

# IMD Smart City

Index  
Report  
2023

IMD / World Competitiveness  
Center

In partnership with



---

“I have never felt salvation in nature. I love cities above all.”

— Michelangelo

---

“The mark of a great city isn’t how it treats its special places – everybody does that right – but how it treats its ordinary ones.”

— Aaron M. Renn  
(The Urban State of Mind:  
Meditations on the City)

# IMD Smart City Index

# 2023

## Introduction

A New Beginning: A More Precise,  
Relevant and Impactful Smart City Index

# IMD Smart City Index 2023

## Introduction: A More Precise, Relevant and Impactful Smart City Index

### Welcome to the 2023 edition of the IMD Smart City Index Report (SCI Report).

This edition marks a significant step in the history of this report, which has now acquired global recognition and respect. After a break in 2022, three major changes have been brought to the Index and accompanying report.

1

The World Smart Sustainable Cities Organization (WeGO) has joined us as a knowledge partner;

2

The number of cities in the SCI has significantly increased; and

3

The SCI's methodology has been improved thanks to the acquisition of new data.

Each of these changes has significant consequences. They make us even more enthusiastic about the impact and relevance of the Index, and about its future. Here's why:

### A New Knowledge Partner



The World Smart Sustainable Cities Organization (WeGO), is a membership-based international association of local governments, smart tech solution providers, and institutions committed to the transformation of cities into smart, sustainable cities through facilitating public-private partnerships (PPP). It was founded by 50 member cities in 2010 as the World e-Governments Organization, hence the acronym. However, as the concept of "smart cities" continued evolving, during the 4th General Assembly (2017) WeGO expanded its mandate and changed its name to the World Smart Sustainable Cities Organization.

For its members, WeGO serves as an international platform to improve the quality of life, innovate in the delivery of public services, and strengthen regional competitiveness. The WeGO network currently includes over 200 cities, 26 are covered by this edition of the SCI index and report.

WeGO as a partner strives to support the development of human-centered cities and progress in seeking solutions to smart city challenges. WeGO's vision is set in the direction of mitigating the digital divide by providing smart cities with a guideline through the smart city index.

### From 118 to 141 Cities

The coverage of the SCI and SCI Report has increased by 20 per cent to include 141 cities (previously 118 were measured), distributed across the world. This reflects the SCI's ongoing efforts to be a global index, and to facilitate the benchmarking of all kinds of cities, whatever their size or level of development. This year, we have made a concerted effort to include more capital cities from all continents, while keeping an eye on 'second-tier cities' showing signs of dynamism, and an appetite for designing and implementing innovative solutions to their key problems.

# IMD Smart City Index 2023

## Introduction: A More Precise, Relevant and Impactful Smart City Index



### New Data at City Level

The SCI's methodology has been improved thanks to the acquisition of new data at the city level.

The SCI was designed as a tool for action. Since it is based on people's perceptions (surveys), it is critically important that the answers collected are calibrated to the specific context of the cities studied.

For the 2021 Index and all prior editions, we relied on country-level Human Development Index (HDI) data provided by the United Nations Development Programme (UNDP). Throughout the course of 2022, we explored the possibility of using city-level HDI data that could provide a more granular (and realistic) vision of the socio-economic environment of specific cities. The new SCI methodology is described in detail below. We believe that time invested in furthering our methodological approach was incredibly well spent and are excited by the applicability of the results obtained.

# IMD Smart City Index 2023

## Introduction: A More Precise, Relevant and Impactful Smart City Index



The SCI's value rests greatly on its ability to generate time series, and this is where citizens and decision makers can track the evolution of their city's performance over time, and compare it with that of other cities around the world. It follows that deciding to change an index's methodology isn't easy and often comes at the cost of breaking the continuity necessary to build such a series. We are proud to announce that in the case of the SCI, we have been able to not only improve the methodology but also to preserve our users' ability to work on time series. We did so by 'building back' the data and rankings that would have been those of the cities covered if the new methodology had been applied at the time. This means that the rankings of the SCI 2023 should not be compared to those published in previous SCI reports as they are the result of different approaches. However, comparisons across time can be made and used with recourse to the tables included in this report that reflect the 2019-2023 rankings of the cities covered using the most recent methodology. See pages 39-40 of this report.

Against the background of these three significant changes, what key messages emerge from this revamped 2023 Index and Report? They can be summarized as follows:

---

1

---

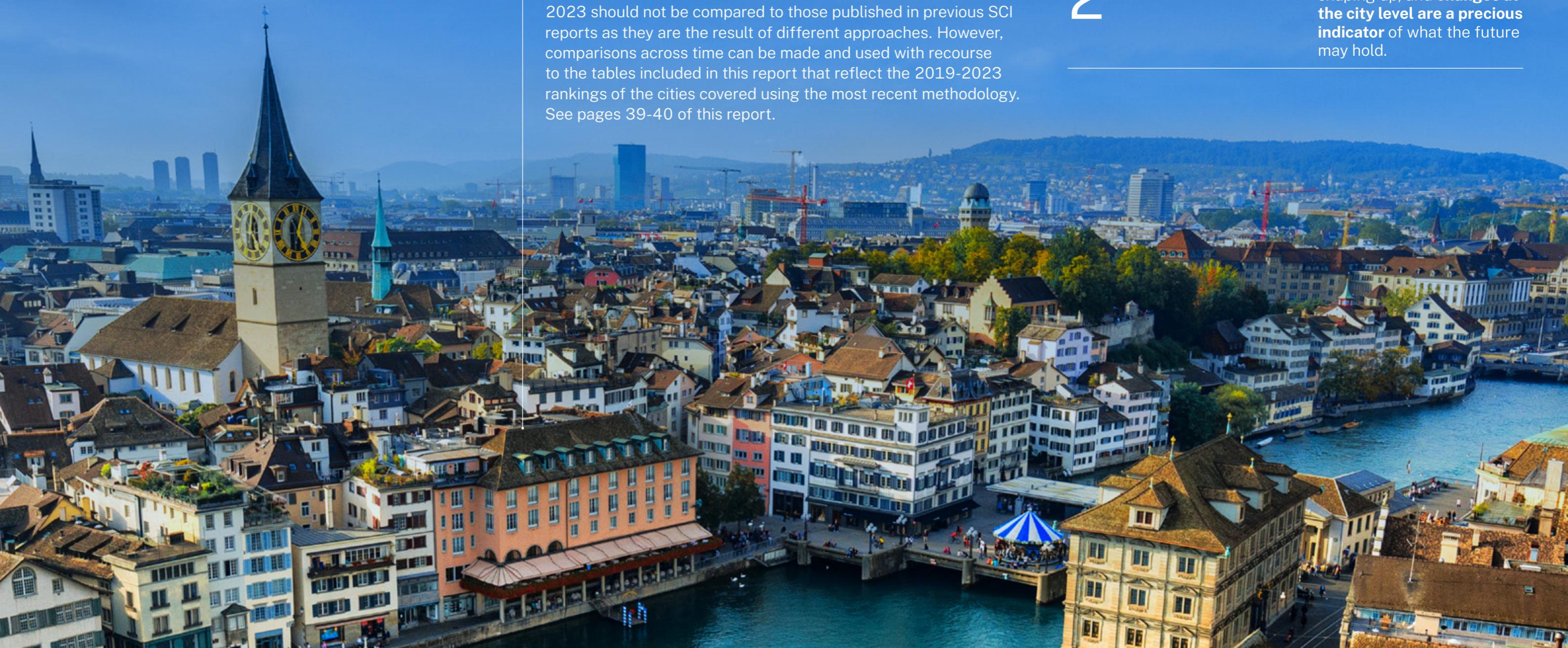
The global landscape of smart cities is changing, and lessons can be learned from the experience of "SCI champions" – the top 20.

---

2

---

Globally, a new world is shaping up, and **changes at the city level are a precious indicator** of what the future may hold.



# IMD Smart City Index 2023

## Introduction: A More Precise, Relevant and Impactful Smart City Index

### Lessons from the champions: who is in the top 20, and how did they do it?

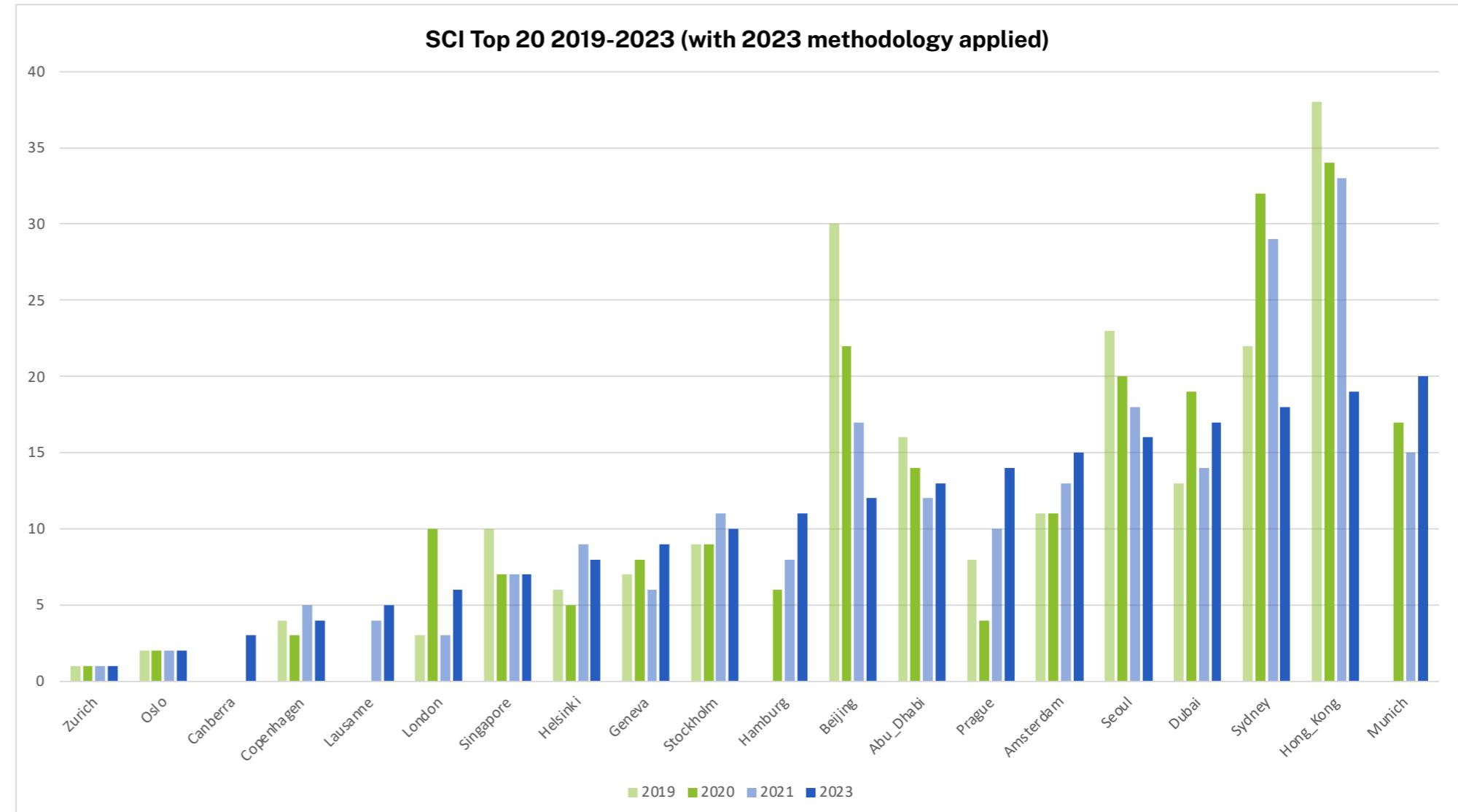
In 2023, the upper echelons of the SCI comprise the 20 cities in the table below. Rankings prior to 2023 have been adjusted according to the new methodology for the purposes of homogeneity and to allow comparison.

City	Rank 2023	Rank 2021	Rank 2020	Rank 2019
Zurich	1	1	1	1
Oslo	2	2	2	2
Canberra	3	—	—	—
Copenhagen	4	5	3	4
Lausanne	5	4	—	—
London	6	3	10	3
Singapore	7	7	7	10
Helsinki	8	9	5	6
Geneva	9	6	8	7
Stockholm	10	11	9	9
Hamburg	11	8	6	—
Beijing	12	17	22	30
Abu Dhabi	13	12	14	16
Prague	14	10	4	8
Amsterdam	15	13	11	11
Seoul	16	18	20	23
Dubai	17	14	19	13
Sydney	18	29	32	22
Hong Kong	19	33	34	38

# IMD Smart City Index 2023

## Introduction: A More Precise, Relevant and Impactful Smart City Index

Several observations can be made by analyzing this list. Most strikingly, out of the top 20, 17 cities have been part of the SCI since its creation. Among those 17, six cities show either a continuous improvement or stability, year-upon-year. These ‘super-champions’ are: Zurich, Oslo, Singapore, Beijing, Seoul, and Hong Kong.)



# IMD Smart City Index 2023

## Introduction: A More Precise, Relevant and Impactful Smart City Index

### A New World is Shaping Up. Cities Tell Us Where to Look

**1. Asia and Europe ahead of the pack?** Apart from Abu Dhabi and Dubai, all of the cities occupying the top 20 are either in Europe or in Asia-Pacific. The absence of American or African cities is notable. New York ranks 22nd while Cairo (108th) is the leading African city. Medellin (118th) is the leading South American one. The 2023 rankings reflect a growing interest and higher levels of concern about the quality of life that residents are expecting to enjoy in their respective cities. Size is often a handicap rather than an advantage in this regard. This explains why most large metropolises such as Boston (34th) or Paris (46th) rank relatively low in the index, in spite of remarkable progress in a number of key areas such as sustainability and mobility.

**2. ‘Second tier’ cities continue to do better than the rest.** Although the SCI’s top 20 include 12 capital cities (such as Oslo and Canberra), and several ‘economic capitals’ (like Zurich and Dubai), the picture is different when one looks at the top half of the rankings (1 to 70); a significant number of medium-sized cities show both solid positions and a continuous ability to move up. In Europe, this is the case for Lausanne, Munich and Bilbao, for example, and elsewhere in the world it rings true for Montreal, Mecca and Denver.

**3. Smart city strategies are undergoing deep changes.** The basic principle that led to the creation of the Smart City Index in 2019 was that if cities wanted to be smarter, they needed to be less technology-centric, and more human-focused. Since then, this way of conceiving the nature and purpose of smart cities has moved closer to being mainstream. Many city officials are now routinely using a variety of different expressions in lieu of ‘smart cities’: ‘open and innovative cities’, ‘inclusive and diverse cities’, ‘sustainable cities’ and ‘citizen-centric cities’ are becoming part of the new labelling of ‘smart cities’ that were. But this is not merely a semantic change; it reflects deep changes in the way smart cities (and cities in general) will be designed and managed. Thanks to its initial design and philosophy, the Smart City Index is emerging as a critical tool to benchmark progress along those new lines. The SCI’s updated methodology will further enhance its relevance as these changes gather momentum.

**4. Inclusion and diversity are emerging as key benchmarks for success.** An increasing number of cities are deploying new efforts to encourage diversity and inclusion as part of their smart strategies, variously linked to strategies to attract or retain talent, or to pre-existing conditions. Higher levels of tolerance for immigrants and minorities are becoming a marker in the ‘quality of life’ category, and in ‘leaving no one behind’ – a key phrase in defining the future of smart cities. Moreover, cities continue to accept (and, sometimes, seek) new roles, as central governments strive to become more agile through decentralization. Even at the international level, at a time in which many multilateral efforts seem to be losing momentum at the nation-states level, cities and their leaders are becoming more visible. Openness and inter-city collaboration may very well become key components of the next wave of globalization.

### Continuing to Improve the SCI

There are different ways to improve the quality of the SCI. Expanding the number of cities studied will always extend the scope of the index. Employing more focused data will improve the accuracy of the index and allow for a meaningful comparison among different qualities of cities. Finally, fine tuning the construction of the ranking improves its relevance as an action tool, and allows for better comparisons between cities. The 2023 SCI makes advances in all three dimensions.

As flagged earlier, the city coverage of the SCI index and report has increased by almost 20 per cent, bringing the total number of smart cities to 141. Using city-specific data for the construction of the Index was the focus of our research in 2022. In its new design, the SCI employs a city-specific measure of the HDI initially produced by the United Nations Development Program (UNDP).

HDI is a composite index that combines information about life expectancy, expected years of schooling and the mean years of education completed, as well as the per capita income of a country’s citizens. Until this year, the SCI used country-level HDI information as a proxy to evaluate the dimensions of health, knowledge and standard of living in each city. The 2023 SCI features city-level HDI, provided by the Global Data Lab. This allows for a more accurate ranking of each city, whilst also allowing readers to compare the performance of any given city to that of the country in which it is found.

Finally, city-level HDI facilitates a more academically rigorous comparison among cities. The 2023 SCI standardizes the performance of a city with the average of the city-HDI and the average of the surveys. This allows for a meaningful classification of a city relative to all other cities covered by the Index.

# IMD Smart City Index 2023

## Table of Contents

<b>Introduction</b>	03
<b>Table of Contents</b>	10
<b>The IMD World Competitiveness Center</b>	12
<b>City Performance Overview</b>	13
In 2023 City Ranking Order with HDI Context and 2019-2023 Ranking Comparison	14
In Alphabetical Order By City with 2023 Deep Dive and 2021 Comparison	17
In Alphabetical Order by City with HDI Context and 2019-2023 Rankings	22
In Alphabetical Order by Country with HDI Context and 2019-2023 Rankings	26
<b>A User's Guide</b>	30
<b>Methodology</b>	33
<b>City Profiles</b>	35
Abu Dhabi	36
Abuja	37
Accra	38
Algiers	39
Amman	40
Amsterdam	41
Ankara	42
Athens	43
Aukland	44
Bangkok	45
Barcelona	46
Beijing	47
Beirut	48
Belfast	49
Bengaluru	50
Berlin	51
Bilbao	52
Birmingham	53
Bogota	54
Bologna	55
Bordeaux	56
Boston	57
Brasilia	58
Bratislava	59
Brisbane	60
Brussels	61
Bucharest	62
Budapest	63
Buenos Aires	64
Busan	65
Cairo	66
Canberra	67
Cape Town	68
Cardiff	69
Chengdu	70
Chicago	71
Chongqing	72
Copenhagen	73
Delhi	74
Denver	75
Doha	76
Dubai	77
Dublin	78
Dusseldorf	79
Geneva	80
Glasgow	81
Gothenburg	82
Guangzhou	83
Guatemala City	84
Hamburg	85
Hangzhou	86
Hanoi	87
Hanover	88
Helsinki	89
Ho Chi Minh City	90
Hong Kong	91
Hyderabad	92
Islamabad	93
Istanbul	94
Jakarta	95
Jeddah	96
Kiel	97
Krakow	98
Kuala Lumpur	99
Lagos	100
Lausanne	101
Leeds	102
Lille	103
Lima	104
Lisbon	105
Ljubljana	106
London	107
Los Angeles	108
Luxembourg	109
Lyon	110
Madrid	111
Makassar	112

# IMD Smart City Index 2023

## Table of Contents

Manchester	113
Manila	114
Marseille	115
Mecca	116
Medan	117
Medellin	118
Medina	119
Melbourne	120
Mexico City	121
Milan	122
Montreal	123
Mumbai	124
Munich	125
Muscat	126
Nairobi	127
Nanjing	128
New York	129
Newcastle	130
Nicosia	131
Osaka	132
Oslo	133
Ottawa	134
Paris	135
Philadelphia	136
Phoenix	137
Prague	138
Rabat	139
Reykjavic	140
Riga	141
Rio de Janeiro	142
Riyadh	143
Rome	144
Rotterdam	145
San Francisco	146
San José	147
Sana'a	148
Santiago	149
Sao Paulo	150
Seattle	151
Seoul	152
Shanghai	153
Shenzhen	154
Singapore	155
Sofia	156
Stockholm	157
Sydney	158
Taipei City	159
Tallinn	160
Tel Aviv	161
The Hague	162
Tianjin	163
Tokyo	164
Toronto	165
Tunis	166
Vancouver	167
Vienna	168
Vilnius	169
Warsaw	170
Washington D.C.	171
Wellington	172
Zagreb	173
Zaragoza	174
Zhuhai	175
Zurich	176

# IMD Smart City Index 2023

The IMD World Competitiveness Center

For over thirty years, the IMD World Competitiveness Center has pioneered research on how countries and companies compete to lay the foundations for sustainable value creation. The competitiveness of nations is probably one of the most significant developments in modern management and IMD is committed to leading the field.

The IMD World Competitiveness Center Team:

---

**Professor Arturo Bris**

Director

---

**Christos Cabolis**

Chief Economist & Head of Operations

---

**Bruno Lanvin**

President, Smart City Observatory

---

**Odete Madureira**

WCC Coordinator

---

**José Caballero**

Senior Economist

---

**Marco Pistis**

Research Associate

---

**Maryam Zargari**

Research Associate

---

**Alice Tozer**

Content Manager

---

# IMD Smart City Index

# 2023

A Series of Tables Showcasing  
the Results in Different Ways

# IMD Smart City Index 2023: Results

In 2023 City Ranking Order with HDI Context and 2019-2023 Ranking Comparison (2023 Methodology Applied)

Country	Country HDI	City	City HDI	Rankings			
				2019	2020	2021	2023
Switzerland	0.962	Zurich	0.989	1	1	1	1
Norway	0.961	Oslo	0.98	2	2	2	2
Australia	0.951	Canberra	0.98				3
Denmark	0.948	Copenhagen	0.967	4	3	5	4
Switzerland	0.962	Lausanne	0.966			4	5
United Kingdom	0.929	London	0.973	3	10	3	6
Singapore	0.939	Singapore	0.939	10	7	7	7
Finland	0.94	Helsinki	0.96	6	5	9	8
Switzerland	0.962	Geneva	0.966	7	8	6	9
Sweden	0.947	Stockholm	0.972	9	9	11	10
Germany	0.942	Hamburg	0.972		6	8	11
China	0.768	Beijing	0.907	30	22	17	12
United Arab Emirates	0.911	Abu Dhabi	0.911	16	14	12	13
Czech Rep.	0.889	Prague	0.96	8	4	10	14
Netherlands	0.941	Amsterdam	0.962	11	11	13	15
Korea South	0.925	Seoul	0.952	23	20	18	16
United Arab Emirates	0.911	Dubai	0.911	13	19	14	17
Australia	0.951	Sydney	0.952	22	32	29	18
Hong Kong	0.949	Hong Kong	0.946	38	34	33	19
Germany	0.942	Munich	0.95		17	15	20
USA	0.921	New York	0.938	34	12	19	21
New Zealand	0.937	Auckland	0.951	5	15	16	22

Country	Country HDI	City	City HDI	Rankings			
				2019	2020	2021	2023
New Zealand	0.937	Wellington	0.958				23
Australia	0.951	Brisbane	0.944	42	27	40	24
China	0.768	Shanghai	0.88	37	42	32	25
Iceland	0.959	Reykjavik	0.959				26
Spain	0.905	Bilbao	0.932	18	25	23	27
Austria	0.916	Vienna	0.942	12	18	20	28
Taiwan	0.916	Taipei City	0.916	24	23	25	29
Saudi Arabia	0.875	Riyadh	0.9	55	44	39	30
Australia	0.951	Melbourne	0.948	35	33	36	31
Estonia	0.89	Tallinn	0.932		39	24	32
Germany	0.942	Berlin	0.959	19	21	21	33
USA	0.921	Boston	0.949	15	24	22	34
Belgium	0.937	Brussels	0.953	51	16	45	35
Sweden	0.947	Gothenburg	0.944	33	43	46	36
Spain	0.905	Madrid	0.94	25	30	37	37
Germany	0.942	Dusseldorf	0.939	17	37	27	38
USA	0.921	Washington D.C.	0.94	26	13	26	39
Canada	0.936	Ottawa	0.943				40
Netherlands	0.941	Rotterdam	0.941	40	35	43	41
Canada	0.936	Vancouver	0.944	20	40	28	42
Netherlands	0.941	The Hague	0.941	36	38	35	43
Poland	0.876	Warsaw	0.926	14	48	41	44

# IMD Smart City Index 2023: Results

In 2023 City Ranking Order with HDI Context and 2019-2023 Ranking Comparison (2023 Methodology Applied)

Country	Country HDI	City	City HDI	Rankings			
				2019	2020	2021	2023
Luxembourg	0.93	Luxembourg	0.93				45
France	0.903	Paris	0.949	39	47	49	46
Slovenia	0.918	Ljubljana	0.953				47
Canada	0.936	Toronto	0.943	29	46	31	48
Korea South	0.925	Busan	0.936	45	29	47	49
USA	0.921	Los Angeles	0.931	44	36	30	50
Italy	0.895	Bologna	0.924	41	50	48	51
Saudi Arabia	0.875	Mecca	0.871				52
USA	0.921	Denver	0.942	27	31	34	53
Spain	0.905	Zaragoza	0.912	58	53	51	54
USA	0.921	Seattle	0.94	31	41	38	55
Saudi Arabia	0.875	Jeddah	0.871				56
Germany	0.942	Hanover	0.93	43	51	53	57
China	0.768	Nanjing	0.81	65	59	57	58
Qatar	0.855	Doha	0.855				59
China	0.768	Zhuhai	0.799	53	56	52	60
USA	0.921	Chicago	0.929	57	54	56	61
Slovakia	0.848	Bratislava	0.944	32	26	42	62
Ireland	0.945	Dublin	0.95	21	28	44	63
France	0.903	Lyon	0.914	54	61	62	64
Lithuania	0.875	Vilnius	0.913				65
China	0.768	Shenzhen	0.799	61	66	60	66

Country	Country HDI	City	City HDI	Rankings			
				2019	2020	2021	2023
China	0.768	Tianjin	0.844	48	45	50	67
USA	0.921	San Francisco	0.931	28	49	54	68
Canada	0.936	Montreal	0.923	50	52	55	69
China	0.768	Hangzhou	0.801	66	60	63	70
China	0.768	Guangzhou	0.799	67	64	66	71
Japan	0.925	Tokyo	0.951	46	73	67	72
United Kingdom	0.929	Manchester	0.915		57	58	73
United Kingdom	0.929	Birmingham	0.913	63	68	73	74
Spain	0.905	Barcelona	0.916	56	58	70	75
United Kingdom	0.929	Leeds	0.908			64	76
United Kingdom	0.929	Newcastle	0.901		62	61	77
France	0.903	Bordeaux	0.9			68	78
Poland	0.876	Krakow	0.888	47	69	76	79
United Kingdom	0.929	Glasgow	0.921			65	80
Germany	0.942	Kiel	0.921			72	81
Italy	0.895	Milan	0.915	52	70	69	82
Latvia	0.863	Riga	0.929				83
France	0.903	Lille	0.88			82	84
Saudi Arabia	0.875	Medina	0.871			79	85
China	0.768	Chongqing	0.774	69	65	74	86
Hungary	0.846	Budapest	0.922	64	63	78	87
Thailand	0.8	Bangkok	0.839	75	78	86	88

# IMD Smart City Index 2023: Results

In 2023 City Ranking Order with HDI Context and 2019-2023 Ranking Comparison (2023 Methodology Applied)

Country	Country HDI	City	City HDI	Rankings			
				2019	2020	2021	2023
Malaysia	0.803	Kuala Lumpur	0.858	59	71	80	89
Turkey	0.838	Ankara	0.854	73	74	75	90
Israel	0.919	Tel Aviv	0.919	49	55	59	91
USA	0.921	Philadelphia	0.923	71	79	85	92
USA	0.921	Phoenix	0.908		72	77	93
Wales	0.929	Cardiff	0.898				94
Northern Ireland	0.929	Belfast	0.896				95
Oman	0.816	Muscat	0.816				96
China	0.768	Chengdu	0.74	74	77	84	97
Japan	0.925	Osaka	0.928	68	84	90	98
Portugal	0.866	Lisbon	0.9	62	75	81	99
Vietnam	0.703	Hanoi	0.744	77	82	89	100
France	0.903	Marseille	0.899		83	91	101
Indonesia	0.705	Jakarta	0.759	80	81	92	102
Vietnam	0.703	Ho Chi Minh City	0.714	76	86	93	103
Romania	0.821	Bucharest	0.926	60	76	87	104
India	0.633	Delhi	0.73	78	85	94	105
Croatia	0.858	Zagreb	0.916				106
Turkey	0.838	Istanbul	0.867			88	107
Egypt	0.731	Cairo	0.779	96	100	105	108
India	0.633	Mumbai	0.688	83	89	95	109
India	0.633	Bengaluru	0.667	85	96	97	110

Country	Country HDI	City	City HDI	Rankings			
				2019	2020	2021	2023
Bulgaria	0.795	Sofia	0.856	87	87	103	111
Indonesia	0.705	Medan	0.711	89	94	96	112
Greece	0.887	Athens	0.909	94	98	108	113
Indonesia	0.705	Makassar	0.699	86	90	102	114
Philippines	0.699	Manila	0.76	93	95	100	115
India	0.633	Hyderabad	0.647	81	91	101	116
Cyprus	0.896	Nicosia	0.896				117
Colombia	0.752	Medellin	0.757	82	88	99	118
Chile	0.855	Santiago	0.886	79	102	107	119
Pakistan	0.544	Islamabad	0.659				120
Mexico	0.758	Mexico City	0.815	90	103	110	121
Italy	0.895	Rome	0.917	97	97	111	122
Algeria	0.745	Algiers	0.767				123
Argentina	0.842	Buenos Aires	0.812	88	93	104	124
South Africa	0.713	Cape Town	0.751	92	99	106	125
Morocco	0.683	Rabat	0.702	99	101	109	126
Costa Rica	0.809	San José	0.826				127
Brazil	0.754	Brasilia	0.816				128
Colombia	0.752	Bogota	0.797	91	104	113	129
Brazil	0.754	Sao Paulo	0.78	95	108	117	130
Kenya	0.575	Nairobi	0.636	100	107	115	131
Nigeria	0.535	Lagos	0.681	101	105	116	132

# IMD Smart City Index 2023: Results

In 2023 City Ranking Order with HDI Context and 2019-2023 Ranking Comparison (2023 Methodology Applied)

Country	Country HDI	City	City HDI	Rankings			
				2019	2020	2021	2023
Nigeria	0.535	Abuja	0.646	98	106	114	133
Peru	0.762	Lima	0.82				134
Jordan	0.72	Amman	0.737				135
Brazil	0.754	Rio de Janeiro	0.783	102	109	118	136
Tunisia	0.731	Tunis	0.775				137
Ghana	0.632	Accra	0.707				138
Lebanon	0.706	Beirut	0.677				139
Yemen	0.455	Sana'a	0.521				140
Guatemala	0.627	Guatemala City	0.722				141

# IMD Smart City Index 2023: Results

In Alphabetical Order By City with 2023 Deep Dive and  
2021 Comparison (2023 Methodology Applied)

City	Smart City Rank 2023	Smart City Rating 2023	Structure 2023	Technology 2023	Smart City Rank 2021	Change
Abu Dhabi	13	BB	BB	BB	12	▼ -1
Abuja	133	D	C	D	114	▼ -19
Accra	138	D	D	D	NEW	—
Algiers	123	C	C	C	NEW	—
Amman	135	D	D	D	NEW	—
Amsterdam	15	A	BBB	A	13	▼ -2
Ankara	90	CCC	B	CCC	75	▼ -15
Athens	113	C	C	C	108	▼ -5
Auckland	22	A	A	A	16	▼ -6
Bangkok	88	B	CCC	B	86	▼ -2
Barcelona	75	BB	BB	BB	70	▼ -5
Beijing	12	BB	BB	BB	17	▲ 5
Beirut	139	D	D	D	NEW	—
Belfast	95	CC	CCC	CC	NEW	—
Bengaluru	110	CC	CC	CC	97	▼ -13
Berlin	33	BBB	BBB	BBB	21	▼ -12
Bilbao	27	BBB	BBB	BBB	23	▼ -4
Birmingham	74	BB	BB	BB	73	▼ -1
Bogota	129	D	D	C	113	▼ -16
Bologna	51	BB	BBB	BB	48	▼ -3
Bordeaux	78	CCC	CCC	CC	68	▼ -10
Boston	34	A	A	A	22	▼ -12

City	Smart City Rank 2023	Smart City Rating 2023	Structure 2023	Technology 2023	Smart City Rank 2021	Change
Brasilia	128	C	C	C	NEW	—
Bratislava	62	BB	BB	BBB	42	▼ -20
Brisbane	24	AA	A	A	40	▲ 16
Brussels	35	BBB	BB	A	45	▲ 10
Bucharest	104	CCC	CCC	B	87	▼ -17
Budapest	87	B	B	BB	78	▼ -9
Buenos Aires	124	C	C	C	104	▼ -20
Busan	49	BB	BB	BBB	47	▼ -2
Cairo	108	CC	C	CC	105	▼ -3
Canberra	3	AA	AA	A	NEW	—
Cape Town	125	C	C	C	106	▼ -19
Cardiff	94	CC	CCC	CC	NEW	—
Chengdu	97	CCC	CCC	CCC	84	▼ -13
Chicago	61	BB	BB	BB	56	▼ -5
Chongqing	86	CCC	CCC	CCC	74	▼ -12
Copenhagen	4	AA	AAA	A	5	▲ 1
Delhi	105	CC	CC	CC	94	▼ -11
Denver	53	BBB	BBB	BBB	34	▼ -19
Doha	59	BB	BB	B	NEW	—
Dubai	17	BB	BB	B	14	▼ -3
Dublin	63	BB	BB	BBB	44	▼ -19
Dusseldorf	38	BB	BBB	BB	27	▼ -11

# IMD Smart City Index 2023: Results

In Alphabetical Order By City with 2023 Deep Dive and  
2021 Comparison (2023 Methodology Applied)

City	Smart City Rank 2023	Smart City Rating 2023	Structure 2023	Technology 2023	Smart City Rank 2021	Change
Geneva	9	AA	AA	A	6	▼ -3
Glasgow	80	BB	BB	B	65	▼ -15
Gothenburg	36	A	A	A	46	▲ 10
Guangzhou	71	CCC	CCC	CCC	66	▼ -5
Guatemala City	141	D	D	D	NEW	—
Hamburg	11	A	A	BBB	8	▼ -3
Hangzhou	70	CCC	CCC	CCC	63	▼ -7
Hanoi	100	CCC	CCC	CCC	89	▼ -11
Hanover	57	BB	BBB	B	53	▼ -4
Helsinki	8	AAA	AA	A	9	▲ 1
Ho Chi Minh City	103	CCC	CCC	CCC	93	▼ -10
Hong Kong	19	AA	BBB	AAA	33	▲ 14
Hyderabad	116	CC	CC	CC	101	▼ -15
Islamabad	120	CC	CC	CC	NEW	—
Istanbul	107	CC	CC	CC	88	▼ -19
Jakarta	102	CC	CC	CC	92	▼ -10
Jeddah	56	B	B	B	NEW	—
Kiel	81	BB	BBB	CCC	72	▼ -9
Krakow	79	CCC	B	CCC	76	▼ -3
Kuala Lumpur	89	CCC	B	CCC	80	▼ -9
Lagos	132	D	D	C	116	▼ -16
Lausanne	5	AA	AA	A	4	▼ -1

City	Smart City Rank 2023	Smart City Rating 2023	Structure 2023	Technology 2023	Smart City Rank 2021	Change
Leeds	76	CCC	CCC	CC	64	▼ -12
Lille	84	CCC	CCC	CCC	82	▼ -2
Lima	134	C	C	C	NEW	—
Lisbon	99	CC	CC	CC	81	▼ -18
Ljubljana	47	BBB	BB	BBB	NEW	—
London	6	A	BBB	AA	3	▼ -3
Los Angeles	50	BB	BB	BBB	30	▼ -20
Luxembourg	45	BB	BBB	B	NEW	—
Lyon	64	BB	BB	BB	62	▼ -2
Madrid	37	BB	BB	BBB	37	—
Makassar	114	CC	CC	CC	102	▼ -12
Manchester	73	BB	BB	BB	58	▼ -15
Manila	115	C	C	CC	100	▼ -15
Marseille	101	CC	CC	CC	91	▼ -10
Mecca	52	B	B	B	NEW	—
Medan	112	CC	CC	CC	96	▼ -16
Medellin	118	C	C	C	99	▼ -19
Medina	85	CCC	CCC	CCC	79	▼ -6
Melbourne	31	A	BBB	A	36	▲ 5
Mexico City	121	C	C	CC	110	▼ -11
Milan	82	BB	BB	BB	69	▼ -13
Montreal	69	BB	BBB	B	55	▼ -14

# IMD Smart City Index 2023: Results

In Alphabetical Order By City with 2023 Deep Dive and  
2021 Comparison (2023 Methodology Applied)

City	Smart City Rank 2023	Smart City Rating 2023	Structure 2023	Technology 2023	Smart City Rank 2021	Change
Mumbai	109	CC	CC	CCC	95	▼ -14
Munich	20	AA	AA	A	15	▼ -5
Muscat	96	B	B	CCC	NEW	—
Nairobi	131	C	C	C	115	▼ -16
Nanjing	58	CCC	CCC	CCC	57	▼ -1
New York	21	BBB	BBB	A	19	▼ -2
Newcastle	77	CCC	B	CC	61	▼ -16
Nicosia	117	C	CC	C	NEW	—
Osaka	98	B	BB	CCC	90	▼ -8
Oslo	2	AAA	AAA	A	2	—
Ottawa	40	A	AA	BBB	NEW	—
Paris	46	BBB	BB	A	49	▲ 3
Philadelphia	92	B	B	B	85	▼ -7
Phoenix	93	CC	CCC	CC	77	▼ -16
Prague	14	AA	A	A	10	▼ -4
Rabat	126	C	C	C	109	▼ -17
Reykjavik	26	BBB	A	BBB	NEW	—
Riga	83	B	B	B	NEW	—
Rio de Janeiro	136	D	D	D	118	▼ -18
Riyadh	30	BB	B	BB	39	▲ 9
Rome	122	CCC	CCC	CCC	111	▼ -11
Rotterdam	41	A	BBB	A	43	▲ 2

City	Smart City Rank 2023	Smart City Rating 2023	Structure 2023	Technology 2023	Smart City Rank 2021	Change
San Francisco	68	BB	BB	BB	54	▼ -14
San José	127	C	CC	C	112	▼ -15
Sana'a	140	D	D	D	NEW	—
Santiago	119	C	C	C	107	▼ -12
Sao Paulo	130	D	D	C	117	▼ -13
Seattle	55	BB	BB	B	38	▼ -17
Seoul	16	AA	BBB	AAA	18	▲ 2
Shanghai	25	BB	BB	BB	32	▲ 7
Shenzhen	66	CCC	CCC	CCC	60	▼ -6
Singapore	7	A	A	A	7	—
Sofia	111	CC	CC	CC	103	▼ -8
Stockholm	10	A	A	A	11	▲ 1
Sydney	18	AA	A	AA	29	▲ 11
Taipei City	29	A	BBB	A	25	▼ -4
Tallinn	32	BBB	BBB	BB	24	▼ -8
Tel Aviv	91	B	B	BB	59	▼ -32
The Hague	43	A	A	A	35	▼ -8
Tianjin	67	BB	B	BB	50	▼ -17
Tokyo	72	BB	BB	BB	67	▼ -5
Toronto	48	BBB	BBB	BBB	31	▼ -17
Tunis	137	D	D	D	NEW	—
Vancouver	42	A	A	BBB	28	▼ -14

# IMD Smart City Index 2023: Results

In Alphabetical Order By City with 2023 Deep Dive and  
2021 Comparison (2023 Methodology Applied)

City	Smart City Rank 2023	Smart City Rating 2023	Structure 2023	Technology 2023	Smart City Rank 2021	Change
Vienna	28	AA	AA	A	20	▼ -8
Vilnius	65	BB	BB	BBB	NEW	-
Warsaw	44	BBB	BBB	BBB	41	▼ -3
Washington D.C.	39	BB	BB	BB	26	▼ -13
Wellington	23	A	A	BBB	NEW	-
Zagreb	106	CCC	B	CCC	NEW	-
Zaragoza	54	CCC	B	CC	51	▼ -3
Zhuhai	60	CCC	CCC	CCC	52	▼ -8
Zurich	1	AAA	AAA	A	1	-

# IMD Smart City Index 2023: Results

In Alphabetical Order by City with HDI Context and  
2019-2023 Rankings (2023 Methodology Applied)

				Rankings			
Country	Country HDI	City	City HDI	2019	2020	2021	2023
United Arab Emirates	0.911	Abu Dhabi	0.911	16	14	12	13
Nigeria	0.535	Abuja	0.646	98	106	114	133
Ghana	0.632	Accra	0.707				138
Algeria	0.745	Algiers	0.767				123
Jordan	0.72	Amman	0.737				135
Netherlands	0.941	Amsterdam	0.962	11	11	13	15
Turkey	0.838	Ankara	0.854	73	74	75	90
Greece	0.887	Athens	0.909	94	98	108	113
New Zealand	0.937	Auckland	0.951	5	15	16	22
Thailand	0.8	Bangkok	0.839	75	78	86	88
Spain	0.905	Barcelona	0.916	56	58	70	75
China	0.768	Beijing	0.907	30	22	17	12
Lebanon	0.706	Beirut	0.677				139
Northern Ireland	0.929	Belfast	0.896				95
India	0.633	Bengaluru	0.667	85	96	97	110
Germany	0.942	Berlin	0.959	19	21	21	33
Spain	0.905	Bilbao	0.932	18	25	23	27
United Kingdom	0.929	Birmingham	0.913	63	68	73	74
Colombia	0.752	Bogota	0.797	91	104	113	129
Italy	0.895	Bologna	0.924	41	50	48	51
France	0.903	Bordeaux	0.9			68	78
USA	0.921	Boston	0.949	15	24	22	34

				Rankings			
Country	Country HDI	City	City HDI	2019	2020	2021	2023
Brazil	0.754	Brasilia	0.816				128
Slovakia	0.848	Bratislava	0.944	32	26	42	62
Australia	0.951	Brisbane	0.944	42	27	40	24
Belgium	0.937	Brussels	0.953	51	16	45	35
Romania	0.821	Bucharest	0.926	60	76	87	104
Hungary	0.846	Budapest	0.922	64	63	78	87
Argentina	0.842	Buenos Aires	0.812	88	93	104	124
Korea South	0.925	Busan	0.936	45	29	47	49
Egypt	0.731	Cairo	0.779	96	100	105	108
Australia	0.951	Canberra	0.98				3
South Africa	0.713	Cape Town	0.751	92	99	106	125
Wales	0.929	Cardiff	0.898				94
China	0.768	Chengdu	0.74	74	77	84	97
USA	0.921	Chicago	0.929	57	54	56	61
China	0.768	Chongqing	0.774	69	65	74	86
Denmark	0.948	Copenhagen	0.967	4	3	5	4
India	0.633	Delhi	0.73	78	85	94	105
USA	0.921	Denver	0.942	27	31	34	53
Qatar	0.855	Doha	0.855				59
United Arab Emirates	0.911	Dubai	0.911	13	19	14	17
Ireland	0.945	Dublin	0.95	21	28	44	63
Germany	0.942	Dusseldorf	0.939	17	37	27	38

# IMD Smart City Index 2023: Results

In Alphabetical Order by City with HDI Context and  
2019-2023 Rankings (2023 Methodology Applied)

Country	Country HDI	City	City HDI	Rankings			
				2019	2020	2021	2023
Switzerland	0.962	Geneva	0.966	7	8	6	9
United Kingdom	0.929	Glasgow	0.921			65	80
Sweden	0.947	Gothenburg	0.944	33	43	46	36
China	0.768	Guangzhou	0.799	67	64	66	71
Guatemala	0.627	Guatemala City	0.722				141
Germany	0.942	Hamburg	0.972		6	8	11
China	0.768	Hangzhou	0.801	66	60	63	70
Vietnam	0.703	Hanoi	0.744	77	82	89	100
Germany	0.942	Hanover	0.93	43	51	53	57
Finland	0.94	Helsinki	0.96	6	5	9	8
Vietnam	0.703	Ho Chi Minh City	0.714	76	86	93	103
Hong Kong	0.949	Hong Kong	0.946	38	34	33	19
India	0.633	Hyderabad	0.647	81	91	101	116
Pakistan	0.544	Islamabad	0.659				120
Turkey	0.838	Istanbul	0.867			88	107
Indonesia	0.705	Jakarta	0.759	80	81	92	102
Saudi Arabia	0.875	Jeddah	0.871				56
Germany	0.942	Kiel	0.921			72	81
Poland	0.876	Krakow	0.888	47	69	76	79
Malaysia	0.803	Kuala Lumpur	0.858	59	71	80	89
Nigeria	0.535	Lagos	0.681	101	105	116	132
Switzerland	0.962	Lausanne	0.966			4	5

Country	Country HDI	City	City HDI	Rankings			
				2019	2020	2021	2023
United Kingdom	0.929	Leeds	0.908				64
France	0.903	Lille	0.88				82
Peru	0.762	Lima	0.82				134
Portugal	0.866	Lisbon	0.9	62	75	81	99
Slovenia	0.918	Ljubljana	0.953				47
United Kingdom	0.929	London	0.973	3	10	3	6
USA	0.921	Los Angeles	0.931	44	36	30	50
Luxembourg	0.93	Luxembourg	0.93				45
France	0.903	Lyon	0.914	54	61	62	64
Spain	0.905	Madrid	0.94	25	30	37	37
Indonesia	0.705	Makassar	0.699	86	90	102	114
United Kingdom	0.929	Manchester	0.915			57	58
Philippines	0.699	Manila	0.76	93	95	100	115
France	0.903	Marseille	0.899		83	91	101
Saudi Arabia	0.875	Mecca	0.871				52
Indonesia	0.705	Medan	0.711	89	94	96	112
Colombia	0.752	Medellin	0.757	82	88	99	118
Saudi Arabia	0.875	Medina	0.871			79	85
Australia	0.951	Melbourne	0.948	35	33	36	31
Mexico	0.758	Mexico City	0.815	90	103	110	121
Italy	0.895	Milan	0.915	52	70	69	82
Canada	0.936	Montreal	0.923	50	52	55	69

# IMD Smart City Index 2023: Results

In Alphabetical Order by City with HDI Context and  
2019-2023 Rankings (2023 Methodology Applied)

				Rankings			
Country	Country HDI	City	City HDI	2019	2020	2021	2023
India	0.633	Mumbai	0.688	83	89	95	109
Germany	0.942	Munich	0.95		17	15	20
Oman	0.816	Muscat	0.816				96
Kenya	0.575	Nairobi	0.636	100	107	115	131
China	0.768	Nanjing	0.81	65	59	57	58
USA	0.921	New York	0.938	34	12	19	21
United Kingdom	0.929	Newcastle	0.901		62	61	77
Cyprus	0.896	Nicosia	0.896				117
Japan	0.925	Osaka	0.928	68	84	90	98
Norway	0.961	Oslo	0.98	2	2	2	2
Canada	0.936	Ottawa	0.943				40
France	0.903	Paris	0.949	39	47	49	46
USA	0.921	Philadelphia	0.923	71	79	85	92
USA	0.921	Phoenix	0.908		72	77	93
Czech Rep.	0.889	Prague	0.96	8	4	10	14
Morocco	0.683	Rabat	0.702	99	101	109	126
Iceland	0.959	Reykjavik	0.959				26
Latvia	0.863	Riga	0.929				83
Brazil	0.754	Rio De Janeiro	0.783	102	109	118	136
Saudi Arabia	0.875	Riyadh	0.9	55	44	39	30
Italy	0.895	Rome	0.917	97	97	111	122
Netherlands	0.941	Rotterdam	0.941	40	35	43	41

				Rankings			
Country	Country HDI	City	City HDI	2019	2020	2021	2023
USA	0.921	San Francisco	0.931	28	49	54	68
Costa Rica	0.809	San José	0.826			112	127
Yemen	0.455	Sana'a	0.521				140
Chile	0.855	Santiago	0.886	79	102	107	119
Brazil	0.754	Sao Paulo	0.78	95	108	117	130
USA	0.921	Seattle	0.94	31	41	38	55
Korea South	0.925	Seoul	0.952	23	20	18	16
China	0.768	Shanghai	0.88	37	42	32	25
China	0.768	Shenzhen	0.799	61	66	60	66
Singapore	0.939	Singapore	0.939	10	7	7	7
Bulgaria	0.795	Sofia	0.856	87	87	103	111
Sweden	0.947	Stockholm	0.972	9	9	11	10
Australia	0.951	Sydney	0.952	22	32	29	18
Taiwan	0.916	Taipei City	0.916	24	23	25	29
Estonia	0.89	Tallinn	0.932		39	24	32
Israel	0.919	Tel Aviv	0.919	49	55	59	91
Netherlands	0.941	The Hague	0.941	36	38	35	43
China	0.768	Tianjin	0.844	48	45	50	67
Japan	0.925	Tokyo	0.951	46	73	67	72
Canada	0.936	Toronto	0.943	29	46	31	48
Tunisia	0.731	Tunis	0.775				137
Canada	0.936	Vancouver	0.944	20	40	28	42

# IMD Smart City Index 2023: Results

In Alphabetical Order by City with HDI Context and  
2019-2023 Rankings (2023 Methodology Applied)

Country	Country HDI	City	City HDI	Rankings			
				2019	2020	2021	2023
Austria	0.916	Vienna	0.942	12	18	20	28
Lithuania	0.875	Vilnius	0.913				65
Poland	0.876	Warsaw	0.926	14	48	41	44
USA	0.921	Washington D.C.	0.94	26	13	26	39
New Zealand	0.937	Wellington	0.958				23
Croatia	0.858	Zagreb	0.916				106
Spain	0.905	Zaragoza	0.912	58	53	51	54
China	0.768	Zhuhai	0.799	53	56	52	60
Switzerland	0.962	Zurich	0.989	1	1	1	1

# IMD Smart City Index 2023: Results

In Alphabetical Order by Country with HDI Context and  
2019-2023 Rankings (2023 Methodology Applied)

Country	Country HDI	City	City HDI	Rankings			
				2019	2020	2021	2023
Algeria	0.745	Algiers	0.767				123
Argentina	0.842	Buenos Aires	0.812	88	93	104	124
Australia	0.951	Brisbane	0.944	42	27	40	24
Australia	0.951	Canberra	0.98				3
Australia	0.951	Melbourne	0.948	35	33	36	31
Australia	0.951	Sydney	0.952	22	32	29	18
Austria	0.916	Vienna	0.942	12	18	20	28
Belgium	0.937	Brussels	0.953	51	16	45	35
Brazil	0.754	Brasilia	0.816				128
Brazil	0.754	Rio de Janeiro	0.783	102	109	118	136
Brazil	0.754	Sao Paulo	0.78	95	108	117	130
Bulgaria	0.795	Sofia	0.856	87	87	103	111
Canada	0.936	Montreal	0.923	50	52	55	69
Canada	0.936	Ottawa	0.943				40
Canada	0.936	Toronto	0.943	29	46	31	48
Canada	0.936	Vancouver	0.944	20	40	28	42
Chile	0.855	Santiago	0.886	79	102	107	119
China	0.768	Beijing	0.907	30	22	17	12
China	0.768	Chengdu	0.74	74	77	84	97
China	0.768	Chongqing	0.774	69	65	74	86
China	0.768	Guangzhou	0.799	67	64	66	71
China	0.768	Hangzhou	0.801	66	60	63	70

Country	Country HDI	City	City HDI	Rankings				
				2019	2020	2021	2023	
China	0.768	Nanjing	0.81	65	59	57	58	
China	0.768	Shanghai	0.88	37	42	32	25	
China	0.768	Shenzhen	0.799	61	66	60	66	
China	0.768	Tianjin	0.844	48	45	50	67	
China	0.768	Zhuhai	0.799	53	56	52	60	
Colombia	0.752	Bogota	0.797	91	104	113	129	
Colombia	0.752	Medellin	0.757	82	88	99	118	
Costa Rica	0.809	San José	0.826				112	127
Croatia	0.858	Zagreb	0.916					106
Cyprus	0.896	Nicosia	0.896					117
Czech Rep.	0.889	Prague	0.96	8	4	10	14	
Denmark	0.948	Copenhagen	0.967	4	3	5	4	
Egypt	0.731	Cairo	0.779	96	100	105	108	
Estonia	0.89	Tallinn	0.932			39	24	32
Finland	0.94	Helsinki	0.96	6	5	9	8	
France	0.903	Bordeaux	0.9				68	78
France	0.903	Lille	0.88				82	84
France	0.903	Lyon	0.914	54	61	62	64	
France	0.903	Marseille	0.899			83	91	101
France	0.903	Paris	0.949	39	47	49	46	
Germany	0.942	Berlin	0.959	19	21	21	33	
Germany	0.942	Dusseldorf	0.939	17	37	27	38	

# IMD Smart City Index 2023: Results

In Alphabetical Order by Country with HDI Context and  
2019-2023 Rankings (2023 Methodology Applied)

Country	Country HDI	City	City HDI	Rankings			
				2019	2020	2021	2023
Germany	0.942	Hamburg	0.972		6	8	11
Germany	0.942	Hanover	0.93	43	51	53	57
Germany	0.942	Kiel	0.921			72	81
Germany	0.942	Munich	0.95		17	15	20
Ghana	0.632	Accra	0.707				138
Greece	0.887	Athens	0.909	94	98	108	113
Guatemala	0.627	Guatemala City	0.722				141
Hong Kong	0.949	Hong Kong	0.946	38	34	33	19
Hungary	0.846	Budapest	0.922	64	63	78	87
Iceland	0.959	Reykjavik	0.959				26
India	0.633	Bengaluru	0.667	85	96	97	110
India	0.633	Delhi	0.73	78	85	94	105
India	0.633	Hyderabad	0.647	81	91	101	116
India	0.633	Mumbai	0.688	83	89	95	109
Indonesia	0.705	Jakarta	0.759	80	81	92	102
Indonesia	0.705	Makassar	0.699	86	90	102	114
Indonesia	0.705	Medan	0.711	89	94	96	112
Ireland	0.945	Dublin	0.95	21	28	44	63
Israel	0.919	Tel Aviv	0.919	49	55	59	91
Italy	0.895	Bologna	0.924	41	50	48	51
Italy	0.895	Milan	0.915	52	70	69	82
Italy	0.895	Rome	0.917	97	97	111	122

Country	Country HDI	City	City HDI	Rankings			
				2019	2020	2021	2023
Japan	0.925	Osaka	0.928	68	84	90	98
Japan	0.925	Tokyo	0.951	46	73	67	72
Jordan	0.72	Amman	0.737				135
Kenya	0.575	Nairobi	0.636	100	107	115	131
Korea South	0.925	Busan	0.936	45	29	47	49
Korea South	0.925	Seoul	0.952	23	20	18	16
Latvia	0.863	Riga	0.929				83
Lebanon	0.706	Beirut	0.677				139
Lithuania	0.875	Vilnius	0.913				65
Luxembourg	0.93	Luxembourg	0.93				45
Malaysia	0.803	Kuala Lumpur	0.858	59	71	80	89
Mexico	0.758	Mexico City	0.815	90	103	110	121
Morocco	0.683	Rabat	0.702	99	101	109	126
Netherlands	0.941	Amsterdam	0.962	11	11	13	15
Netherlands	0.941	Rotterdam	0.941	40	35	43	41
Netherlands	0.941	The Hague	0.941	36	38	35	43
New Zealand	0.937	Auckland	0.951	5	15	16	22
New Zealand	0.937	Wellington	0.958				23
Nigeria	0.535	Abuja	0.646	98	106	114	133
Nigeria	0.535	Lagos	0.681	101	105	116	132
Northern Ireland	0.929	Belfast	0.896				95
Norway	0.961	Oslo	0.98	2	2	2	2

# IMD Smart City Index 2023: Results

In Alphabetical Order by Country with HDI Context and  
2019-2023 Rankings (2023 Methodology Applied)

Country	Country HDI	City	City HDI	Rankings			
				2019	2020	2021	2023
Oman	0.816	Muscat	0.816				96
Pakistan	0.544	Islamabad	0.659				120
Peru	0.762	Lima	0.82				134
Philippines	0.699	Manila	0.76	93	95	100	115
Poland	0.876	Krakow	0.888	47	69	76	79
Poland	0.876	Warsaw	0.926	14	48	41	44
Portugal	0.866	Lisbon	0.9	62	75	81	99
Qatar	0.855	Doha	0.855				59
Romania	0.821	Bucharest	0.926	60	76	87	104
Saudi Arabia	0.875	Jeddah	0.871				56
Saudi Arabia	0.875	Mecca	0.871				52
Saudi Arabia	0.875	Medina	0.871			79	85
Saudi Arabia	0.875	Riyadh	0.9	55	44	39	30
Singapore	0.939	Singapore	0.939	10	7	7	7
Slovakia	0.848	Bratislava	0.944	32	26	42	62
Slovenia	0.918	Ljubljana	0.953				47
South Africa	0.713	Cape Town	0.751	92	99	106	125
Spain	0.905	Barcelona	0.916	56	58	70	75
Spain	0.905	Bilbao	0.932	18	25	23	27
Spain	0.905	Madrid	0.94	25	30	37	37
Spain	0.905	Zaragoza	0.912	58	53	51	54
Sweden	0.947	Gothenburg	0.944	33	43	46	36

Country	Country HDI	City	City HDI	Rankings			
				2019	2020	2021	2023
Sweden	0.947	Stockholm	0.972	9	9	11	10
Switzerland	0.962	Geneva	0.966	7	8	6	9
Switzerland	0.962	Lausanne	0.966			4	5
Switzerland	0.962	Zurich	0.989	1	1	1	1
Taiwan	0.916	Taipei City	0.916	24	23	25	29
Thailand	0.8	Bangkok	0.839	75	78	86	88
Tunisia	0.731	Tunis	0.775				137
Turkey	0.838	Ankara	0.854	73	74	75	90
Turkey	0.838	Istanbul	0.867			88	107
United Arab Emirates	0.911	Abu Dhabi	0.911	16	14	12	13
United Arab Emirates	0.911	Dubai	0.911	13	19	14	17
United Kingdom	0.929	Birmingham	0.913	63	68	73	74
United Kingdom	0.929	Glasgow	0.921			65	80
United Kingdom	0.929	Leeds	0.908			64	76
United Kingdom	0.929	London	0.973	3	10	3	6
United Kingdom	0.929	Manchester	0.915		57	58	73
United Kingdom	0.929	Newcastle	0.901		62	61	77
USA	0.921	Boston	0.949	15	24	22	34
USA	0.921	Chicago	0.929	57	54	56	61
USA	0.921	Denver	0.942	27	31	34	53
USA	0.921	Los Angeles	0.931	44	36	30	50
USA	0.921	New York	0.938	34	12	19	21

# IMD Smart City Index 2023: Results

In Alphabetical Order by Country with HDI Context and  
2019-2023 Rankings (2023 Methodology Applied)

Country	Country HDI	City	City HDI	Rankings			
				2019	2020	2021	2023
USA	0.921	Philadelphia	0.923	71	79	85	92
USA	0.921	Phoenix	0.908		72	77	93
USA	0.921	San Francisco	0.931	28	49	54	68
USA	0.921	Seattle	0.94	31	41	38	55
USA	0.921	Washington D.C.	0.94	26	13	26	39
Vietnam	0.703	Hanoi	0.744	77	82	89	100
Vietnam	0.703	Ho Chi Minh City	0.714	76	86	93	103
Wales	0.929	Cardiff	0.898				94
Yemen	0.455	Sana'a	0.521				140

# IMD Smart City Index

# 2023

A User's Guide

# IMD Smart City Index 2023

## A User's Guide

SMART  
CITY  
RANKING

**13**

Out of 141



12 out of 118  
in 2021

SMART  
CITY RATING

**BB**

A in 2021

FACTOR  
RATINGS

**BB**

STRUCTURES

**BB**

TECHNOLOGIES

GROUP

**3**

All ratings range  
from AAA to D

## Smart City Ranking

**Smart City Ranking:** The Ranking position of the city amongst the 141 cities measured, based upon the Rating and its components.

**Group:** Each city is assigned to one of four groups, based upon its HDI values.

**Smart City Rating and Factor Ratings:** The Ratings for each city are calculated from the city's performance relative to the other cities within the group.

The Methodology section provides the exact procedure for these calculations.

The 2021 Ranking and Rating are also shown for the 118 cities included in the last edition's index (2021).

### BACKGROUND INFORMATION

#### City

Population  
3,652,029

HDI  
0.911

(UN World Urbanisation Prospects 2022  
estimate)



Country	2018	2019	2020	2021	1 yr change
HDI	0.866	0.890	0.912	0.911	-0.001
Life expectancy at birth	77.8	78.0	79.0	78.7	-0.2
Expected years of schooling	13.6	14.3	15.7	15.7	+0.0
Mean years of schooling	11.0	12.1	12.7	12.7	+0.0
GNI per capita (PPP \$)	66,912	67,462	63,016	62,574	-443

## Background Information

This section presents the Human Development Index (HDI) at the city level taken from the Global Data Lab, and the population of the city as defined through the United Nations World Urbanization Prospects for the majority of cities, or Eurostat for some of European cities.

It also presents the United Nations HDI (country-level - for the parent economy of a given city) and its four components, as well as the city's position on the map. Please note: for Taipei City only, the data is calculated using the same methodology and comparable data.

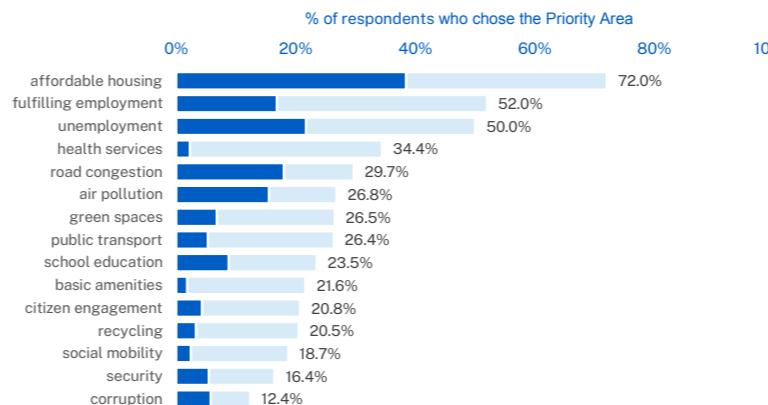
## Priority Areas

Summarizes the areas that the respondents perceive as the priority area for their city. From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. The total bar indicates the percentage of the respondents that included a given area as one of their five choices. The higher the percentage of responses per area, the greater the priority for the city. The left-hand section of each bar shows the Alignment - the proportion of those respondents who also answered the corresponding survey questions low. A strong Alignment implies that these areas also demand priority attention.

### PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left-hand, dark blue section of each bar shows the Alignment, i.e. the proportion of those respondents who also answered the survey on the corresponding area by giving it low priority. A strong Alignment (i.e. consistency across both areas explained) means that these areas may benefit from close observation.

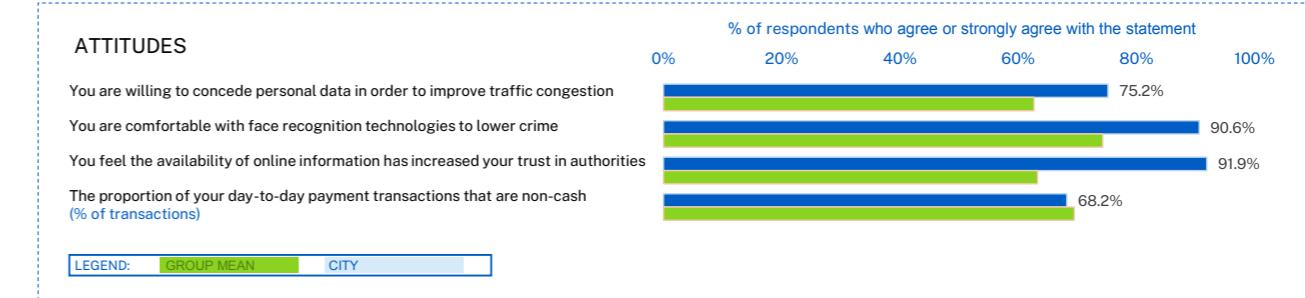


# IMD Smart City Index 2023

## A User's Guide

### Attitudes

Shows and compares the responses to three key privacy aspects (willingness to concede personal data, comfort vis-à-vis face recognition, and whether online information has increased trust in authorities) and the percentage of day-to-day transactions that are non-cash. The city is represented by the blue bar, while the group average is shown by the light red bar.



### Structures and Technologies

Key survey data collected on Structures (left side) and Technologies (right side), under five key areas: health and safety, mobility, activities, opportunities, and governance.

Each indicator presents the Score for the city and a comparison with its Group (1-4). Showing the Group's Minimum, Mean, and Maximum Scores (light red bar) alongside with the city (blue circle) allows a clear comparison of the city's performance in this indicator. The Methodology section provides the exact calculation of the Score.

This table can be read in two ways: down to examine all Structures or Technologies indicators, or across to examine a key area in both Structures and Technologies.



# IMD Smart City Index

# 2023

Methodology

# IMD Smart City Index 2023

## Methodology

1

The IMD Smart City Index 2023 assesses the perceptions of residents on issues related to structures and technology applications available to them in their city.

2

This edition of the SCI ranks 141 cities worldwide by capturing the perceptions of 120 residents in each city. The final score for each city is computed by using the perceptions of the last three years of the survey, with the weight of 3:2:1 for 2023:2021:2020.

3

There are two pillars for which perceptions from residents are solicited: The Structures pillar referring to the existing infrastructure of the cities, and the Technology pillar describing the technological provisions and services available to the inhabitants.

4

Each pillar is evaluated over five key areas: health and safety, mobility, activities, opportunities, and governance.

5

The cities are distributed into four groups based on the Global Data Lab's Human Development Index (HDI) score of the city they are part of.

6

Within each HDI group, cities are assigned a 'rating scale' (AAA to D) based on the perceptions-score of a given city compared to the scores of all other cities within the same group.

**For group 1** (highest HDI quartile), scale

**AAA-AA-A-BBB-BB**

**For group 2** (second HDI quartile), scale

**A-BBB-BB-B-CCC**

**For group 3** (third HDI quartile), scale

**BB-B-CCC-CC-C**

**For group 4** (lowest HDI quartile), scale

**CCC-CC-C-D**

7

**Rankings are then presented in two formats:**

- an overall ranking (1 to 141)
- a rating for each pillar and overall

# IMD Smart City Index

# 2023

City Profiles

# Abu Dhabi

SMART  
CITY  
RANKING

**13**

Out of 141



12 out of 118  
in 2021

SMART  
CITY RATING

**BB**

A in 2021

FACTOR  
RATINGS

**BB**

STRUCTURES

**BB**

TECHNOLOGIES

GROUP  
**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

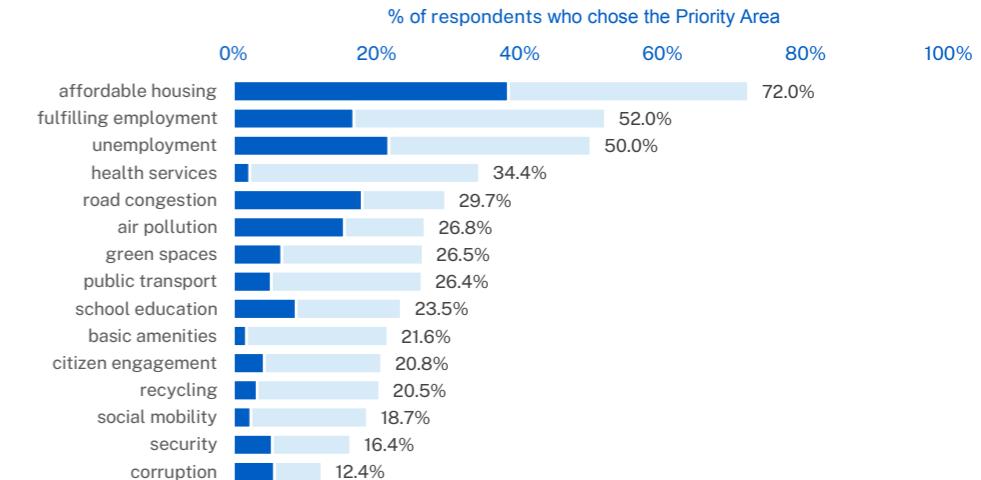
Population      HDI  
3,652,029      0.911

(UN World Urbanisation Prospects 2022  
estimate)



## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



The left-hand, dark blue section of each bar shows the Alignment, i.e. the proportion of those respondents who also answered the survey on the corresponding area by giving it low priority. A strong Alignment (i.e. consistency across both areas explained) means that these areas may benefit from close observation.

## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion



You are comfortable with face recognition technologies to lower crime



You feel the availability of online information has increased your trust in authorities



The proportion of your day-to-day payment transactions that are non-cash  
(% of transactions)



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

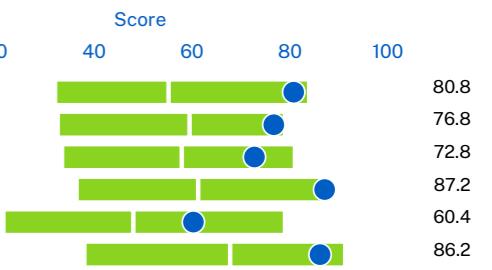
Basic sanitation meets the needs of the poorest areas  
Recycling services are satisfactory  
Public safety is not a problem  
Air pollution is not a problem  
Medical services provision is satisfactory  
Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

Online reporting of city maintenance problems provides a speedy solution  
A website or App allows residents to easily give away unwanted items  
Free public wifi has improved access to city services  
CCTV cameras has made residents feel safer  
A website or App allows residents to effectively monitor air pollution  
Arranging medical appointments online has improved access

## TECHNOLOGIES



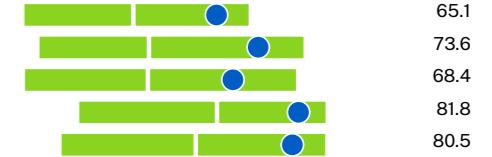
### Mobility

Traffic congestion is not a problem  
Public transport is satisfactory



### Mobility

Car-sharing Apps have reduced congestion  
Apps that direct you to an available parking space have reduced journey time  
Bicycle hiring has reduced congestion  
Online scheduling and ticket sales has made public transport easier to use  
The city provides information on traffic congestion through mobile phones



### Activities

Green spaces are satisfactory  
Cultural activities (shows, bars, and museums) are satisfactory



### Activities

Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

Employment finding services are readily available  
Most children have access to a good school  
Lifelong learning opportunities are provided by local institutions  
Businesses are creating new jobs  
Minorities feel welcome



### Opportunities (Work & School)

Online access to job listings has made it easier to find work  
IT skills are taught well in schools  
Online services provided by the city has made it easier to start a new business  
The current internet speed and reliability meet connectivity needs



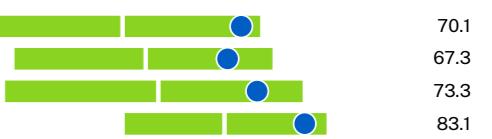
### Governance

Information on local government decisions are easily accessible  
Corruption of city officials is not an issue of concern  
Residents contribute to decision making of local government  
Residents provide feedback on local government projects



### Governance

Online public access to city finances has reduced corruption  
Online voting has increased participation  
An online platform where residents can propose ideas has improved city life  
Processing Identification Documents online has reduced waiting times



## SMART CITY RANKING

**133**

Out of 141



114 out of 118  
in 2021

## SMART CITY RATING

**D**

D in 2021

## FACTOR RATINGS

**C**

## STRUCTURES

**D**

## TECHNOLOGIES

## GROUP 4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population 153,983 HDI 0.646

(UN World Urbanisation Prospects 2022 estimate)



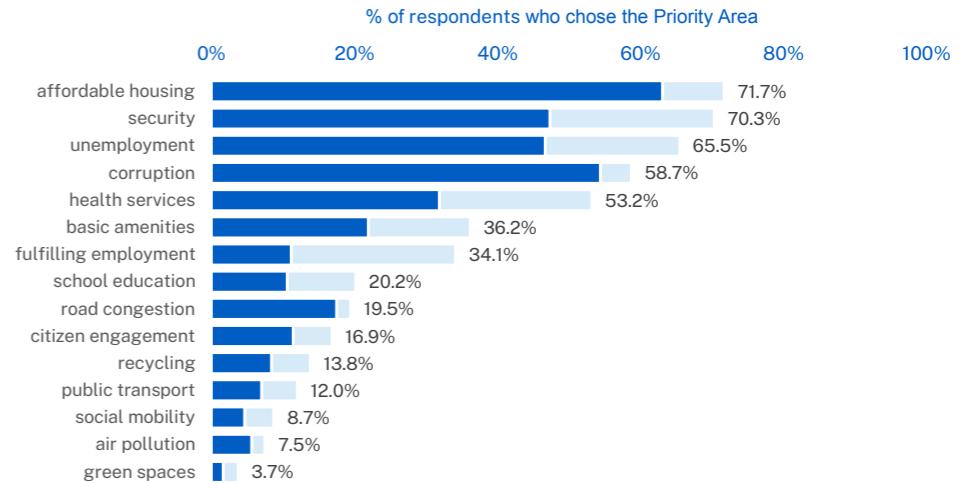
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

#### Country

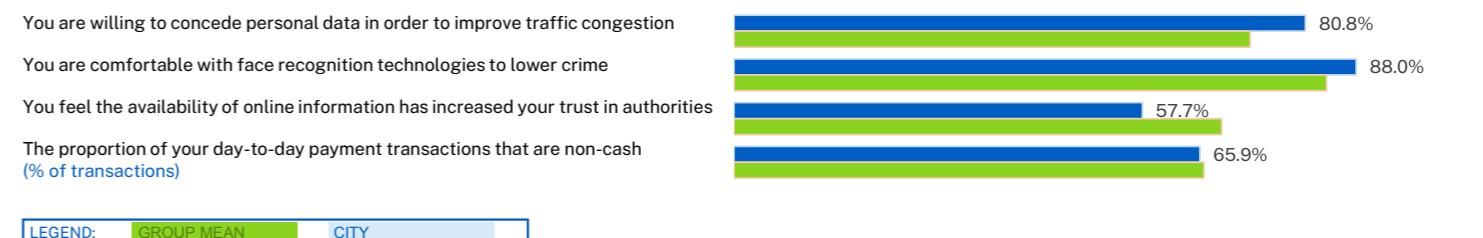
Country	2018	2019	2020	2021	1 yr change
HDI	0.534	0.539	0.535	0.535	+0.000
Life expectancy at birth	54.3	54.7	52.9	52.7	-0.2
Expected years of schooling	9.7	10.0	10.1	10.1	+0.0
Mean years of schooling	6.5	6.7	7.2	7.2	+0.0
GNI per capita (PPP \$)	5,086	4,910	4,740	4,790	+51

### PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

### STRUCTURES

Score

0 20 40 60 80 100

#### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

47.0

43.1

38.3

36.9

48.8

21.5

#### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

36.7

33.4

25.2

33.8

19.0

48.6

#### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

42.9

52.3

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

54.5

33.3

21.8

53.3

38.6

#### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

62.9

70.4

#### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

62.6

#### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

34.3

53.1

43.4

64.1

51.0

#### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

64.2

50.8

51.0

57.2

#### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

42.3

14.2

25.7

35.6

#### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

24.0

26.3

32.0

55.7

## SMART CITY RANKING

**138**

Out of 141

not out of 118  
in 2021

## SMART CITY RATING

**D**

not in 2021

## FACTOR RATINGS

**D**

STRUCTURES

**D**

TECHNOLOGIES

**4**

All ratings range  
from AAA to D

### BACKGROUND INFORMATION

#### City

Population      HDI  
2,605,402      0.707

(UN World Urbanisation Prospects 2022  
estimate)

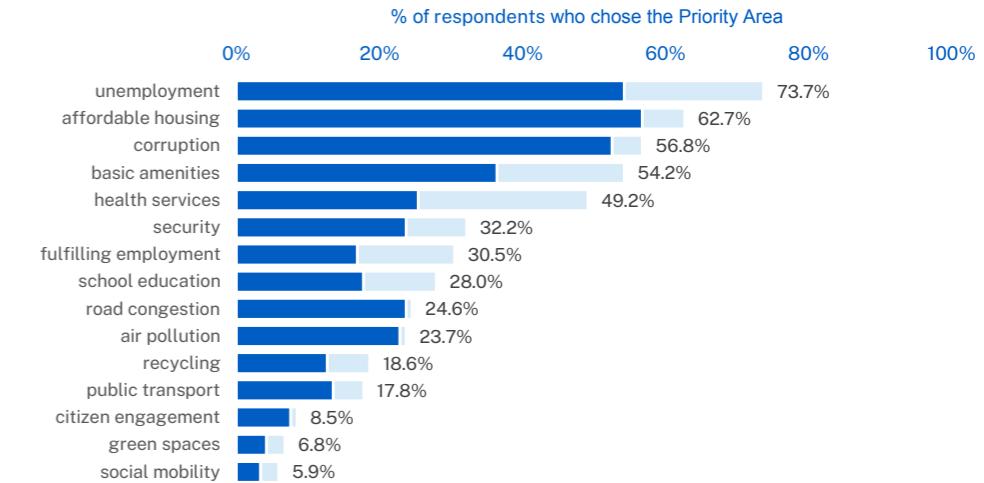


Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.620	0.631	0.632	0.632	+0.000
Life expectancy at birth	64.1	64.7	64.1	63.8	-0.3
Expected years of schooling	11.5	11.9	12.1	12.1	+0.0
Mean years of schooling	8.2	8.3	8.3	8.3	+0.0
GNI per capita (PPP \$)	5,072	5,307	5,601	5,745	+143

### PRIORITY AREAS

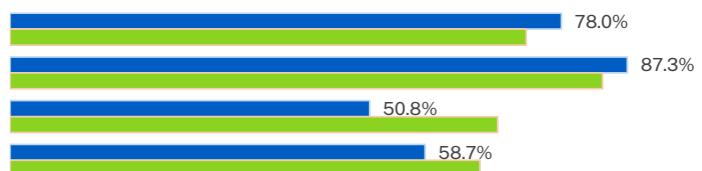
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
You are comfortable with face recognition technologies to lower crime  
You feel the availability of online information has increased your trust in authorities  
The proportion of your day-to-day payment transactions that are non-cash  
(% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

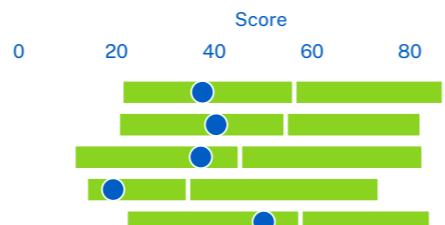
not in 2021

### STRUCTURES

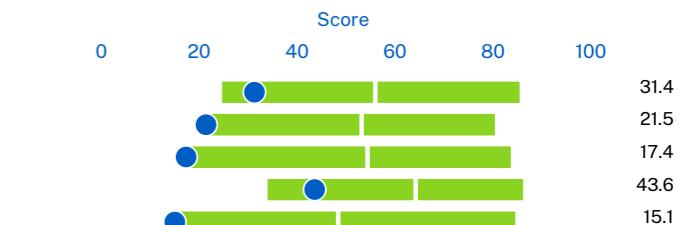
LEGEND: MIN CITY MEAN GROUP MAX

#### Health & Safety

Basic sanitation meets the needs of the poorest areas  
Recycling services are satisfactory  
Public safety is not a problem  
Air pollution is not a problem  
Medical services provision is satisfactory  
Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### TECHNOLOGIES



#### Mobility

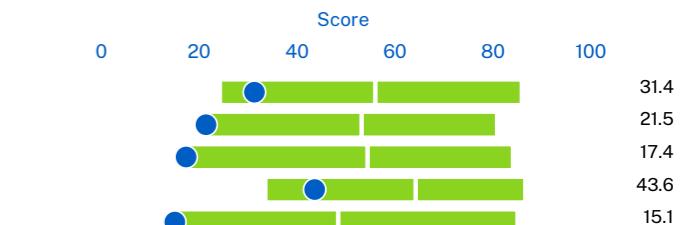
Traffic congestion is not a problem  
Public transport is satisfactory

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution  
A website or App allows residents to easily give away unwanted items  
Free public wifi has improved access to city services  
CCTV cameras has made residents feel safer  
A website or App allows residents to effectively monitor air pollution  
Arranging medical appointments online has improved access

#### Mobility

Car-sharing Apps have reduced congestion  
Apps that direct you to an available parking space have reduced journey time  
Bicycle hiring has reduced congestion  
Online scheduling and ticket sales has made public transport easier to use  
The city provides information on traffic congestion through mobile phones

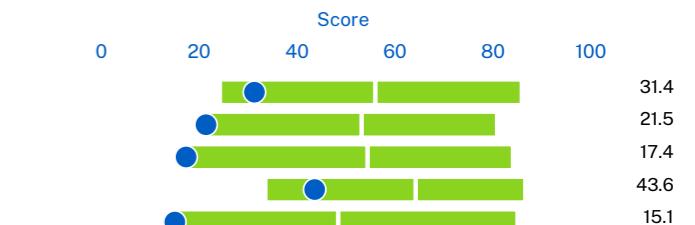


#### Activities

Green spaces are satisfactory  
Cultural activities (shows, bars, and museums) are satisfactory

#### Activities

Online purchasing of tickets to shows and museums has made it easier to attend

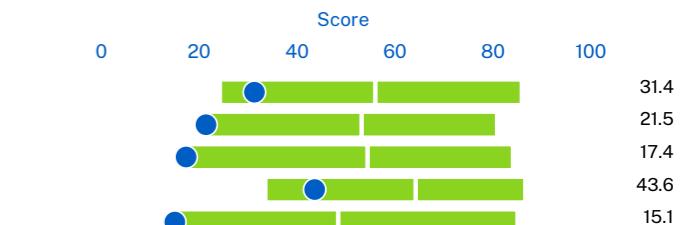


#### Opportunities (Work & School)

Employment finding services are readily available  
Most children have access to a good school  
Lifelong learning opportunities are provided by local institutions  
Businesses are creating new jobs  
Minorities feel welcome

#### Opportunities (Work & School)

Online access to job listings has made it easier to find work  
IT skills are taught well in schools  
Online services provided by the city has made it easier to start a new business  
The current internet speed and reliability meet connectivity needs



#### Governance

Information on local government decisions are easily accessible  
Corruption of city officials is not an issue of concern  
Residents contribute to decision making of local government  
Residents provide feedback on local government projects

#### Governance

Online public access to city finances has reduced corruption  
Online voting has increased participation  
An online platform where residents can propose ideas has improved city life  
Processing Identification Documents online has reduced waiting times

# Algiers

SMART  
CITY  
RANKING

**123**

Out of 141

not out of 118  
in 2021

SMART  
CITY RATING

**C**

not in 2021

FACTOR  
RATINGS

**C**

STRUCTURES

TECHNOLOGIES

**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
2,853,959      0.767

(UN World Urbanisation Prospects 2022  
estimate)

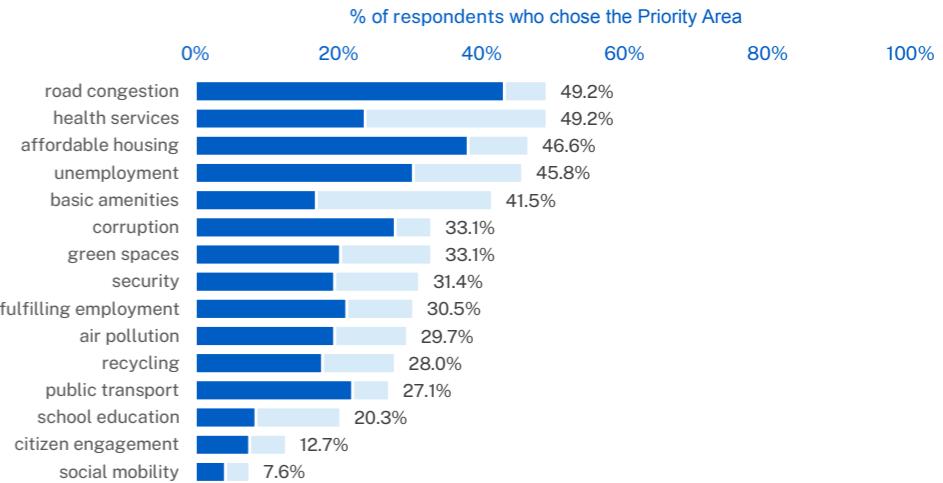


Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.745	0.748	0.736	0.745	+0.009
Life expectancy at birth	76.1	76.5	74.5	76.4	+1.9
Expected years of schooling	14.6	14.6	14.6	14.6	+0.0
Mean years of schooling	8.0	8.1	8.1	8.1	+0.0
GNI per capita (PPP \$)	11,344	11,242	10,530	10,800	+270

## PRIORITY AREAS

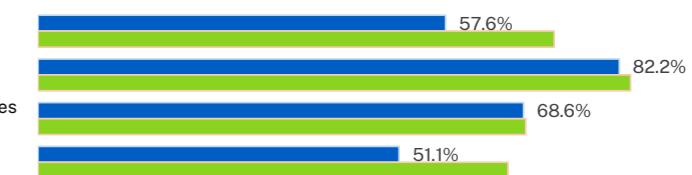
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



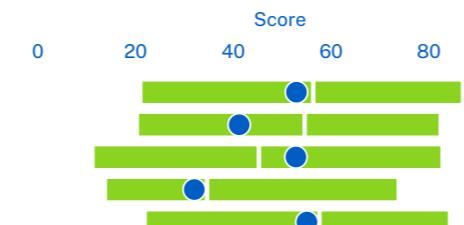
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



Score

53.0

41.2

52.8

32.1

55.1

32.3

### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



Score

17.4

35.6

### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



Score

52.5

49.4

### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



Score

37.9

64.4

64.7

39.5

55.4

### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



Score

50.3

27.1

35.6

41.9

## TECHNOLOGIES

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



Score

48.6

41.9

40.8

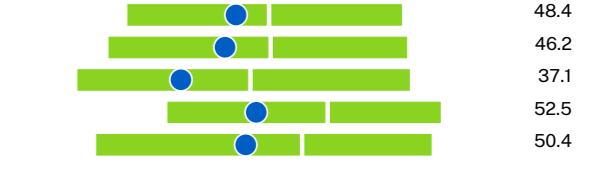
60.9

42.9

55.5

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



Score

48.4

46.2

37.1

52.5

50.4

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

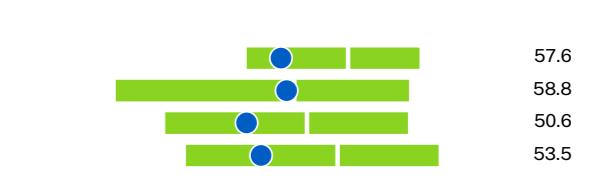


Score

50.7

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



Score

57.6

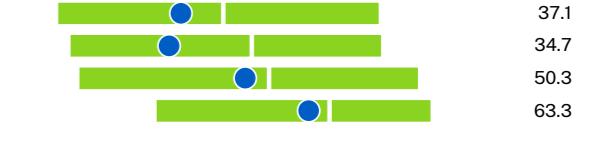
58.8

50.6

53.5

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



Score

37.1

34.7

50.3

63.3

# Amman

SMART  
CITY  
RANKING

**135**

Out of 141

not out of 118  
in 2021

SMART  
CITY RATING

**D**

not in 2021

FACTOR  
RATINGS

**D**

STRUCTURES

**D**

TECHNOLOGIES

**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
4,007,526      0.737

(UN Data)



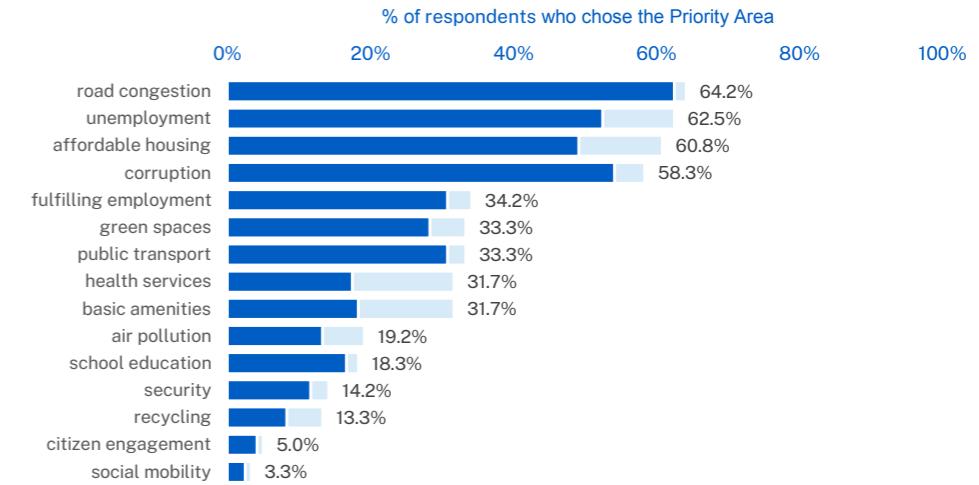
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.723	0.727	0.723	0.720	-0.003
Life expectancy at birth	75.8	76.0	75.2	74.3	-0.9
Expected years of schooling	10.4	10.6	10.7	10.7	+0.0
Mean years of schooling	10.4	10.4	10.5	10.5	+0.0
GNI per capita (PPP \$)	9,967	10,073	9,789	9,924	+135

## PRIORITY AREAS

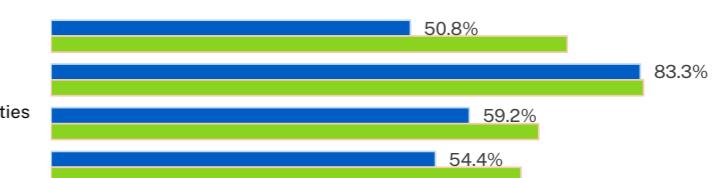
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



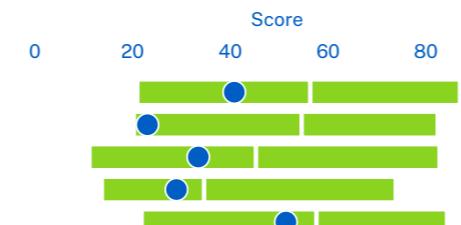
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

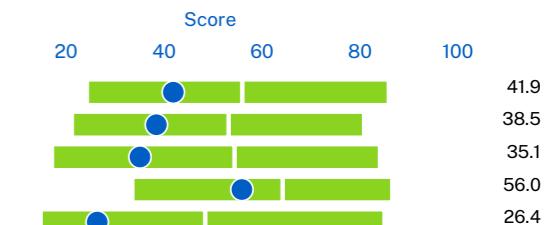
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



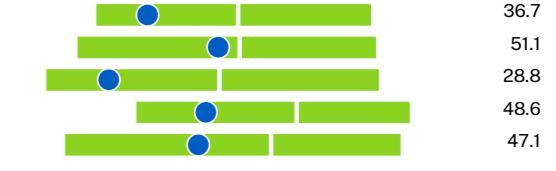
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



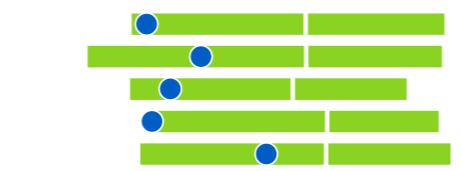
### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



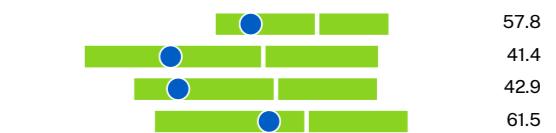
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



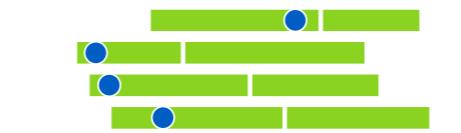
### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



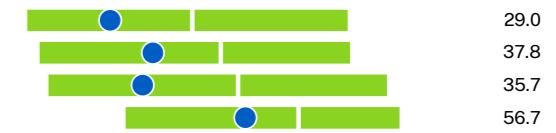
### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Amsterdam

SMART  
CITY  
RANKING

**15**

Out of 141



13 out of 118  
in 2021

SMART  
CITY RATING

**A**

A in 2021

FACTOR  
RATINGS

**BBB**

STRUCTURES

**A**

TECHNOLOGIES

GROUP  
**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
2,888,486      0.962

(Eurostat)

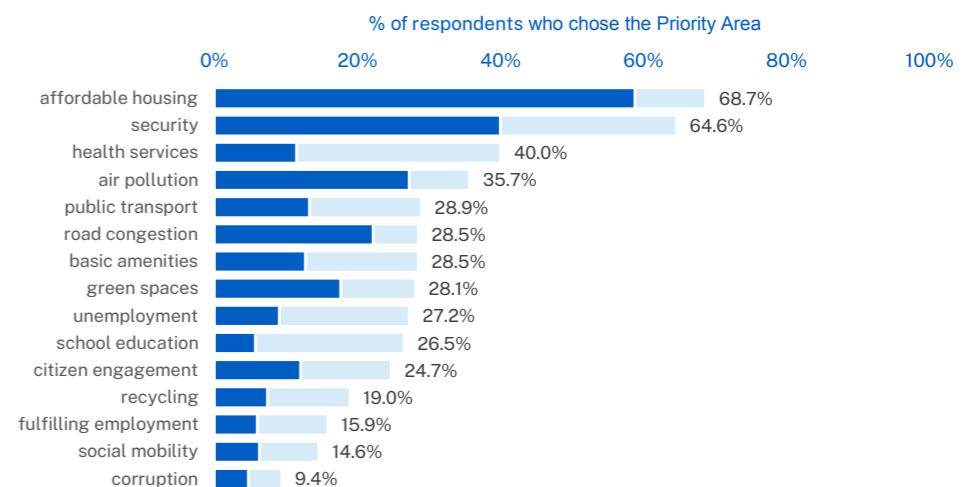


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.934	0.944	0.939	0.941	+0.002
Life expectancy at birth	82.1	82.3	81.6	81.7	+0.0
Expected years of schooling	18.0	18.5	18.0	18.0	+0.0
Mean years of schooling	12.2	12.4	12.6	12.6	+0.0
GNI per capita (PPP \$)	50,013	57,707	53,504	55,979	+2,476

## PRIORITY AREAS

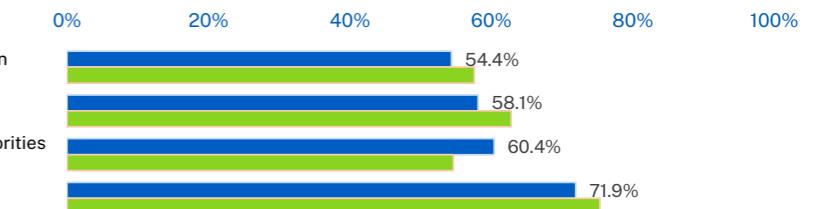
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
You are comfortable with face recognition technologies to lower crime  
You feel the availability of online information has increased your trust in authorities  
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas  
Recycling services are satisfactory  
Public safety is not a problem  
Air pollution is not a problem  
Medical services provision is satisfactory  
Finding housing with rent equal to 30% or less of a monthly salary is not a problem



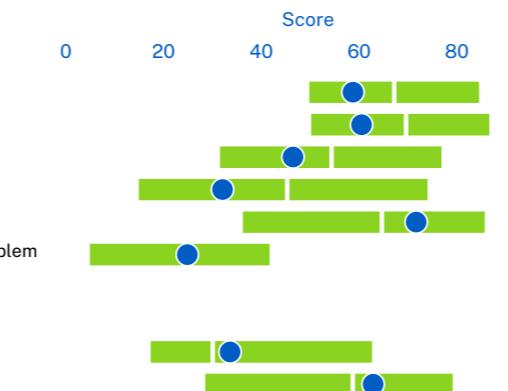
### Health & Safety

Online reporting of city maintenance problems provides a speedy solution  
A website or App allows residents to easily give away unwanted items  
Free public wifi has improved access to city services  
CCTV cameras has made residents feel safer  
A website or App allows residents to effectively monitor air pollution  
Arranging medical appointments online has improved access

## TECHNOLOGIES

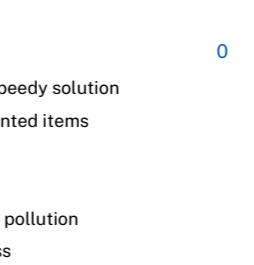
### Mobility

Traffic congestion is not a problem  
Public transport is satisfactory



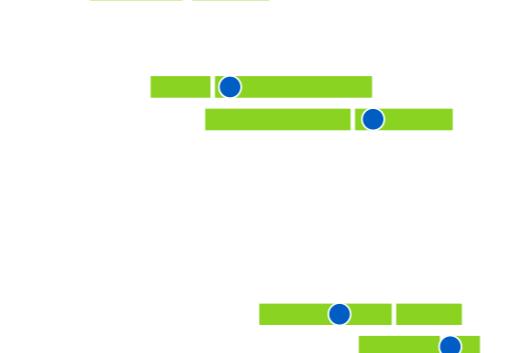
### Mobility

Car-sharing Apps have reduced congestion  
Apps that direct you to an available parking space have reduced journey time  
Bicycle hiring has reduced congestion  
Online scheduling and ticket sales has made public transport easier to use  
The city provides information on traffic congestion through mobile phones



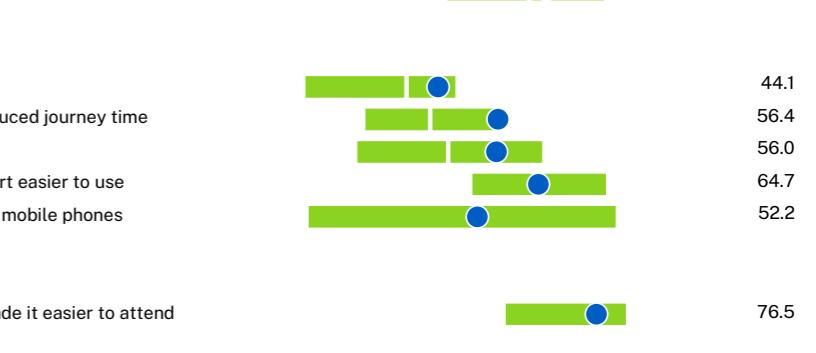
### Activities

Green spaces are satisfactory  
Cultural activities (shows, bars, and museums) are satisfactory



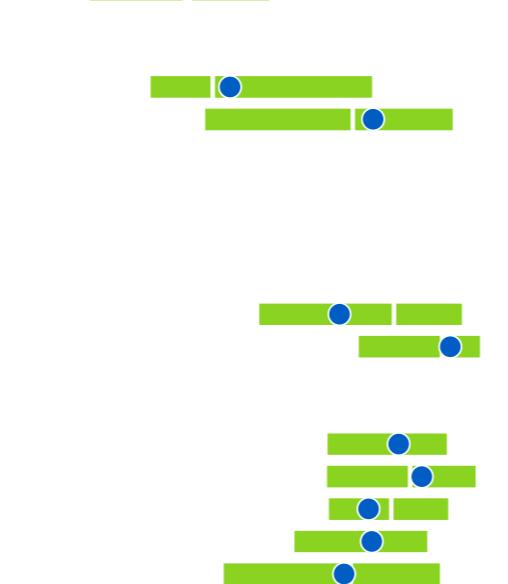
### Activities

Online purchasing of tickets to shows and museums has made it easier to attend



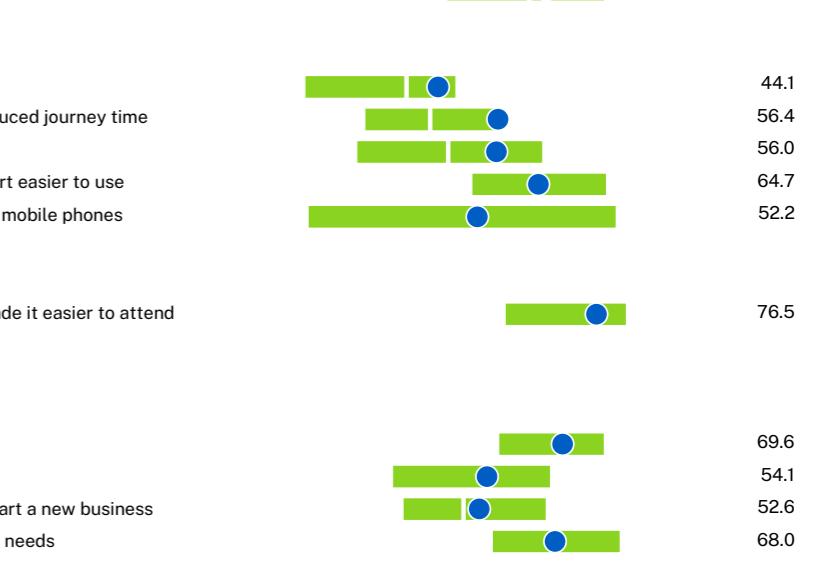
### Opportunities (Work & School)

Employment finding services are readily available  
Most children have access to a good school  
Lifelong learning opportunities are provided by local institutions  
Businesses are creating new jobs  
Minorities feel welcome



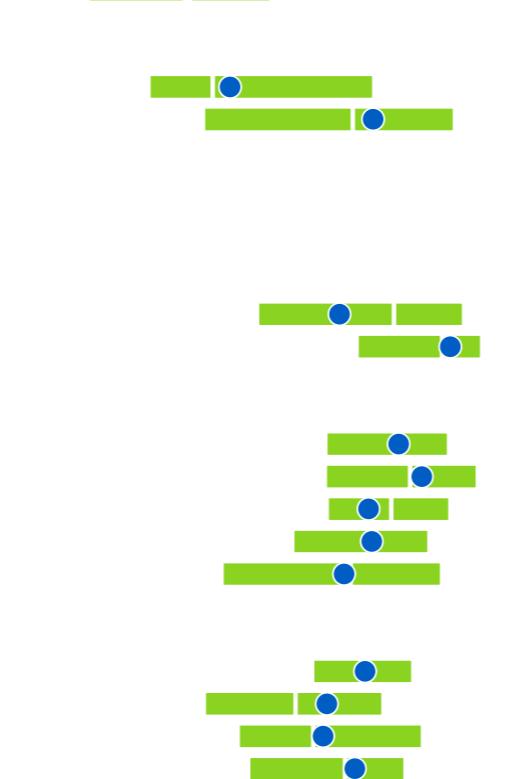
### Opportunities (Work & School)

Online access to job listings has made it easier to find work  
IT skills are taught well in schools  
Online services provided by the city has made it easier to start a new business  
The current internet speed and reliability meet connectivity needs



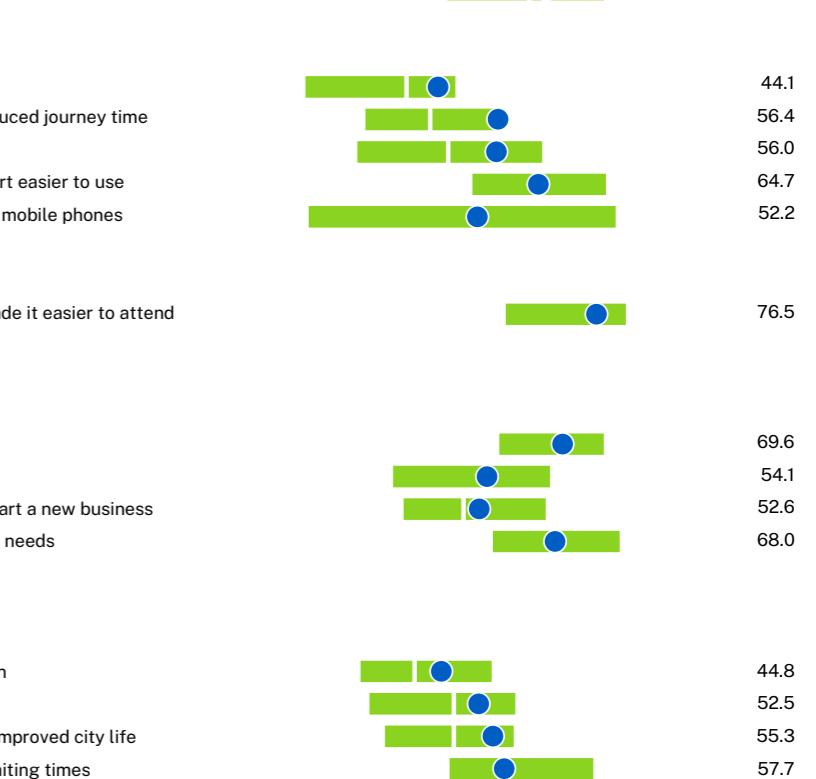
### Governance

Information on local government decisions are easily accessible  
Corruption of city officials is not an issue of concern  
Residents contribute to decision making of local government  
Residents provide feedback on local government projects



### Governance

Online public access to city finances has reduced corruption  
Online voting has increased participation  
An online platform where residents can propose ideas has improved city life  
Processing Identification Documents online has reduced waiting times



# Ankara

SMART  
CITY  
RANKING

**90**

Out of 141



75 out of 118  
in 2021

SMART  
CITY RATING

**CCC**

CCC in 2021

FACTOR  
RATINGS

**B**

STRUCTURES

**CCC**

TECHNOLOGIES

GROUP  
**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
5,663,322      0.854

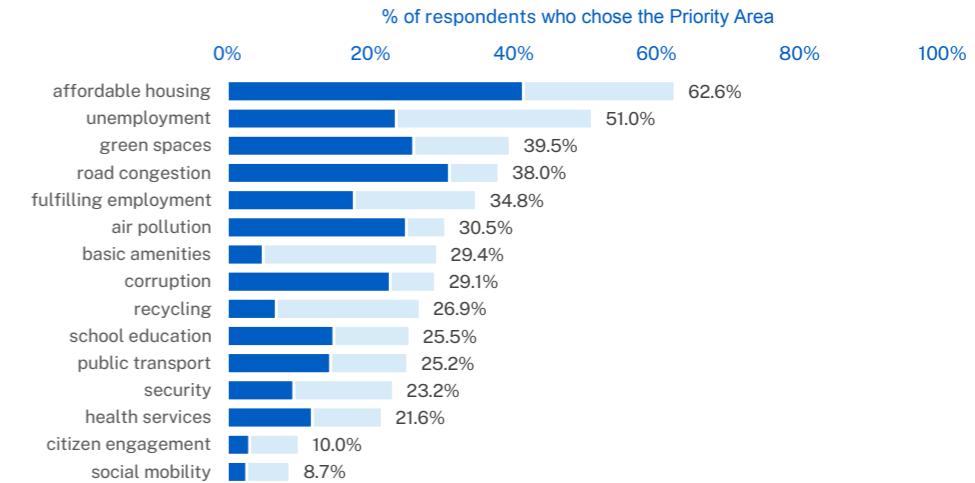
(Eurostat)



Country	2018	2019	2020	2021	1 yr change
HDI	0.807	0.820	0.833	0.838	+0.005
Life expectancy at birth	77.4	77.7	75.9	76.0	+0.2
Expected years of schooling	16.4	16.6	18.0	18.0	+0.0
Mean years of schooling	7.7	8.1	8.6	8.6	+0.0
GNI per capita (PPP \$)	24,905	27,701	28,317	31,033	+2,715

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

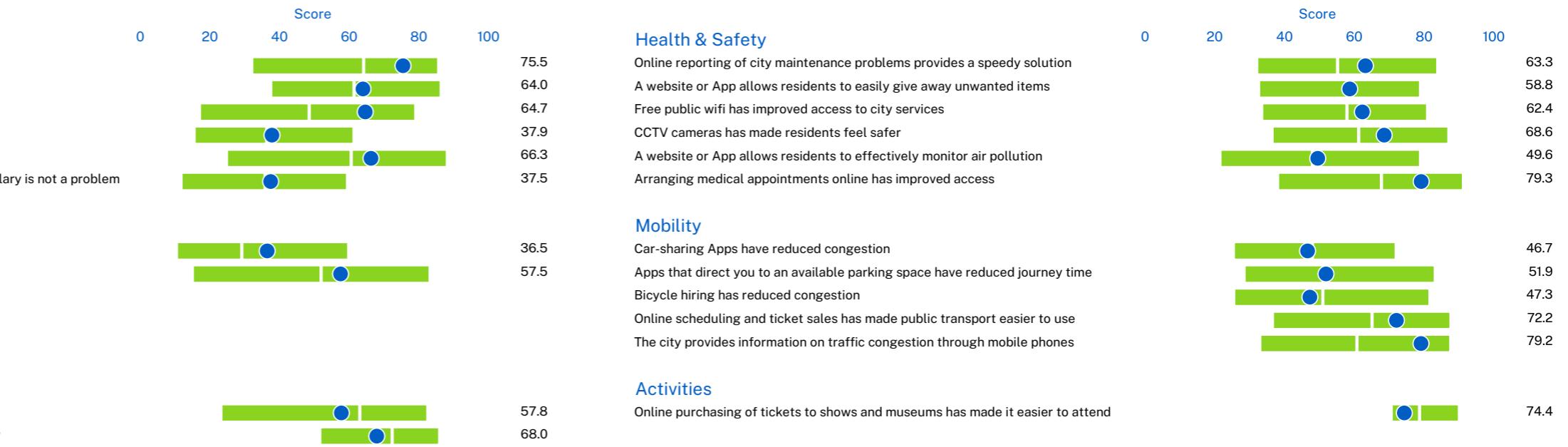
% of respondents who agree or strongly agree with the statement



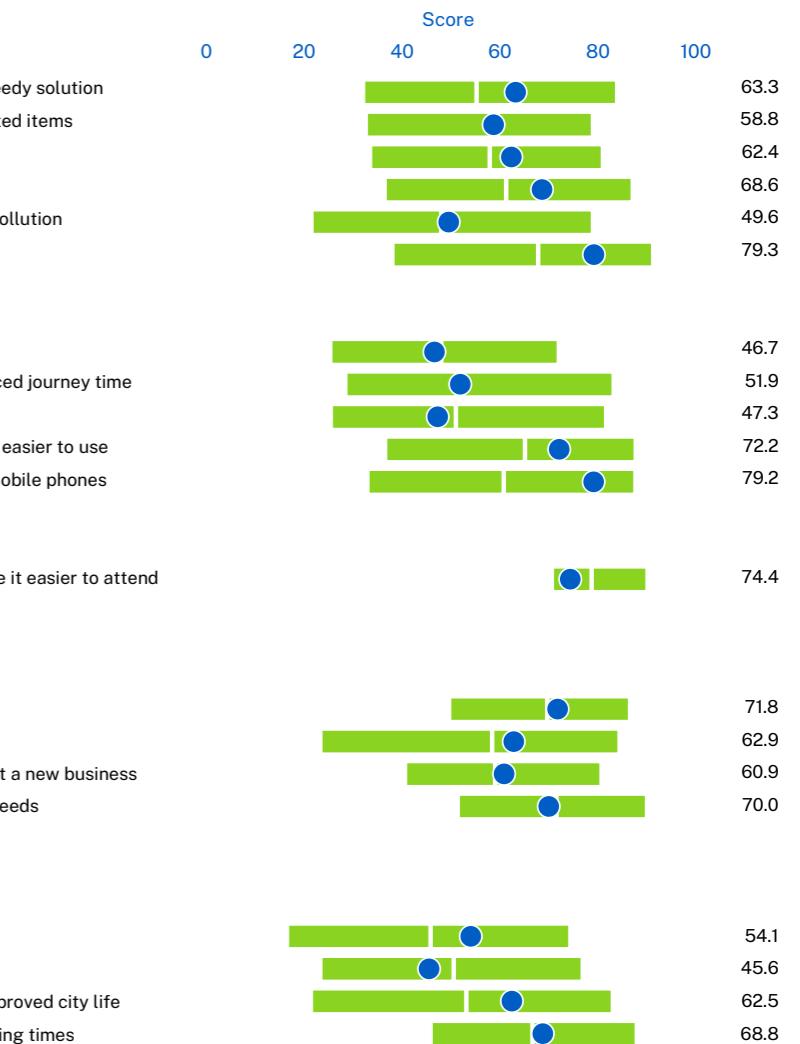
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES



## TECHNOLOGIES



# Athens

SMART  
CITY  
RANKING

**113**

Out of 141



108 out of 118  
in 2021

SMART  
CITY RATING

**C**

C in 2021

FACTOR  
RATINGS

**C**

STRUCTURES

**C**

TECHNOLOGIES

GROUP  
**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

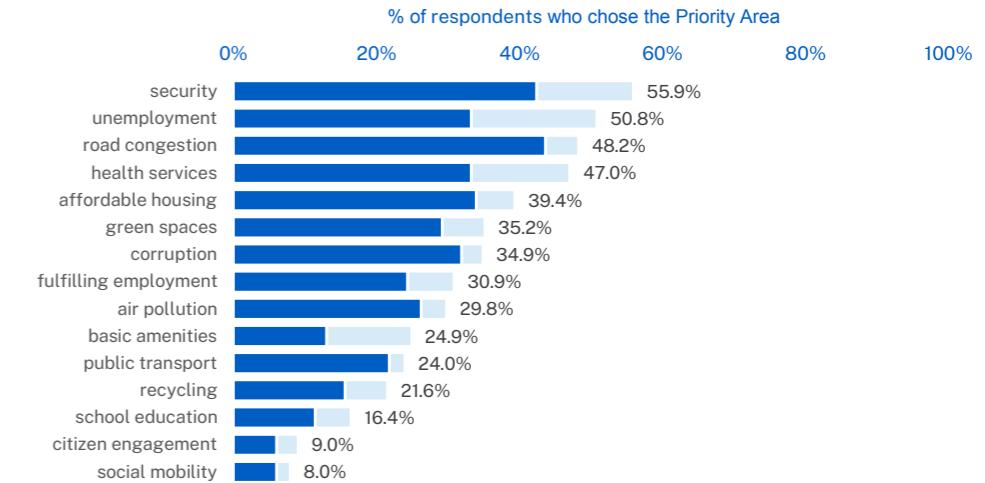
Population      HDI  
3,736,737      0.909  
(Eurostat)



Country	2018	2019	2020	2021	1 yr change
HDI	0.872	0.888	0.886	0.887	+0.001
Life expectancy at birth	82.1	82.2	80.9	80.1	-0.8
Expected years of schooling	17.3	17.9	18.0	18.0	+0.0
Mean years of schooling	10.5	10.6	11.4	11.4	+0.0
GNI per capita (PPP \$)	24,909	30,155	26,681	29,002	+2,322

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



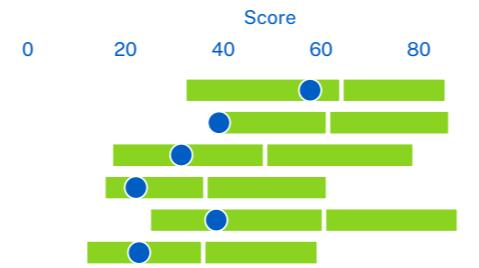
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

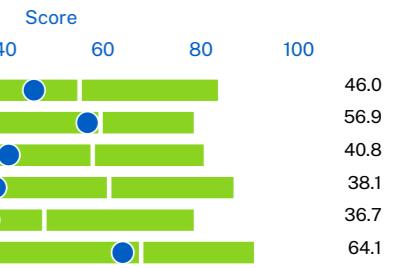
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



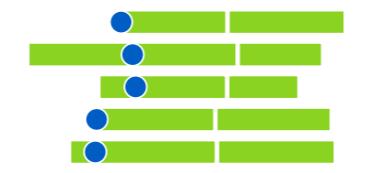
### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



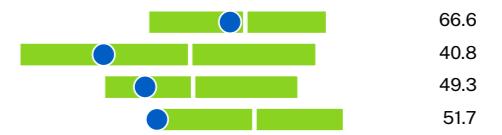
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Auckland

SMART  
CITY  
RANKING

**22**

Out of 141



16 out of 118  
in 2021

SMART  
CITY RATING

**A**

AA in 2021

FACTOR  
RATINGS

**A**

STRUCTURES

**A**

TECHNOLOGIES

GROUP  
**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 1,346,091  
(UN Data)

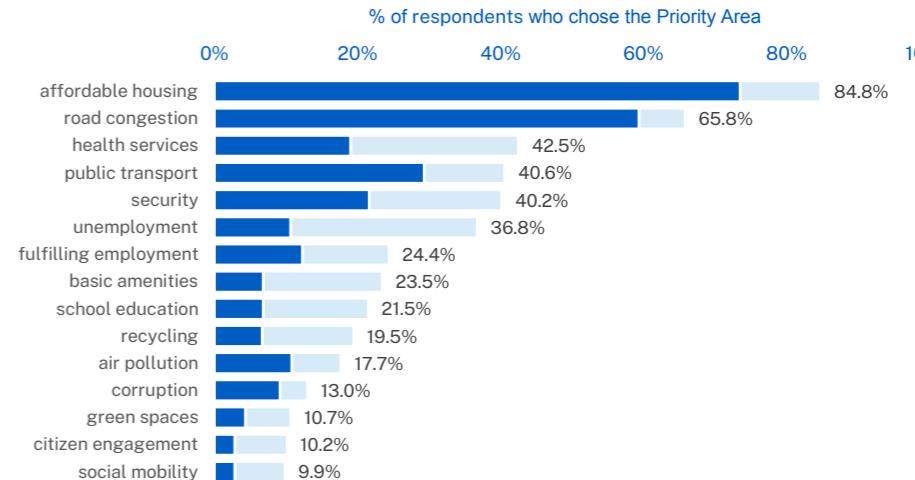


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.936	0.937	0.936	0.937	+0.001
Life expectancy at birth	82.4	82.6	82.7	82.5	-0.3
Expected years of schooling	18.0	18.0	18.0	18.0	+0.0
Mean years of schooling	13.1	7.9	8.7	8.7	+0.0
GNI per capita (PPP \$)	16,129	17,781	16,804	17,030	+226

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



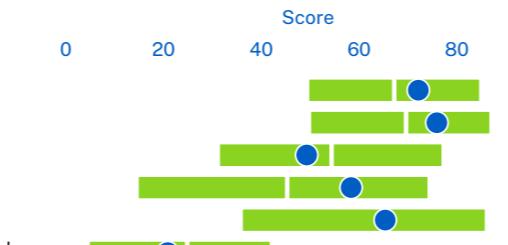
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

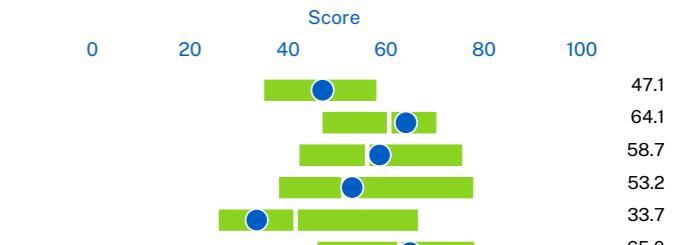
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



## TECHNOLOGIES

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

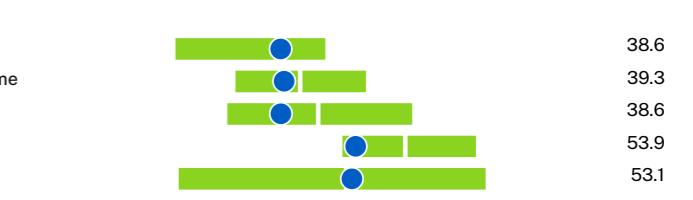


### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

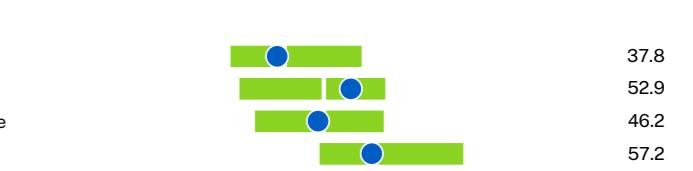


### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Bangkok

SMART  
CITY  
RANKING

**88**

Out of 141

86 out of 118  
in 2021

SMART  
CITY RATING

**B**

CCC in 2021

FACTOR  
RATINGS

**CCC**

**B**

STRUCTURES

TECHNOLOGIES

GROUP

**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 10 900 HDI 0.839

(UN World Urbanisation Prospects 2022 estimate)



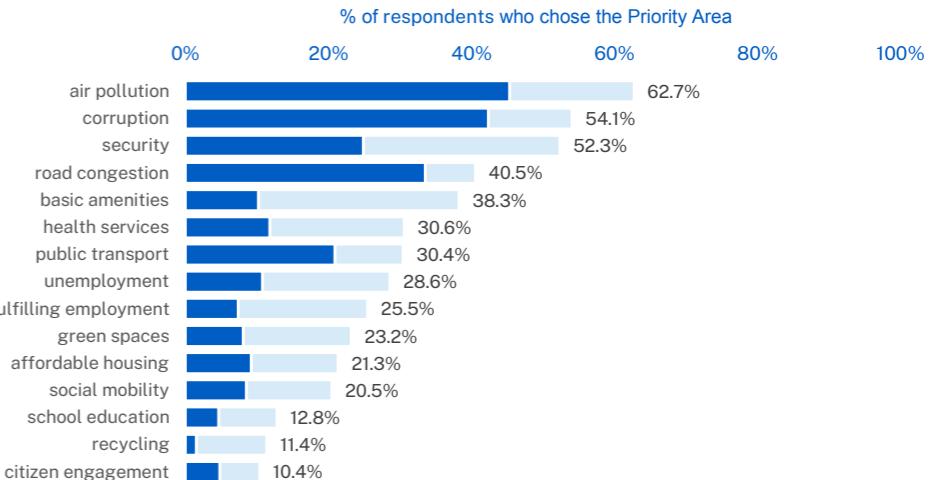
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.765	0.777	0.802	0.800	-0.002
Life expectancy at birth	76.9	77.2	79.3	78.7	-0.5
Expected years of schooling	14.7	15.0	15.9	15.9	+0.0
Mean years of schooling	7.7	7.9	8.7	8.7	+0.0
GNI per capita (PPP \$)	16,129	17,781	16,804	17,030	+226

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



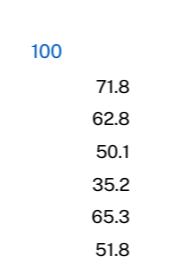
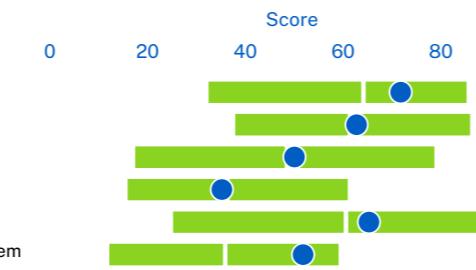
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



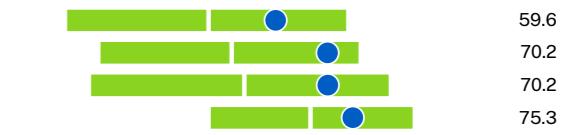
### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Barcelona

SMART  
CITY  
RANKING

**75**

Out of 141



70 out of 118  
in 2021

SMART  
CITY RATING

**BB**

BB in 2021

FACTOR  
RATINGS

**BB**

STRUCTURES

**BB**

TECHNOLOGIES

GROUP  
**2**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
7,671,252      0.916

(Eurostat)



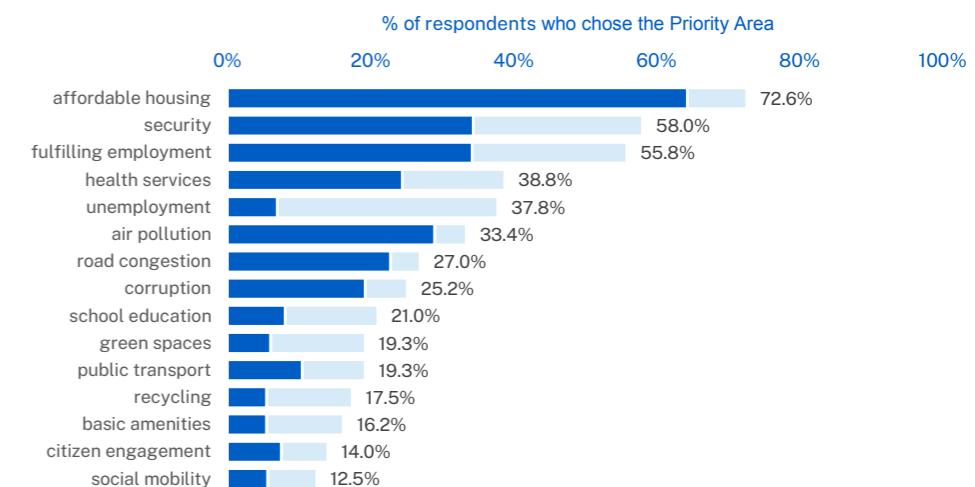
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.893	0.904	0.899	0.905	+0.006
Life expectancy at birth	83.4	83.6	82.3	83.0	+0.7
Expected years of schooling	17.9	17.6	17.9	17.9	+0.0
Mean years of schooling	9.8	10.3	10.6	10.6	+0.0
GNI per capita (PPP \$)	35,041	40,975	36,516	38,354	+1,838

## PRIORITY AREAS

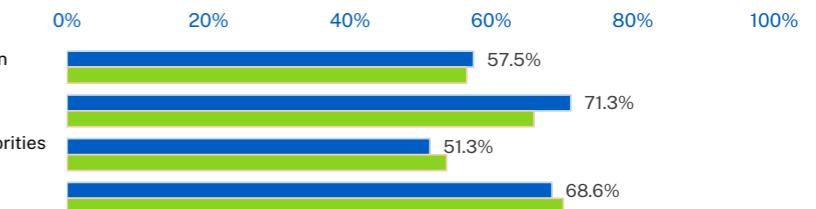
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
You are comfortable with face recognition technologies to lower crime  
You feel the availability of online information has increased your trust in authorities  
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Score

0 20 40 60 80 100

65.0

61.0

49.1

26.8

53.0

18.8

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

Score

0 20 40 60 80 100

49.3

55.7

53.6

42.6

41.1

66.3

### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

Score

0 20 40 60 80 100

27.4

64.1

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

Score

0 20 40 60 80 100

43.9

47.1

55.0

63.6

61.7

### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

Score

0 20 40 60 80 100

62.4

76.0

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

Score

0 20 40 60 80 100

78.8

### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

Score

0 20 40 60 80 100

73.9

61.5

67.1

45.3

51.1

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

Score

0 20 40 60 80 100

63.7

57.4

52.5

73.5

### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

Score

0 20 40 60 80 100

50.1

34.4

35.5

42.5

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

Score

0 20 40 60 80 100

36.8

46.1

48.7

60.9

# Beijing

SMART  
CITY  
RANKING

**12**

Out of 141



17 out of 118  
in 2021

SMART  
CITY RATING

**BB**

BB in 2021

FACTOR  
RATINGS

**BB**

STRUCTURES

**BB**

TECHNOLOGIES

GROUP  
**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
21 333      0.907

(UN World Urbanisation Prospects 2022  
estimate)



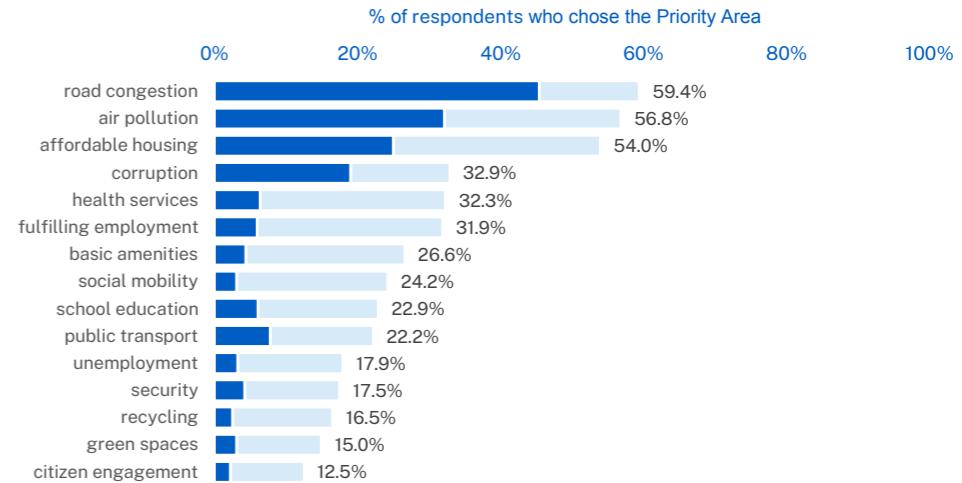
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.758	0.761	0.764	0.768	+0.004
Life expectancy at birth	76.7	76.9	78.1	78.2	+0.1
Expected years of schooling	13.9	14.0	14.2	14.2	+0.0
Mean years of schooling	7.9	8.1	7.6	7.6	+0.0
GNI per capita (PPP \$)	16,127	16,057	16,201	17,504	+1,303

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



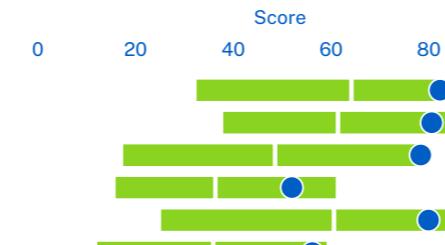
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Beirut

SMART  
CITY  
RANKING

**139**

Out of 141

not out of 118  
in 2021

SMART  
CITY RATING

**D**

not in 2021

FACTOR  
RATINGS

**D**

STRUCTURES

**D**

TECHNOLOGIES

**4**

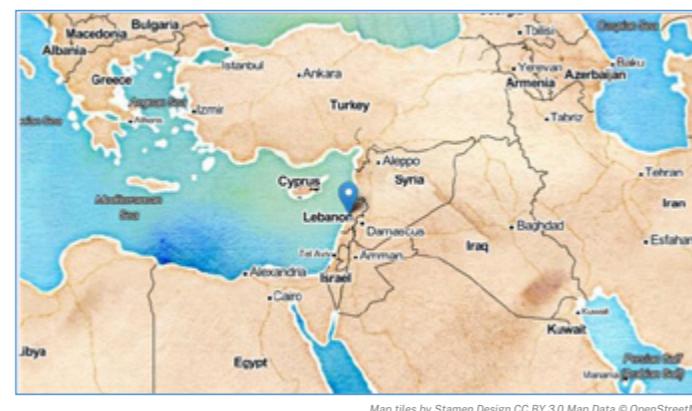
All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
2,433,155      0.677

(UN World Urbanisation Prospects 2022  
estimate)



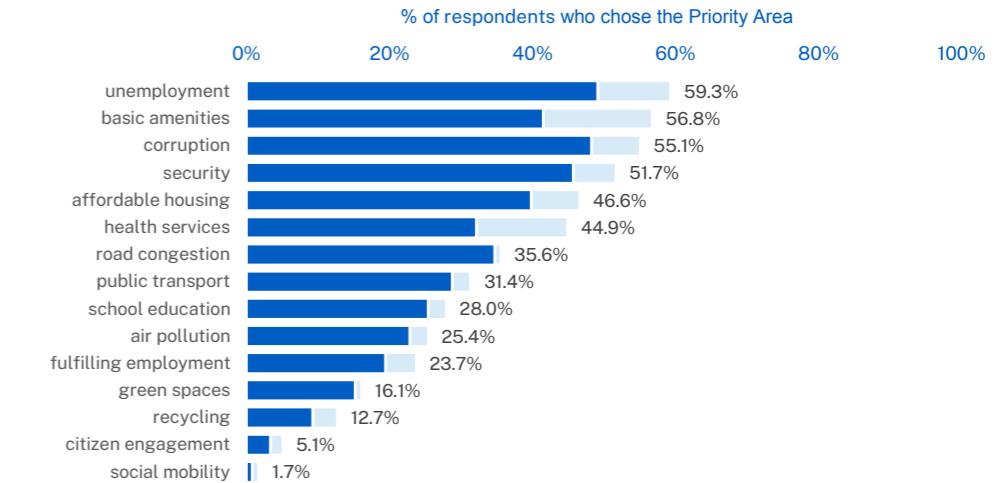
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.750	0.745	0.726	0.706	-0.020
Life expectancy at birth	79.7	79.2	77.8	75.1	-2.8
Expected years of schooling	11.3	11.3	11.3	11.3	+0.0
Mean years of schooling	8.7	8.7	8.7	8.7	+0.0
GNI per capita (PPP \$)	15,586	14,378	11,201	9,526	-1,676

## PRIORITY AREAS

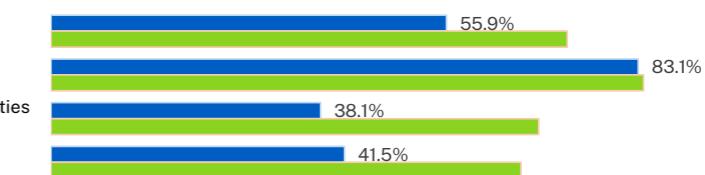
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



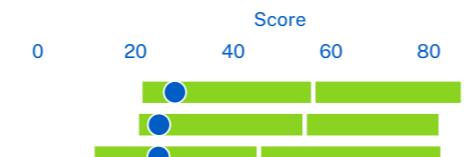
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

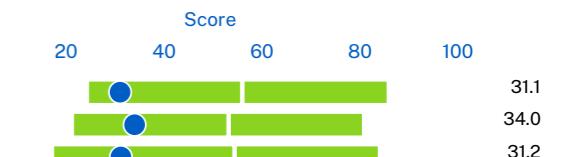
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Technologies

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



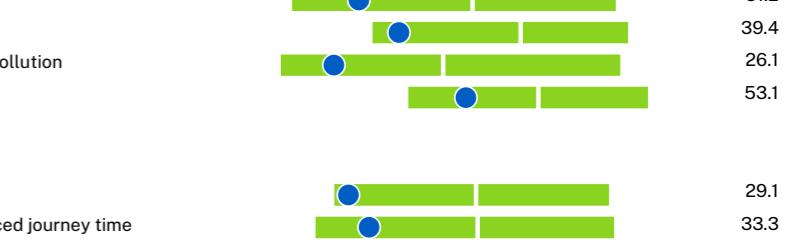
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Activities

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

### Score

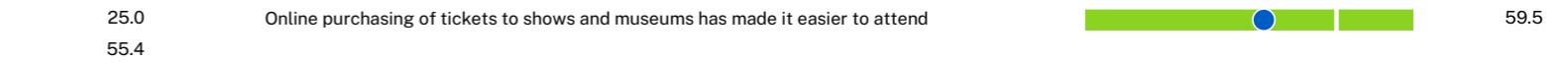


### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Opportunities (Work & School)

- Online purchasing of tickets to shows and museums has made it easier to attend



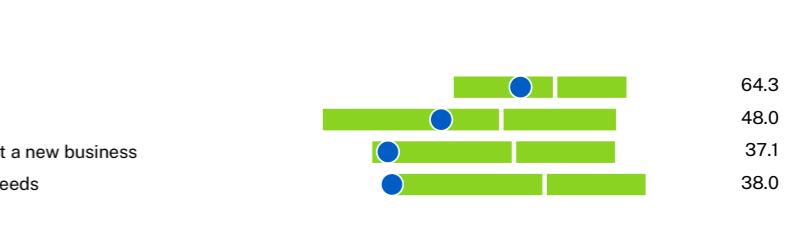
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

### Score

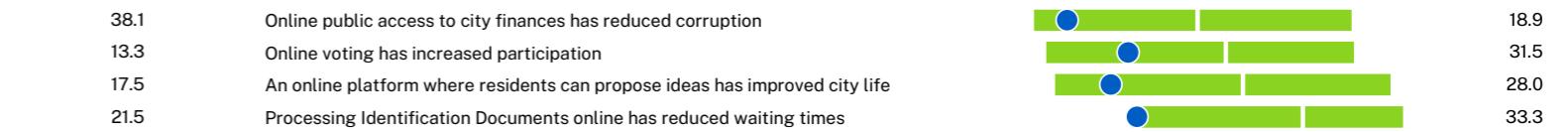


### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Belfast

SMART  
CITY  
RANKING

**95**

Out of 141

not out of 118  
in 2021

SMART  
CITY RATING

**CC**

not in 2021

FACTOR  
RATINGS

**CCC**

STRUCTURES

**CC**

TECHNOLOGIES

GROUP

**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
341,506      0.896

(Eurostat)



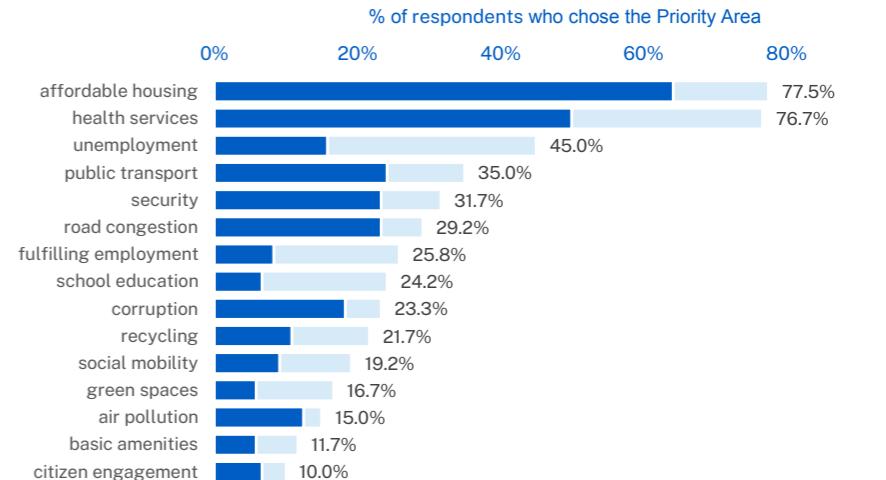
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.929	0.935	0.924	0.929	+0.005
Life expectancy at birth	81.1	81.7	80.4	80.7	+0.3
Expected years of schooling	17.3	17.3	17.3	17.3	+0.0
Mean years of schooling	13.2	13.3	13.4	13.4	+0.0
GNI per capita (PPP \$)	46,226	47,252	42,375	45,225	+2,850

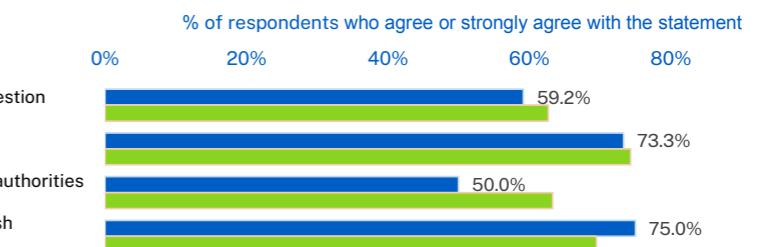
## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



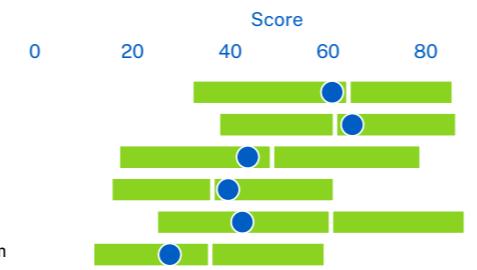
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



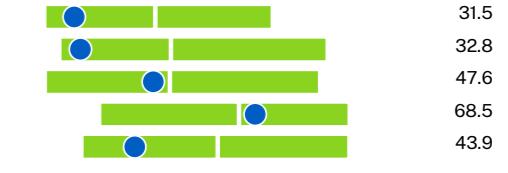
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



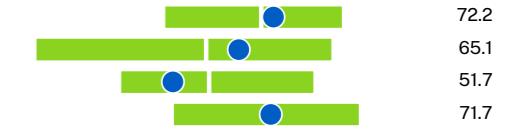
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



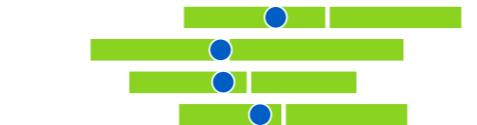
### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Bengaluru

SMART  
CITY  
RANKING  
**110**

Out of 141



97 out of 118  
in 2021

SMART  
CITY RATING

**CC**

CC in 2021

FACTOR  
RATINGS

**CC**

STRUCTURES

**CC**

TECHNOLOGIES

GROUP  
**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
13,193,035      0.667

(UN World Urbanisation Prospects 2022  
estimate)

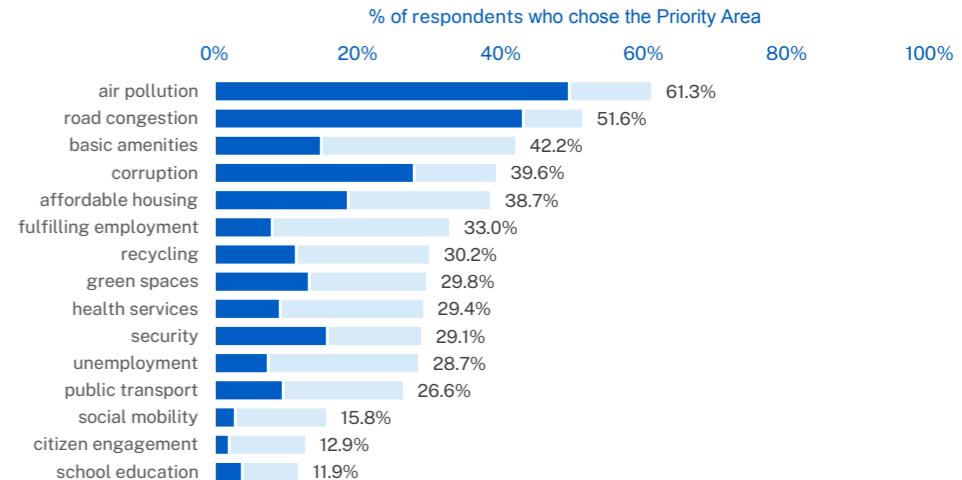


Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.647	0.645	0.642	0.633	-0.009
Life expectancy at birth	69.4	69.7	70.2	67.2	-2.9
Expected years of schooling	12.3	12.2	11.9	11.9	+0.0
Mean years of schooling	6.5	6.5	6.7	6.7	+0.0
GNI per capita (PPP \$)	6,829	6,681	6,107	6,590	+482

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement

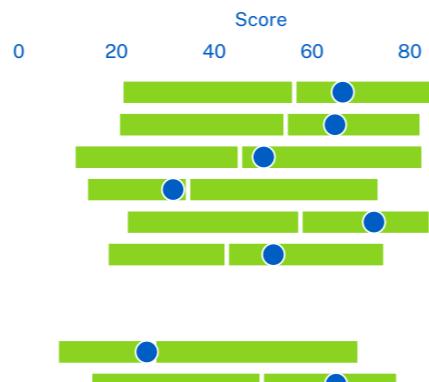


LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

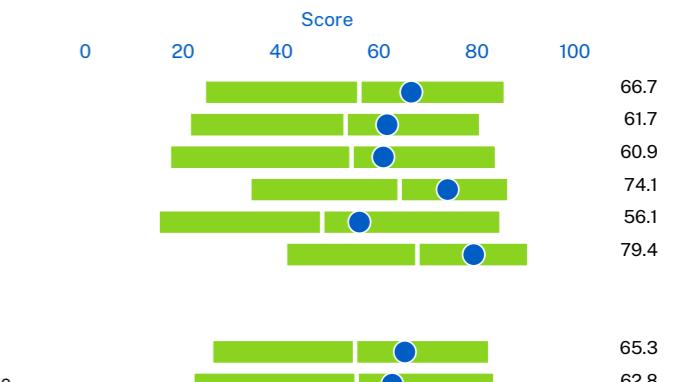
## STRUCTURES

- ### Health & Safety
- Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem



## TECHNOLOGIES

- ### Health & Safety
- Online reporting of city maintenance problems provides a speedy solution
  - A website or App allows residents to easily give away unwanted items
  - Free public wifi has improved access to city services
  - CCTV cameras has made residents feel safer
  - A website or App allows residents to effectively monitor air pollution
  - Arranging medical appointments online has improved access



- ### Mobility
- Traffic congestion is not a problem
  - Public transport is satisfactory

Score

## Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



- ### Activities
- Green spaces are satisfactory
  - Cultural activities (shows, bars, and museums) are satisfactory

## Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



- ### Opportunities (Work & School)
- Employment finding services are readily available
  - Most children have access to a good school
  - Lifelong learning opportunities are provided by local institutions
  - Businesses are creating new jobs
  - Minorities feel welcome

## Opportunities (Work & School)

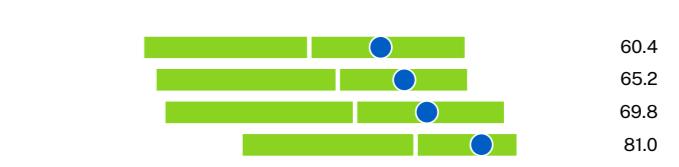
- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



- ### Governance
- Information on local government decisions are easily accessible
  - Corruption of city officials is not an issue of concern
  - Residents contribute to decision making of local government
  - Residents provide feedback on local government projects

## Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Berlin

SMART  
CITY  
RANKING

**33**

Out of 141

21 out of 118  
in 2021

SMART  
CITY RATING

**BBB**

BBB in 2021

FACTOR  
RATINGS

**BBB**

STRUCTURES

**BBB**

TECHNOLOGIES

GROUP  
**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
3,664,088      0.959

(Eurostat)



Out of 141

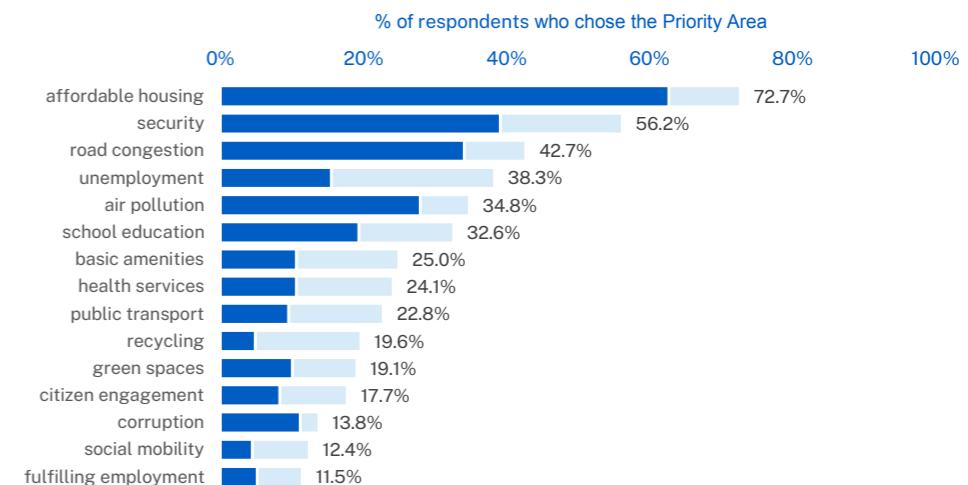
21 out of 118  
in 2021

### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.939	0.947	0.944	0.942	-0.002
Life expectancy at birth	81.2	81.3	81.2	80.6	-0.5
Expected years of schooling	17.1	17.0	17.0	17.0	+0.0
Mean years of schooling	14.1	14.2	14.1	14.1	+0.0
GNI per capita (PPP \$)	46,946	55,314	53,078	54,534	+1,457

## PRIORITY AREAS

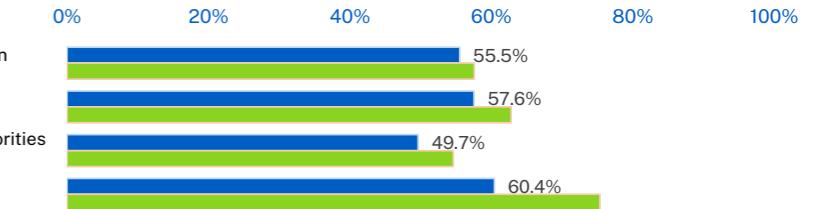
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



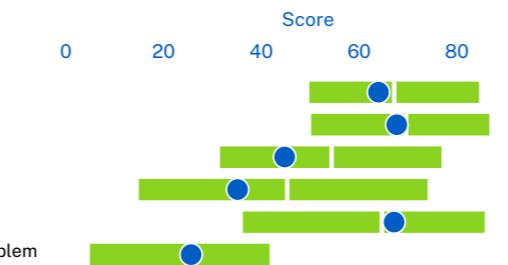
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



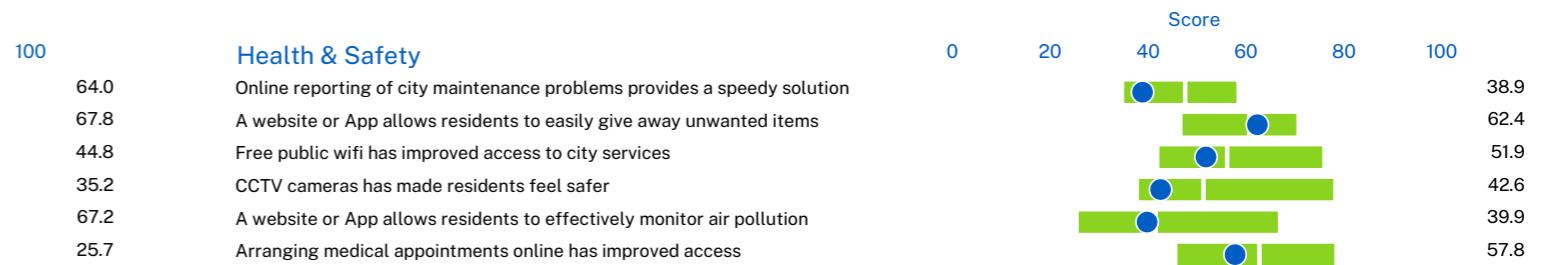
### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES

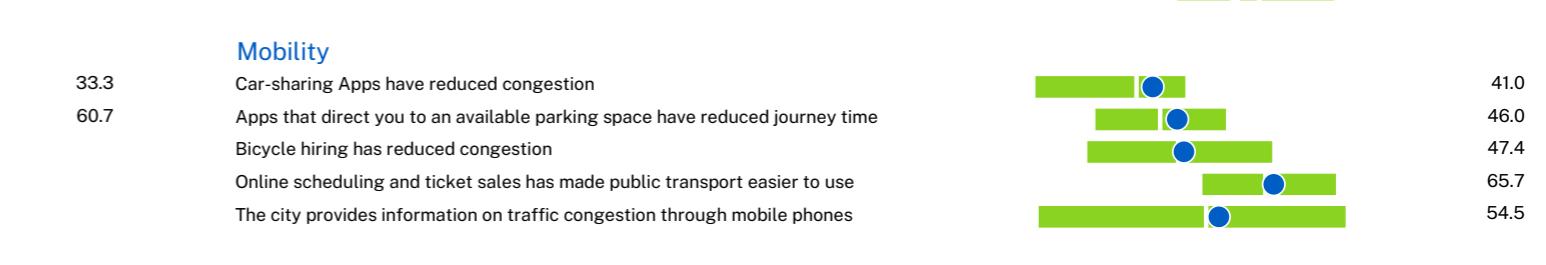
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



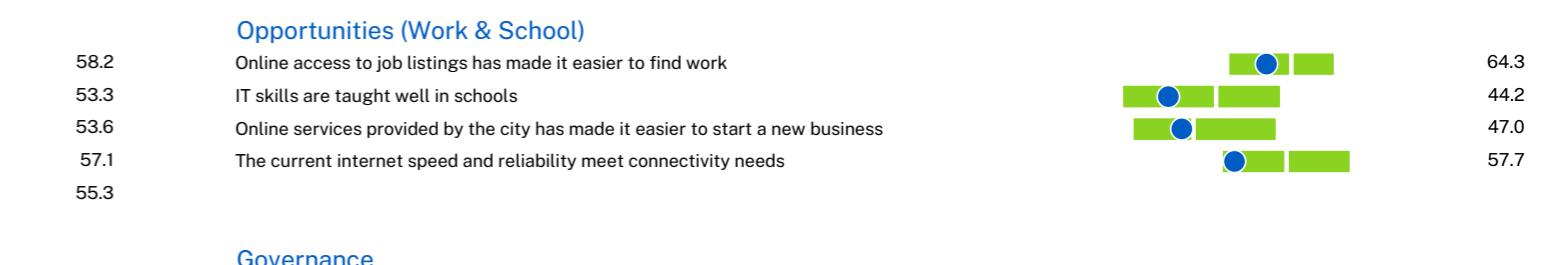
### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



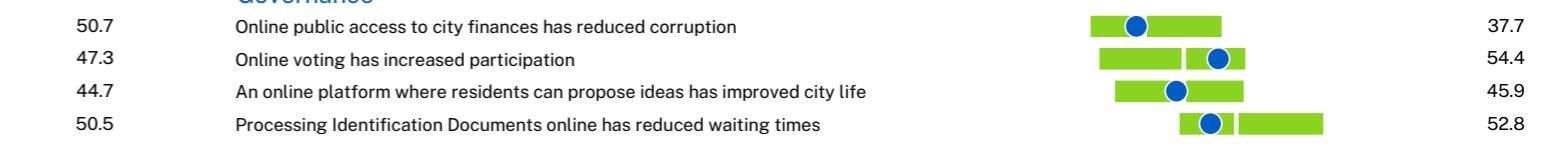
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



## SMART CITY RANKING

**27**

Out of 141



23 out of 118  
in 2021

## SMART CITY RATING

**BBB**

BBB in 2021

## FACTOR RATINGS

**BBB**

STRUCTURES

**BBB**

## TECHNOLOGIES

## GROUP 2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population 2,185,908  
(Eurostat)

HDI 0.932



Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

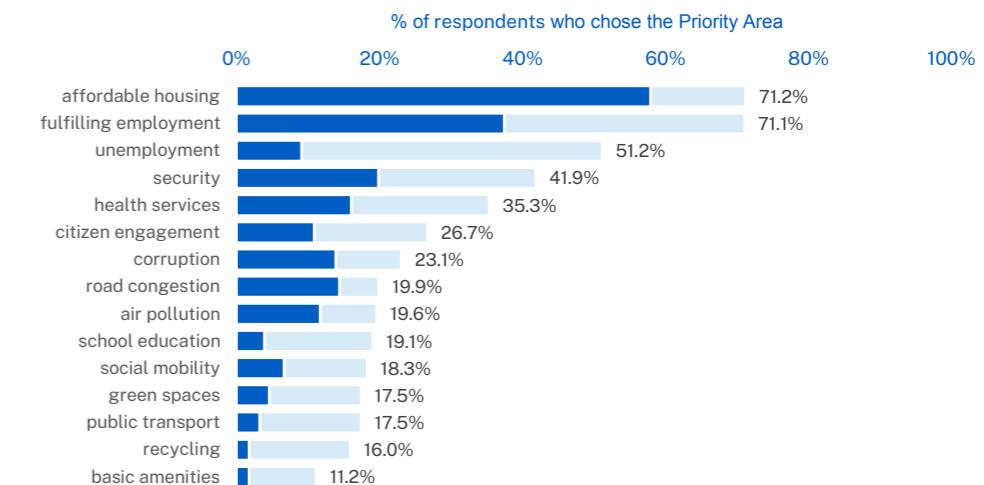
#### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.893	0.904	0.899	0.905	+0.006
Life expectancy at birth	83.4	83.6	82.3	83.0	+0.7
Expected years of schooling	17.9	17.6	17.9	17.9	+0.0
Mean years of schooling	9.8	10.3	10.6	10.6	+0.0
GNI per capita (PPP \$)	35,041	40,975	36,516	38,354	+1,838

### PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left-hand, dark blue section of each bar shows the Alignment, i.e. the proportion of those respondents who also answered the survey on the corresponding area by giving it low priority. A strong Alignment (i.e. consistency across both areas explained) means that these areas may benefit from close observation.



### ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

### STRUCTURES

#### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Score

0 20 40 60 80 100

76.4 76.0 62.2 50.2 69.0 25.4

#### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

47.0

82.8

#### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

Score

0 20 40 60 80 100

55.4 55.8 58.7 50.3 43.2 68.0

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

Score

0 20 40 60 80 100

47.2 48.6 60.7 72.7 60.1

#### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

78.9

84.0

#### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

Score

0 20 40 60 80 100

82.5

#### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

75.4

76.2

76.2

50.9

63.8

#### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

Score

0 20 40 60 80 100

65.1 62.7 52.3 77.7

#### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

#### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

Score

0 20 40 60 80 100

41.7 42.7 56.1 65.4

# Birmingham

SMART  
CITY  
RANKING

**74**

Out of 141



73 out of 118  
in 2021

SMART  
CITY RATING

**BB**

B in 2021

FACTOR  
RATINGS

**BB**

STRUCTURES

**BB**

TECHNOLOGIES

GROUP  
**2**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 1,148,862  
(Eurostat)



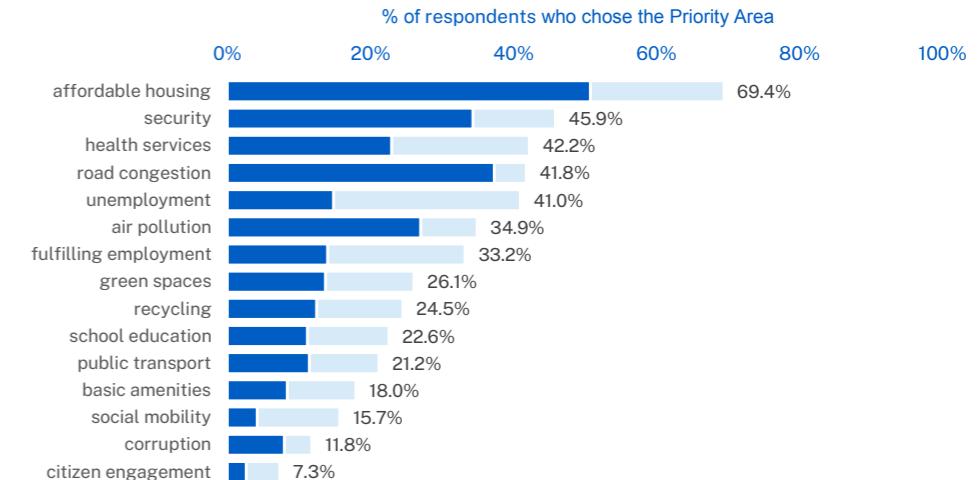
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.920	0.932	0.924	0.929	+0.005
Life expectancy at birth	81.2	81.3	80.4	80.7	+0.3
Expected years of schooling	17.4	17.5	17.3	17.3	+0.0
Mean years of schooling	13.0	13.2	13.4	13.4	+0.0
GNI per capita (PPP \$)	39,507	46,071	42,375	45,225	+2,850

## PRIORITY AREAS

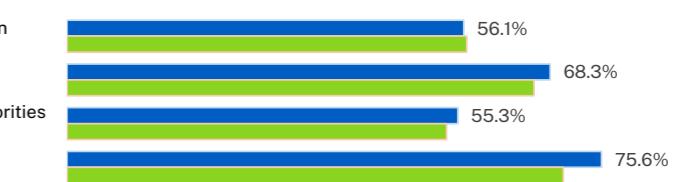
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

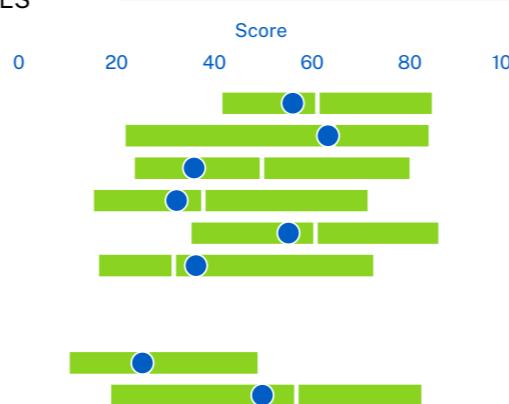
- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement

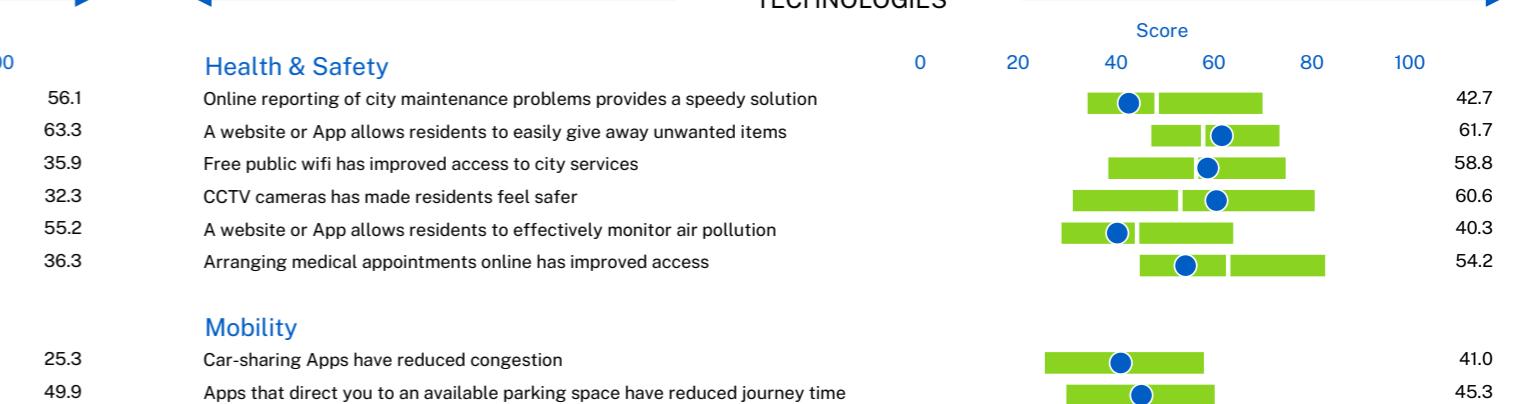


LEGEND: GROUP MEAN CITY

## STRUCTURES



## TECHNOLOGIES



LEGEND: MIN CITY MEAN GROUP MAX

# Bogota

SMART  
CITY  
RANKING

**129**

Out of 141

113 out of 118  
in 2021

SMART  
CITY RATING

**D**

D in 2021

FACTOR  
RATINGS

**D**

STRUCTURES

**C**

TECHNOLOGIES

**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
7,181,469      0.797

(UN Data)

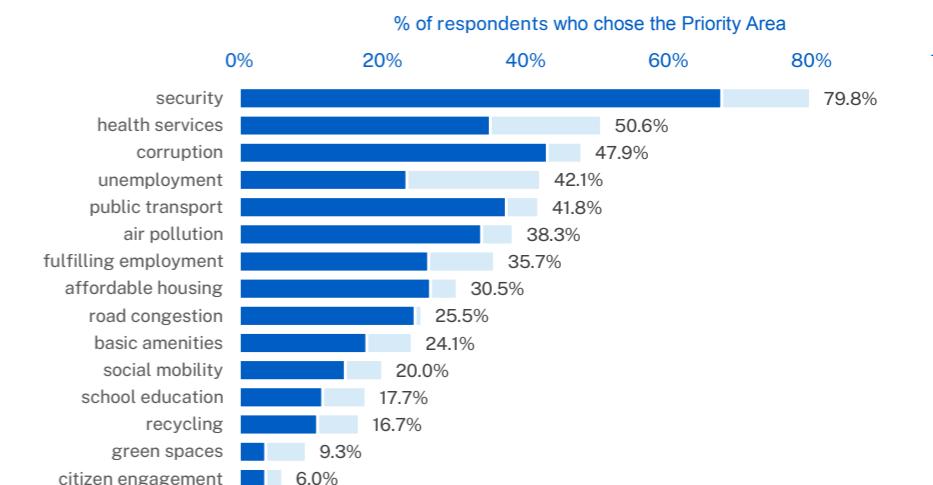


Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.761	0.767	0.756	0.752	-0.004
Life expectancy at birth	77.1	77.3	74.8	72.8	-1.9
Expected years of schooling	14.6	14.4	14.4	14.4	+0.0
Mean years of schooling	8.3	8.5	8.9	8.9	+0.0
GNI per capita (PPP \$)	12,896	14,257	13,185	14,384	+1,199

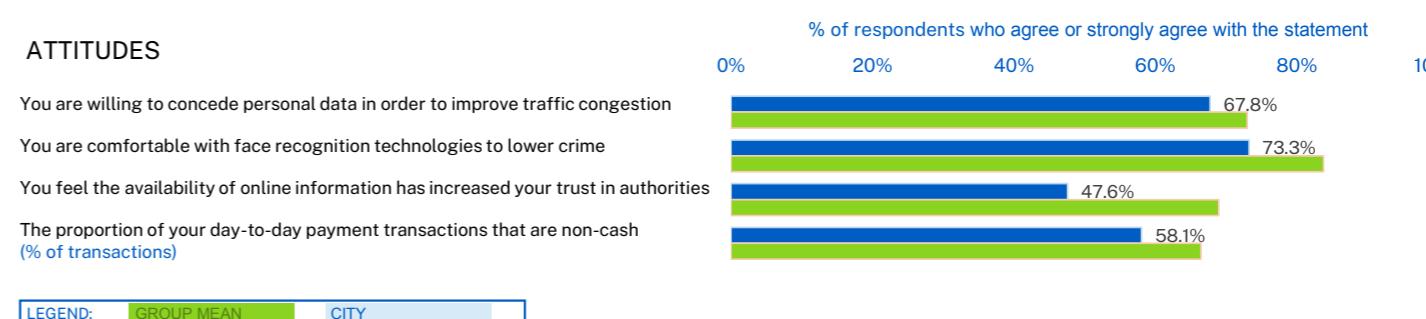
## PRIORITY AREAS



From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left-hand, dark blue section of each bar shows the Alignment, i.e. the proportion of those respondents who also answered the survey on the corresponding area by giving it low priority. A strong Alignment (i.e. consistency across both areas explained) means that these areas may benefit from close observation.

## ATTITUDES



LEGEND: GROUP MEAN CITY GROUP MAX

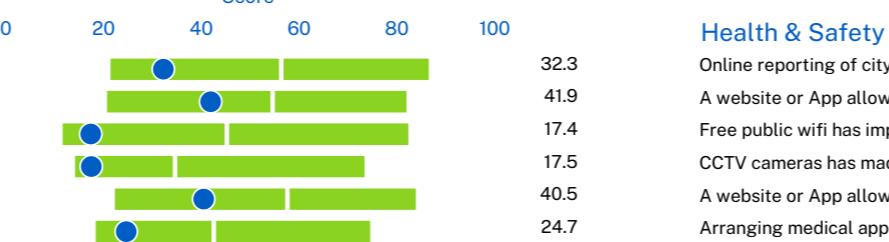
## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

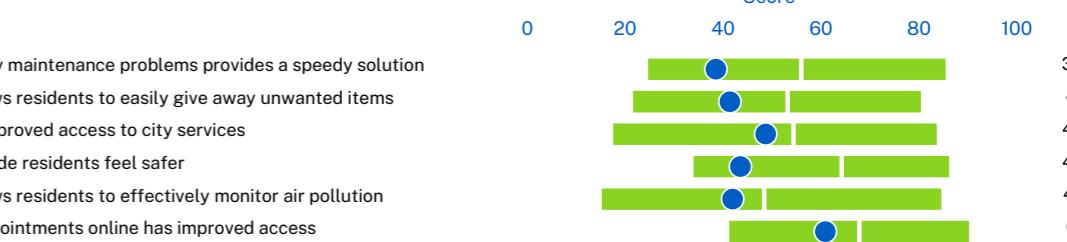
Score: 0 20 40 60 80 100



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

Score: 0 20 40 60 80 100



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



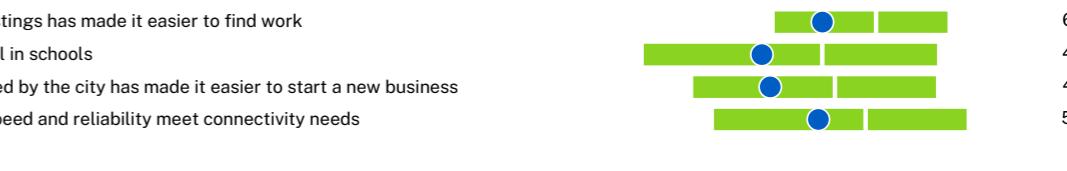
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Bologna

SMART  
CITY  
RANKING

**51**

Out of 141



48 out of 118  
in 2021

SMART  
CITY RATING

**BB**

BB in 2021

FACTOR  
RATINGS

**BBB**

STRUCTURES

**BB**

TECHNOLOGIES

GROUP  
**2**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
4,438,937      0.924

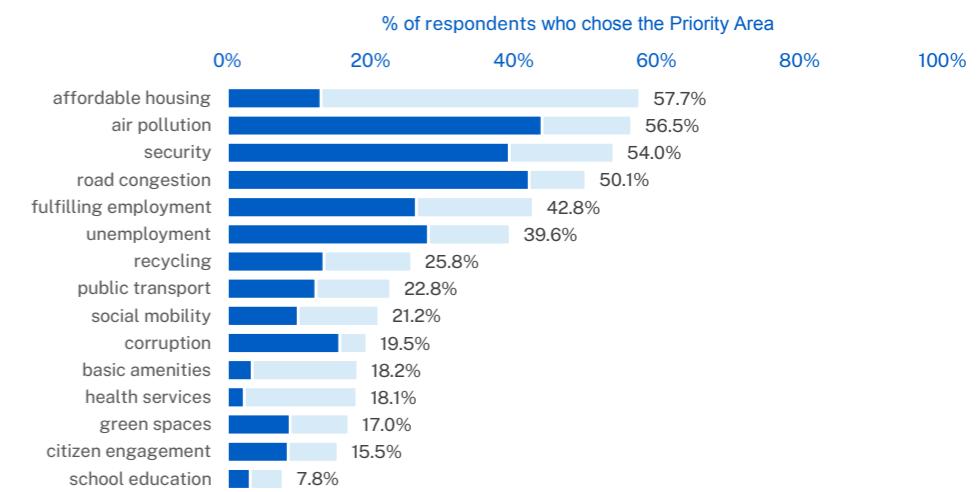
(Eurostat)



Country	2018	2019	2020	2021	1 yr change
HDI	0.883	0.892	0.889	0.895	+0.006
Life expectancy at birth	83.4	83.5	82.4	82.9	+0.4
Expected years of schooling	16.2	16.1	16.2	16.2	+0.0
Mean years of schooling	10.2	10.4	10.7	10.7	+0.0
GNI per capita (PPP \$)	36,141	42,776	39,901	42,840	+2,939

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



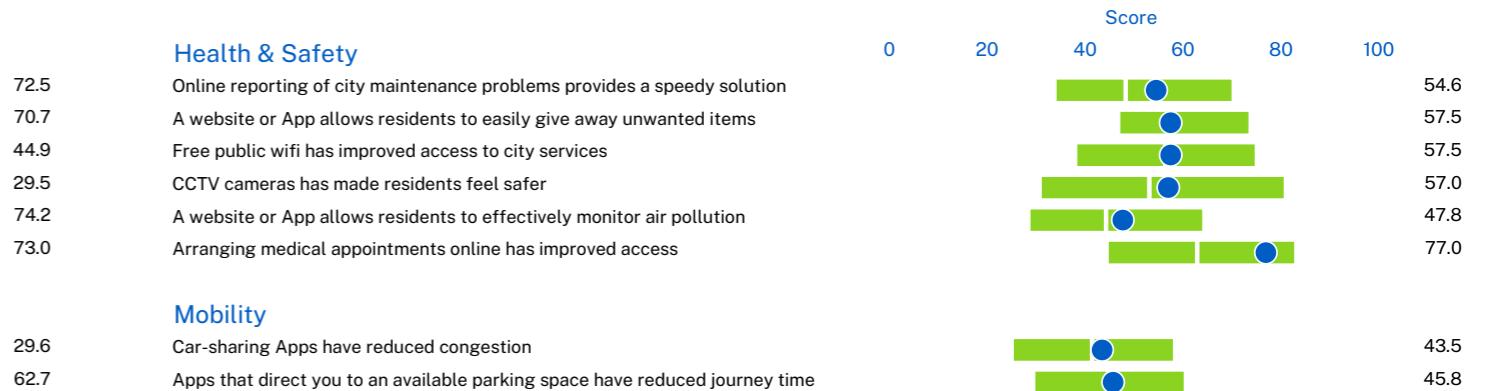
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES



## TECHNOLOGIES



STRUCTURES

TECHNOLOGIES

GROUP

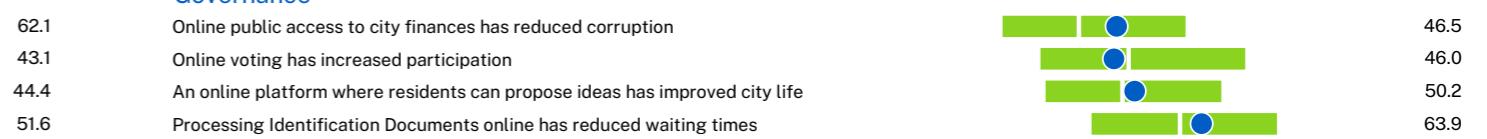
**2**

All ratings range  
from AAA to D

Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

## Governance



# Bordeaux

SMART  
CITY  
RANKING

**78**

Out of 141



68 out of 118  
in 2021

SMART  
CITY RATING

**CCC**

CCC in 2021

FACTOR  
RATINGS

**CCC**

STRUCTURES

TECHNOLOGIES

GROUP

**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population	HDI
3,511,921	0.900

(Eurostat)

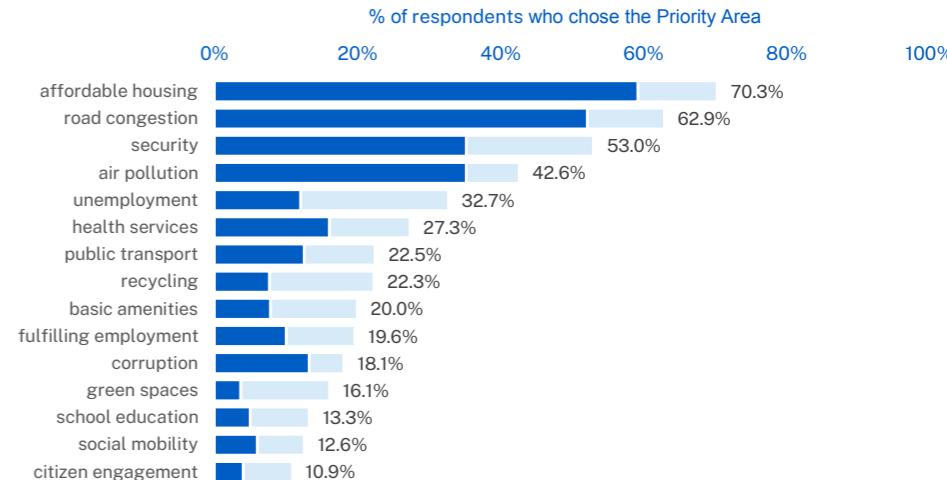


### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.891	0.901	0.898	0.903	+0.005
Life expectancy at birth	82.5	82.7	82.2	82.5	+0.3
Expected years of schooling	15.5	15.6	15.8	15.8	+0.0
Mean years of schooling	11.4	11.5	11.6	11.6	+0.0
GNI per capita (PPP \$)	40,511	47,173	43,048	45,937	+2,889

## PRIORITY AREAS

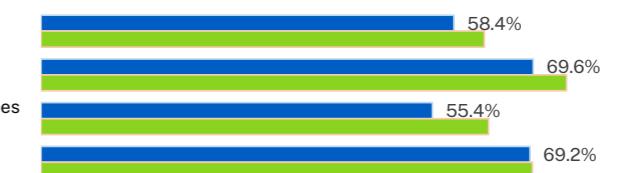
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



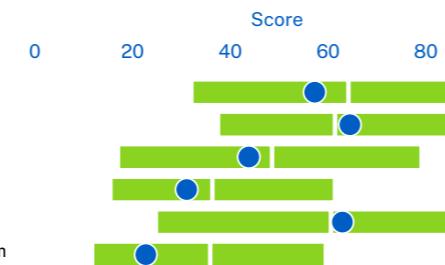
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

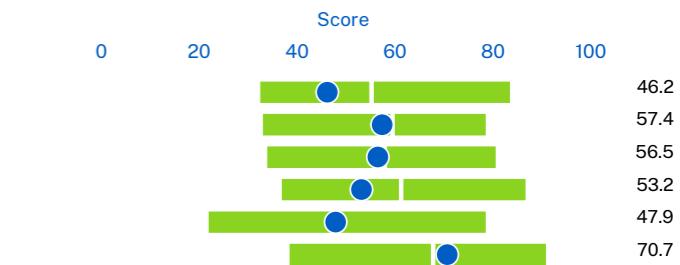
### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



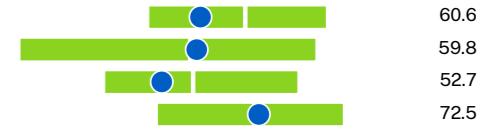
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Boston

SMART  
CITY  
RANKING

**34**

Out of 141

22 out of 118  
in 2021

SMART  
CITY RATING

**A**

BBB in 2021

FACTOR  
RATINGS

**A**

STRUCTURES

TECHNOLOGIES

**A**

GROUP  
1

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
675,647      0.949

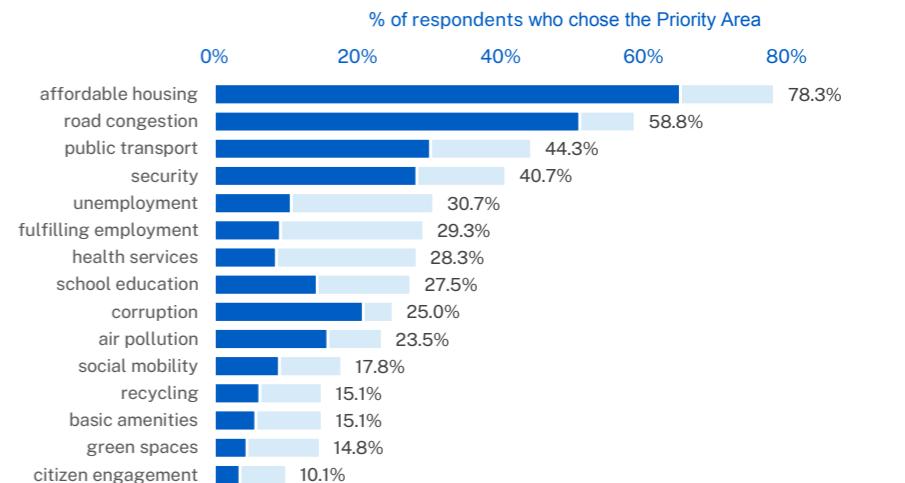
(UN Data)



Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.926	0.920	0.921	+0.001
Life expectancy at birth	78.9	78.9	77.4	77.2	-0.2
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.7	13.7	+0.0
GNI per capita (PPP \$)	56,140	63,826	61,462	64,765	+3,304

## PRIORITY AREAS

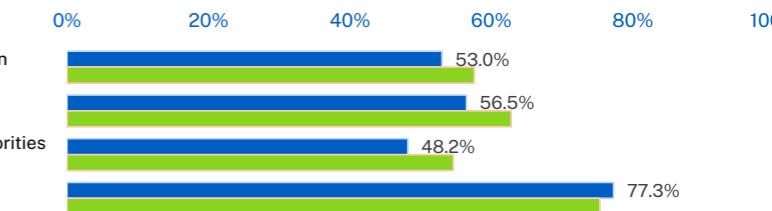
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

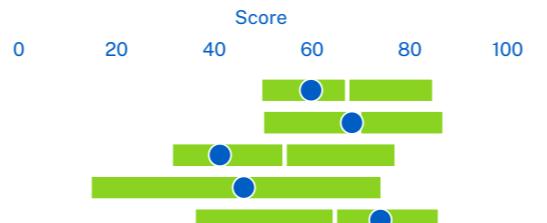
LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

## TECHNOLOGIES

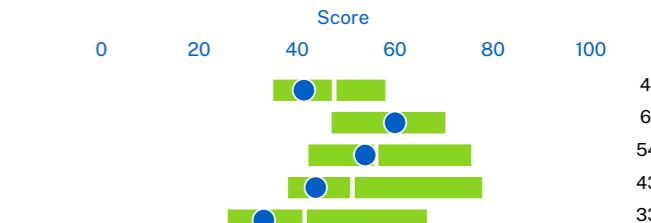
### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



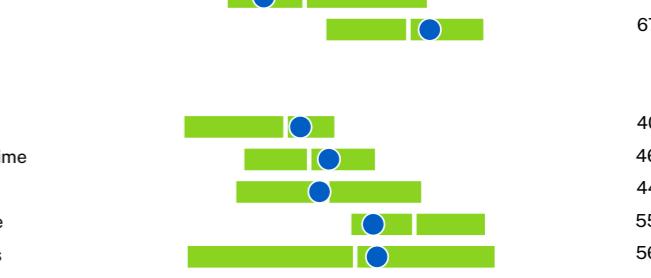
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



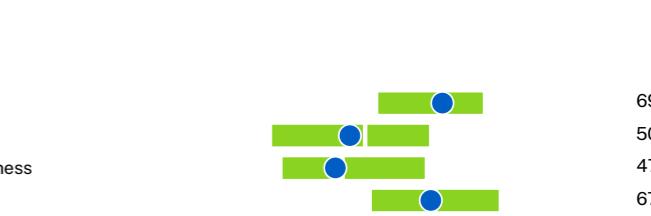
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



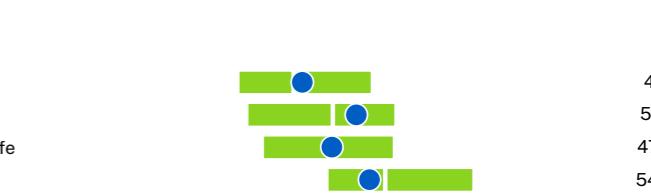
### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Brasilia

SMART  
CITY  
RANKING  
**128**

Out of 141

not out of 118  
in 2021

SMART  
CITY RATING

**C**

not in 2021

FACTOR  
RATINGS

**C**

STRUCTURES

**C**

TECHNOLOGIES

GROUP  
**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
4,803,877      0.816

(UN World Urbanisation Prospects 2022  
estimate)

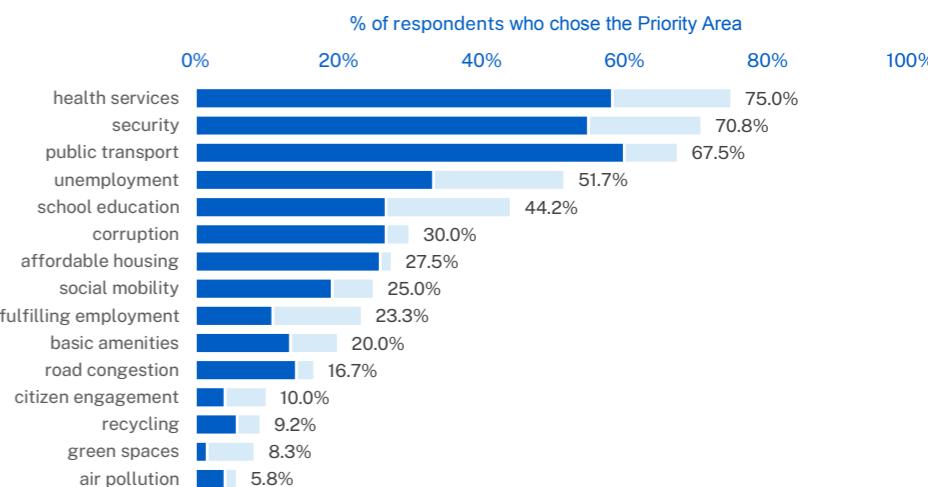


Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.764	0.766	0.758	0.754	-0.004
Life expectancy at birth	75.1	75.3	74.0	72.8	-1.3
Expected years of schooling	15.7	15.6	15.6	15.6	+0.0
Mean years of schooling	8.0	10.6	10.9	10.9	+0.0
GNI per capita (PPP \$)	21,972	23,261	22,286	24,563	+2,277

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES



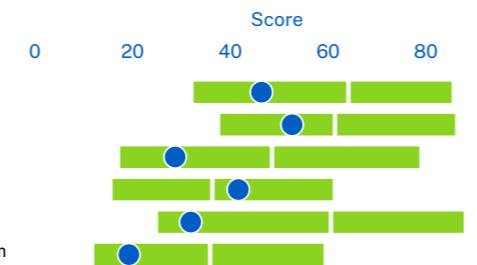
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



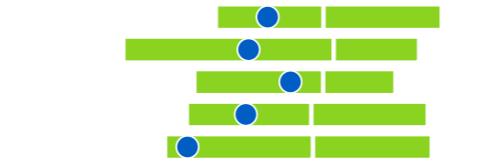
### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



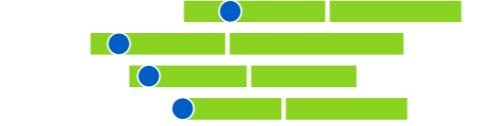
### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Bratislava

SMART  
CITY  
RANKING

**62**

Out of 141



42 out of 118  
in 2021

SMART  
CITY RATING

**BB**

BB in 2021

FACTOR  
RATINGS

**BB**

STRUCTURES

**BBB**

TECHNOLOGIES

GROUP  
**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
677,024      0.944  
(Eurostat)



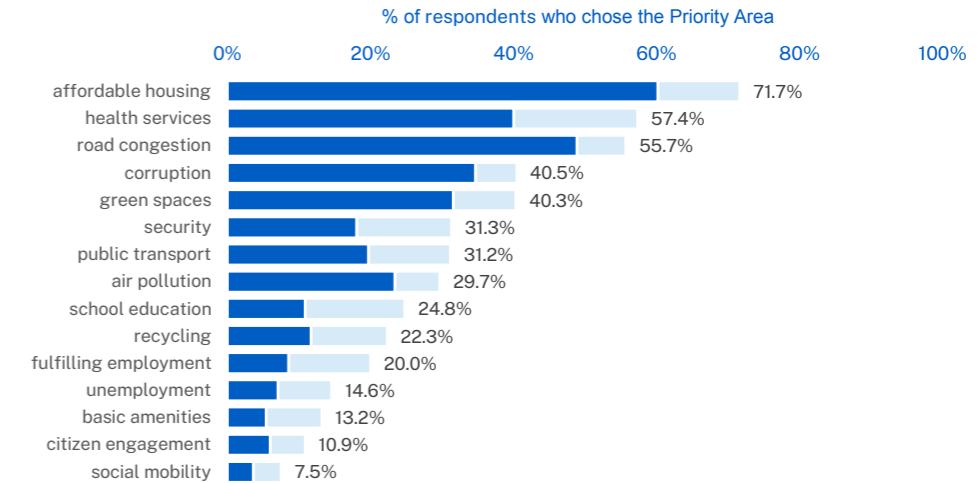
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.857	0.860	0.857	0.848	-0.009
Life expectancy at birth	77.4	77.5	77.0	74.9	-2.1
Expected years of schooling	14.5	14.5	14.5	14.5	+0.0
Mean years of schooling	12.6	12.7	12.9	12.9	+0.0
GNI per capita (PPP \$)	30,672	32,113	29,801	30,690	+889

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



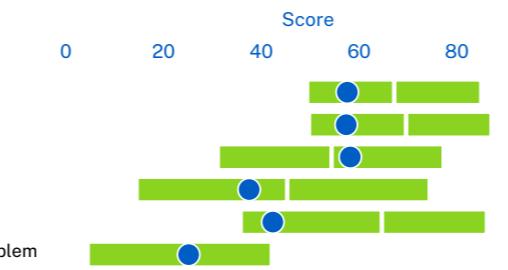
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

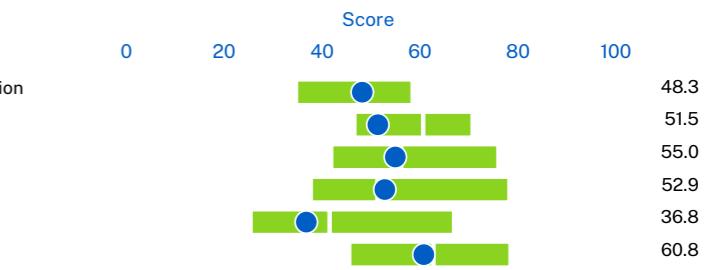
### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



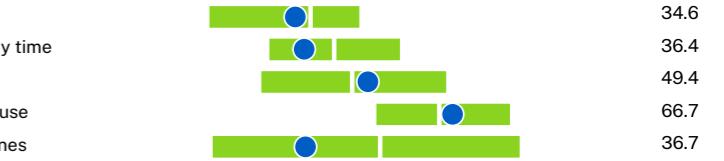
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



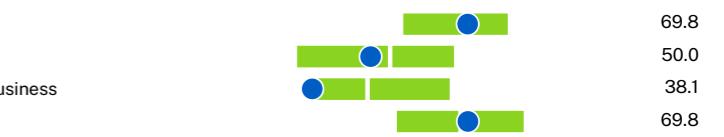
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



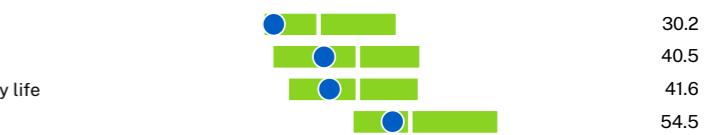
### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Brisbane

SMART  
CITY  
RANKING

**24**

Out of 141



40 out of 118  
in 2021

SMART  
CITY RATING

**AA**

BB in 2021

FACTOR  
RATINGS

**A**

STRUCTURES

**A**

TECHNOLOGIES

GROUP  
**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 2,054,614  
(UN Data)

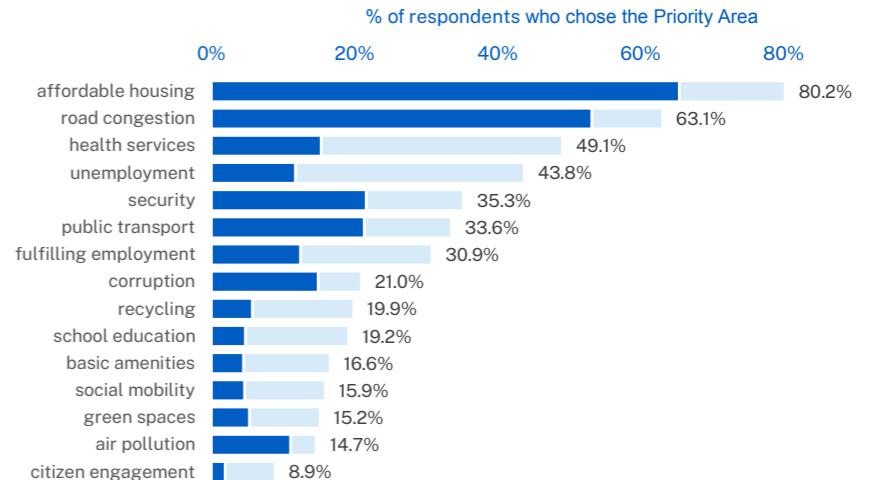


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.941	0.941	0.947	0.951	+0.004
Life expectancy at birth	83.4	83.1	84.3	84.5	+0.2
Expected years of schooling	18.0	18.0	18.0	18.0	+0.0
Mean years of schooling	12.6	12.1	12.4	12.4	+0.0
GNI per capita (PPP \$)	43,821	52,085	49,392	52,293	+2,901

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES



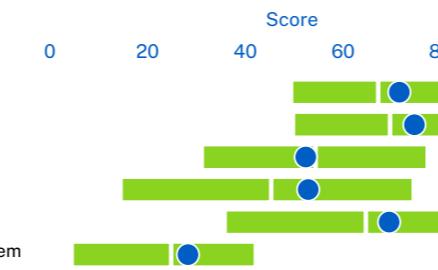
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

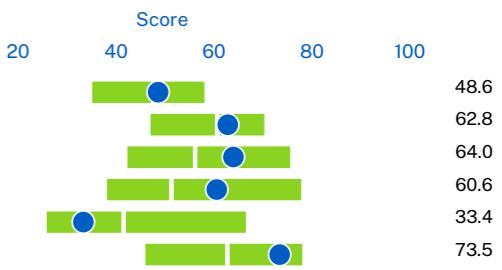
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



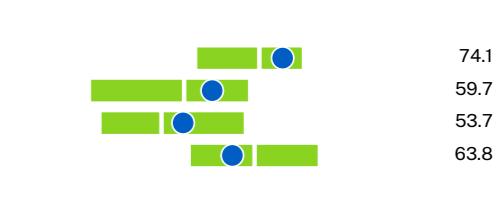
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Brussels

SMART  
CITY  
RANKING

**35**

Out of 141



45 out of 118  
in 2021

SMART  
CITY RATING

**BBB**

BBB in 2021

FACTOR  
RATINGS

**BB**

STRUCTURES

**A**

TECHNOLOGIES

GROUP

**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 1,226,329  
(Eurostat)

HDI 0.953

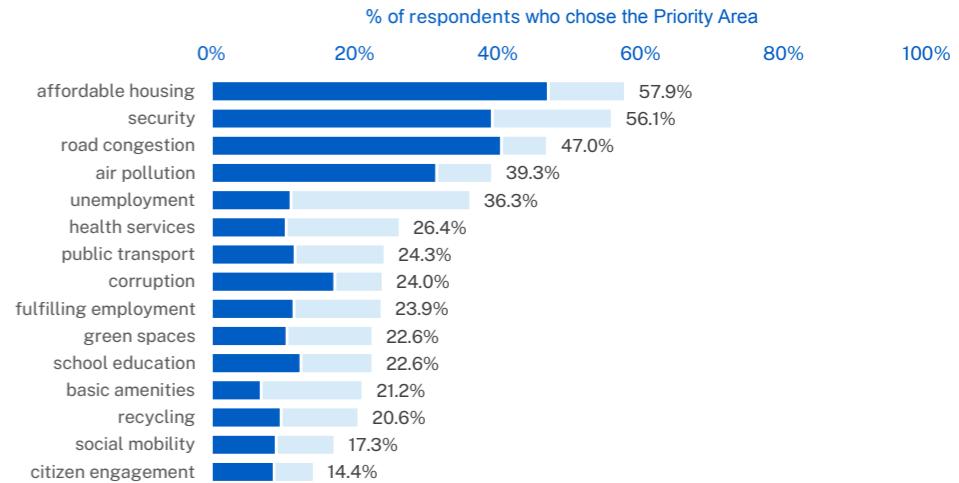


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.919	0.931	0.928	0.937	+0.009
Life expectancy at birth	81.5	81.6	80.8	81.9	+1.1
Expected years of schooling	19.7	19.8	18.0	18.0	+0.0
Mean years of schooling	11.8	12.1	12.4	12.4	+0.0
GNI per capita (PPP \$)	43,821	52,085	49,392	52,293	+2,901

## PRIORITY AREAS

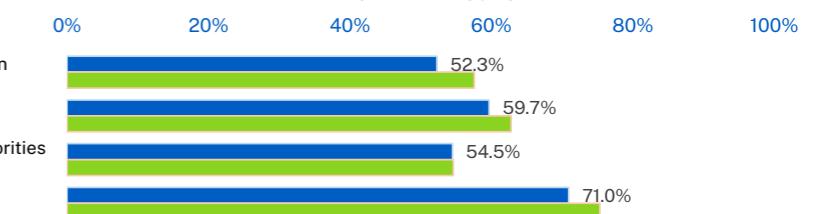
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



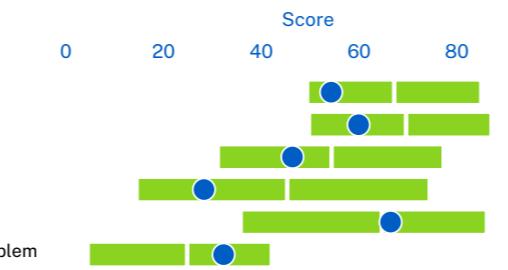
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

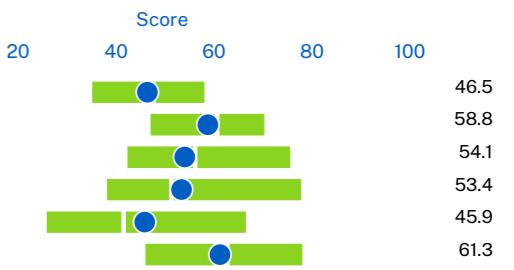
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

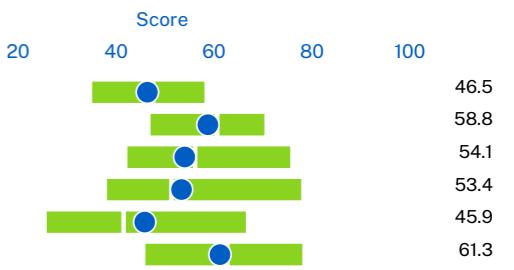
- Traffic congestion is not a problem
- Public transport is satisfactory

Score

0 20 40 60 80 100

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

Score

0 20 40 60 80 100

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

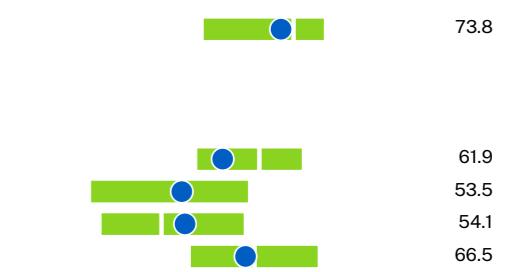
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

Score

0 20 40 60 80 100

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

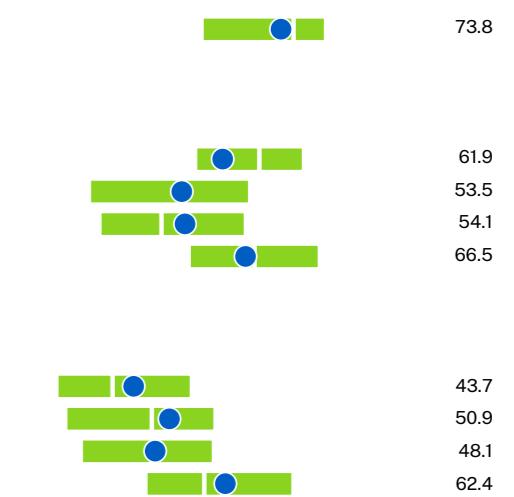
- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

Score

0 20 40 60 80 100

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Bucharest

SMART  
CITY  
RANKING

**104**

Out of 141

87 out of 118  
in 2021

SMART  
CITY RATING

**CCC**

CCC in 2021

FACTOR  
RATINGS

**CCC**

STRUCTURES

**B**

TECHNOLOGIES

GROUP

**2**

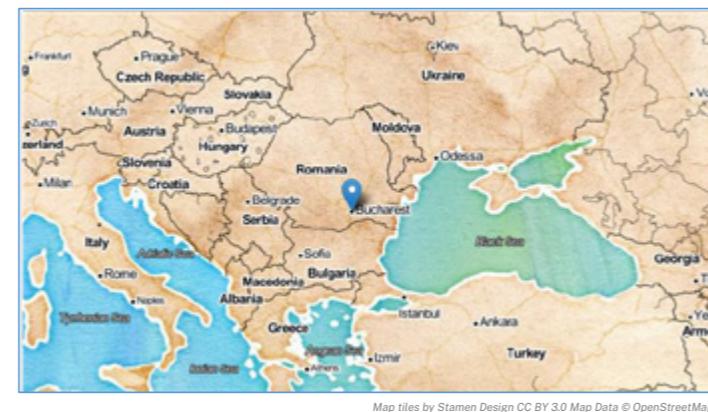
All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 1,823,526  
(Eurostat)

HDI 0.926

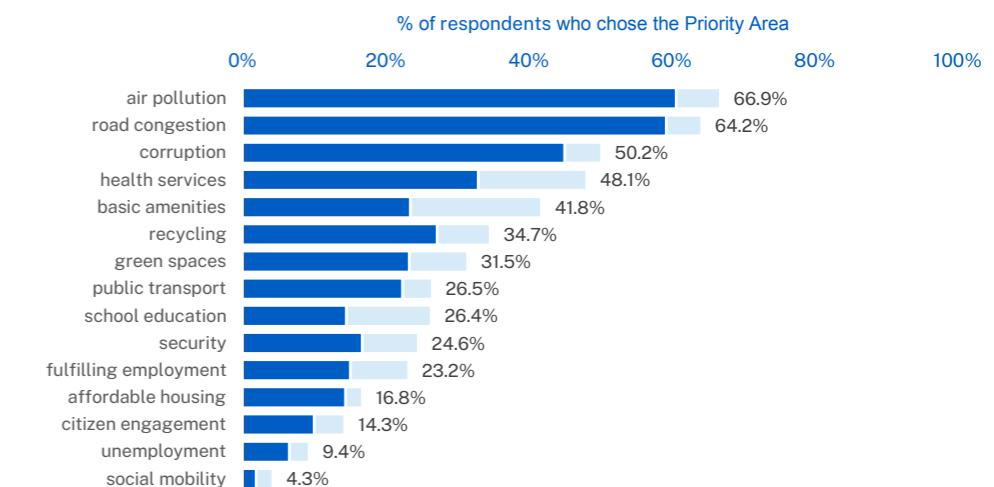


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.816	0.828	0.824	0.821	-0.003
Life expectancy at birth	75.9	76.1	75.4	74.2	-1.2
Expected years of schooling	14.3	14.3	14.2	14.2	+0.0
Mean years of schooling	11.0	11.1	11.3	11.3	+0.0
GNI per capita (PPP \$)	23,906	29,497	28,359	30,027	+1,669

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES



# Budapest

SMART  
CITY  
RANKING

**87**

Out of 141



78 out of 118  
in 2021

SMART  
CITY RATING

**B**

B in 2021

FACTOR  
RATINGS

**B**

STRUCTURES

**BB**

TECHNOLOGIES

GROUP  
**2**

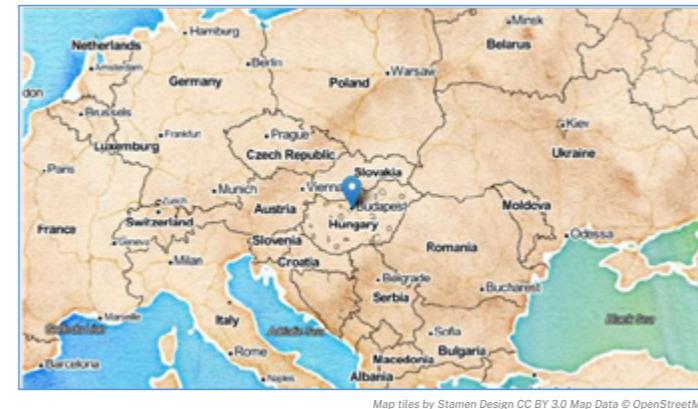
All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 1,752,286  
(Eurostat)

HDI 0.922

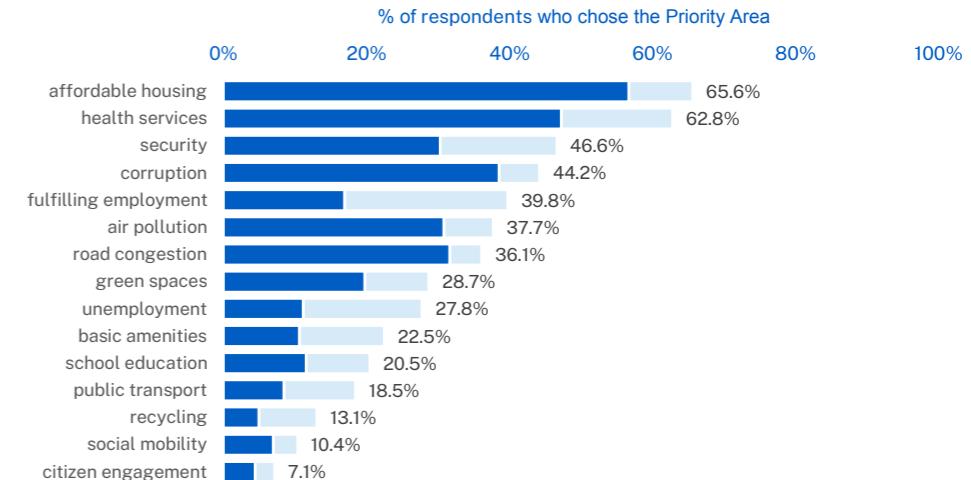


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.845	0.854	0.849	0.846	-0.003
Life expectancy at birth	76.7	76.9	75.7	74.5	-1.2
Expected years of schooling	15.1	15.2	15.0	15.0	+0.0
Mean years of schooling	11.9	12.0	12.3	12.3	+0.0
GNI per capita (PPP \$)	27,144	31,329	30,487	32,789	+2,302

## PRIORITY AREAS

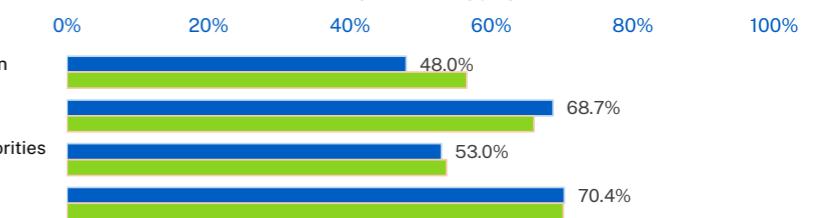
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

→

←

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Score

0 20 40 60 80 100

→

←

→

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

Technologies

Score

0 20 40 60 80 100

→

### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

→

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

→

←

### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

→

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

→

Score

0 20 40 60 80 100

→

### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

→

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

→

### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

→

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

→

Score

0 20 40 60 80 100

→

All ratings range  
from AAA to D

# Buenos Aires

SMART  
CITY  
RANKING

**124**

Out of 141



104 out of 118  
in 2021

SMART  
CITY RATING

**C**

D in 2021

FACTOR  
RATINGS

**C**

STRUCTURES

**C**

TECHNOLOGIES

GROUP  
**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 15,567,820 HDI 0.812

(UN Data)



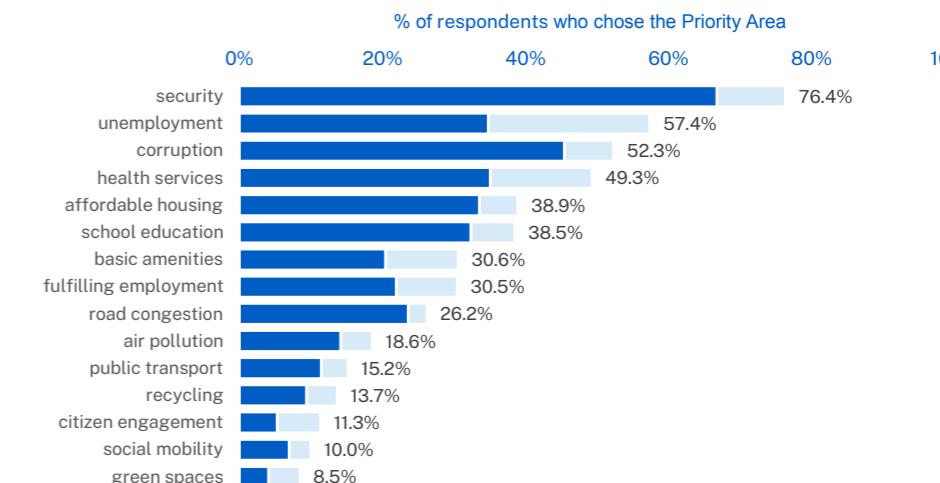
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.830	0.845	0.840	0.842	+0.002
Life expectancy at birth	76.5	76.7	75.9	75.4	-0.5
Expected years of schooling	17.6	17.7	17.9	17.9	+0.0
Mean years of schooling	10.6	10.9	11.2	11.2	+0.0
GNI per capita (PPP \$)	17,611	21,190	19,178	20,925	+1,747

## PRIORITY AREAS

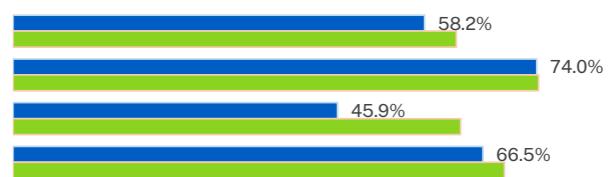
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



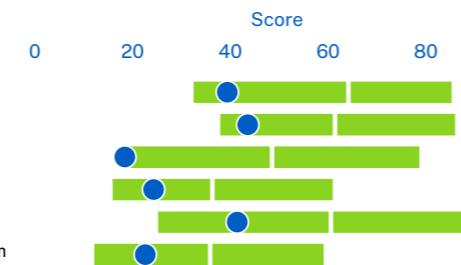
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

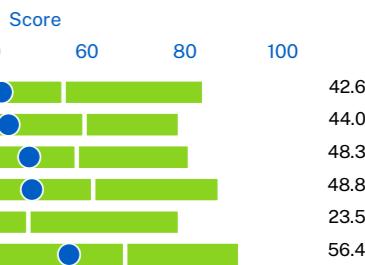
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Score

22.3  
45.2



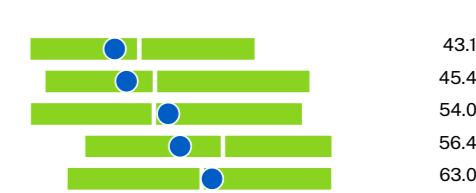
### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

70.7  
75.9

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

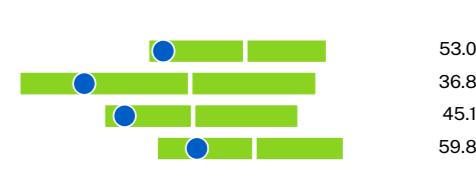


### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



## SMART CITY RANKING

**49**

Out of 141

47 out of 118  
in 2021

## SMART CITY RATING

**BB**

BB in 2021

## FACTOR RATINGS

**BB**

## TECHNOLOGIES

**BBB**

## GROUP 2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population      HDI  
3,343,528      0.936

(UN Data)

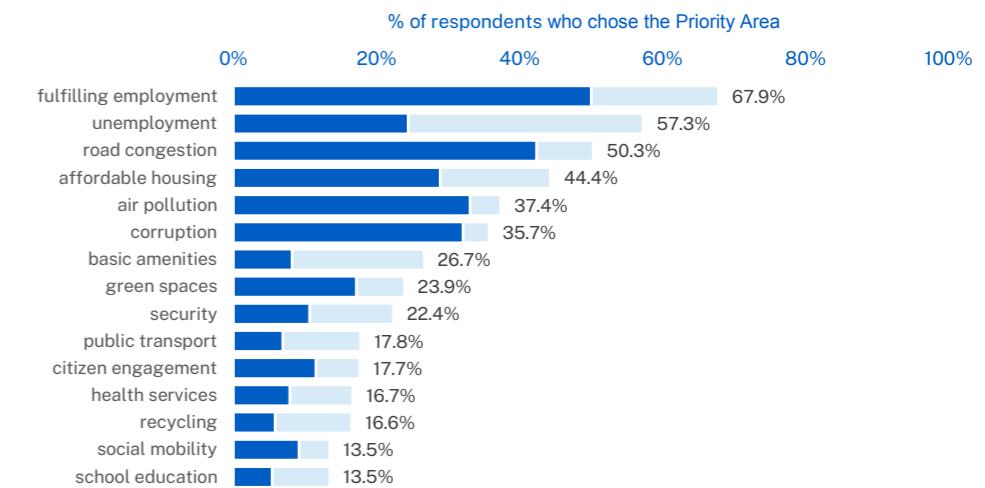


Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.906	0.916	0.922	0.925	+0.003
Life expectancy at birth	82.8	83.0	83.6	83.7	+0.1
Expected years of schooling	16.4	16.5	16.5	16.5	+0.0
Mean years of schooling	12.2	12.2	12.5	12.5	+0.0
GNI per capita (PPP \$)	36,757	43,044	42,698	44,501	+1,803

### PRIORITY AREAS

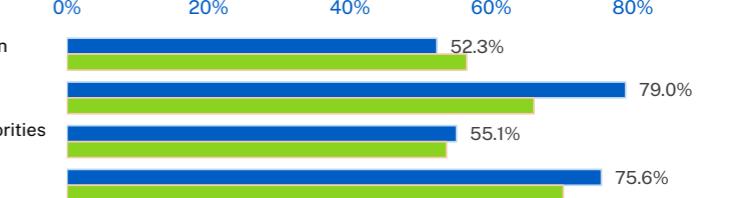
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



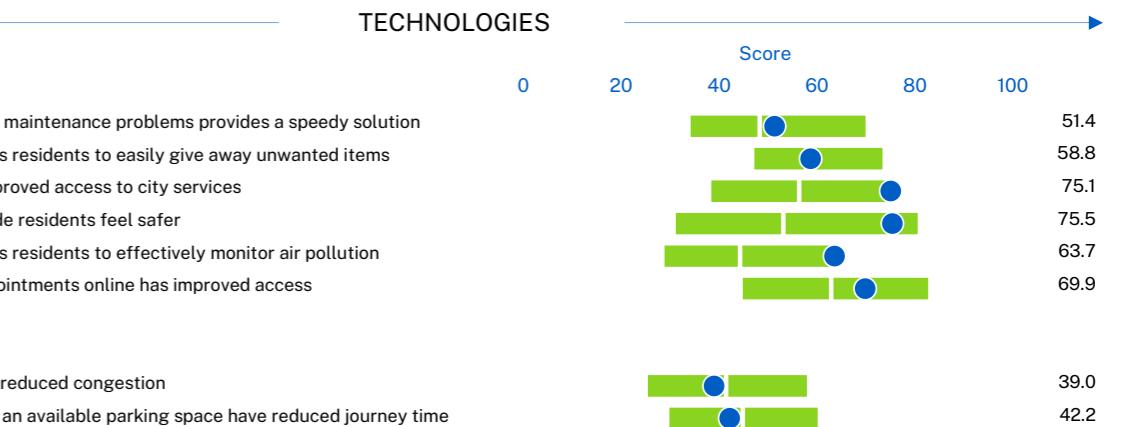
LEGEND: GROUP MEAN CITY

### STRUCTURES

#### STRUCTURES



#### TECHNOLOGIES



### TECHNOLOGIES

#### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

Score: 51.6

Score: 49.2

#### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

Score: 73.5

#### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

Score: 55.5

Score: 60.4

Score: 63.1

Score: 34.9

Score: 31.7

#### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

Score: 62.7

Score: 60.1

Score: 45.3

Score: 75.5

#### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

Score: 54.1

Score: 27.9

Score: 46.1

Score: 44.9

#### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

Score: 36.9

Score: 49.3

Score: 50.3

Score: 76.1

## SMART CITY RANKING

**108**

Out of 141

105 out of 118  
in 2021

## SMART CITY RATING

**CC**

C in 2021

## FACTOR RATINGS

**C**

## TECHNOLOGIES

## GROUP 4

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population 9,539,673 HDI 0.779  
(UN Data)



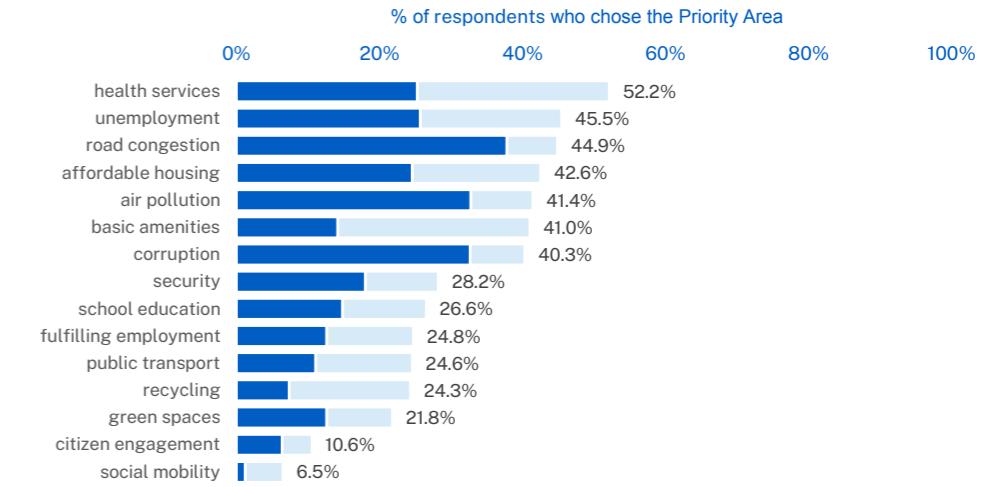
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

#### Country

	2018	2019	2020	2021	1 yr change
HDI	0.700	0.707	0.734	0.731	-0.003
Life expectancy at birth	71.8	72.0	71.0	70.2	-0.8
Expected years of schooling	13.1	13.3	13.8	13.8	+0.0
Mean years of schooling	7.3	7.4	9.6	9.6	+0.0
GNI per capita (PPP \$)	10,744	11,466	11,581	11,732	+151

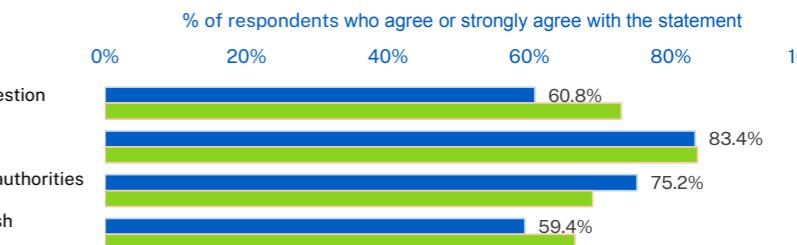
### PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



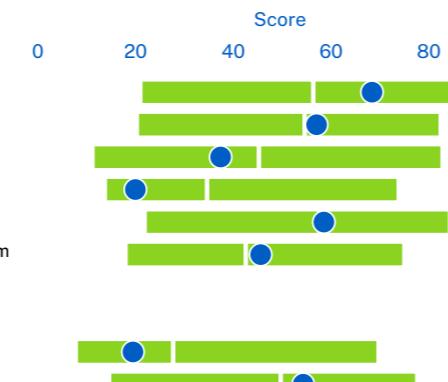
LEGEND: GROUP MEAN CITY

### STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

#### Health & Safety

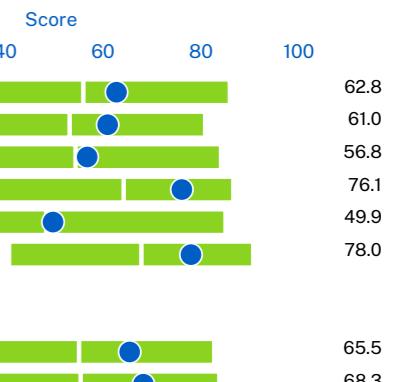
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



#### Health & Safety

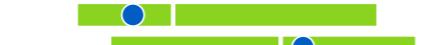
- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

### TECHNOLOGIES



#### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



#### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



#### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



#### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



#### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



#### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



#### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Canberra

SMART  
CITY  
RANKING

**3**

Out of 141

not out of 118  
in 2021

SMART  
CITY RATING

**AA**

not in 2021

FACTOR  
RATINGS

**AA**

STRUCTURES

**A**

TECHNOLOGIES

GROUP

**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
395,790      0.980

(UN Data)

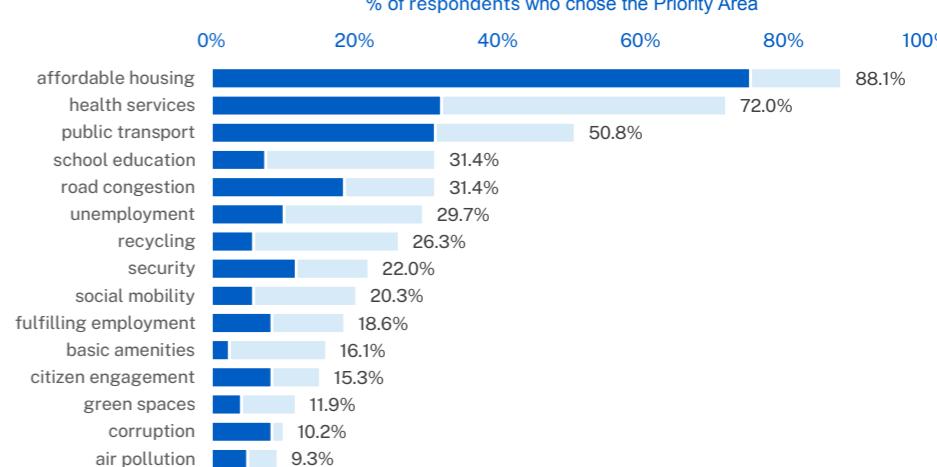


Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.941	0.941	0.947	0.951	+0.004
Life expectancy at birth	83.4	83.1	84.3	84.5	+0.2
Expected years of schooling	18.0	18.0	18.0	18.0	+0.0
Mean years of schooling	12.6	12.1	12.4	12.4	+0.0
GNI per capita (PPP \$)	43,821	52,085	49,392	52,293	+2,901

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

## STRUCTURES

Score: 0 20 40 60 80 100

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Score: 0 20 40 60 80 100

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

Score: 0 20 40 60 80 100

### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

Score: 0 20 40 60 80 100

### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

Score: 0 20 40 60 80 100

### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

Score: 0 20 40 60 80 100

### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

Score: 0 20 40 60 80 100

# Cape Town

SMART  
CITY  
RANKING  
**125**

Out of 141

106 out of 118  
in 2021

SMART  
CITY RATING

**C**

C in 2021

FACTOR  
RATINGS

**C**

STRUCTURES

**C**

TECHNOLOGIES

**4**

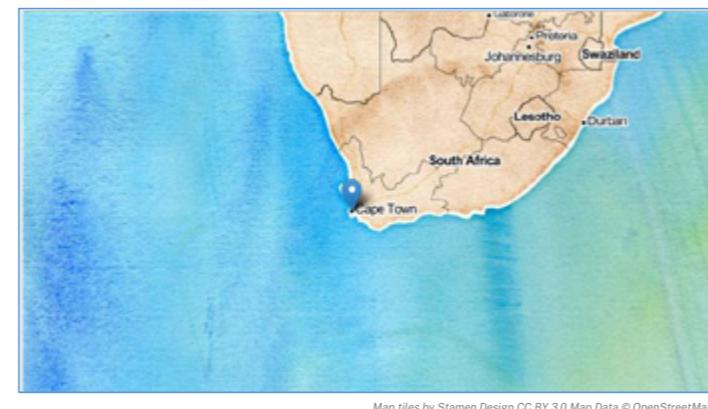
All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
4,800,954      0.751

(UN World Urbanisation Prospects 2022  
estimate)

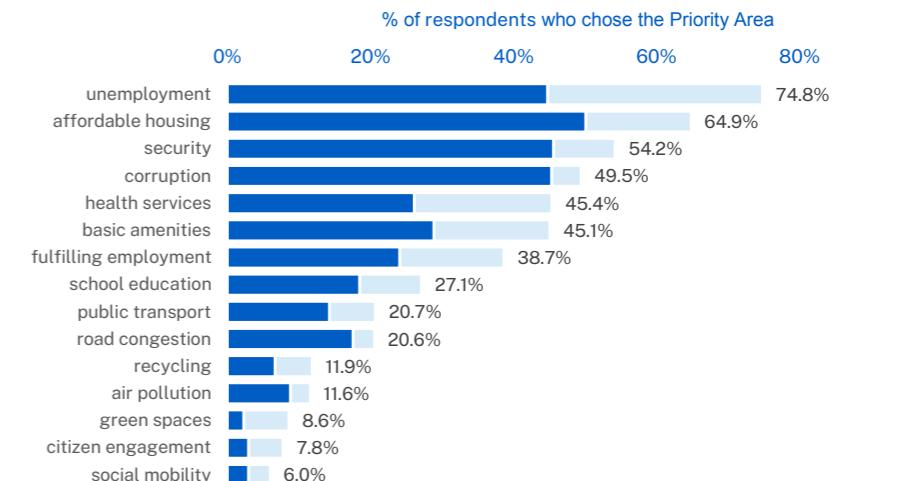


Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.705	0.709	0.727	0.713	-0.014
Life expectancy at birth	63.9	64.1	65.3	62.3	-2.9
Expected years of schooling	13.7	13.8	13.6	13.6	+0.0
Mean years of schooling	10.2	10.2	11.4	11.4	+0.0
GNI per capita (PPP \$)	11,756	12,129	12,450	12,948	+499

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement

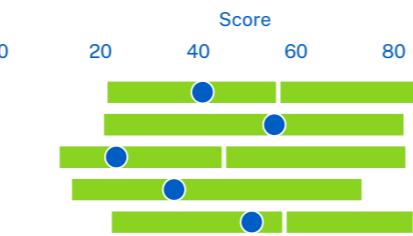


LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

- ### Health & Safety
- Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES

Score

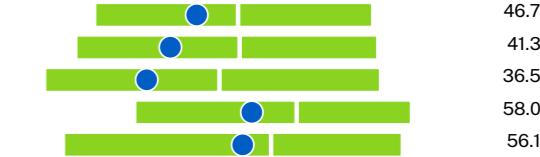


- ### Mobility
- Traffic congestion is not a problem
  - Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



- ### Activities
- Green spaces are satisfactory
  - Cultural activities (shows, bars, and museums) are satisfactory

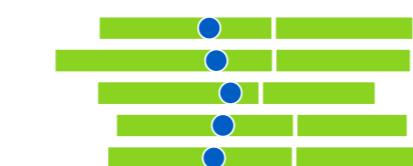


### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

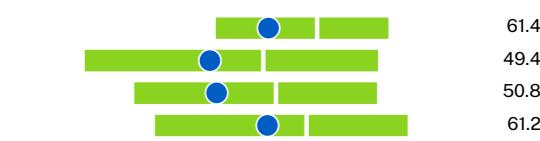


- ### Opportunities (Work & School)
- Employment finding services are readily available
  - Most children have access to a good school
  - Lifelong learning opportunities are provided by local institutions
  - Businesses are creating new jobs
  - Minorities feel welcome

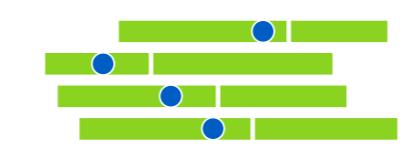


### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

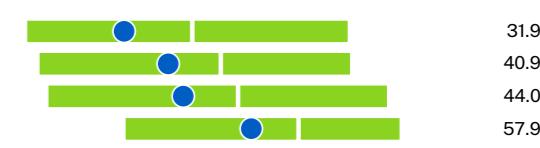


- ### Governance
- Information on local government decisions are easily accessible
  - Corruption of city officials is not an issue of concern
  - Residents contribute to decision making of local government
  - Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Cardiff

SMART  
CITY  
RANKING

**94**

Out of 141

not out of 118  
in 2021

SMART  
CITY RATING

**CC**

not in 2021

FACTOR  
RATINGS

**CCC**

STRUCTURES

**CC**

TECHNOLOGIES

GROUP

**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
497,646      0.898

(Eurostat)



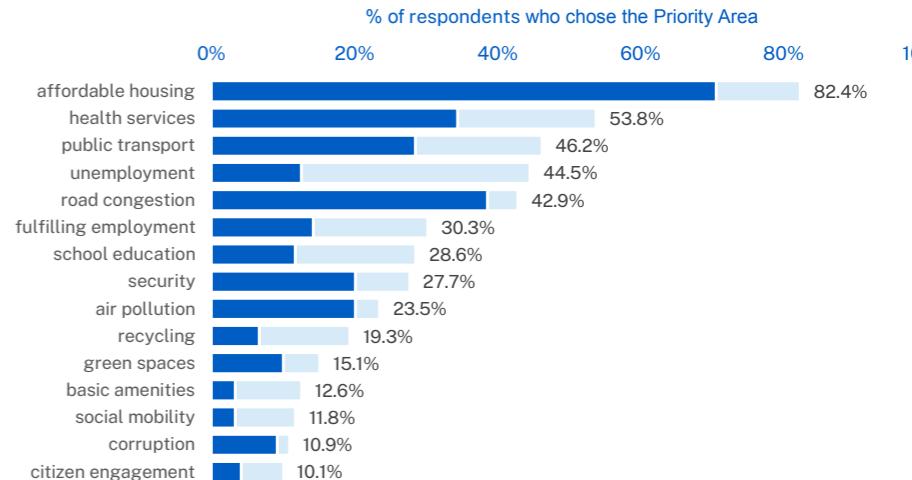
not out of 118  
in 2021

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.920	0.932	0.924	0.929	+0.005
Life expectancy at birth	81.2	81.3	80.4	80.7	+0.3
Expected years of schooling	17.4	17.5	17.3	17.3	+0.0
Mean years of schooling	13.0	13.2	13.4	13.4	+0.0
GNI per capita (PPP \$)	39,507	46,071	42,375	45,225	+2,850

## PRIORITY AREAS

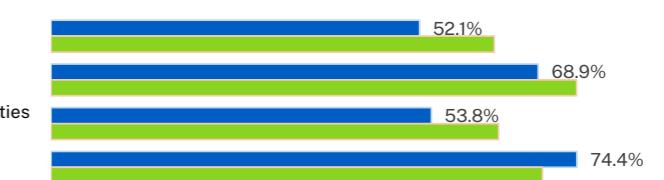
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



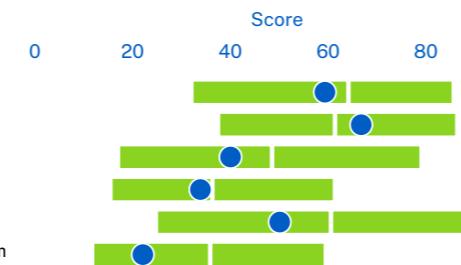
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES

Score



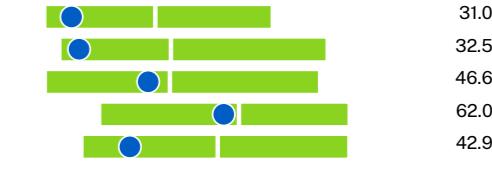
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



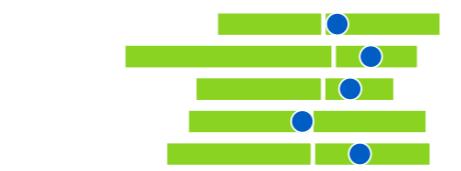
### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



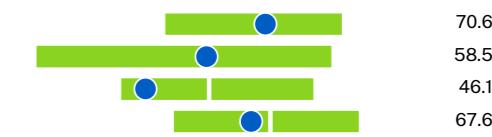
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Chengdu

SMART  
CITY  
RANKING

**97**

Out of 141

84 out of 118  
in 2021

SMART  
CITY RATING

**CCC**

CCC in 2021

FACTOR  
RATINGS

**CCC**

STRUCTURES

**CCC**

TECHNOLOGIES

GROUP

**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
9,478,521      0.740

(UN World Urbanisation Prospects 2022  
estimate)



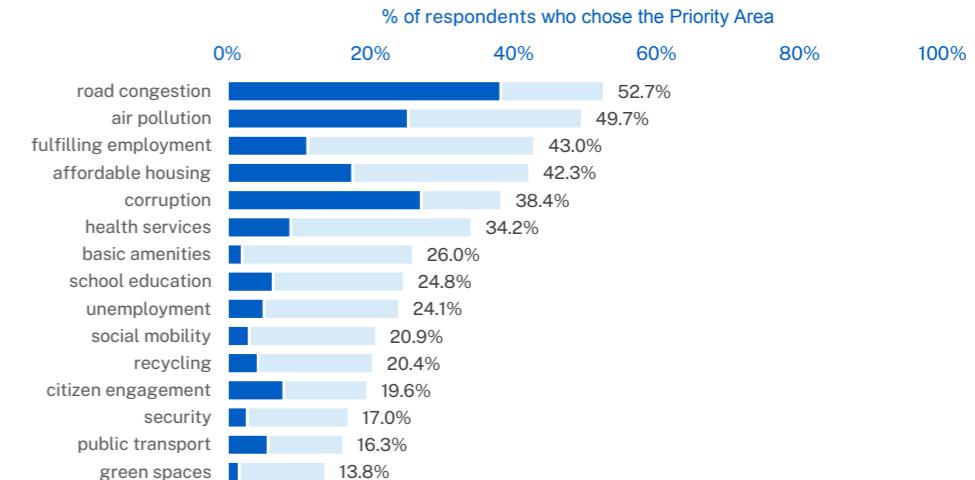
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.758	0.761	0.764	0.768	+0.004
Life expectancy at birth	76.7	76.9	78.1	78.2	+0.1
Expected years of schooling	13.9	14.0	14.2	14.2	+0.0
Mean years of schooling	7.9	8.1	7.6	7.6	+0.0
GNI per capita (PPP \$)	16,127	16,057	16,201	17,504	+1,303

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
You are comfortable with face recognition technologies to lower crime  
You feel the availability of online information has increased your trust in authorities  
The proportion of your day-to-day payment transactions that are non-cash  
(% of transactions)

% of respondents who agree or strongly agree with the statement



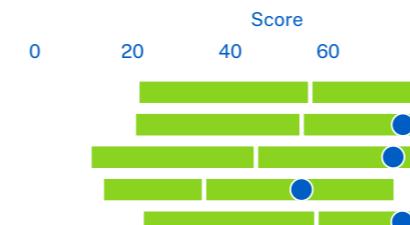
LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

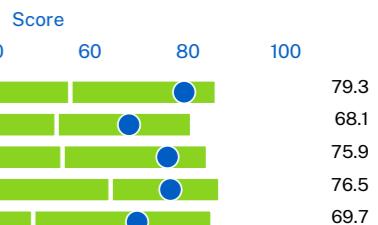
Basic sanitation meets the needs of the poorest areas  
Recycling services are satisfactory  
Public safety is not a problem  
Air pollution is not a problem  
Medical services provision is satisfactory  
Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

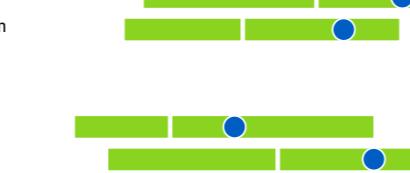
Online reporting of city maintenance problems provides a speedy solution  
A website or App allows residents to easily give away unwanted items  
Free public wifi has improved access to city services  
CCTV cameras has made residents feel safer  
A website or App allows residents to effectively monitor air pollution  
Arranging medical appointments online has improved access

## TECHNOLOGIES



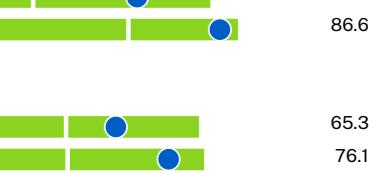
### Mobility

Traffic congestion is not a problem  
Public transport is satisfactory



### Mobility

Car-sharing Apps have reduced congestion  
Apps that direct you to an available parking space have reduced journey time  
Bicycle hiring has reduced congestion  
Online scheduling and ticket sales has made public transport easier to use  
The city provides information on traffic congestion through mobile phones



### Activities

Green spaces are satisfactory  
Cultural activities (shows, bars, and museums) are satisfactory



### Activities

Online purchasing of tickets to shows and museums has made it easier to attend



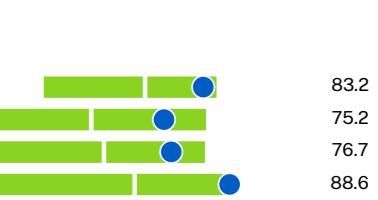
### Opportunities (Work & School)

Employment finding services are readily available  
Most children have access to a good school  
Lifelong learning opportunities are provided by local institutions  
Businesses are creating new jobs  
Minorities feel welcome



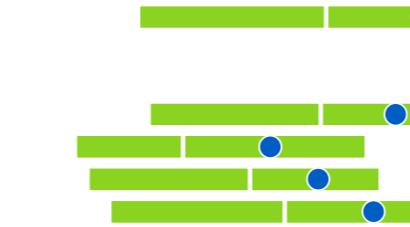
### Opportunities (Work & School)

Online access to job listings has made it easier to find work  
IT skills are taught well in schools  
Online services provided by the city has made it easier to start a new business  
The current internet speed and reliability meet connectivity needs



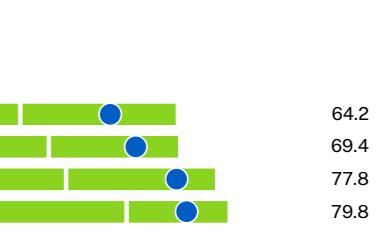
### Governance

Information on local government decisions are easily accessible  
Corruption of city officials is not an issue of concern  
Residents contribute to decision making of local government  
Residents provide feedback on local government projects



### Governance

Online public access to city finances has reduced corruption  
Online voting has increased participation  
An online platform where residents can propose ideas has improved city life  
Processing Identification Documents online has reduced waiting times



# Chicago

SMART  
CITY  
RANKING

**61**

Out of 141



56 out of 118  
in 2021

SMART  
CITY RATING

**BB**

B in 2021

FACTOR  
RATINGS

**BB**

STRUCTURES

**BB**

TECHNOLOGIES

GROUP

**2**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 2,746,388  
(UN Data)

HDI 0.929

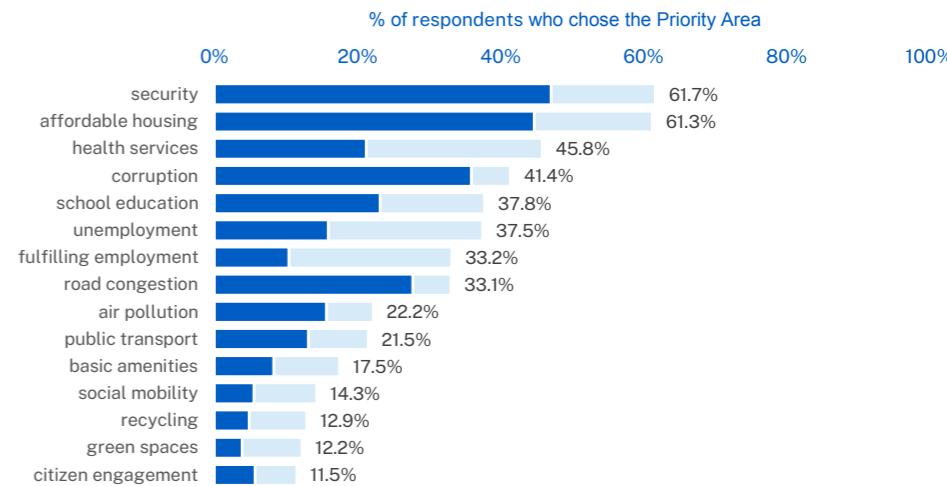


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.920	0.926	0.920	0.921	+0.001
Life expectancy at birth	78.9	78.9	77.4	77.2	-0.2
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.7	13.7	+0.0
GNI per capita (PPP \$)	56,140	63,826	61,462	64,765	+3,304

## PRIORITY AREAS

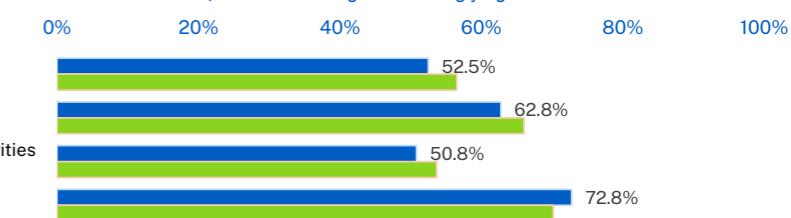
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



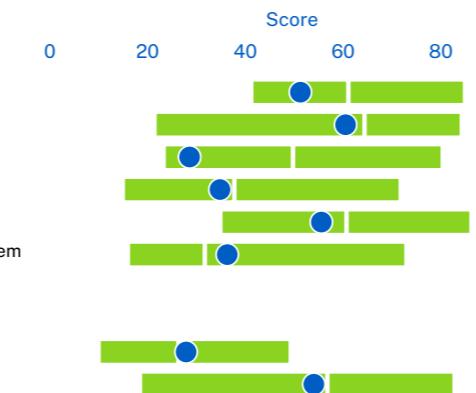
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



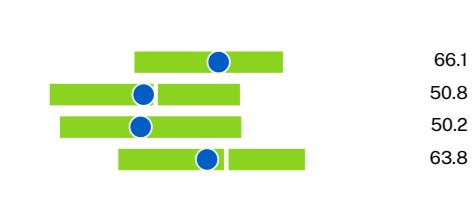
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



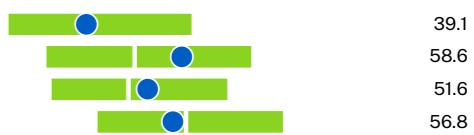
### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Chongqing

SMART  
CITY  
RANKING

**86**

Out of 141

74 out of 118  
in 2021

SMART  
CITY RATING

**CCC**

CCC in 2021

FACTOR  
RATINGS

**CCC**

STRUCTURES

**CCC**

TECHNOLOGIES

GROUP

**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
16,874,741      0.774

(UN World Urbanisation Prospects 2022  
estimate)

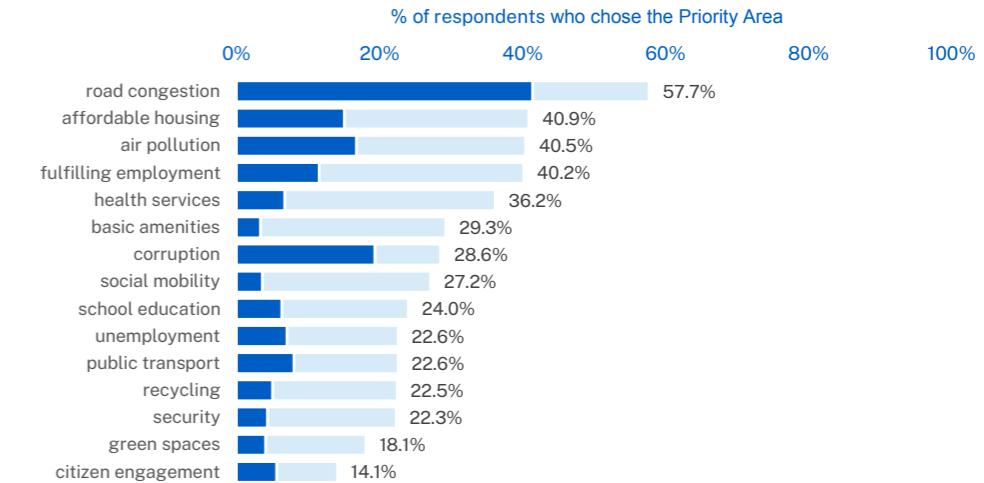


## SMART CITY RATING

Country	2018	2019	2020	2021	1 yr change
HDI	0.758	0.761	0.764	0.768	+0.004
Life expectancy at birth	76.7	76.9	78.1	78.2	+0.1
Expected years of schooling	13.9	14.0	14.2	14.2	+0.0
Mean years of schooling	7.9	8.1	7.6	7.6	+0.0
GNI per capita (PPP \$)	16,127	16,057	16,201	17,504	+1,303

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

- Health & Safety**
- Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem



- Mobility**
- Traffic congestion is not a problem
  - Public transport is satisfactory

## TECHNOLOGIES

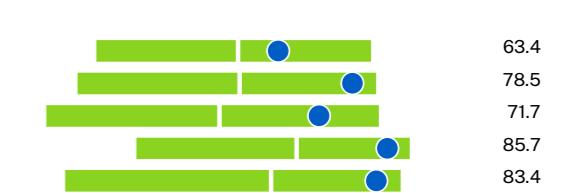
- Health & Safety**
- Online reporting of city maintenance problems provides a speedy solution
  - A website or App allows residents to easily give away unwanted items
  - Free public wifi has improved access to city services
  - CCTV cameras has made residents feel safer
  - A website or App allows residents to effectively monitor air pollution
  - Arranging medical appointments online has improved access



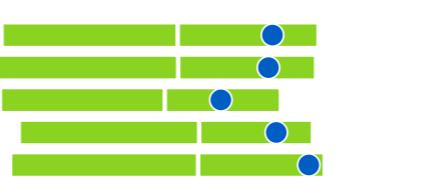
- Activities**
- Green spaces are satisfactory
  - Cultural activities (shows, bars, and museums) are satisfactory



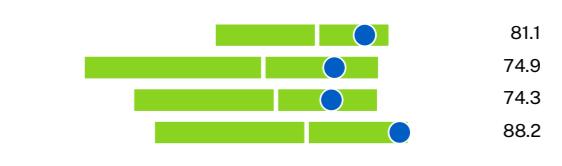
- Mobility**
- Car-sharing Apps have reduced congestion
  - Apps that direct you to an available parking space have reduced journey time
  - Bicycle hiring has reduced congestion
  - Online scheduling and ticket sales has made public transport easier to use
  - The city provides information on traffic congestion through mobile phones



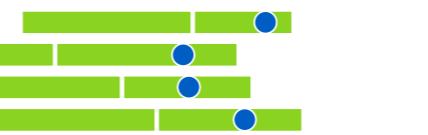
- Opportunities (Work & School)**
- Employment finding services are readily available
  - Most children have access to a good school
  - Lifelong learning opportunities are provided by local institutions
  - Businesses are creating new jobs
  - Minorities feel welcome



- Opportunities (Work & School)**
- Online access to job listings has made it easier to find work
  - IT skills are taught well in schools
  - Online services provided by the city has made it easier to start a new business
  - The current internet speed and reliability meet connectivity needs



- Governance**
- Information on local government decisions are easily accessible
  - Corruption of city officials is not an issue of concern
  - Residents contribute to decision making of local government
  - Residents provide feedback on local government projects



- Governance**
- Online public access to city finances has reduced corruption
  - Online voting has increased participation
  - An online platform where residents can propose ideas has improved city life
  - Processing Identification Documents online has reduced waiting times



# Copenhagen

SMART  
CITY  
RANKING

**4**

Out of 141



5 out of 118  
in 2021

SMART  
CITY RATING

**AA**

AAA in 2021

FACTOR  
RATINGS

**AAA**

STRUCTURES

**A**

TECHNOLOGIES

GROUP  
**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 1,855,084  
(Eurostat)

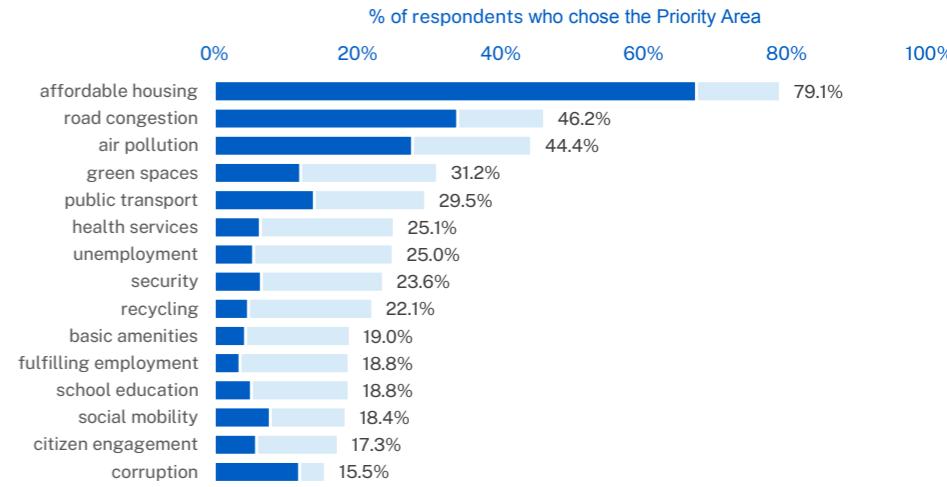


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.930	0.940	0.947	0.948	+0.001
Life expectancy at birth	80.8	80.9	81.6	81.4	-0.2
Expected years of schooling	19.1	18.9	18.0	18.0	+0.0
Mean years of schooling	12.6	12.6	13.0	13.0	+0.0
GNI per capita (PPP \$)	48,836	58,662	58,144	60,365	+2,221

## PRIORITY AREAS

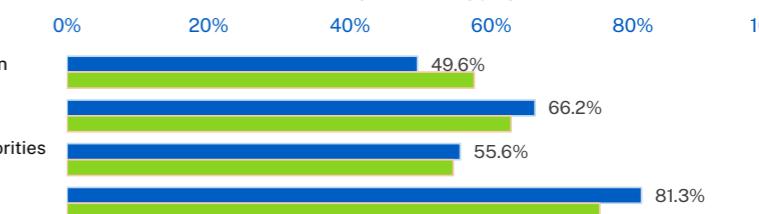
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

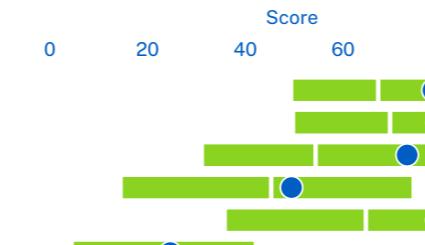
% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES



## TECHNOLOGIES



### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

SMART

CITY

RANKING

**105**

Out of 141

94 out of 118  
in 2021SMART  
CITY RATING**CC**

CC in 2021

FACTOR  
RATINGS**CC**

STRUCTURES

**CC**

TECHNOLOGIES

GROUP

**4**All ratings range  
from AAA to D**BACKGROUND INFORMATION****City**

Population	HDI
3,206,576	0.730

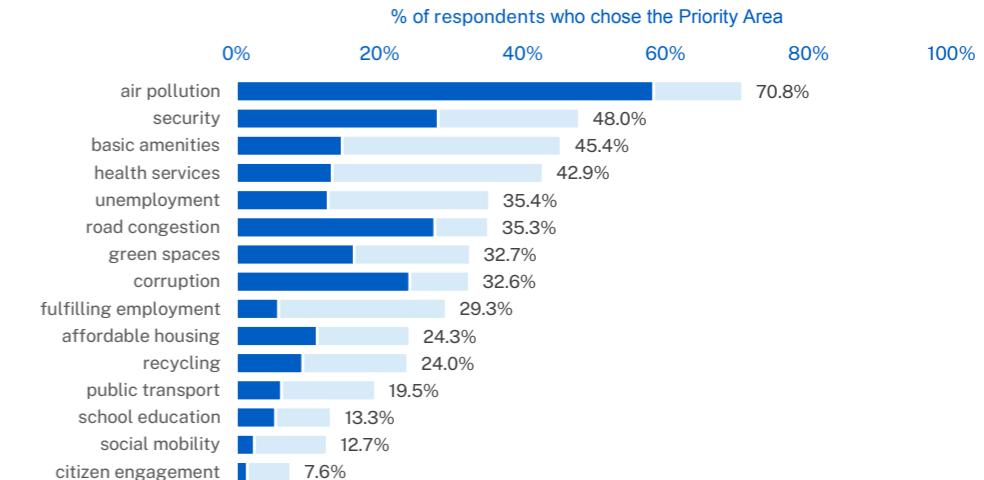
(UN World Urbanisation Prospects 2022 estimate)



Country	2018	2019	2020	2021	1 yr change
HDI	0.647	0.645	0.642	0.633	-0.009
Life expectancy at birth	69.4	69.7	70.2	67.2	-2.9
Expected years of schooling	12.3	12.2	11.9	11.9	+0.0
Mean years of schooling	6.5	6.5	6.7	6.7	+0.0
GNI per capita (PPP \$)	6,829	6,681	6,107	6,590	+482

**PRIORITY AREAS**

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

**ATTITUDES**

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement

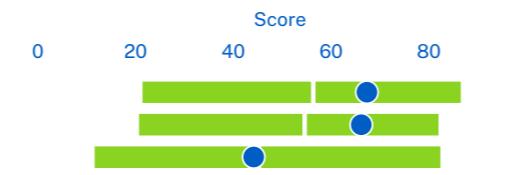


LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

**STRUCTURES****Health & Safety**

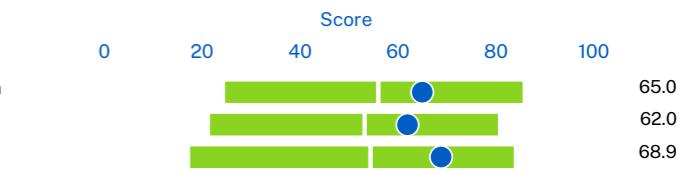
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

**Mobility**

- Traffic congestion is not a problem
- Public transport is satisfactory

**Health & Safety**

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

**TECHNOLOGIES****Activities**

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

**Mobility**

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

**Opportunities (Work & School)**

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

**Opportunities (Work & School)**

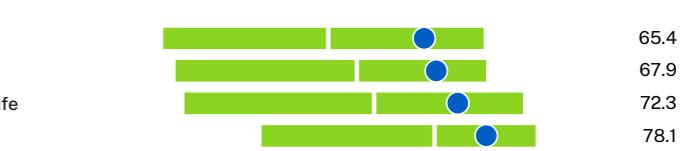
- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

**Governance**

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

**Governance**

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Denver

SMART  
CITY  
RANKING

**53**

Out of 141



34 out of 118  
in 2021

SMART  
CITY RATING

**BBB**

BBB in 2021

FACTOR  
RATINGS

**BBB**

STRUCTURES

**BBB**

TECHNOLOGIES

GROUP

**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
715,522      0.942

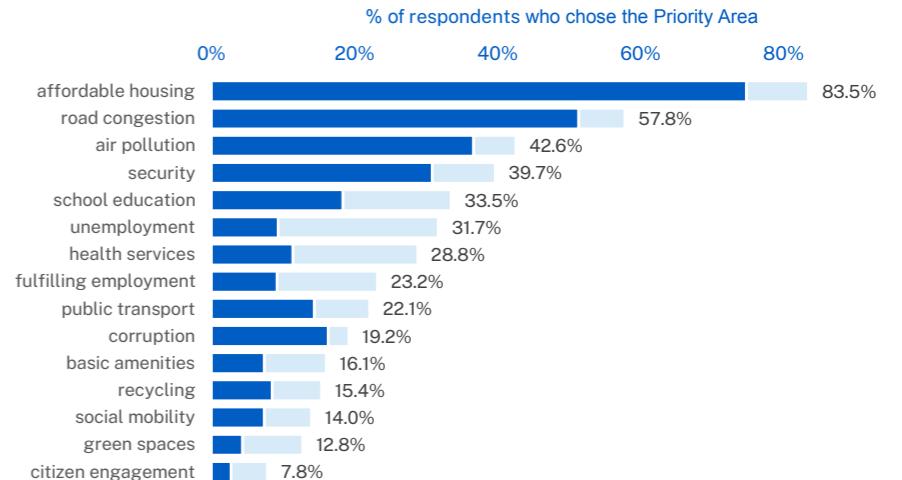
(UN Data)



Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.926	0.920	0.921	+0.001
Life expectancy at birth	78.9	78.9	77.4	77.2	-0.2
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.7	13.7	+0.0
GNI per capita (PPP \$)	56,140	63,826	61,462	64,765	+3,304

## PRIORITY AREAS

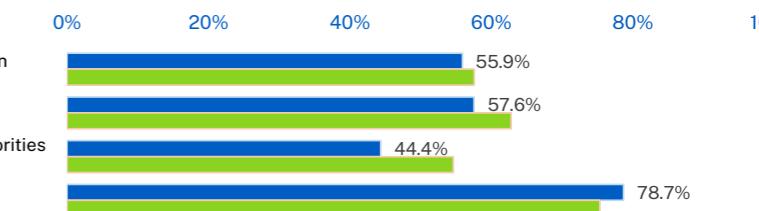
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



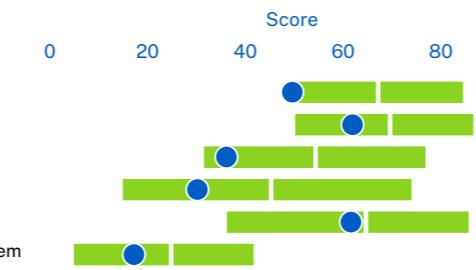
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

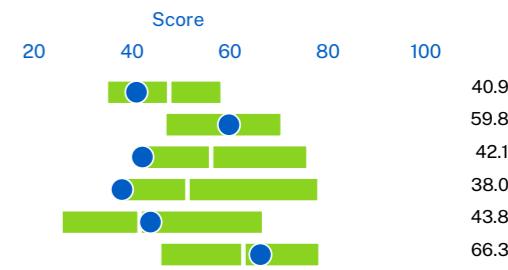
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



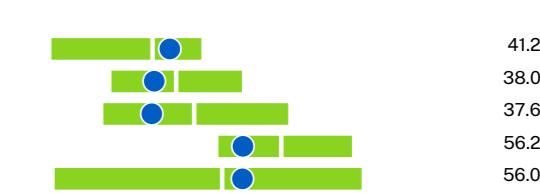
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



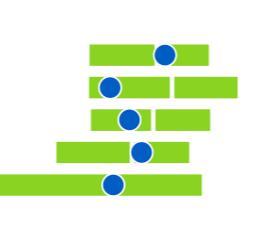
### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



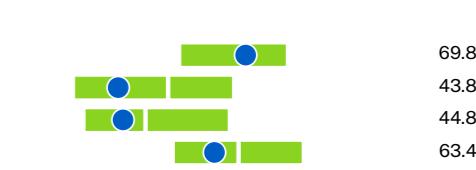
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



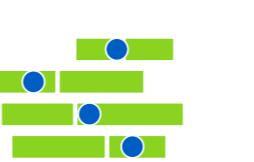
### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



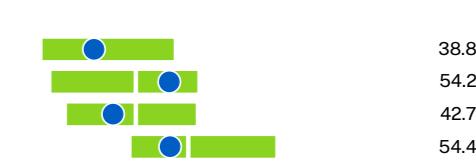
### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



## SMART CITY RANKING

**59**

Out of 141

not out of 118  
in 2021

## SMART CITY RATING

**BB**

not in 2021

## FACTOR RATINGS

**BB**

## STRUCTURES

**B**

## TECHNOLOGIES

**3**

All ratings range  
from AAA to D

### BACKGROUND INFORMATION

#### City

Population      HDI  
1,186,023      0.855

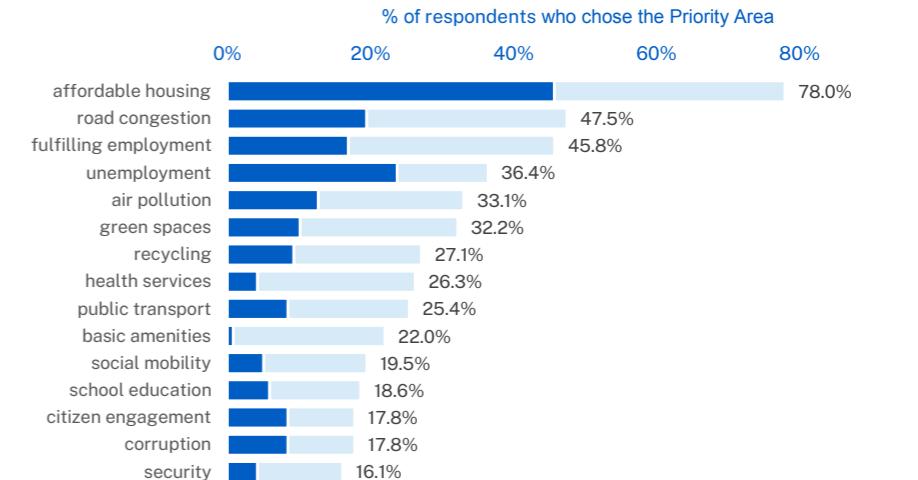
(UN Data)



Country	2018	2019	2020	2021	1 yr change
HDI	0.853	0.859	0.854	0.855	+0.001
Life expectancy at birth	80.9	81.0	79.1	79.3	+0.2
Expected years of schooling	12.0	12.3	12.6	12.6	+0.0
Mean years of schooling	9.9	10.0	10.0	10.0	+0.0
GNI per capita (PPP \$)	89,089	87,792	83,721	87,134	+3,413

### PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES



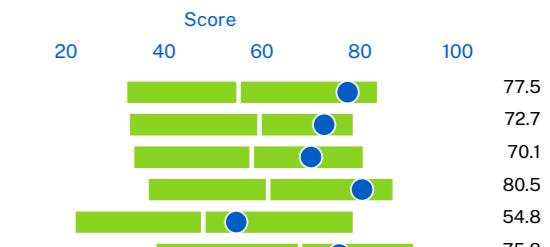
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

### STRUCTURES



### TECHNOLOGIES



#### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

#### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

#### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

#### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

#### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

#### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

#### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

# Dubai

SMART  
CITY  
RANKING

**17**

Out of 141



14 out of 118  
in 2021

SMART  
CITY RATING

**BB**

A in 2021

FACTOR  
RATINGS

**BB**

STRUCTURES

**B**

TECHNOLOGIES

GROUP  
**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

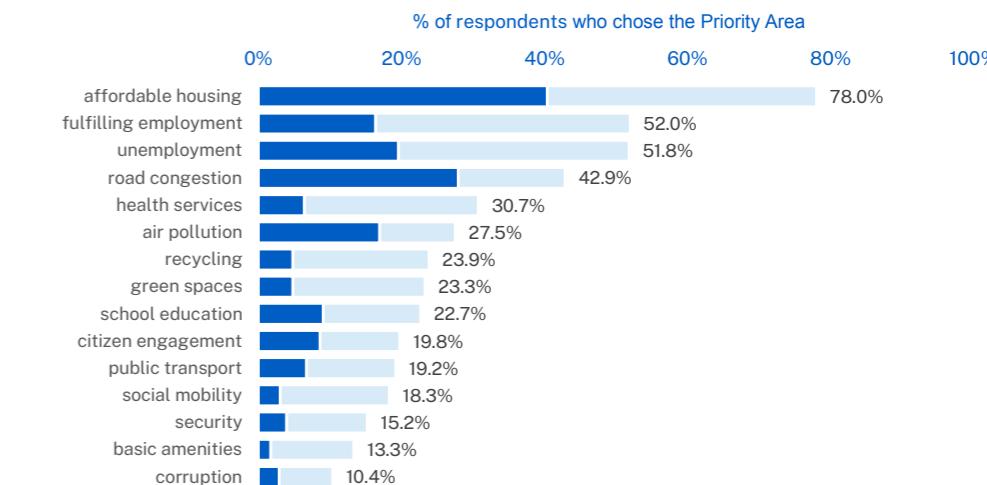
### City

Population      HDI  
2,964,382      0.911

(UN World Urbanisation Prospects 2022  
estimate)



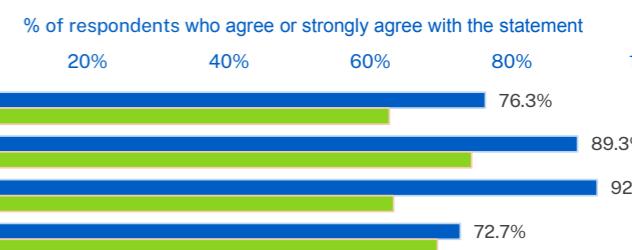
## PRIORITY AREAS



From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left-hand, dark blue section of each bar shows the Alignment, i.e. the proportion of those respondents who also answered the survey on the corresponding area by giving it low priority. A strong Alignment (i.e. consistency across both areas explained) means that these areas may benefit from close observation.

## ATTITUDES



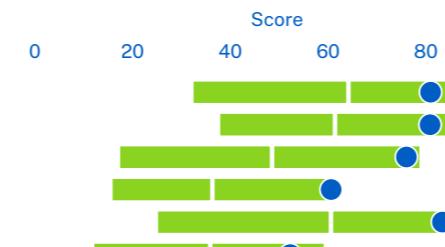
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



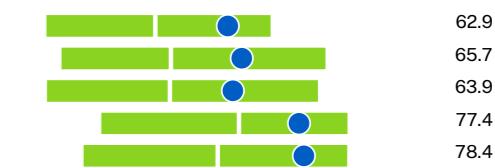
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



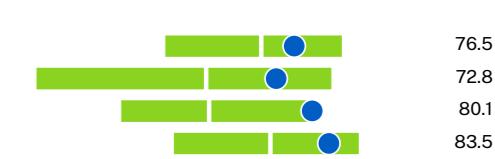
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



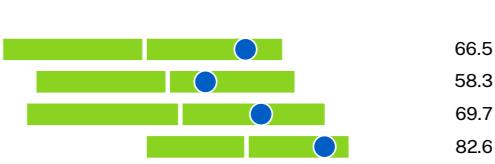
### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Dublin

SMART  
CITY  
RANKING

**63**

Out of 141

44 out of 118  
in 2021

SMART  
CITY RATING

**BB**

BBB in 2021

FACTOR  
RATINGS

**BB**

STRUCTURES

**BBB**

TECHNOLOGIES

GROUP

**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
1,423,957      0.950

(Eurostat)



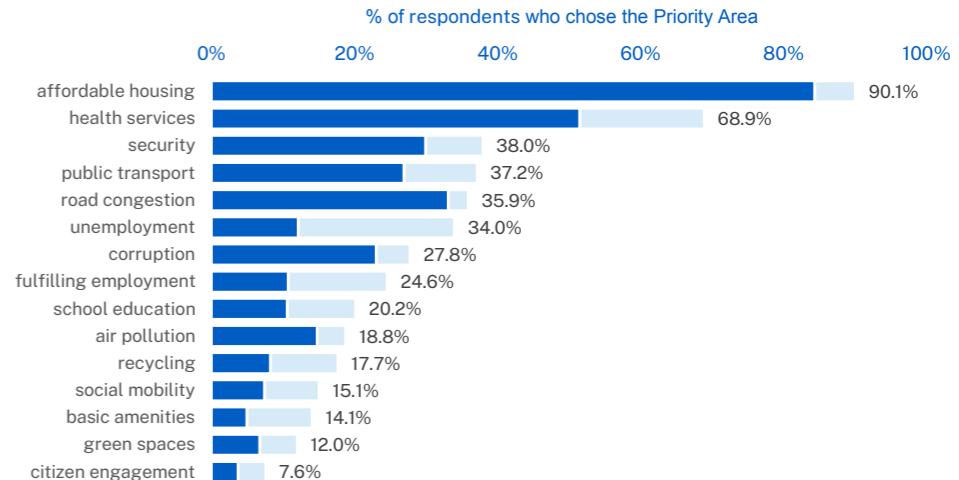
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.942	0.955	0.943	0.945	+0.002
Life expectancy at birth	82.1	82.3	82.5	82.0	-0.5
Expected years of schooling	18.8	18.7	18.0	18.0	+0.0
Mean years of schooling	12.5	12.7	11.6	11.6	+0.0
GNI per capita (PPP \$)	55,660	68,371	67,736	76,169	+8,433

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

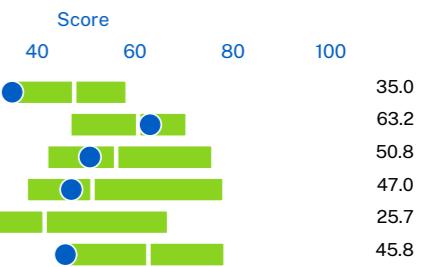
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



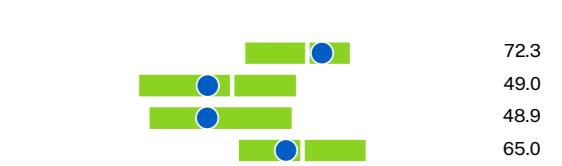
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Dusseldorf

SMART  
CITY  
RANKING

**38**

Out of 141

27 out of 118  
in 2021

SMART  
CITY RATING

**BB**

A in 2021

FACTOR  
RATINGS

**BBB**

STRUCTURES

**BB**

TECHNOLOGIES

GROUP  
**2**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 17,925,570  
(Eurostat)

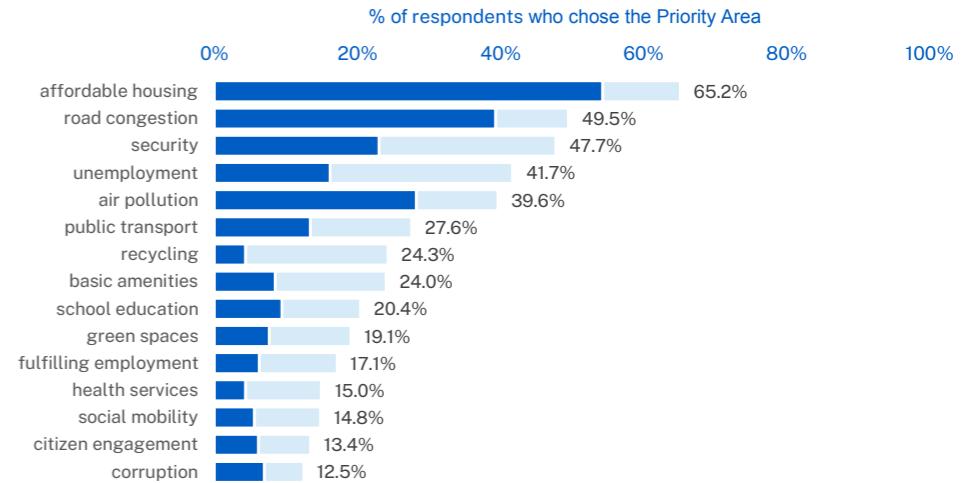


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.939	0.947	0.944	0.942	-0.002
Life expectancy at birth	81.2	81.3	81.2	80.6	-0.5
Expected years of schooling	17.1	17.0	17.0	17.0	+0.0
Mean years of schooling	14.1	14.2	14.1	14.1	+0.0
GNI per capita (PPP \$)	46,946	55,314	53,078	54,534	+1,457

## PRIORITY AREAS

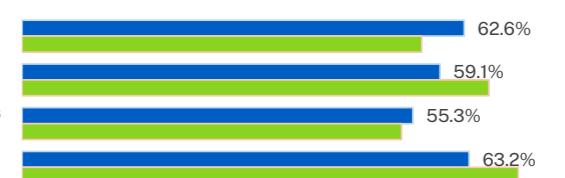
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

## STRUCTURES



LEGEND: MIN CITY MEAN GROUP MAX

## TECHNOLOGIES



## ACTIVITIES

Online purchasing of tickets to shows and museums has made it easier to attend



## OPPORTUNITIES (WORK & SCHOOL)

Online access to job listings has made it easier to find work  
IT skills are taught well in schools  
Online services provided by the city has made it easier to start a new business  
The current internet speed and reliability meet connectivity needs



## Governance

Online public access to city finances has reduced corruption  
Online voting has increased participation  
An online platform where residents can propose ideas has improved city life  
Processing Identification Documents online has reduced waiting times



# Geneva

SMART  
CITY  
RANKING

**9**

Out of 141

6 out of 118  
in 2021

SMART  
CITY RATING

**AA**

AA in 2021

FACTOR  
RATINGS

**AA**

STRUCTURES

**A**

TECHNOLOGIES

GROUP  
**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
506,343      0.966

(Eurostat)

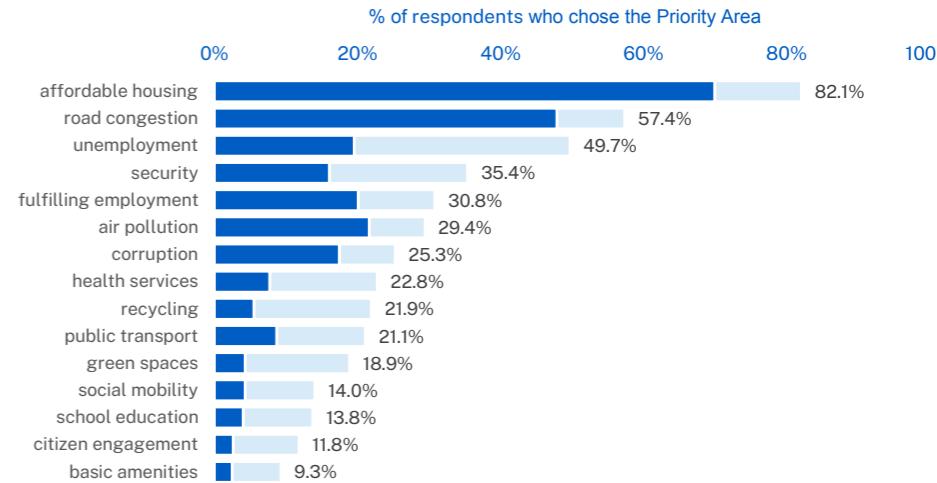


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.946	0.955	0.956	0.962	+0.006
Life expectancy at birth	83.6	83.8	83.1	84.0	+0.9
Expected years of schooling	16.2	16.3	16.5	16.5	+0.0
Mean years of schooling	13.4	13.4	13.9	13.9	+0.0
GNI per capita (PPP \$)	59,375	69,394	65,011	66,933	+1,922

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



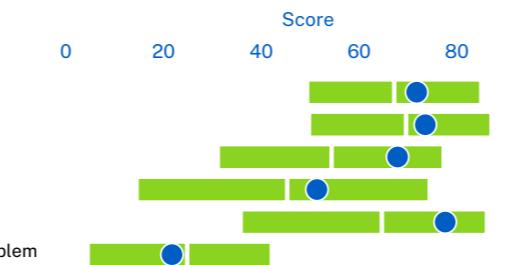
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

## STRUCTURES

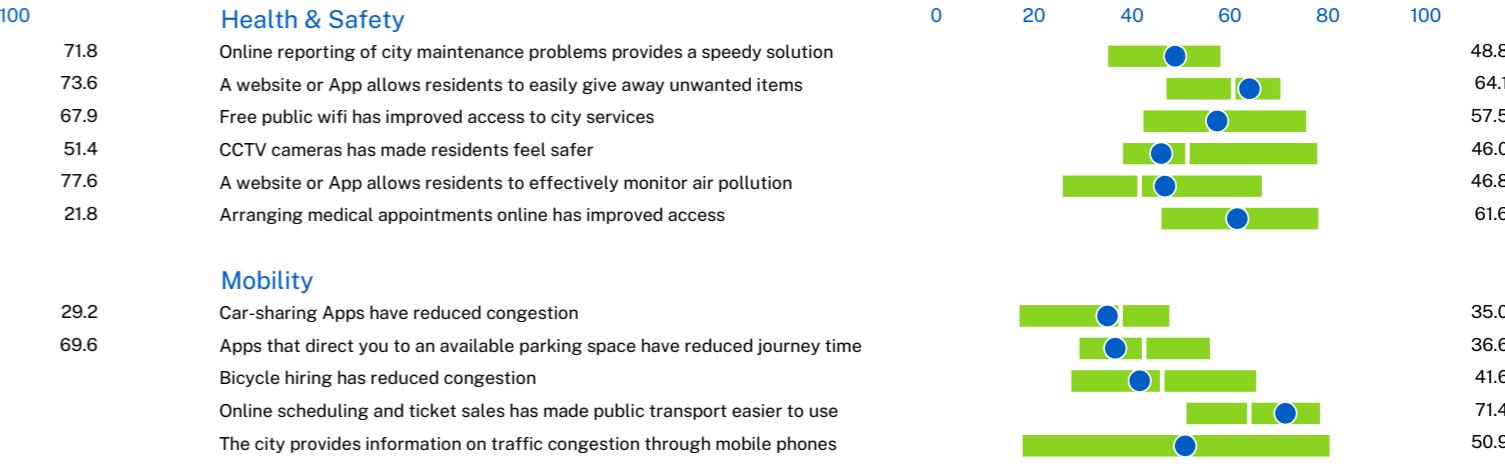
### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

## TECHNOLOGIES



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

## STRUCTURES

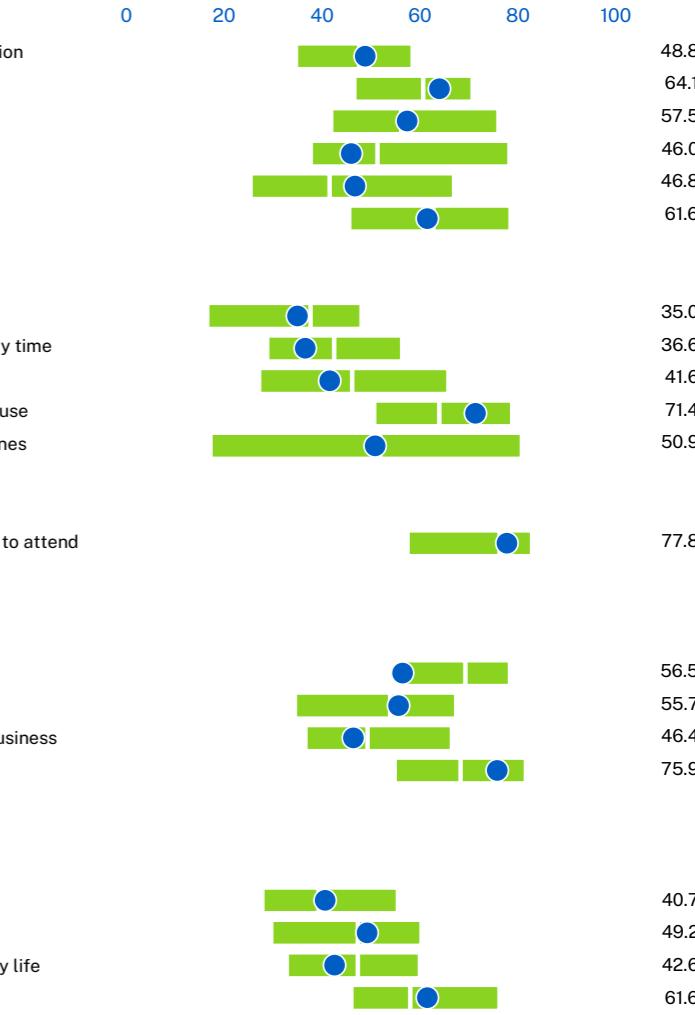
### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

## TECHNOLOGIES



# Glasgow

SMART  
CITY  
RANKING

**80**

Out of 141

65 out of 118  
in 2021

SMART  
CITY RATING

**BB**

B in 2021

FACTOR  
RATINGS

**BB**

STRUCTURES

**B**

TECHNOLOGIES

GROUP  
**2**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
627,479      0.921

(Eurostat)



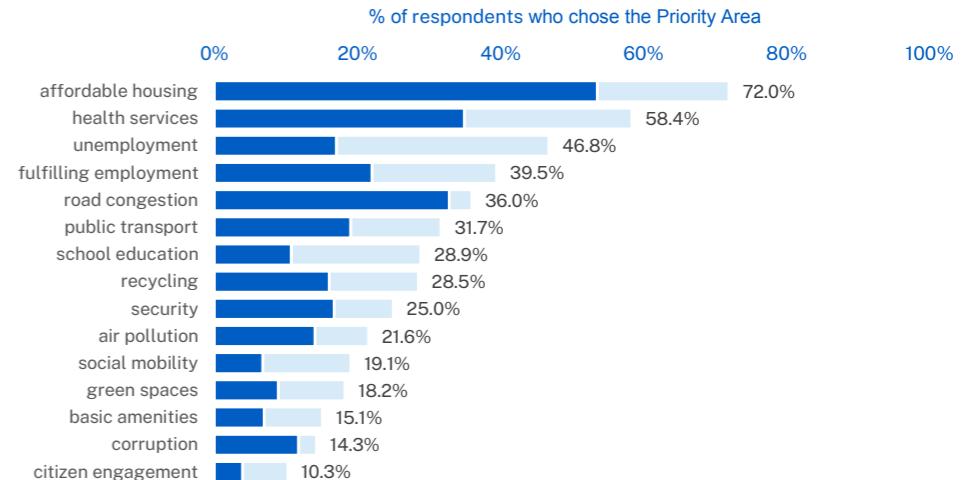
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.920	0.932	0.924	0.929	+0.005
Life expectancy at birth	81.2	81.3	80.4	80.7	+0.3
Expected years of schooling	17.4	17.5	17.3	17.3	+0.0
Mean years of schooling	13.0	13.2	13.4	13.4	+0.0
GNI per capita (PPP \$)	39,507	46,071	42,375	45,225	+2,850

## PRIORITY AREAS

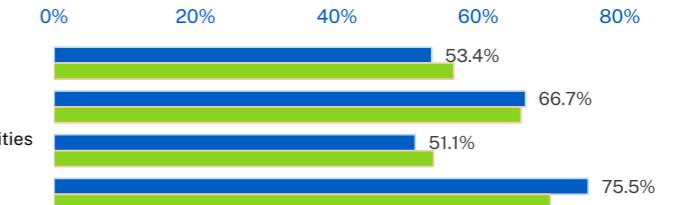
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

The left-hand, dark blue section of each bar shows the Alignment, i.e. the proportion of those respondents who also answered the survey on the corresponding area by giving it low priority. A strong Alignment (i.e. consistency across both areas explained) means that these areas may benefit from close observation.

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



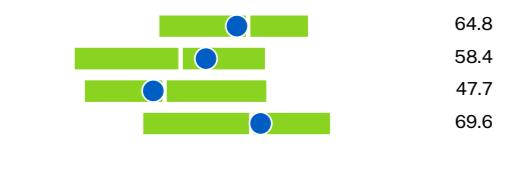
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Gothenburg

SMART  
CITY  
RANKING

**36**

Out of 141



46 out of 118  
in 2021

SMART  
CITY RATING

**A**

BBB in 2021

FACTOR  
RATINGS

**A**

STRUCTURES

**A**

TECHNOLOGIES

GROUP

**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
2,071,191      0.944

(Eurostat)

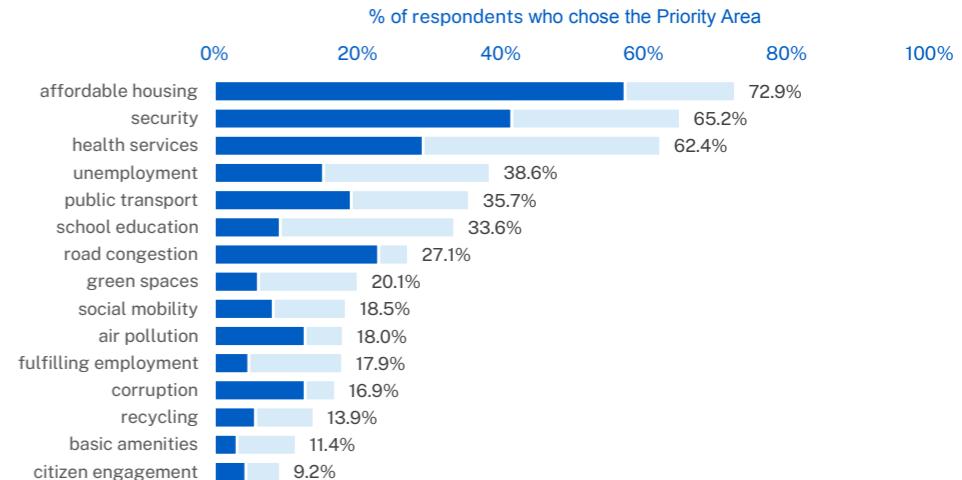


Country

	2018	2019	2020	2021	1 yr change
HDI	0.937	0.945	0.942	0.947	+0.005
Life expectancy at birth	82.7	82.8	82.4	83.0	+0.5
Expected years of schooling	18.8	19.5	18.0	18.0	+0.0
Mean years of schooling	12.4	12.5	12.6	12.6	+0.0
GNI per capita (PPP \$)	47,955	54,508	52,359	54,489	+2,130

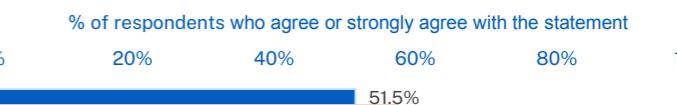
## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

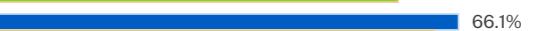


## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion



You are comfortable with face recognition technologies to lower crime



You feel the availability of online information has increased your trust in authorities



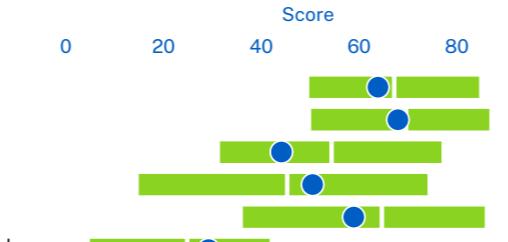
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



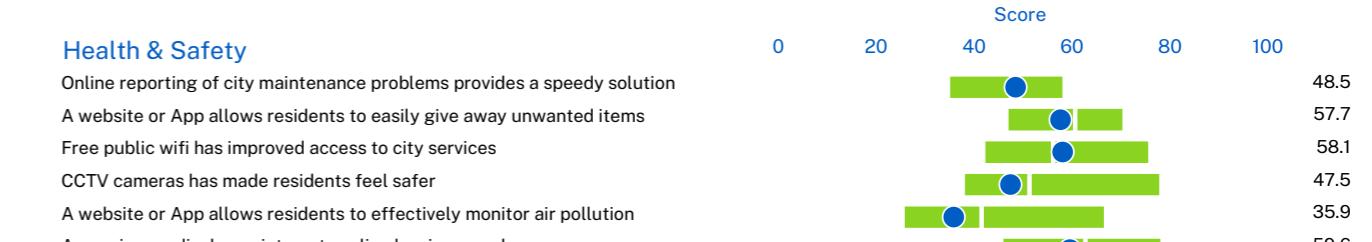
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES



## TECHNOLOGIES



### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

# Guangzhou

SMART  
CITY  
RANKING

**71**

Out of 141



66 out of 118  
in 2021

SMART  
CITY RATING

**CCC**

CCC in 2021

FACTOR  
RATINGS

**CCC**

STRUCTURES

**CCC**

TECHNOLOGIES

GROUP

**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 13,964,637 HDI 0.799

(UN World Urbanisation Prospects 2022 estimate)



Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

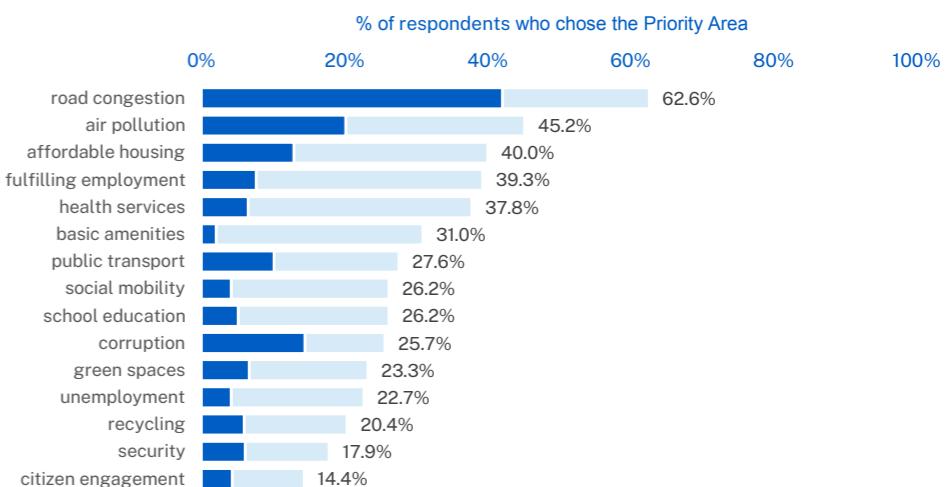
### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.758	0.761	0.764	0.768	+0.004
Life expectancy at birth	76.7	76.9	78.1	78.2	+0.1
Expected years of schooling	13.9	14.0	14.2	14.2	+0.0
Mean years of schooling	7.9	8.1	7.6	7.6	+0.0
GNI per capita (PPP \$)	16,127	16,057	16,201	17,504	+1,303

## PRIORITY AREAS

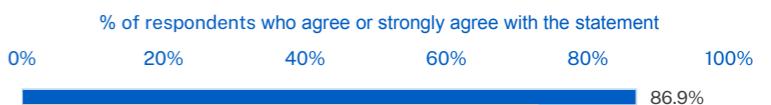
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left-hand, dark blue section of each bar shows the Alignment, i.e. the proportion of those respondents who also answered the survey on the corresponding area by giving it low priority. A strong Alignment (i.e. consistency across both areas explained) means that these areas may benefit from close observation.



## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion



You are comfortable with face recognition technologies to lower crime



You feel the availability of online information has increased your trust in authorities



The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



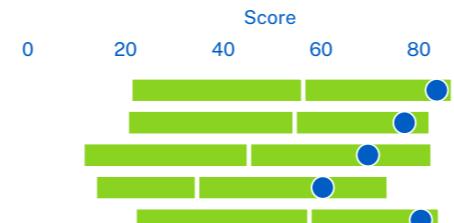
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

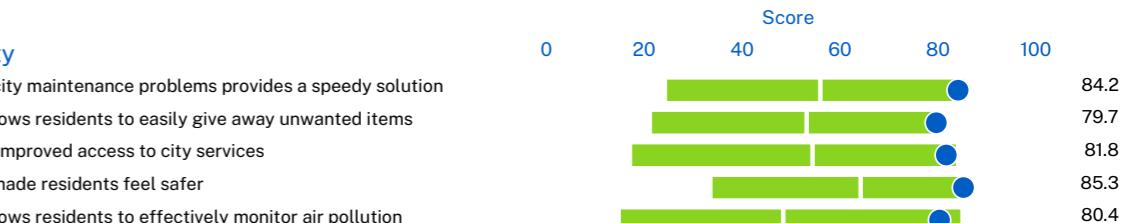
### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



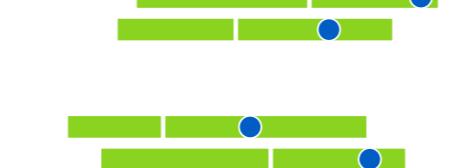
### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



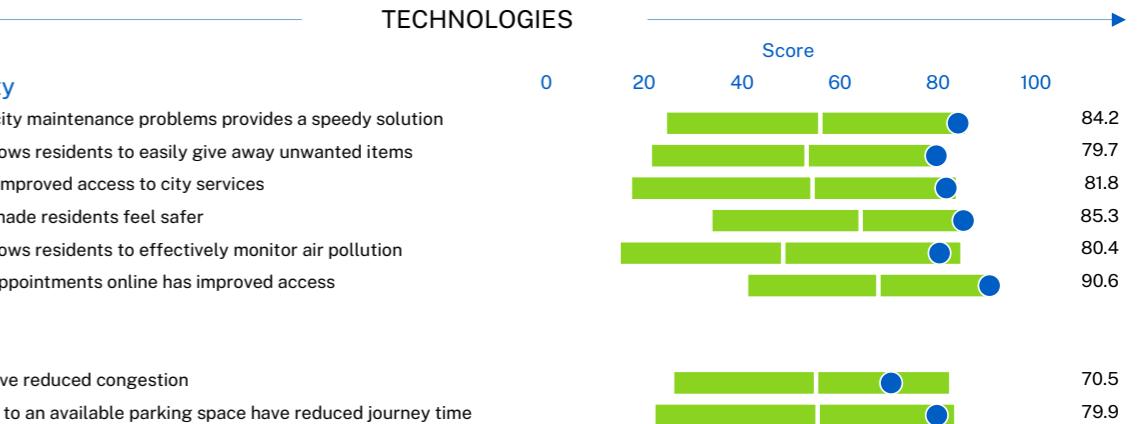
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Guatemala City

SMART  
CITY  
RANKING  
**141**

Out of 141

not out of 118  
in 2021

SMART  
CITY RATING

**D**

not in 2021

FACTOR  
RATINGS

**D**

STRUCTURES

TECHNOLOGIES

**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
3,036,405      0.722

(UN World Urbanisation Prospects 2022  
estimate)

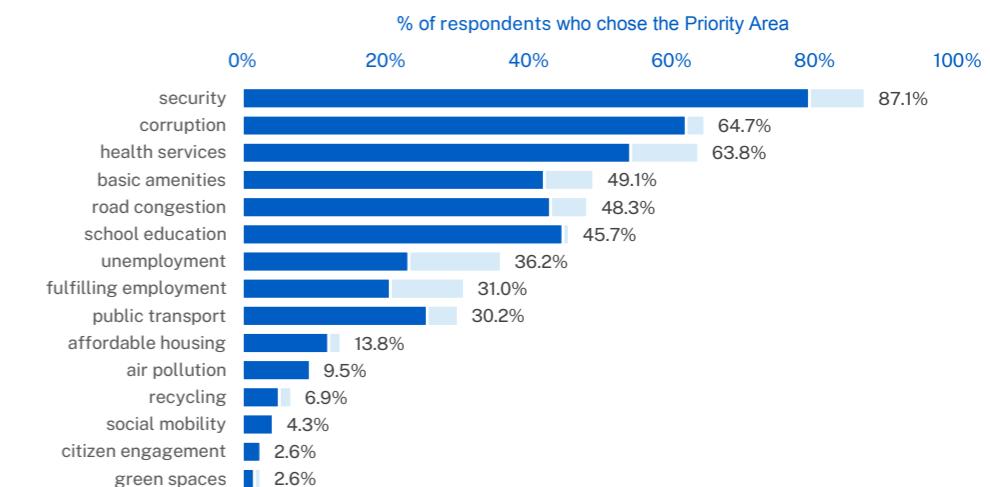


Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.640	0.642	0.635	0.627	-0.008
Life expectancy at birth	72.7	73.1	71.8	69.2	-2.6
Expected years of schooling	10.6	10.6	10.6	10.6	+0.0
Mean years of schooling	5.7	5.7	5.7	5.7	+0.0
GNI per capita (PPP \$)	8,289	8,494	8,241	8,723	+482

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

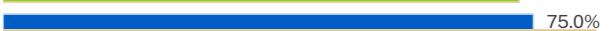


## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion



You are comfortable with face recognition technologies to lower crime



You feel the availability of online information has increased your trust in authorities



The proportion of your day-to-day payment transactions that are non-cash  
(% of transactions)



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

→

←

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



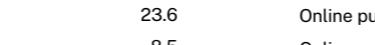
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



# Hamburg

SMART  
CITY  
RANKING

**11**

Out of 141



8 out of 118  
in 2021

SMART  
CITY RATING

**A**

A in 2021

FACTOR  
RATINGS

**A**

STRUCTURES

**BBB**

TECHNOLOGIES

GROUP  
**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 1,852,478  
(Eurostat)

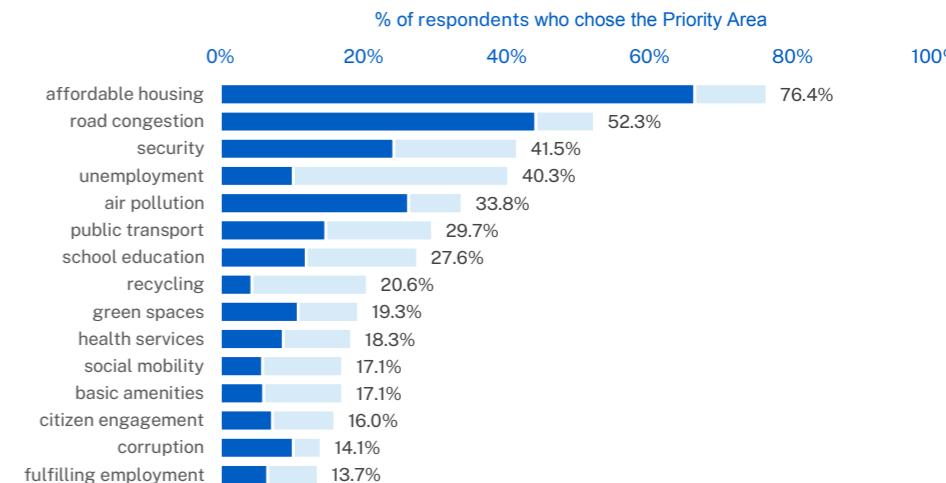


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.939	0.947	0.944	0.942	-0.002
Life expectancy at birth	81.2	81.3	81.2	80.6	-0.5
Expected years of schooling	17.1	17.0	17.0	17.0	+0.0
Mean years of schooling	14.1	14.2	14.1	14.1	+0.0
GNI per capita (PPP \$)	46,946	55,314	53,078	54,534	+1,457

## PRIORITY AREAS

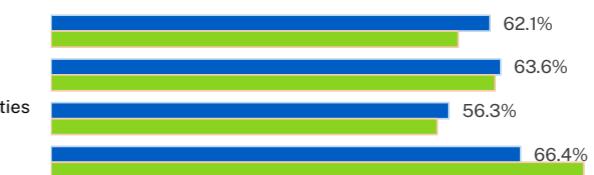
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



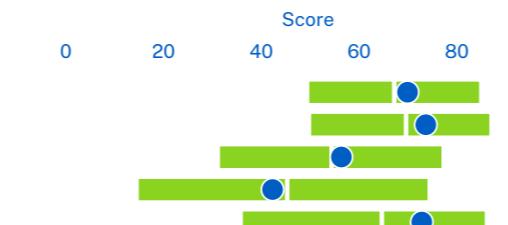
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

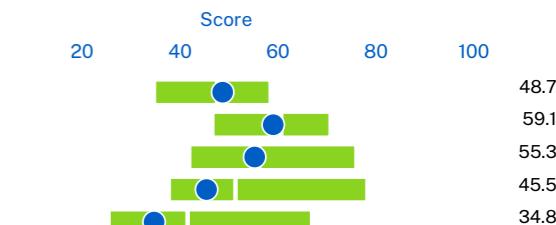


→

## TECHNOLOGIES

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



### Mobility

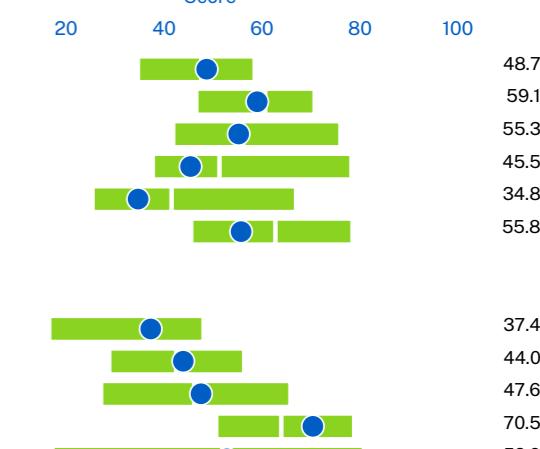
- Traffic congestion is not a problem
- Public transport is satisfactory



←

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



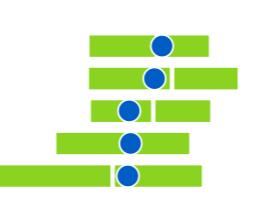
### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



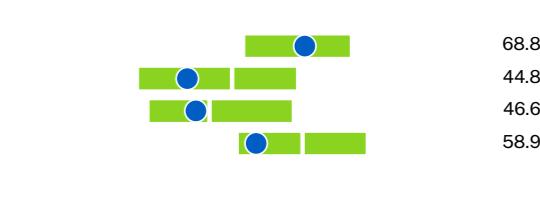
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



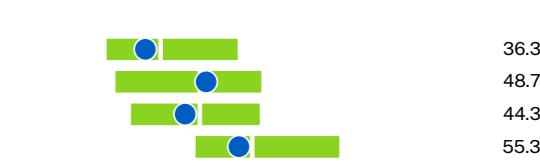
### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Hangzhou

SMART  
CITY  
RANKING

**70**

Out of 141



63 out of 118  
in 2021

SMART  
CITY RATING

**CCC**

CCC in 2021

FACTOR  
RATINGS

**CCC**

STRUCTURES

**CCC**

TECHNOLOGIES

GROUP  
**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
8,044,878      0.801

(UN World Urbanisation Prospects 2022  
estimate)



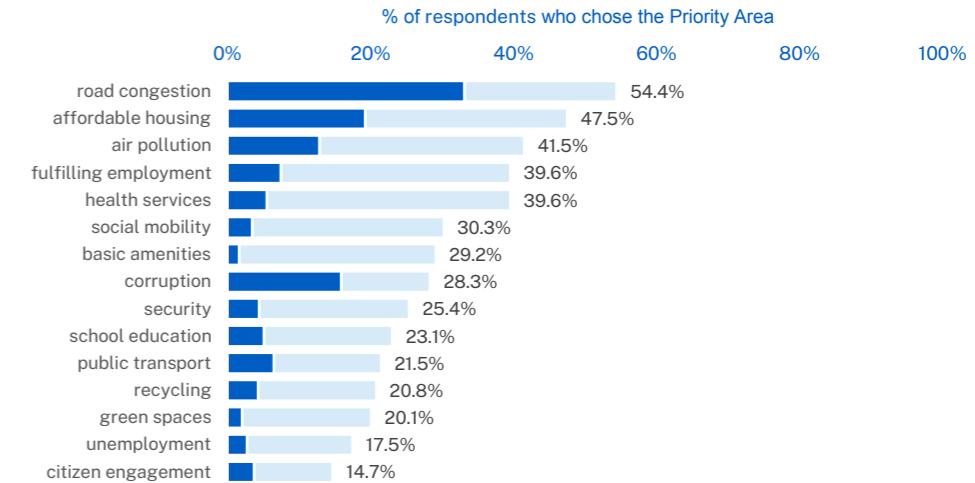
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.758	0.761	0.764	0.768	+0.004
Life expectancy at birth	76.7	76.9	78.1	78.2	+0.1
Expected years of schooling	13.9	14.0	14.2	14.2	+0.0
Mean years of schooling	7.9	8.1	7.6	7.6	+0.0
GNI per capita (PPP \$)	16,127	16,057	16,201	17,504	+1,303

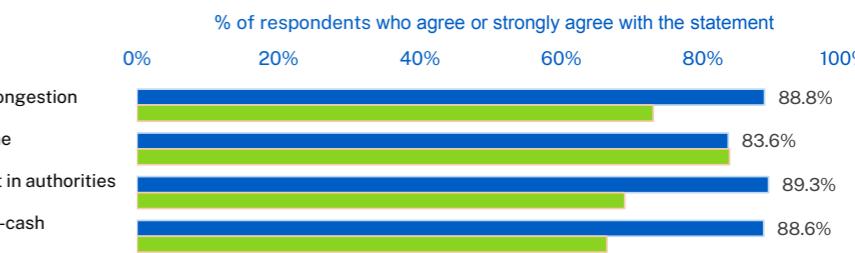
## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



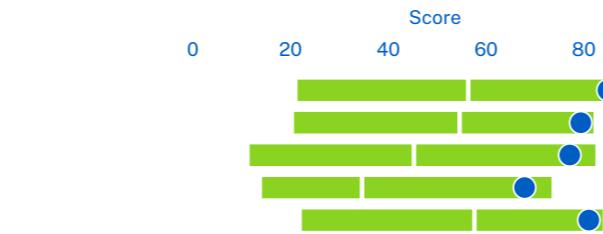
## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
You are comfortable with face recognition technologies to lower crime  
You feel the availability of online information has increased your trust in authorities  
The proportion of your day-to-day payment transactions that are non-cash  
(% of transactions)



LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES



## Mobility



## Activities



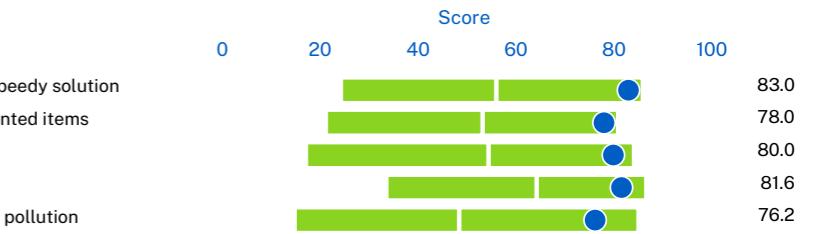
## Opportunities (Work & School)



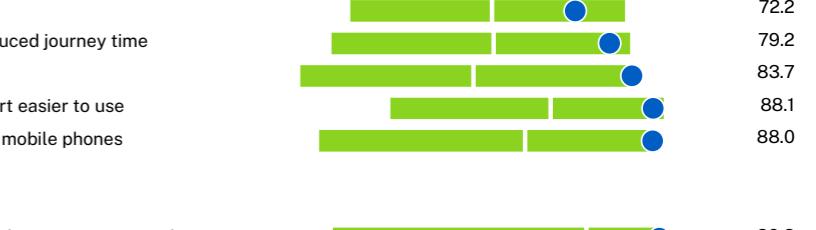
## Governance



## TECHNOLOGIES



## Mobility



## Activities



## Opportunities (Work & School)



## Governance



## SMART CITY RANKING 100

Out of 141



89 out of 118  
in 2021

## SMART CITY RATING

# CCC

CC in 2021

## FACTOR RATINGS

# CCC

## STRUCTURES

## TECHNOLOGIES

## GROUP 4

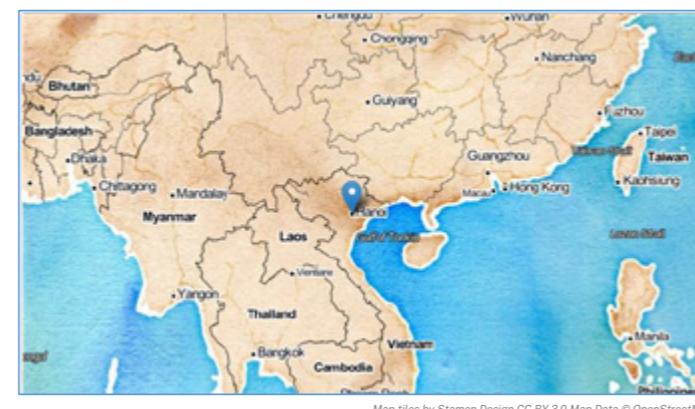
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population HDI  
5,067,352 0.744

(UN World Urbanisation Prospects 2022 estimate)



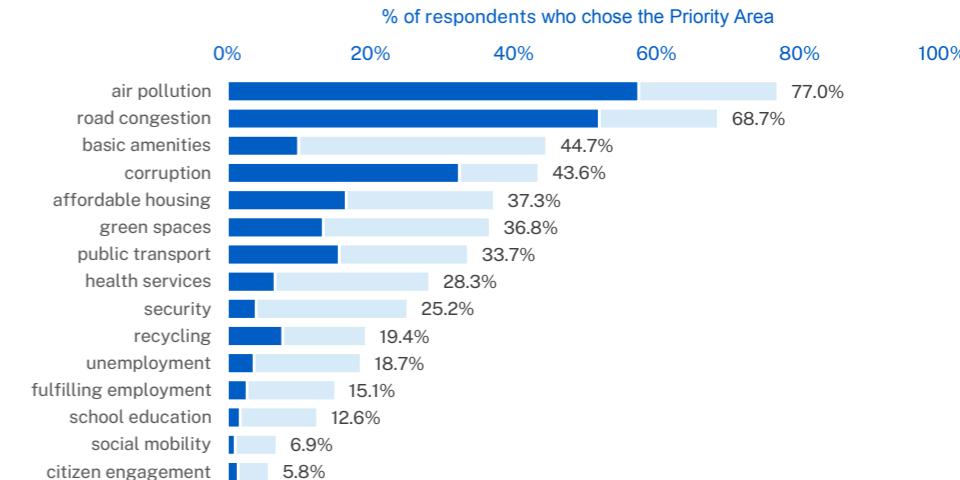
### SMART CITY RATING

# CCC

Country	2018	2019	2020	2021	1 yr change
HDI	0.693	0.704	0.710	0.703	-0.007
Life expectancy at birth	75.3	75.4	75.4	73.6	-1.8
Expected years of schooling	12.7	12.7	13.0	13.0	+0.0
Mean years of schooling	8.2	8.3	8.4	8.4	+0.0
GNI per capita (PPP \$)	6,220	7,433	7,742	7,867	+125

### PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement

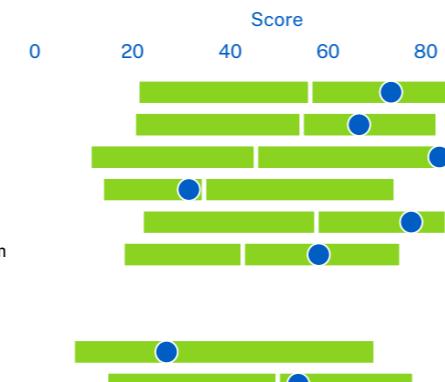


LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

### STRUCTURES

- #### Health & Safety
- Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### TECHNOLOGIES

- #### Health & Safety
- Online reporting of city maintenance problems provides a speedy solution
  - A website or App allows residents to easily give away unwanted items
  - Free public wifi has improved access to city services
  - CCTV cameras has made residents feel safer
  - A website or App allows residents to effectively monitor air pollution
  - Arranging medical appointments online has improved access



#### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

#### Technology

- #### Mobility
- Car-sharing Apps have reduced congestion
  - Apps that direct you to an available parking space have reduced journey time
  - Bicycle hiring has reduced congestion
  - Online scheduling and ticket sales has made public transport easier to use
  - The city provides information on traffic congestion through mobile phones



#### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### Technology

- #### Activities
- Online purchasing of tickets to shows and museums has made it easier to attend



#### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



#### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

#### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Hanover

SMART  
CITY  
RANKING

**57**

Out of 141

53 out of 118  
in 2021

SMART  
CITY RATING

**BB**

BB in 2021

FACTOR  
RATINGS

**BBB**

STRUCTURES

**B**

TECHNOLOGIES

GROUP  
**2**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
8,003,421      0.930

(Eurostat)



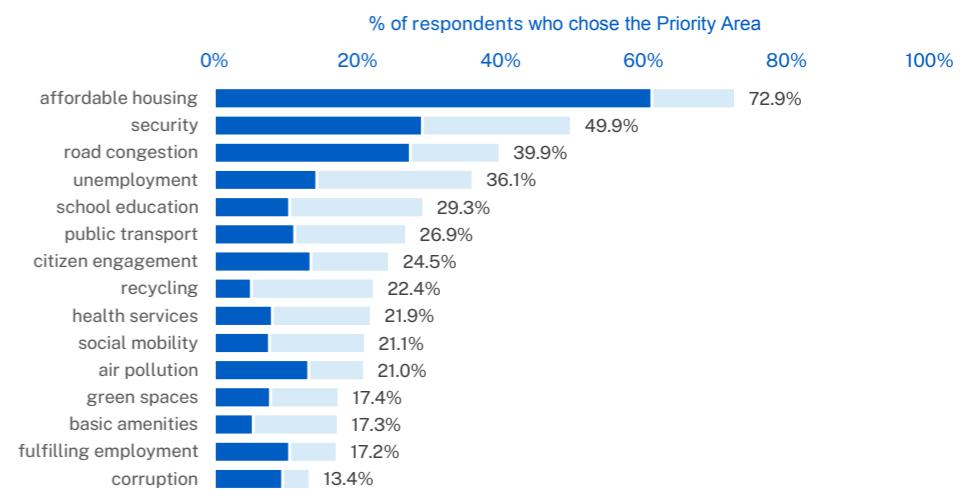
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.939	0.947	0.944	0.942	-0.002
Life expectancy at birth	81.2	81.3	81.2	80.6	-0.5
Expected years of schooling	17.1	17.0	17.0	17.0	+0.0
Mean years of schooling	14.1	14.2	14.1	14.1	+0.0
GNI per capita (PPP \$)	46,946	55,314	53,078	54,534	+1,457

## PRIORITY AREAS

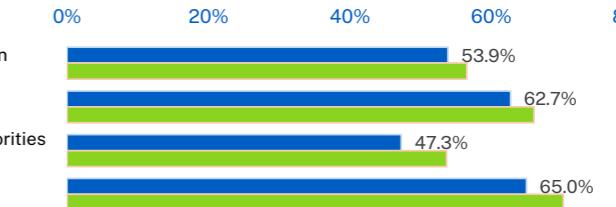
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

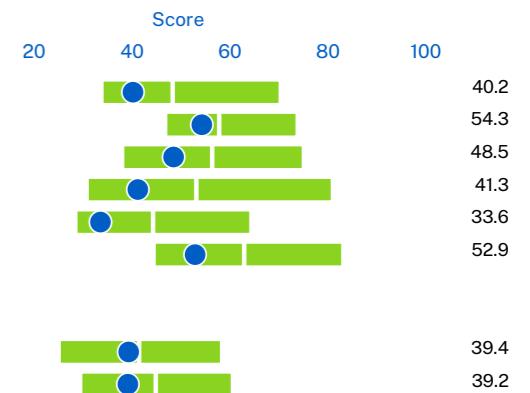
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



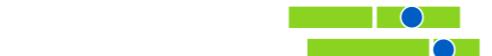
### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Helsinki

SMART  
CITY  
RANKING

**8**

Out of 141



9 out of 118  
in 2021

SMART  
CITY RATING

**AAA**

AAA in 2021

FACTOR  
RATINGS

**AA**

STRUCTURES

**A**

TECHNOLOGIES

GROUP  
**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
1,702,678      0.960  
(Eurostat)

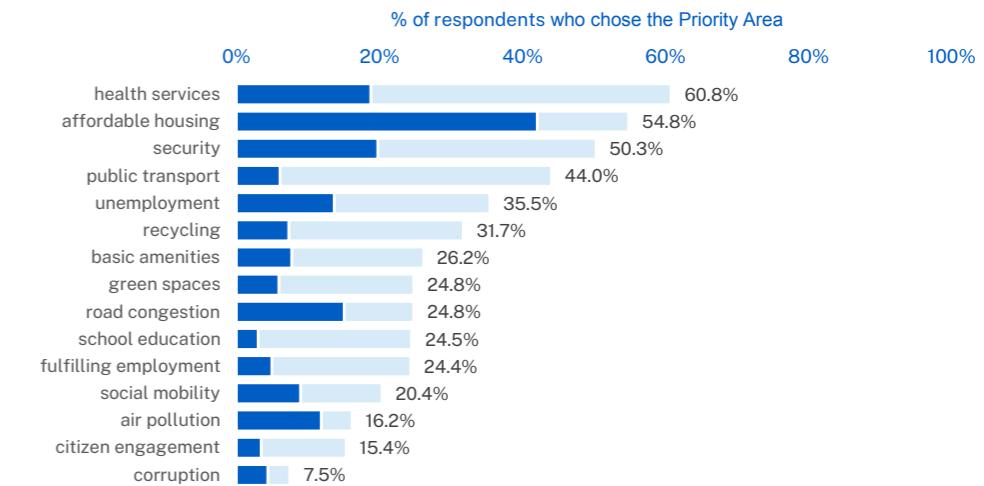


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.925	0.938	0.938	0.940	+0.002
Life expectancy at birth	81.7	81.9	81.9	82.0	+0.2
Expected years of schooling	19.3	19.4	18.0	18.0	+0.0
Mean years of schooling	12.4	12.8	12.9	12.9	+0.0
GNI per capita (PPP \$)	41,779	48,511	47,946	49,452	+1,506

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
You are comfortable with face recognition technologies to lower crime  
You feel the availability of online information has increased your trust in authorities  
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



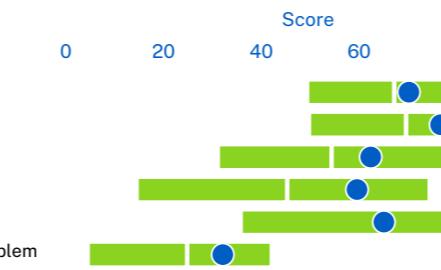
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

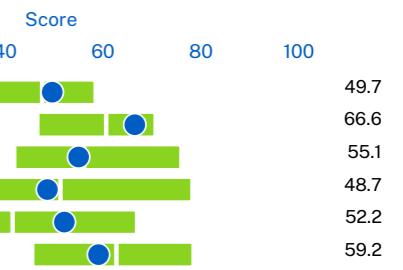
Basic sanitation meets the needs of the poorest areas  
Recycling services are satisfactory  
Public safety is not a problem  
Air pollution is not a problem  
Medical services provision is satisfactory  
Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

Online reporting of city maintenance problems provides a speedy solution  
A website or App allows residents to easily give away unwanted items  
Free public wifi has improved access to city services  
CCTV cameras has made residents feel safer  
A website or App allows residents to effectively monitor air pollution  
Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

Traffic congestion is not a problem  
Public transport is satisfactory



### Mobility

Car-sharing Apps have reduced congestion  
Apps that direct you to an available parking space have reduced journey time  
Bicycle hiring has reduced congestion  
Online scheduling and ticket sales has made public transport easier to use  
The city provides information on traffic congestion through mobile phones



### Activities

Green spaces are satisfactory  
Cultural activities (shows, bars, and museums) are satisfactory



### Activities

Online purchasing of tickets to shows and museums has made it easier to attend



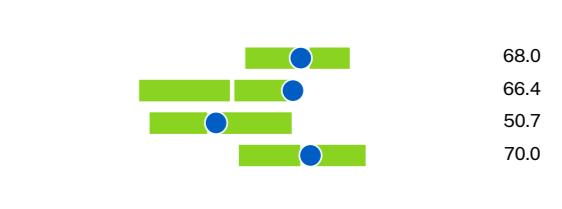
### Opportunities (Work & School)

Employment finding services are readily available  
Most children have access to a good school  
Lifelong learning opportunities are provided by local institutions  
Businesses are creating new jobs  
Minorities feel welcome



### Opportunities (Work & School)

Online access to job listings has made it easier to find work  
IT skills are taught well in schools  
Online services provided by the city has made it easier to start a new business  
The current internet speed and reliability meet connectivity needs



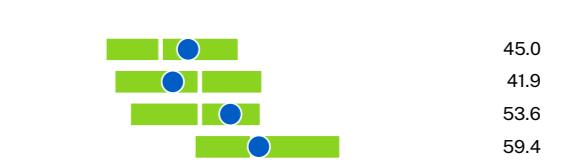
### Governance

Information on local government decisions are easily accessible  
Corruption of city officials is not an issue of concern  
Residents contribute to decision making of local government  
Residents provide feedback on local government projects



### Governance

Online public access to city finances has reduced corruption  
Online voting has increased participation  
An online platform where residents can propose ideas has improved city life  
Processing Identification Documents online has reduced waiting times



# Ho Chi Minh City

SMART  
CITY  
RANKING  
**103**

Out of 141

93 out of 118  
in 2021

SMART  
CITY RATING

**CCC**

CC in 2021

FACTOR  
RATINGS

**CCC**

STRUCTURES

**CCC**

TECHNOLOGIES

GROUP

**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
9,077,158      0.714

(UN World Urbanisation Prospects 2022  
estimate)



## SMART CITY RATING

**CCC**

CC in 2021

FACTOR  
RATINGS

**CCC**

STRUCTURES

**CCC**

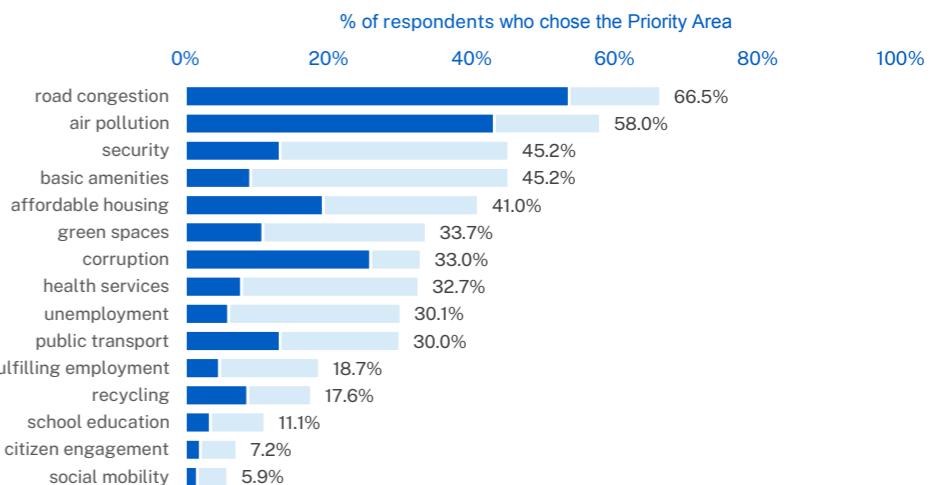
TECHNOLOGIES

GROUP

**4**

All ratings range  
from AAA to D

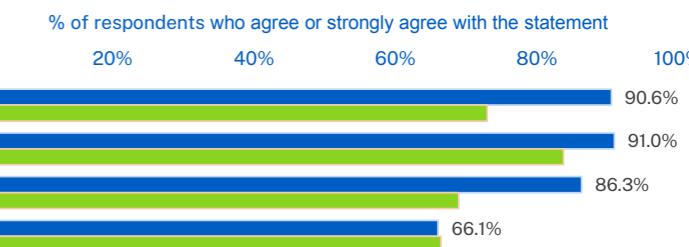
## PRIORITY AREAS



From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left-hand, dark blue section of each bar shows the Alignment, i.e. the proportion of those respondents who also answered the survey on the corresponding area by giving it low priority. A strong Alignment (i.e. consistency across both areas explained) means that these areas may benefit from close observation.

## ATTITUDES



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

Basic sanitation meets the needs of the poorest areas  
Recycling services are satisfactory  
Public safety is not a problem  
Air pollution is not a problem  
Medical services provision is satisfactory  
Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Mobility

Traffic congestion is not a problem  
Public transport is satisfactory



### Mobility

Car-sharing Apps have reduced congestion  
Apps that direct you to an available parking space have reduced journey time  
Bicycle hiring has reduced congestion  
Online scheduling and ticket sales has made public transport easier to use  
The city provides information on traffic congestion through mobile phones

### Activities

Green spaces are satisfactory  
Cultural activities (shows, bars, and museums) are satisfactory

65.3

76.1

### Activities

Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

Employment finding services are readily available  
Most children have access to a good school  
Lifelong learning opportunities are provided by local institutions  
Businesses are creating new jobs  
Minorities feel welcome

82.4

83.4

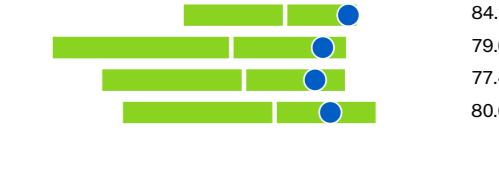
66.5

79.6

72.9

### Opportunities (Work & School)

Online access to job listings has made it easier to find work  
IT skills are taught well in schools  
Online services provided by the city has made it easier to start a new business  
The current internet speed and reliability meet connectivity needs

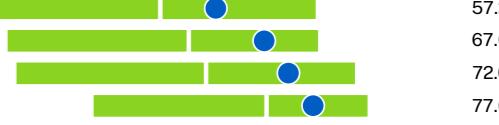


### Governance

Information on local government decisions are easily accessible  
Corruption of city officials is not an issue of concern  
Residents contribute to decision making of local government  
Residents provide feedback on local government projects

### Governance

Online public access to city finances has reduced corruption  
Online voting has increased participation  
An online platform where residents can propose ideas has improved city life  
Processing Identification Documents online has reduced waiting times



# Hong Kong

SMART  
CITY  
RANKING

**19**

Out of 141



33 out of 118  
in 2021

SMART  
CITY RATING

**AA**

A in 2021

FACTOR  
RATINGS

**BBB**

STRUCTURES

**AAA**

TECHNOLOGIES

GROUP  
**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI (2019)  
7,413,070      0.949

(UN Data)



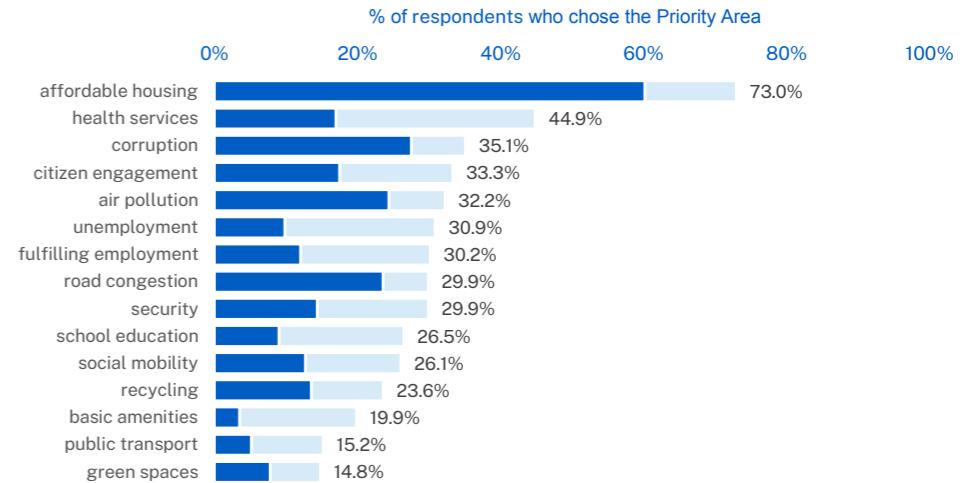
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.939	0.949	NA	NA	NA
Life expectancy at birth	84.7	84.9	NA	NA	NA
Expected years of schooling	16.5	16.9	NA	NA	NA
Mean years of schooling	12.0	12.3	NA	NA	NA
GNI per capita (PPP \$)	60,221	62,985	58,644	62,607	+3,963

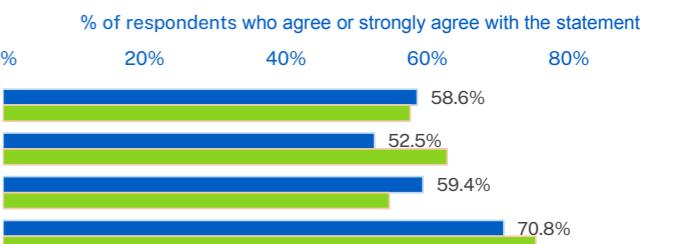
## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion



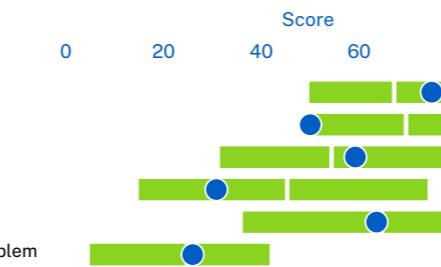
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

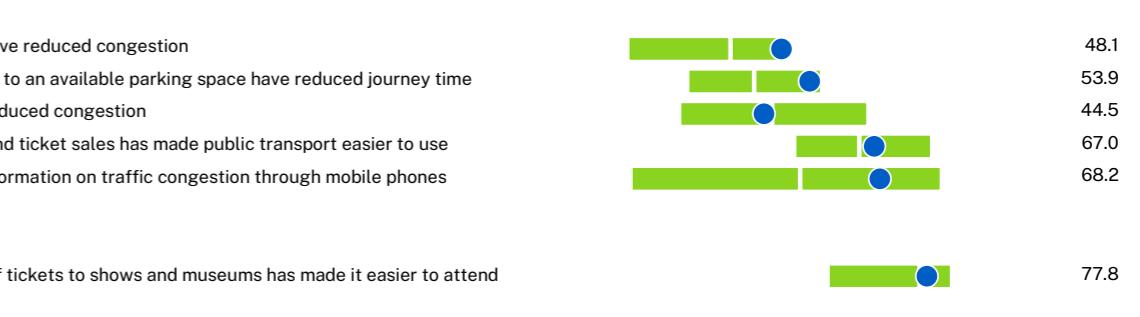


### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

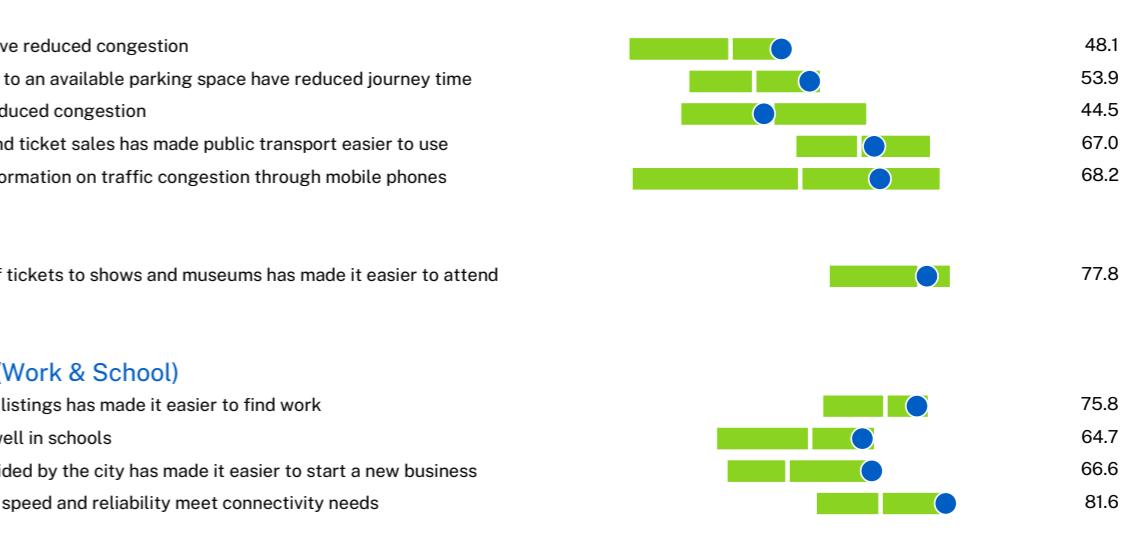


### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

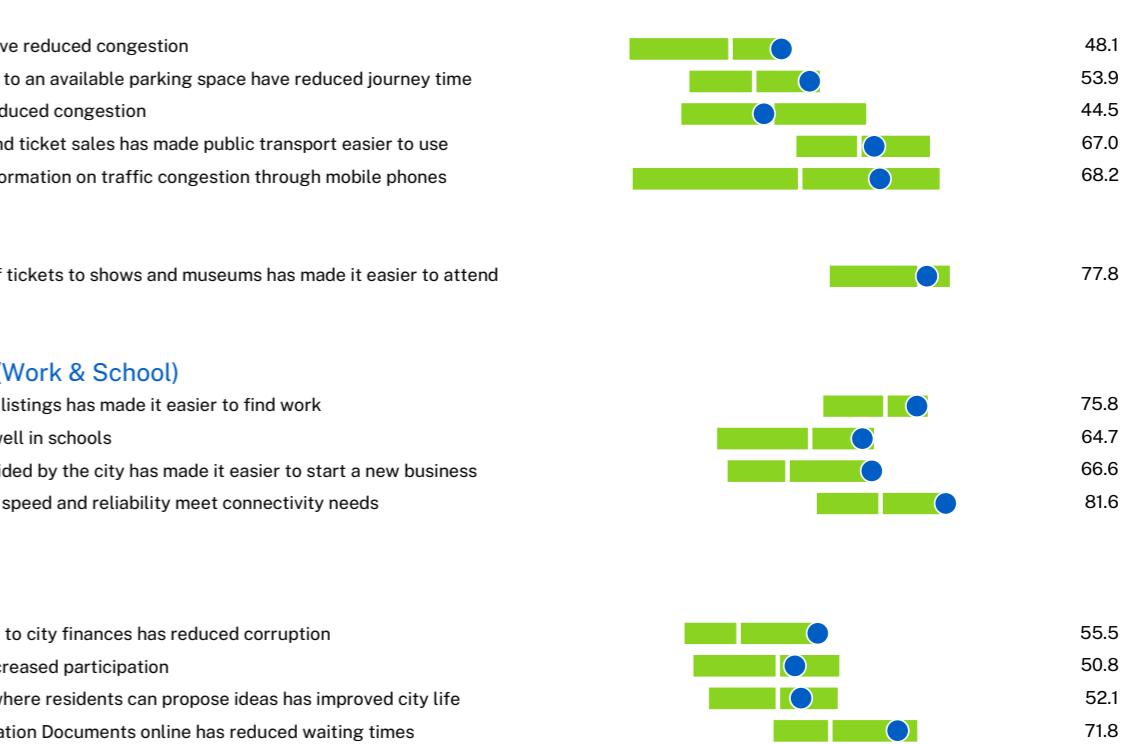


### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Hyderabad

SMART  
CITY  
RANKING

**116**

Out of 141



101 out of 118  
in 2021

SMART  
CITY RATING

**CC**

CC in 2021

FACTOR  
RATINGS

**CC**

STRUCTURES

**CC**

TECHNOLOGIES

GROUP  
**4**

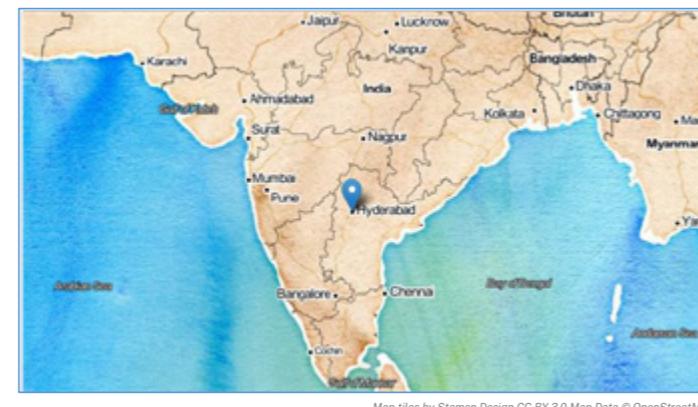
All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
10,534,418      0.647

(UN World Urbanisation Prospects 2022  
estimate)



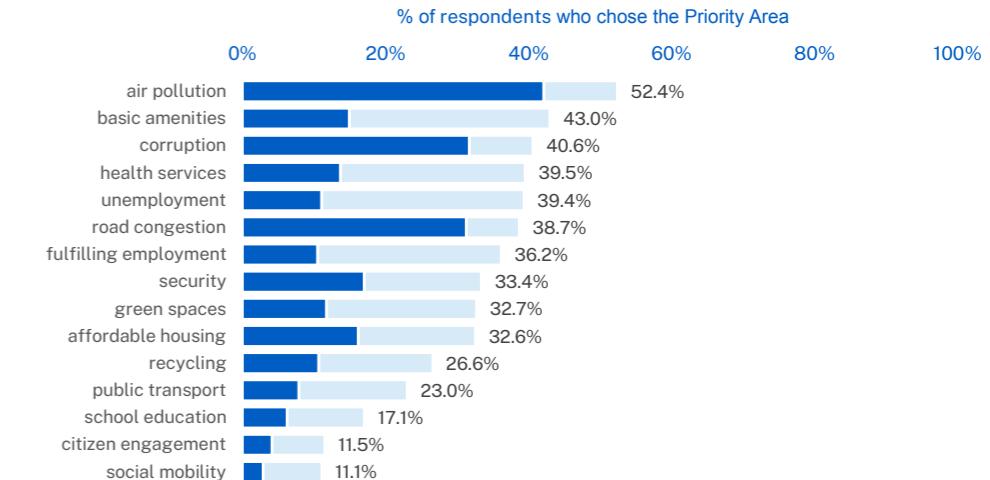
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.647	0.645	0.642	0.633	-0.009
Life expectancy at birth	69.4	69.7	70.2	67.2	-2.9
Expected years of schooling	12.3	12.2	11.9	11.9	+0.0
Mean years of schooling	6.5	6.5	6.7	6.7	+0.0
GNI per capita (PPP \$)	6,829	6,681	6,107	6,590	+482

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES



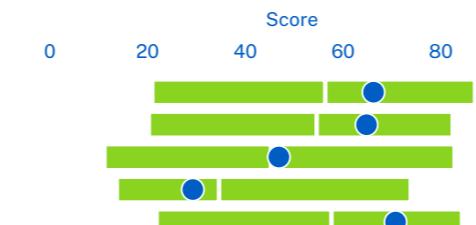
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



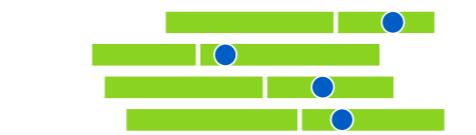
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



## STRUCTURES

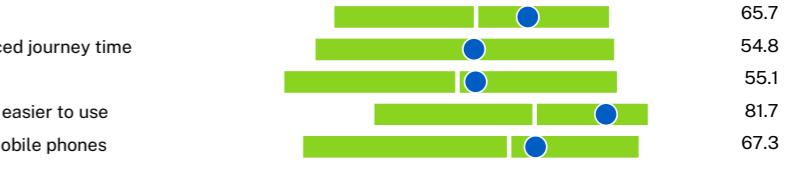
### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



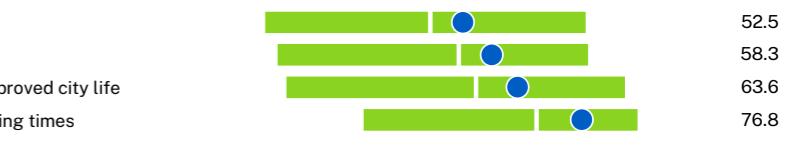
### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Islamabad

SMART  
CITY  
RANKING  
**120**

Out of 141

not out of 118  
in 2021

SMART  
CITY RATING

**CC**

not in 2021

FACTOR  
RATINGS

**CC**

STRUCTURES

**CC**

TECHNOLOGIES

GROUP  
**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 1,009,003  
(UN Data)

HDI 0.659



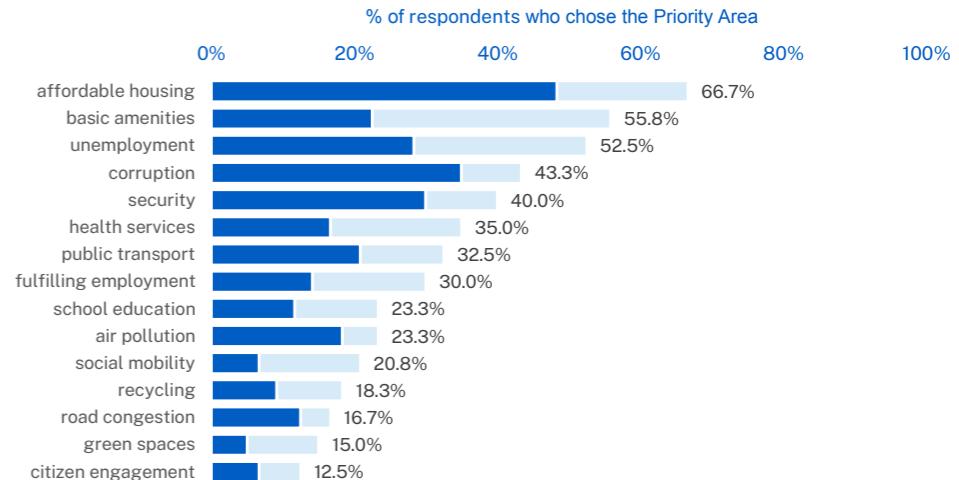
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.545	0.546	0.543	0.544	+0.001
Life expectancy at birth	66.5	66.8	66.3	66.1	-0.2
Expected years of schooling	8.3	8.7	8.7	8.7	+0.0
Mean years of schooling	4.8	4.5	4.5	4.5	+0.0
GNI per capita (PPP \$)	4,658	4,604	4,467	4,624	+156

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
You are comfortable with face recognition technologies to lower crime  
You feel the availability of online information has increased your trust in authorities  
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



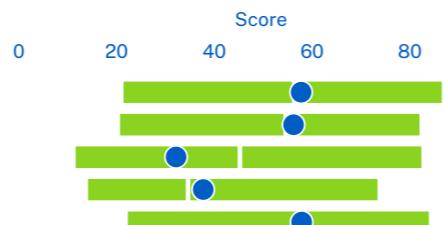
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

Basic sanitation meets the needs of the poorest areas  
Recycling services are satisfactory  
Public safety is not a problem  
Air pollution is not a problem  
Medical services provision is satisfactory  
Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

Online reporting of city maintenance problems provides a speedy solution  
A website or App allows residents to easily give away unwanted items  
Free public wifi has improved access to city services  
CCTV cameras has made residents feel safer  
A website or App allows residents to effectively monitor air pollution  
Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

Traffic congestion is not a problem  
Public transport is satisfactory

Score

43.3  
56.5

### Mobility

Car-sharing Apps have reduced congestion  
Apps that direct you to an available parking space have reduced journey time  
Bicycle hiring has reduced congestion  
Online scheduling and ticket sales has made public transport easier to use  
The city provides information on traffic congestion through mobile phones



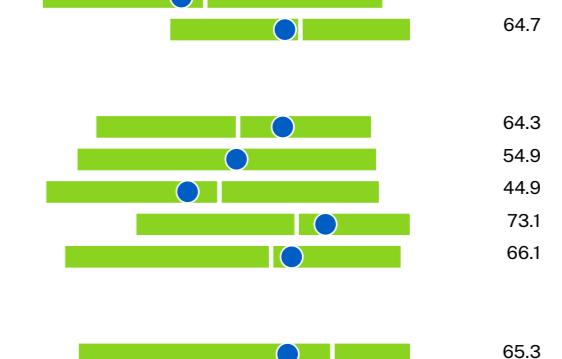
### Activities

Green spaces are satisfactory  
Cultural activities (shows, bars, and museums) are satisfactory

Score  
82.1  
73.5

### Activities

Online purchasing of tickets to shows and museums has made it easier to attend



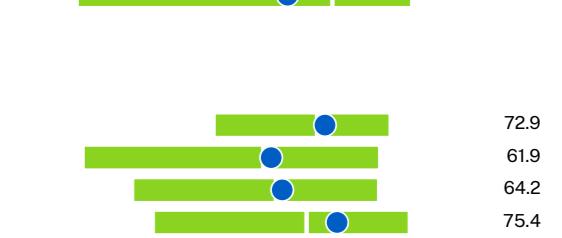
### Opportunities (Work & School)

Employment finding services are readily available  
Most children have access to a good school  
Lifelong learning opportunities are provided by local institutions  
Businesses are creating new jobs  
Minorities feel welcome

Score  
46.8  
59.4  
52.8  
56.5  
65.4

### Opportunities (Work & School)

Online access to job listings has made it easier to find work  
IT skills are taught well in schools  
Online services provided by the city has made it easier to start a new business  
The current internet speed and reliability meet connectivity needs



### Governance

Information on local government decisions are easily accessible  
Corruption of city officials is not an issue of concern  
Residents contribute to decision making of local government  
Residents provide feedback on local government projects

Score  
57.9  
31.1  
38.8  
43.6

### Governance

Online public access to city finances has reduced corruption  
Online voting has increased participation  
An online platform where residents can propose ideas has improved city life  
Processing Identification Documents online has reduced waiting times

# Istanbul

SMART  
CITY  
RANKING  
**107**

Out of 141

88 out of 118  
in 2021

SMART  
CITY RATING

**CC**

CC in 2021

FACTOR  
RATINGS

**CC**

STRUCTURES

**CC**

TECHNOLOGIES

GROUP  
**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
15,462,452      0.867

(Eurostat)



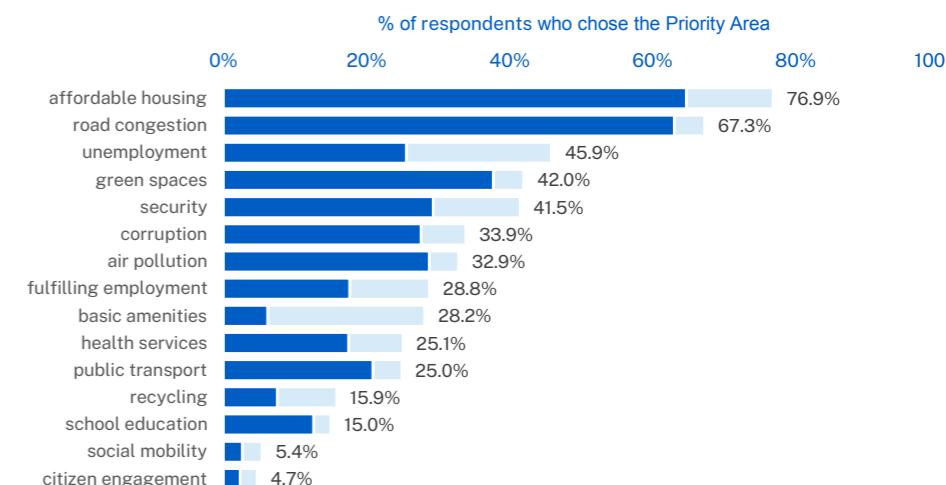
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.807	0.820	0.833	0.838	+0.005
Life expectancy at birth	77.4	77.7	75.9	76.0	+0.2
Expected years of schooling	16.4	16.6	18.0	18.0	+0.0
Mean years of schooling	7.7	8.1	8.6	8.6	+0.0
GNI per capita (PPP \$)	24,905	27,701	28,317	31,033	+2,715

## PRIORITY AREAS

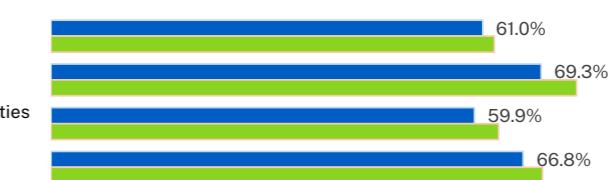
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



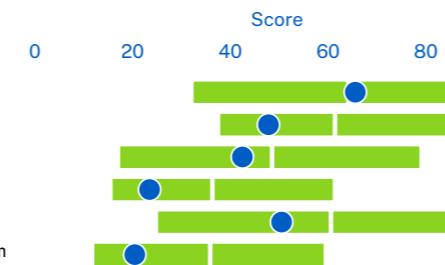
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



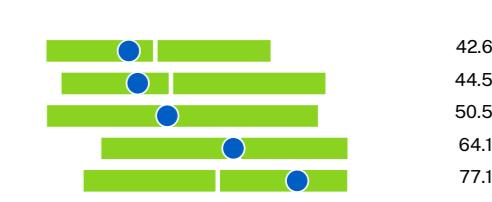
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



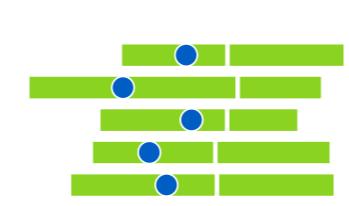
### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



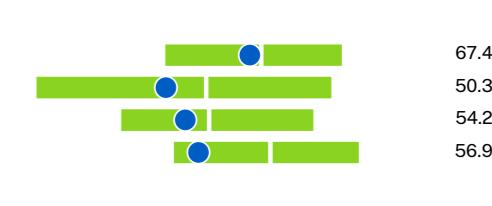
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



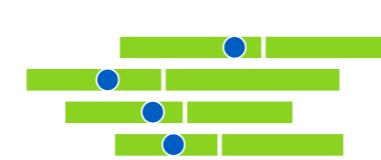
### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



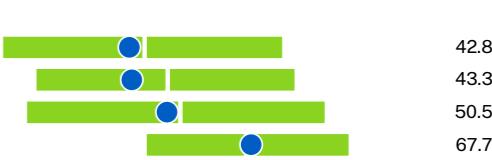
### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Jakarta

SMART  
CITY  
RANKING  
**102**

Out of 141



92 out of 118  
in 2021

SMART  
CITY RATING

**CC**

CC in 2021

FACTOR  
RATINGS

**CC**

STRUCTURES

**CC**

TECHNOLOGIES

GROUP  
**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

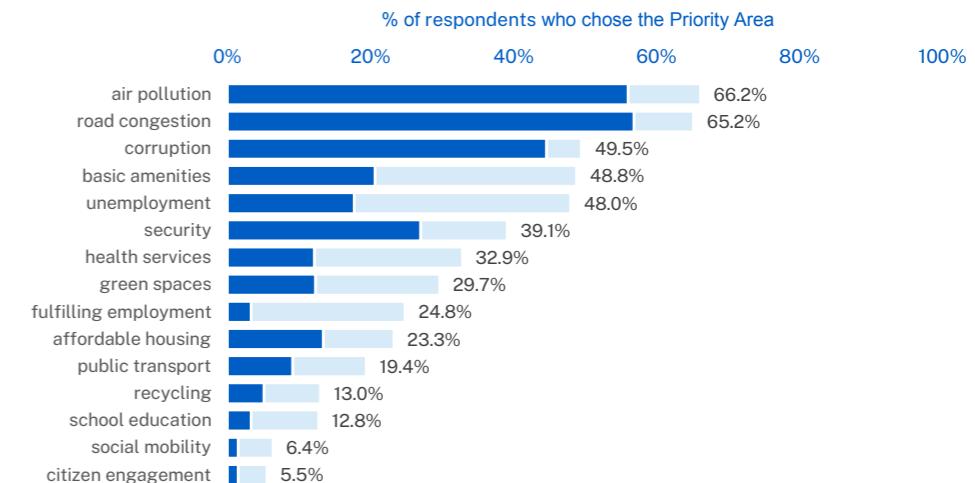
Population 10,562,088  
(UN Data)

HDI 0.759



## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion



You are comfortable with face recognition technologies to lower crime



You feel the availability of online information has increased your trust in authorities



The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



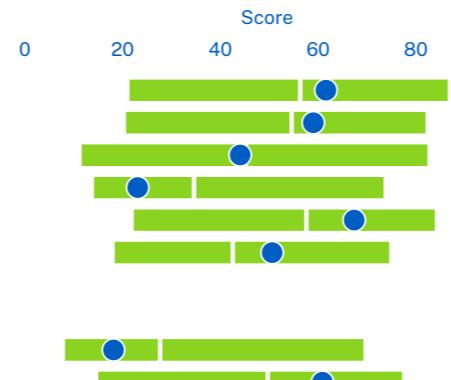
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Jeddah

SMART  
CITY  
RANKING

**56**

Out of 141

not out of 118  
in 2021

SMART  
CITY RATING

**B**

not in 2021

FACTOR  
RATINGS

**B**

STRUCTURES

**B**

TECHNOLOGIES

GROUP  
**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
478,074      0.871

(UN World Urbanisation Prospects 2022  
estimate)



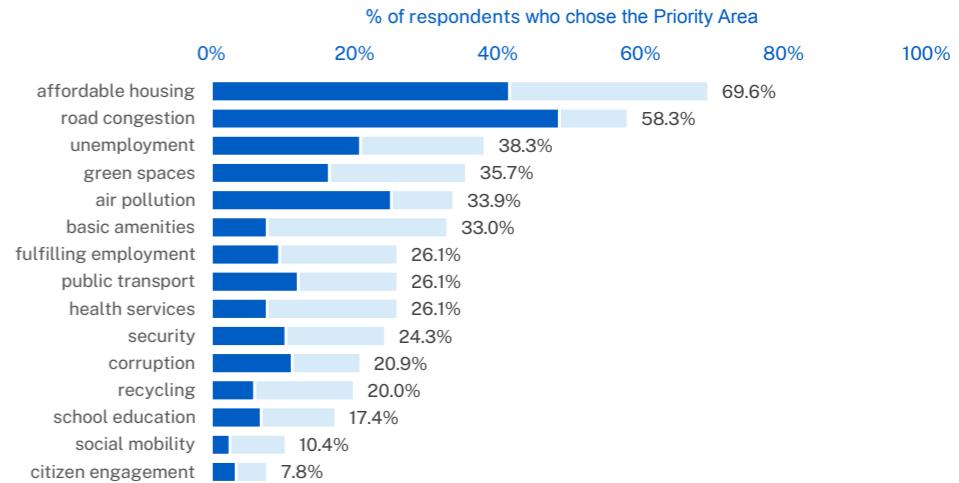
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.865	0.873	0.870	0.875	+0.005
Life expectancy at birth	77.2	77.3	76.2	76.9	+0.7
Expected years of schooling	15.7	16.0	16.1	16.1	+0.0
Mean years of schooling	10.6	8.3	8.3	8.3	+0.0
GNI per capita (PPP \$)	5,072	5,307	5,601	5,745	+143

## PRIORITY AREAS

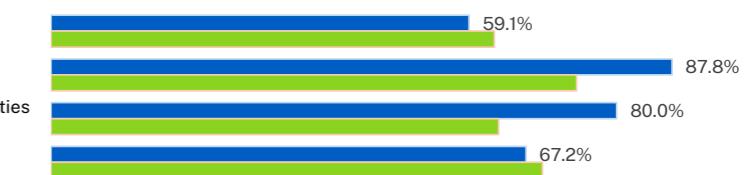
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



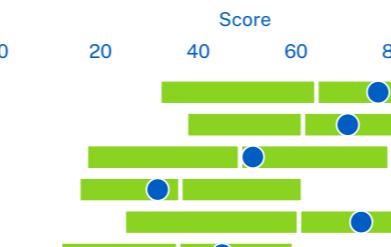
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



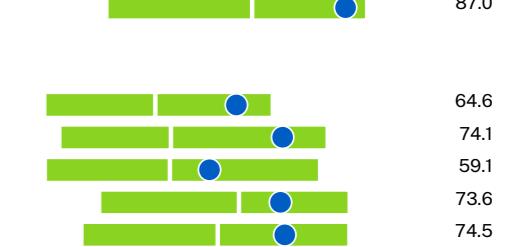
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



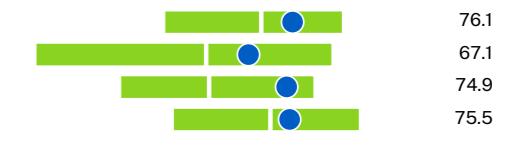
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



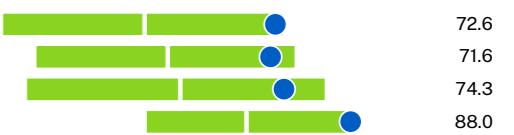
### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# SMART CITY RANKING

**81**

Out of 141

72 out of 118  
in 2021

# SMART CITY RATING

**BB**

B in 2021

# FACTOR RATINGS

**BBB**

# STRUCTURES

# TECHNOLOGIES

**CCC**

# GROUP 2

All ratings range from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
2,910,875      0.921  
(Eurostat)

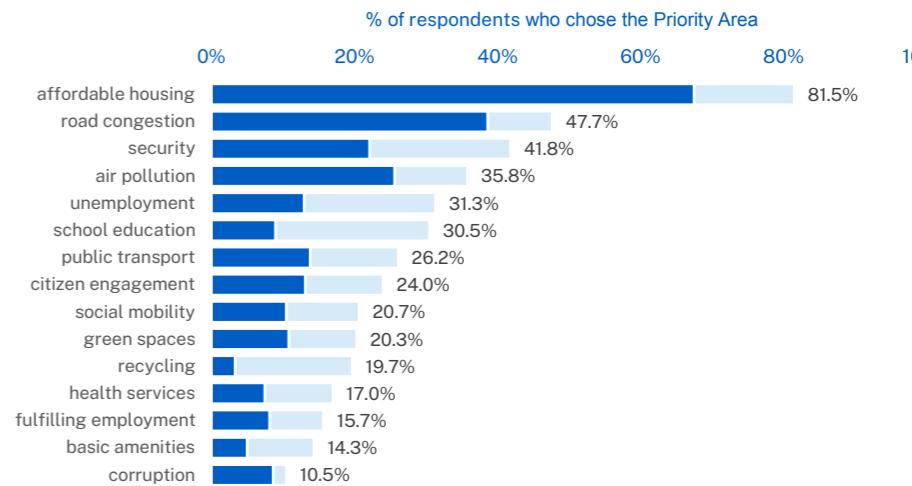


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.939	0.947	0.944	0.942	-0.002
Life expectancy at birth	81.2	81.3	81.2	80.6	-0.5
Expected years of schooling	17.1	17.0	17.0	17.0	+0.0
Mean years of schooling	14.1	14.2	14.1	14.1	+0.0
GNI per capita (PPP \$)	46,946	55,314	53,078	54,534	+1,457

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Score

0 20 40 60 80 100

70.0

74.5

56.0

47.6

78.1

24.1

### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

Score

0 20 40 60 80 100

44.4

51.9

53.9

31.0

28.7

46.7

### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

31.9

31.2

46.1

60.5

39.6

### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

63.1

38.0

33.5

57.5

### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

31.2

41.9

38.5

47.3

# Krakow

SMART  
CITY  
RANKING

**79**

Out of 141



76 out of 118  
in 2021

SMART  
CITY RATING

**CCC**

CCC in 2021

FACTOR  
RATINGS

**B**

STRUCTURES

**CCC**

TECHNOLOGIES

GROUP  
**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
3,372,763      0.888  
(Eurostat)



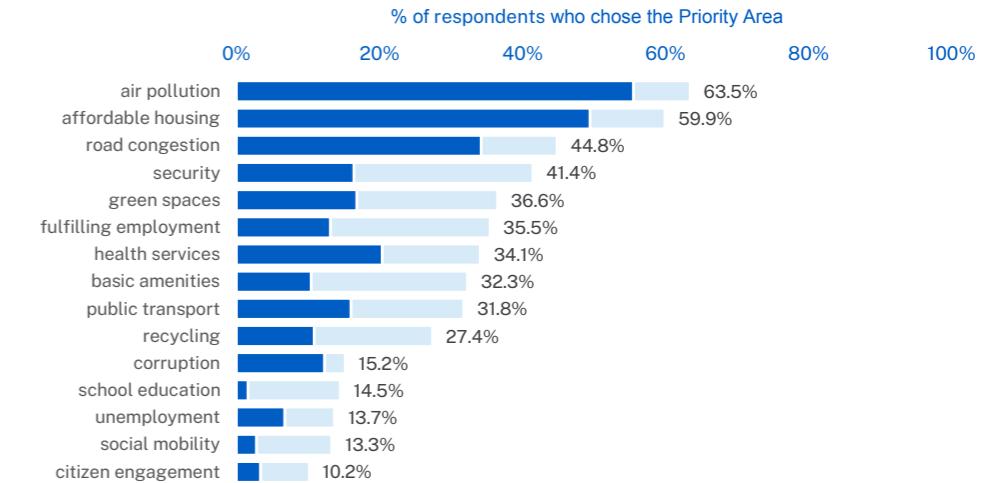
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.872	0.880	0.876	0.876	+0.000
Life expectancy at birth	78.5	78.7	76.9	76.5	-0.5
Expected years of schooling	16.4	16.3	16.0	16.0	+0.0
Mean years of schooling	12.3	12.5	13.2	13.2	+0.0
GNI per capita (PPP \$)	27,626	31,623	31,164	33,034	+1,869

## PRIORITY AREAS

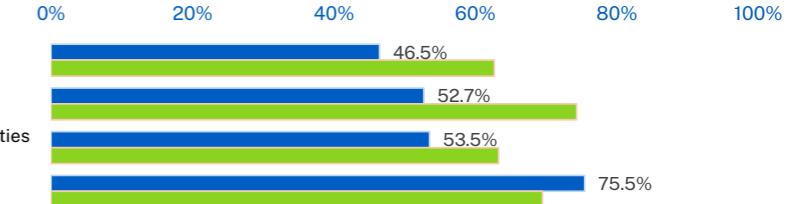
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement

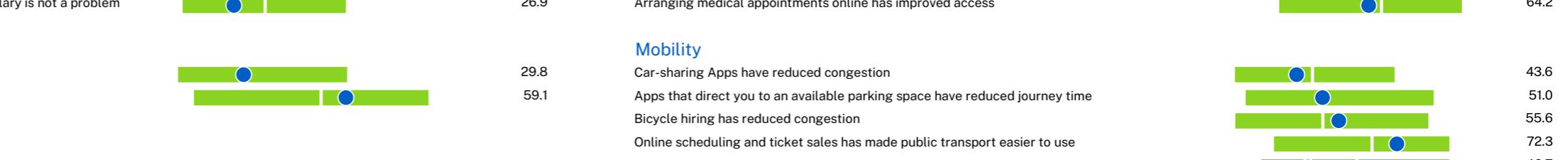
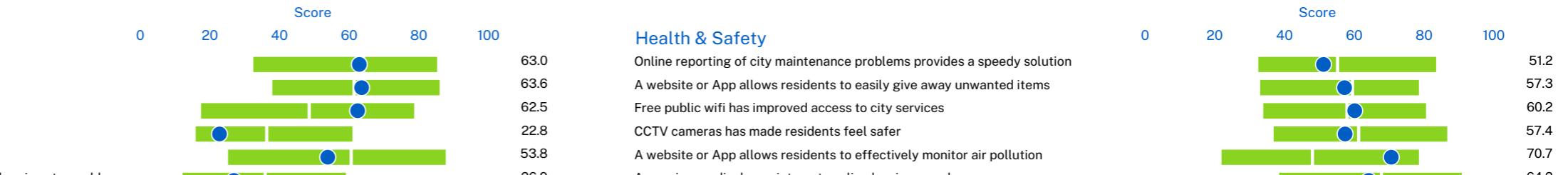


LEGEND: GROUP MEAN CITY

STRUCTURES

STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX



TECHNOLOGIES

### Activities

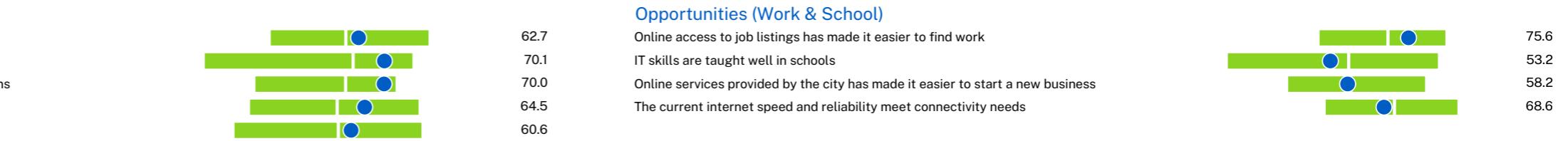
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

63.5  
80.1

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

78.8



# Kuala Lumpur

SMART  
CITY  
RANKING

**89**

Out of 141

80 out of 118  
in 2021

SMART  
CITY RATING

**CCC**

CCC in 2021

FACTOR  
RATINGS

**B**

STRUCTURES

**CCC**

TECHNOLOGIES

GROUP

**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 1,853,918  
(UN Data)

HDI 0.858



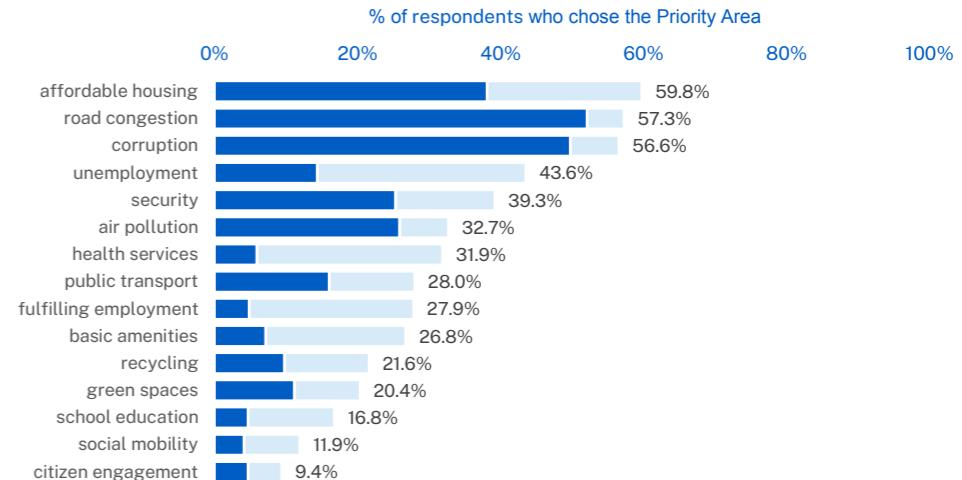
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.804	0.810	0.806	0.803	-0.003
Life expectancy at birth	76.0	76.2	75.9	74.9	-1.1
Expected years of schooling	13.5	13.7	13.3	13.3	+0.0
Mean years of schooling	10.2	10.4	10.7	10.7	+0.0
GNI per capita (PPP \$)	27,227	27,534	25,940	26,658	+717

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

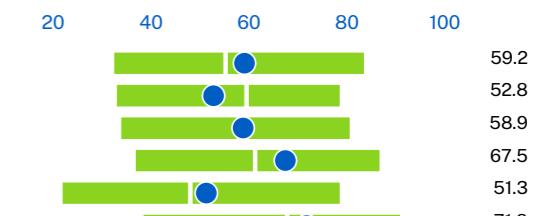


### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES

Score



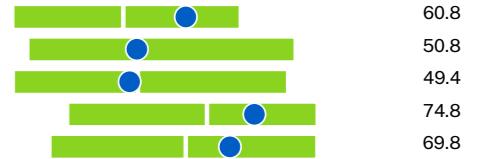
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



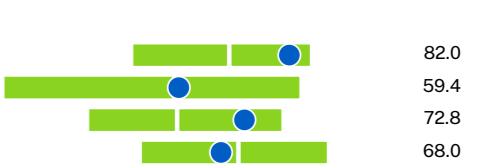
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



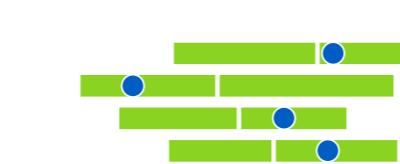
### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Lagos

SMART  
CITY  
RANKING

**132**

Out of 141



116 out of 118  
in 2021

SMART  
CITY RATING

**D**

D in 2021

FACTOR  
RATINGS

**D**

STRUCTURES

**C**

TECHNOLOGIES

**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
15,387,639      0.681

(UN World Urbanisation Prospects 2022  
estimate)

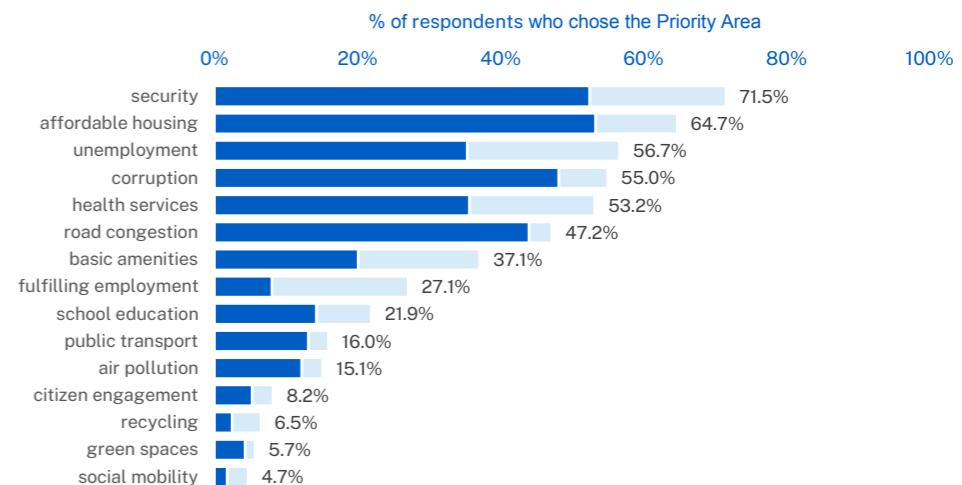


Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.534	0.539	0.535	0.535	+0.000
Life expectancy at birth	54.3	54.7	52.9	52.7	-0.2
Expected years of schooling	9.7	10.0	10.1	10.1	+0.0
Mean years of schooling	6.5	6.7	7.2	7.2	+0.0
GNI per capita (PPP \$)	5,086	4,910	4,740	4,790	+51

## PRIORITY AREAS

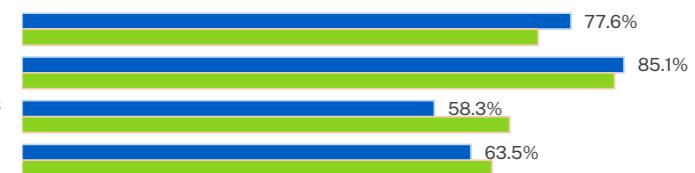
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

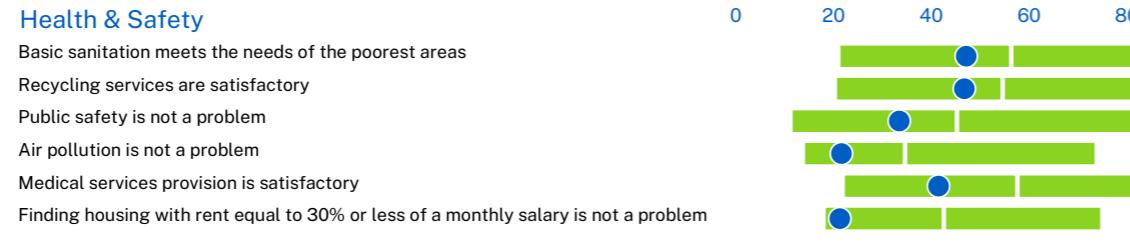
% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

## STRUCTURES

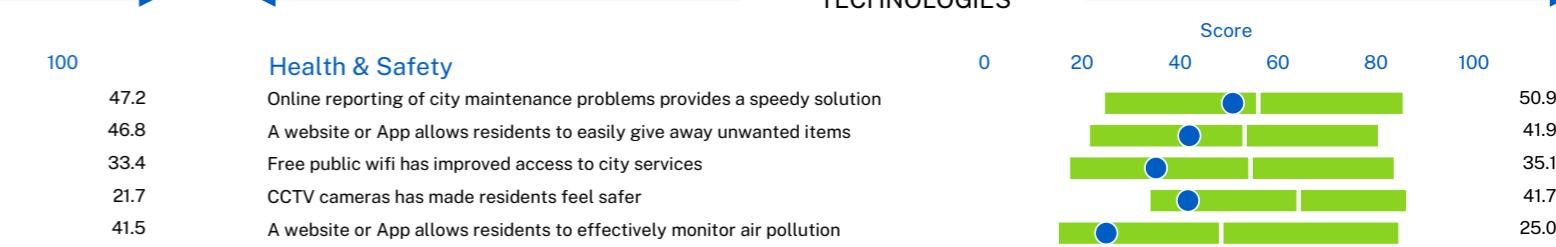
LEGEND: MIN CITY MEAN GROUP MAX



## Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

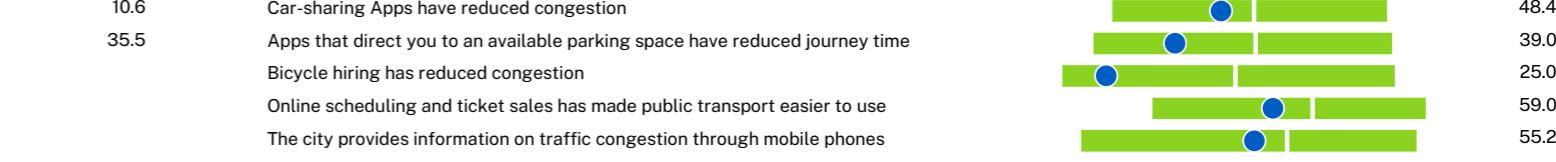
## TECHNOLOGIES



## Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

## Mobility

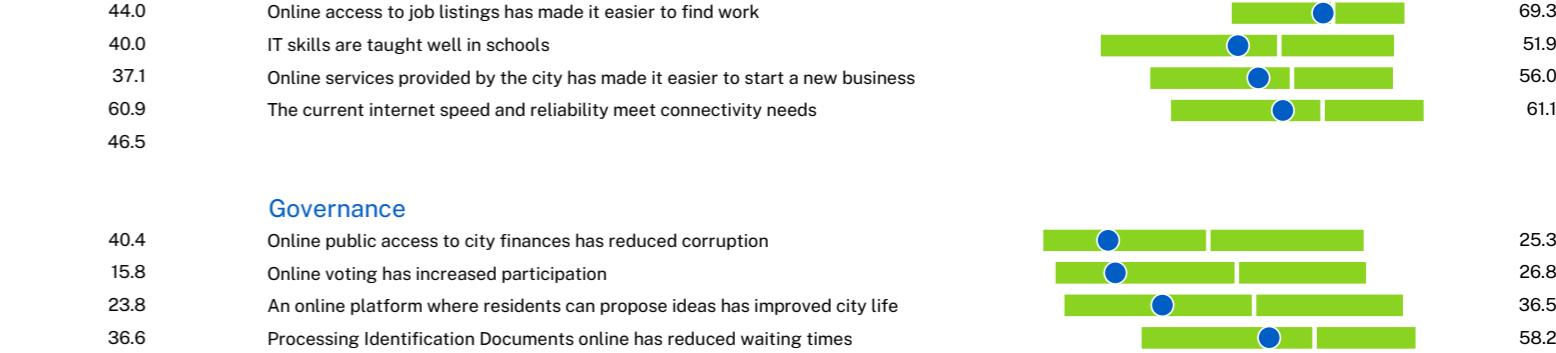


## Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

## Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



## Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

# Lausanne

SMART  
CITY  
RANKING

**5**

Out of 141



4 out of 118  
in 2021

SMART  
CITY RATING

**AA**

AAA in 2021

FACTOR  
RATINGS

**AA**

STRUCTURES

**A**

TECHNOLOGIES

GROUP

**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
1,669,608      0.966

(Eurostat)

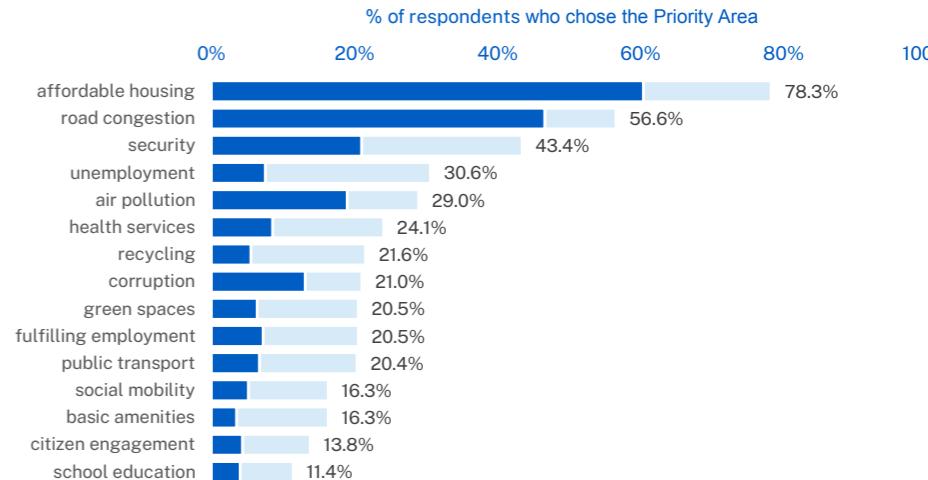


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.946	0.955	0.956	0.962	+0.006
Life expectancy at birth	83.6	83.8	83.1	84.0	+0.9
Expected years of schooling	16.2	16.3	16.5	16.5	+0.0
Mean years of schooling	13.4	13.4	13.9	13.9	+0.0
GNI per capita (PPP \$)	59,375	69,394	65,011	66,933	+1,922

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



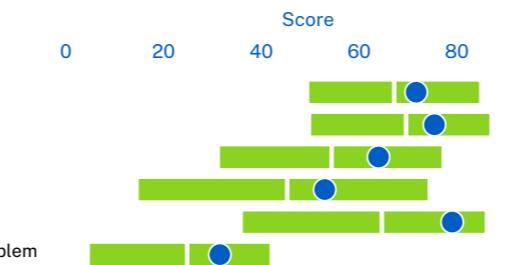
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

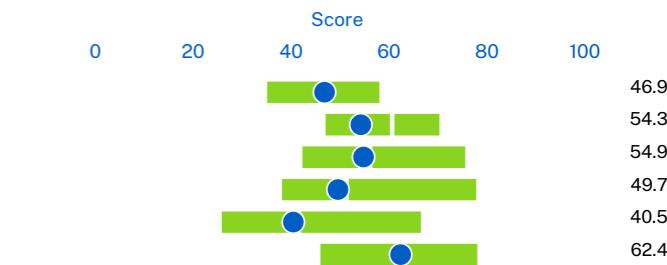
### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

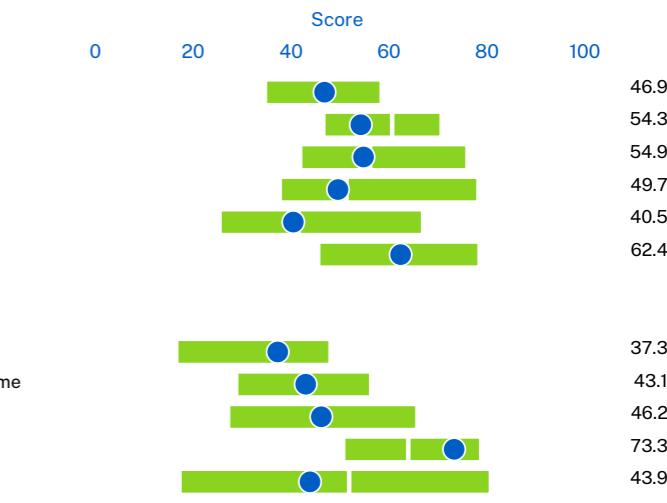


### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

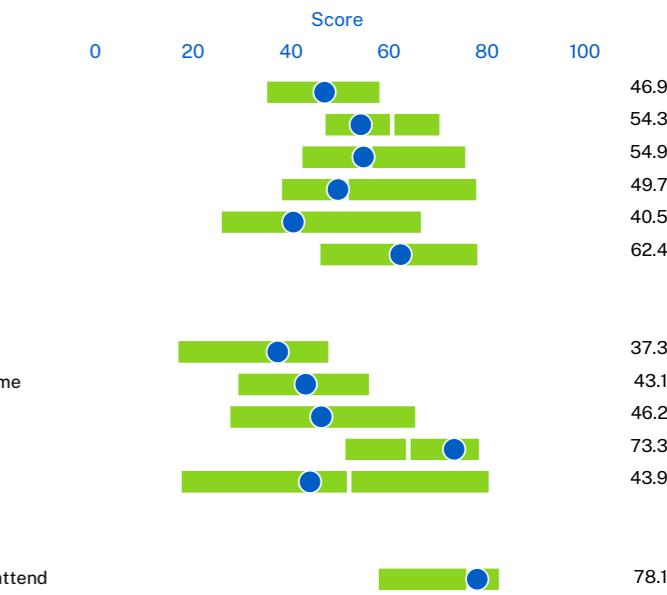


### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

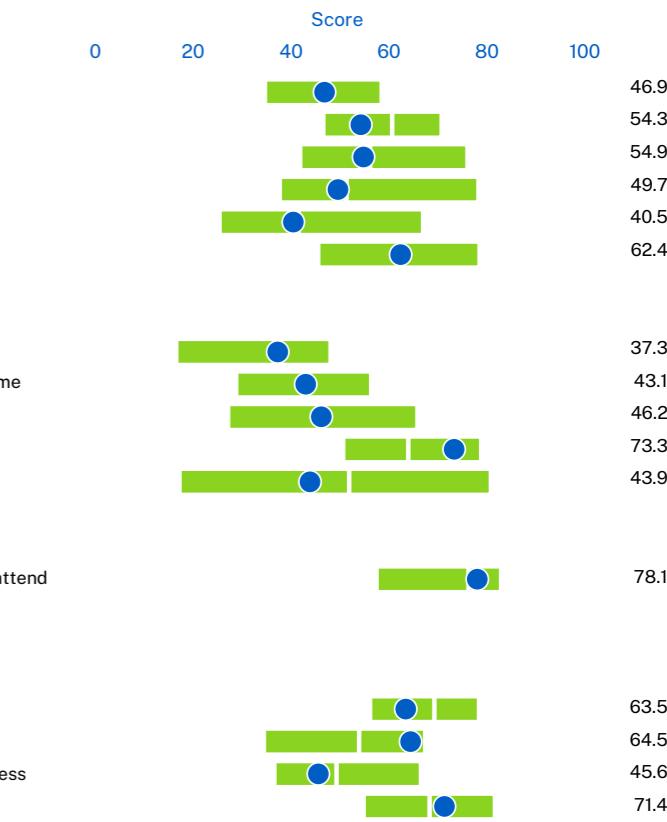


### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

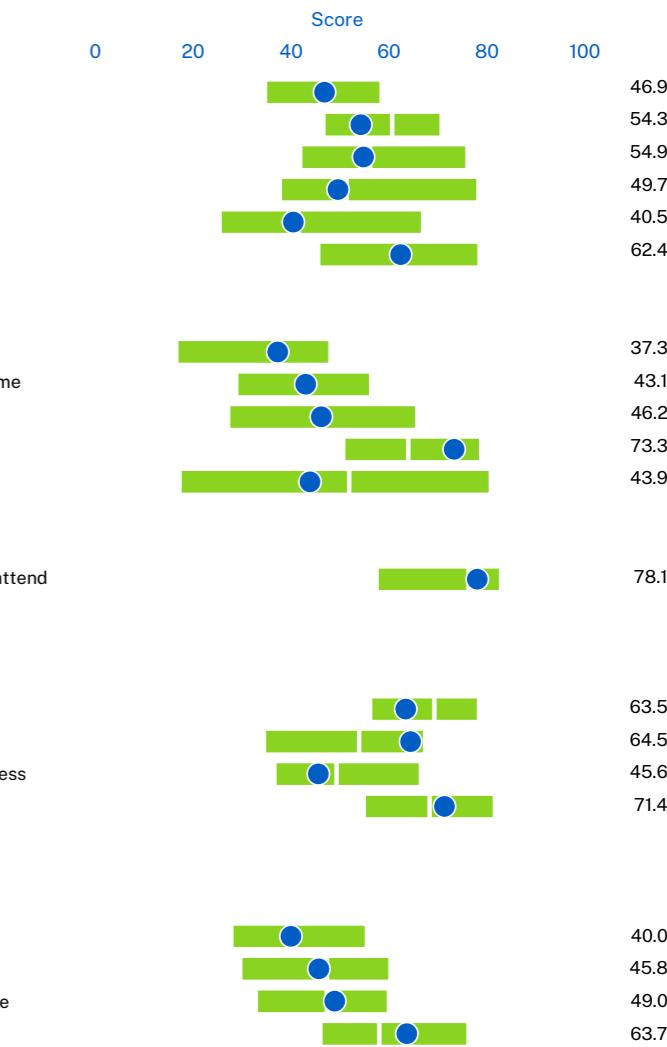


### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Leeds

SMART  
CITY  
RANKING

**76**

Out of 141

64 out of 118  
in 2021

SMART  
CITY RATING

**CCC**

CCC in 2021

FACTOR  
RATINGS

**CCC**

STRUCTURES

**CC**

TECHNOLOGIES

GROUP  
**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
2,324,560      0.908

(Eurostat)



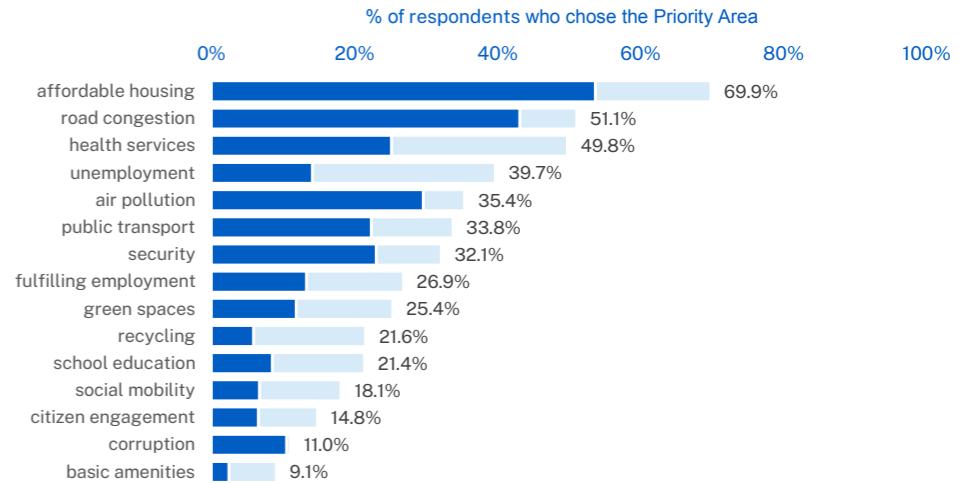
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.920	0.932	0.924	0.929	+0.005
Life expectancy at birth	81.2	81.3	80.4	80.7	+0.3
Expected years of schooling	17.4	17.5	17.3	17.3	+0.0
Mean years of schooling	13.0	13.2	13.4	13.4	+0.0
GNI per capita (PPP \$)	39,507	46,071	42,375	45,225	+2,850

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



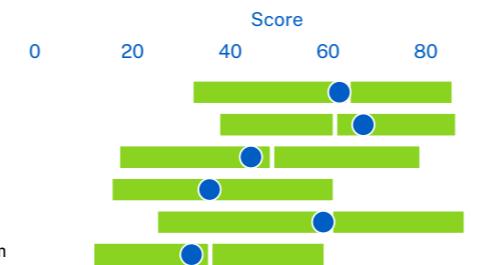
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

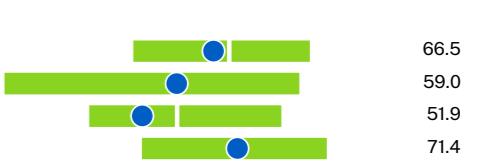


### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

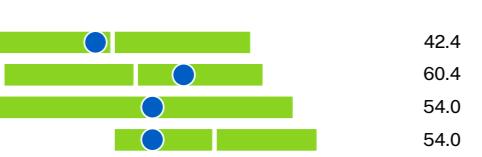


### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



## SMART CITY RANKING

**84**

Out of 141

82 out of 118  
in 2021

## SMART CITY RATING

**CCC**

CC in 2021

## FACTOR RATINGS

**CCC**

## STRUCTURES

**CCC**

## TECHNOLOGIES

## GROUP 3

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population 2,607,879  
(Eurostat)

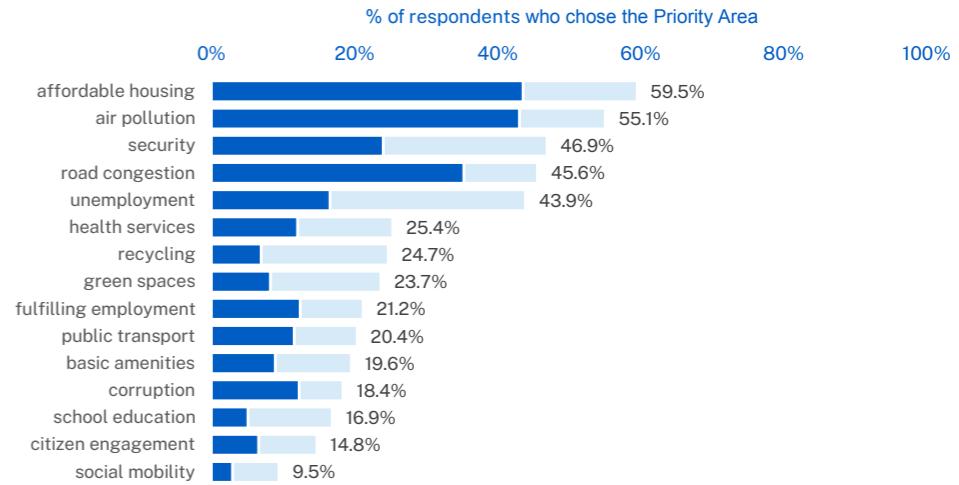


#### Country

	2018	2019	2020	2021	1 yr change
HDI	0.891	0.901	0.898	0.903	+0.005
Life expectancy at birth	82.5	82.7	82.2	82.5	+0.3
Expected years of schooling	15.5	15.6	15.8	15.8	+0.0
Mean years of schooling	11.4	11.5	11.6	11.6	+0.0
GNI per capita (PPP \$)	40,511	47,173	43,048	45,937	+2,889

### PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
You are comfortable with face recognition technologies to lower crime  
You feel the availability of online information has increased your trust in authorities  
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



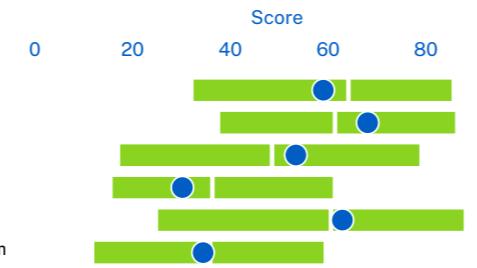
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas  
Recycling services are satisfactory  
Public safety is not a problem  
Air pollution is not a problem  
Medical services provision is satisfactory  
Finding housing with rent equal to 30% or less of a monthly salary is not a problem



#### Mobility

Traffic congestion is not a problem  
Public transport is satisfactory



#### Activities

Green spaces are satisfactory  
Cultural activities (shows, bars, and museums) are satisfactory



#### Opportunities (Work & School)

Employment finding services are readily available  
Most children have access to a good school  
Lifelong learning opportunities are provided by local institutions  
Businesses are creating new jobs  
Minorities feel welcome



#### Governance

Information on local government decisions are easily accessible  
Corruption of city officials is not an issue of concern  
Residents contribute to decision making of local government  
Residents provide feedback on local government projects



### TECHNOLOGIES

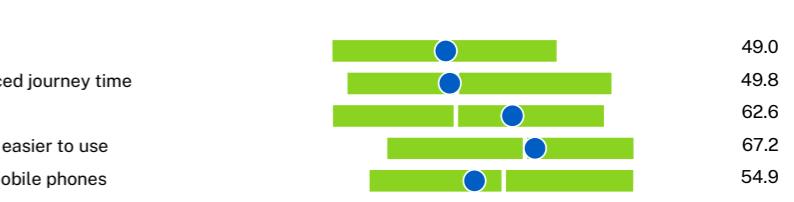
#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution  
A website or App allows residents to easily give away unwanted items  
Free public wifi has improved access to city services  
CCTV cameras has made residents feel safer  
A website or App allows residents to effectively monitor air pollution  
Arranging medical appointments online has improved access



#### Mobility

Car-sharing Apps have reduced congestion  
Apps that direct you to an available parking space have reduced journey time  
Bicycle hiring has reduced congestion  
Online scheduling and ticket sales has made public transport easier to use  
The city provides information on traffic congestion through mobile phones



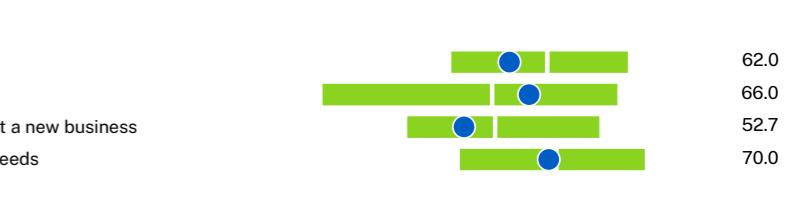
#### Activities

Online purchasing of tickets to shows and museums has made it easier to attend



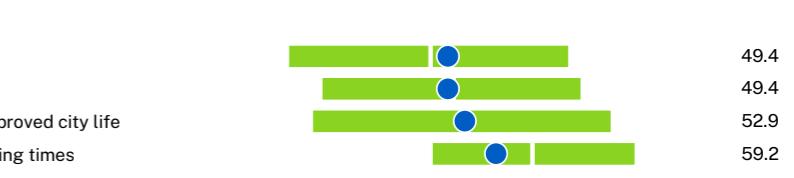
#### Opportunities (Work & School)

Online access to job listings has made it easier to find work  
IT skills are taught well in schools  
Online services provided by the city has made it easier to start a new business  
The current internet speed and reliability meet connectivity needs



#### Governance

Online public access to city finances has reduced corruption  
Online voting has increased participation  
An online platform where residents can propose ideas has improved city life  
Processing Identification Documents online has reduced waiting times



## SMART CITY RANKING

**134**

Out of 141

not out of 118  
in 2021

## SMART CITY RATING

**C**

not in 2021

## FACTOR RATINGS

**C**

## STRUCTURES

**C**

## TECHNOLOGIES

**3**

All ratings range  
from AAA to D

### BACKGROUND INFORMATION

#### City

Population      HDI  
9,562,280      0.820

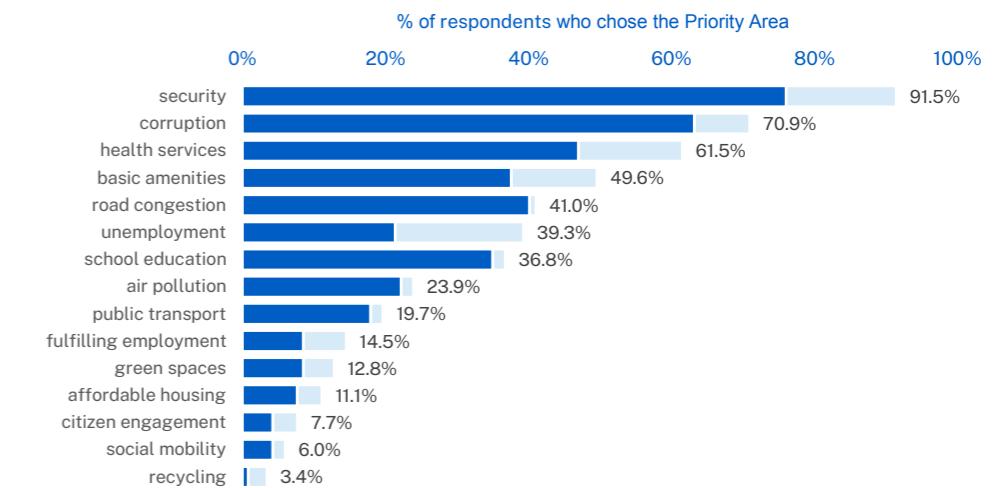
(UN Data)



Country	2018	2019	2020	2021	1 yr change
HDI	0.776	0.780	0.762	0.762	+0.000
Life expectancy at birth	76.0	76.2	73.7	72.4	-1.3
Expected years of schooling	15.2	15.4	15.4	15.4	+0.0
Mean years of schooling	9.8	9.9	9.9	9.9	+0.0
GNI per capita (PPP \$)	12,143	12,304	10,917	12,246	+1,329

### PRIORITY AREAS

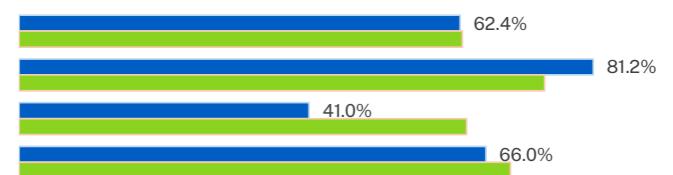
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement

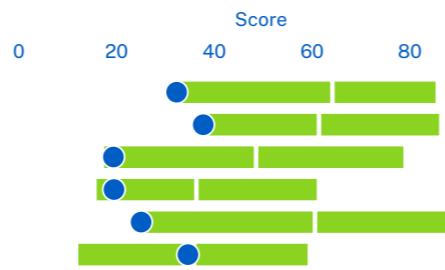


LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

### STRUCTURES

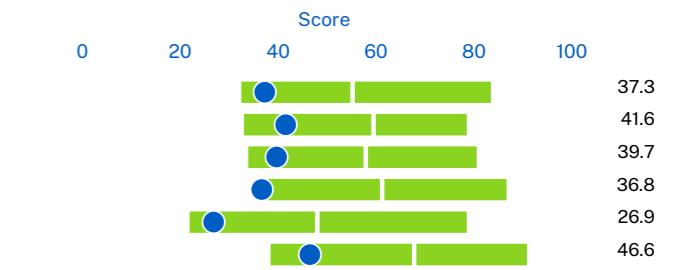
- #### Health & Safety
- Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem



LEGEND: MIN CITY MEAN GROUP MAX

### TECHNOLOGIES

- #### Health & Safety
- Online reporting of city maintenance problems provides a speedy solution
  - A website or App allows residents to easily give away unwanted items
  - Free public wifi has improved access to city services
  - CCTV cameras has made residents feel safer
  - A website or App allows residents to effectively monitor air pollution
  - Arranging medical appointments online has improved access

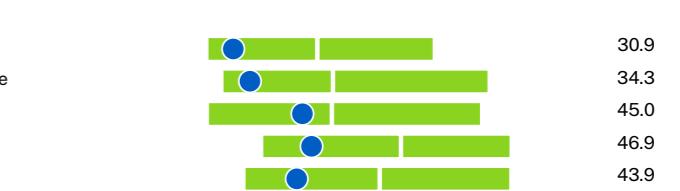


- #### Mobility
- Traffic congestion is not a problem
  - Public transport is satisfactory



#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



- #### Activities
- Green spaces are satisfactory
  - Cultural activities (shows, bars, and museums) are satisfactory

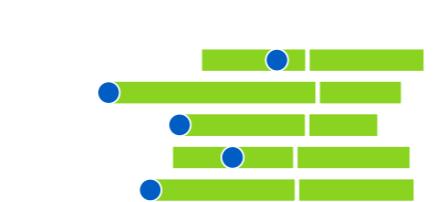


#### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

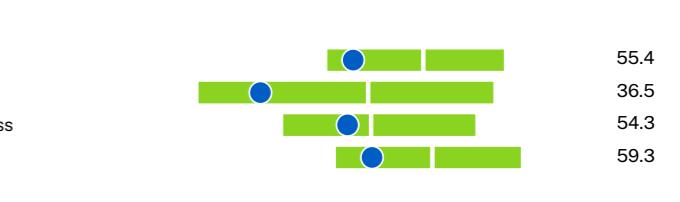


- #### Opportunities (Work & School)
- Employment finding services are readily available
  - Most children have access to a good school
  - Lifelong learning opportunities are provided by local institutions
  - Businesses are creating new jobs
  - Minorities feel welcome

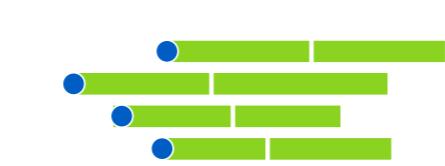


#### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

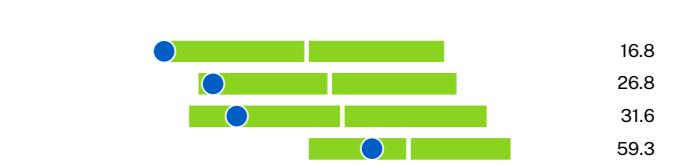


- #### Governance
- Information on local government decisions are easily accessible
  - Corruption of city officials is not an issue of concern
  - Residents contribute to decision making of local government
  - Residents provide feedback on local government projects



#### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Lisbon

SMART  
CITY  
RANKING

**99**

Out of 141

81 out of 118  
in 2021

SMART  
CITY RATING

**CC**

CC in 2021

FACTOR  
RATINGS

**CC**

STRUCTURES

**CC**

TECHNOLOGIES

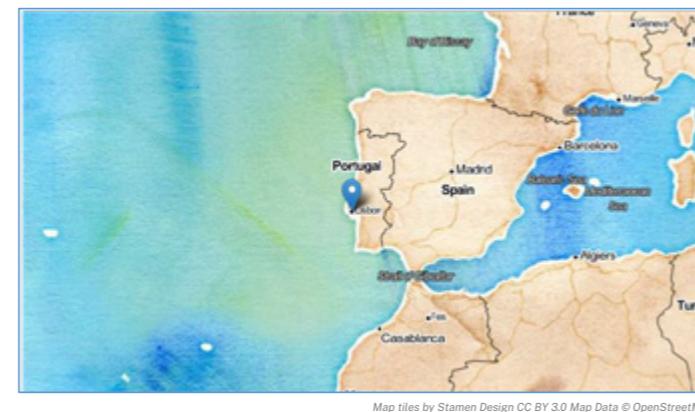
GROUP  
3

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 2,869,033 HDI 0.900  
(Eurostat)



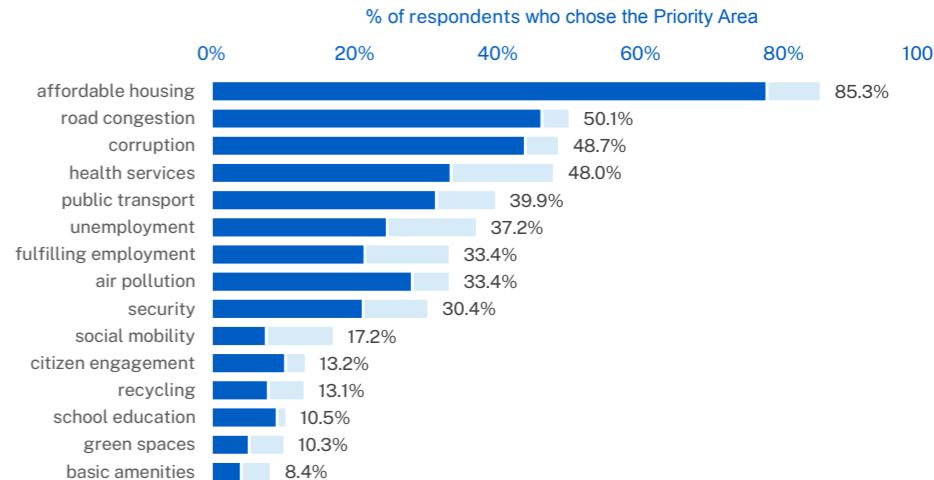
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.850	0.864	0.863	0.866	+0.003
Life expectancy at birth	81.9	82.1	81.1	81.0	-0.0
Expected years of schooling	16.3	16.5	16.9	16.9	+0.0
Mean years of schooling	9.2	9.3	9.6	9.6	+0.0
GNI per capita (PPP \$)	27,935	33,967	31,637	33,155	+1,518

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



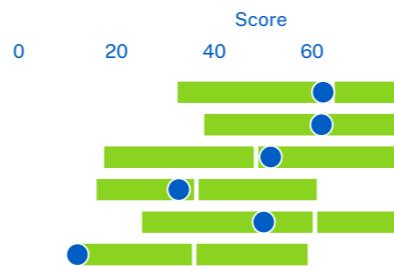
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

Score  
17.7  
37.8

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

Score  
65.1  
78.5

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



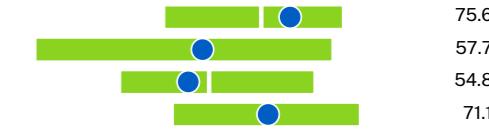
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

Score  
42.2  
52.9  
49.0  
41.1  
51.7

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

Score  
49.0  
19.3  
31.7  
33.9

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Ljubljana

SMART  
CITY  
RANKING

**47**

Out of 141

not out of 118  
in 2021

SMART  
CITY RATING

**BBB**

not in 2021

FACTOR  
RATINGS

**BB**

STRUCTURES

**BBB**

TECHNOLOGIES

GROUP

**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
555,948      0.953

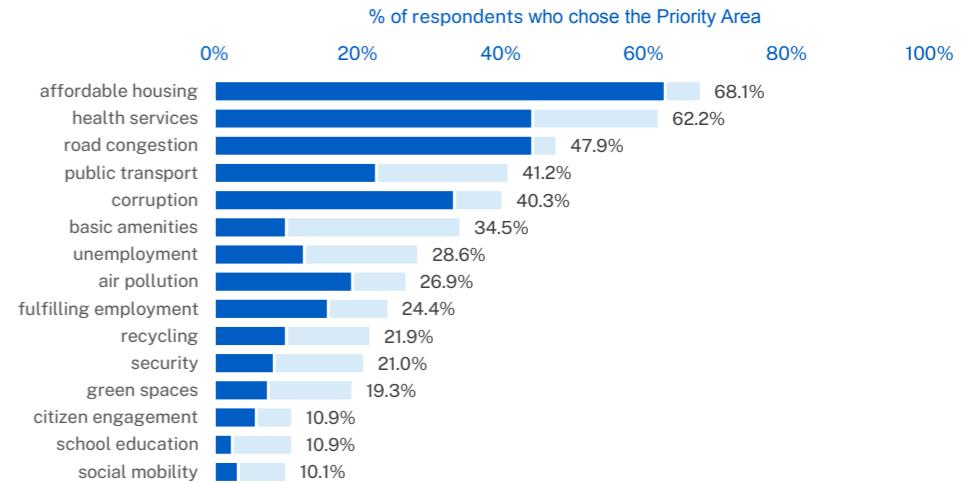
(Eurostat)



Country	2018	2019	2020	2021	1 yr change
HDI	0.917	0.921	0.913	0.918	+0.005
Life expectancy at birth	81.4	81.6	80.4	80.7	+0.3
Expected years of schooling	17.6	17.7	17.7	17.7	+0.0
Mean years of schooling	12.8	12.8	12.8	12.8	+0.0
GNI per capita (PPP \$)	37,411	38,440	36,993	39,746	+2,753

## PRIORITY AREAS

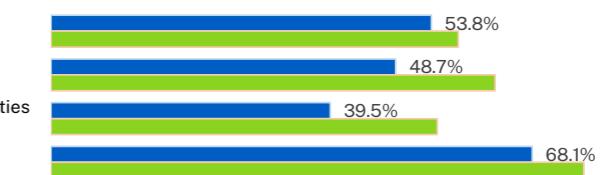
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES



# London

SMART  
CITY  
RANKING

**6**

Out of 141

3 out of 118  
in 2021

SMART  
CITY RATING

**A**

A in 2021

FACTOR  
RATINGS

**BBB**

STRUCTURES  
TECHNOLOGIES

GROUP

**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
8,982,256      0.973

(Eurostat)

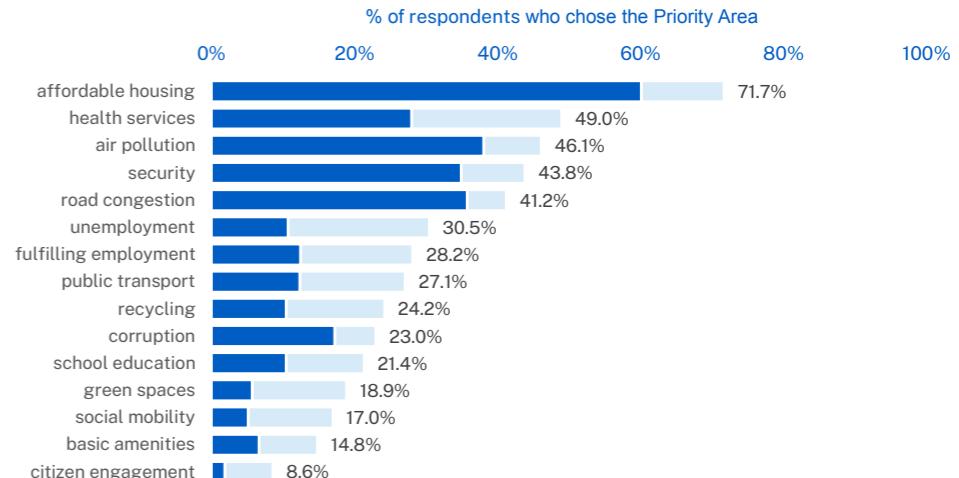


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.920	0.932	0.924	0.929	+0.005
Life expectancy at birth	81.2	81.3	80.4	80.7	+0.3
Expected years of schooling	17.4	17.5	17.3	17.3	+0.0
Mean years of schooling	13.0	13.2	13.4	13.4	+0.0
GNI per capita (PPP \$)	39,507	46,071	42,375	45,225	+2,850

## PRIORITY AREAS

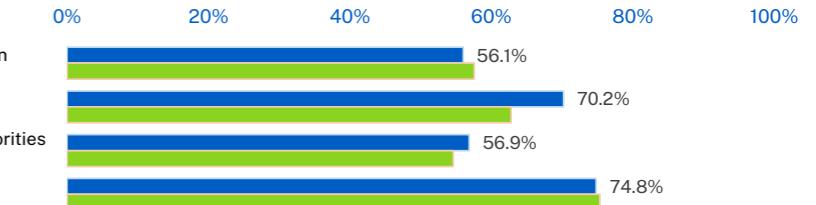
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



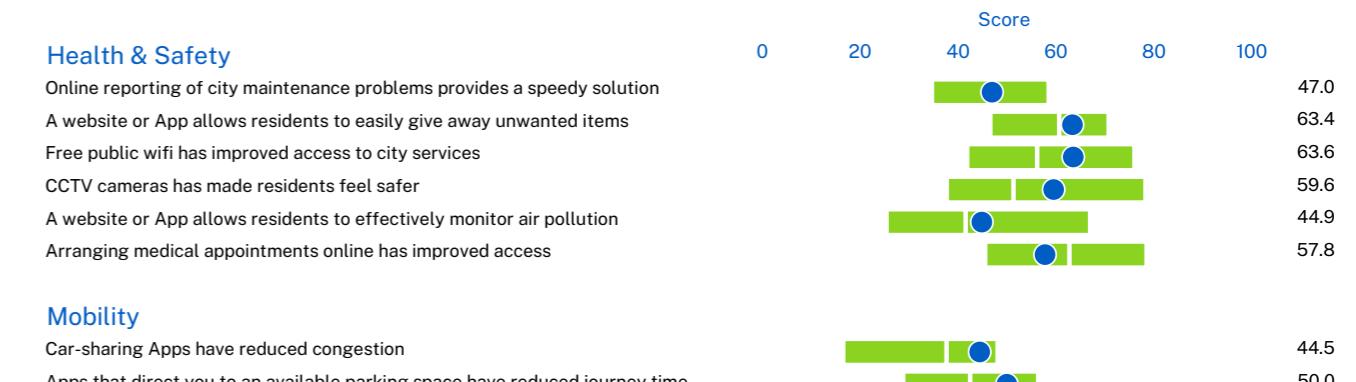
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES



## TECHNOLOGIES



## ACTIVITIES

- Online purchasing of tickets to shows and museums has made it easier to attend

## OPPORTUNITIES (WORK & SCHOOL)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

## Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

# Los Angeles

SMART  
CITY  
RANKING  
**50**

Out of 141

30 out of 118  
in 2021

SMART  
CITY RATING

**BB**

BB in 2021

FACTOR  
RATINGS

**BB**

STRUCTURES

**BBB**

TECHNOLOGIES

GROUP  
**2**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
3,898,747      0.931

(UN Data)



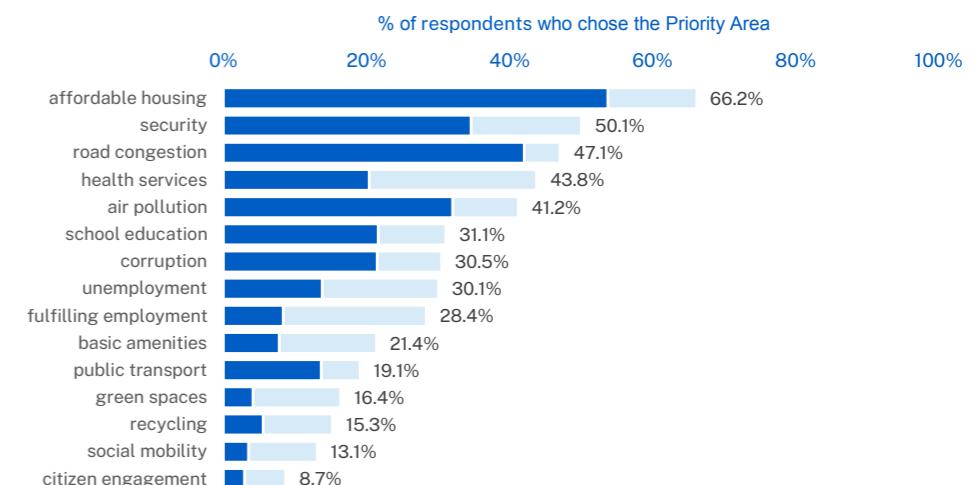
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.920	0.926	0.920	0.921	+0.001
Life expectancy at birth	78.9	78.9	77.4	77.2	-0.2
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.7	13.7	+0.0
GNI per capita (PPP \$)	56,140	63,826	61,462	64,765	+3,304

## PRIORITY AREAS

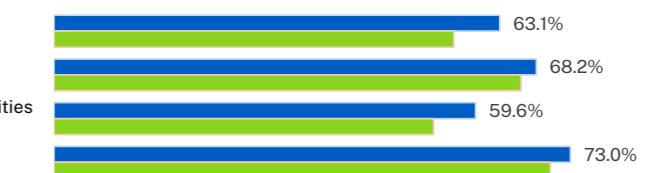
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

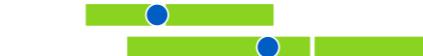
- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



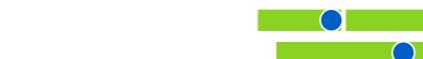
### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



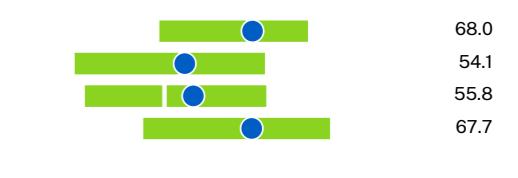
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



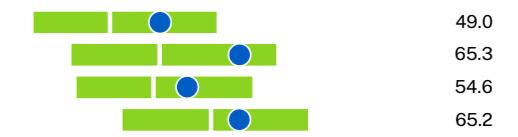
### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Luxembourg

SMART  
CITY  
RANKING

**45**

Out of 141

not out of 118  
in 2021

SMART  
CITY RATING

**BB**

not in 2021

FACTOR  
RATINGS

**BBB**

STRUCTURES

**B**

TECHNOLOGIES

GROUP  
**2**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
634,730      0.930

(Eurostat)



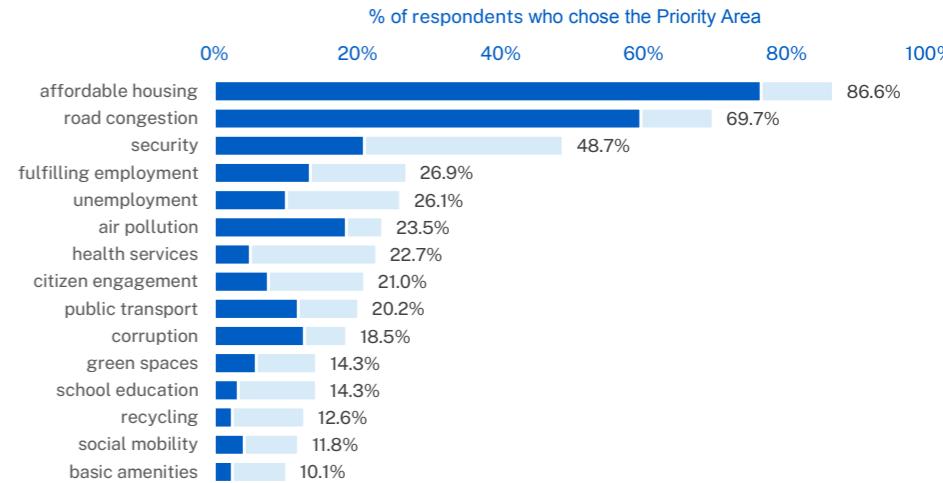
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.922	0.927	0.924	0.930	+0.006
Life expectancy at birth	81.8	82.1	81.4	82.6	+1.2
Expected years of schooling	14.3	14.4	14.4	14.4	+0.0
Mean years of schooling	12.8	13.0	13.0	13.0	+0.0
GNI per capita (PPP \$)	81,399	76,019	80,286	84,649	+4,364

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



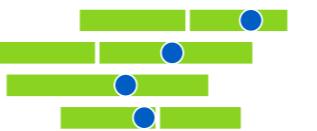
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Governance

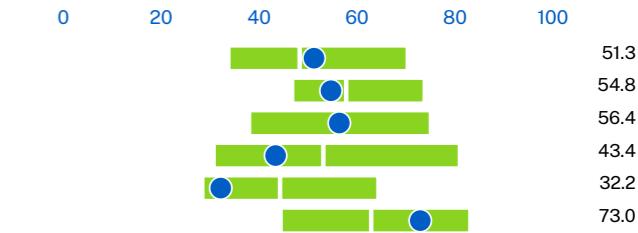
- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



## TECHNOLOGIES

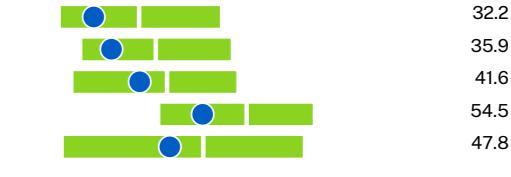
### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



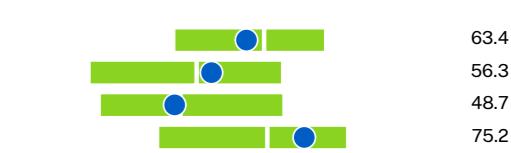
### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



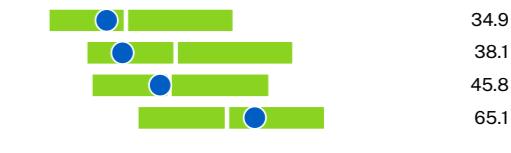
### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



## SMART CITY RANKING

**64**

Out of 141



62 out of 118  
in 2021

## SMART CITY RATING

**BB**

CCC in 2021

## FACTOR RATINGS

**BB**

## STRUCTURES

## TECHNOLOGIES

**2**

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population      HDI  
6,740,730      0.914

(Eurostat)



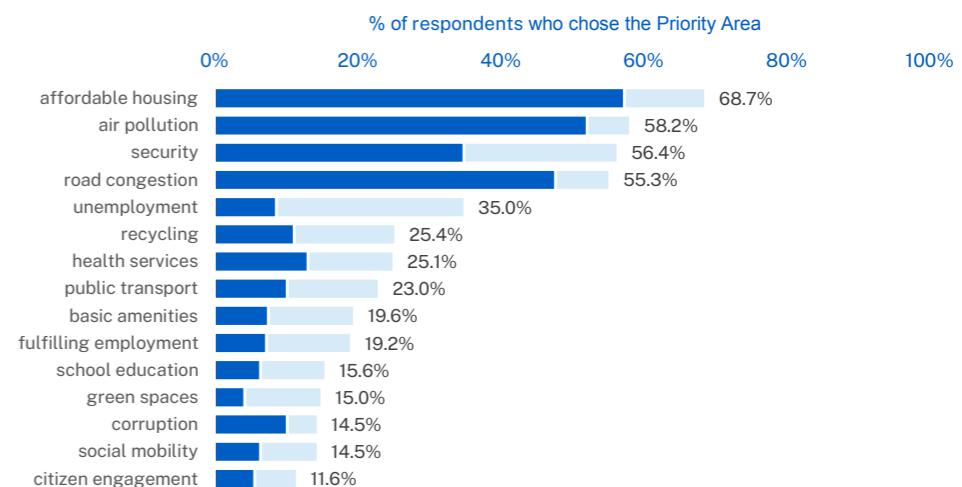
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

#### Country

	2018	2019	2020	2021	1 yr change
HDI	0.891	0.901	0.898	0.903	+0.005
Life expectancy at birth	82.5	82.7	82.2	82.5	+0.3
Expected years of schooling	15.5	15.6	15.8	15.8	+0.0
Mean years of schooling	11.4	11.5	11.6	11.6	+0.0
GNI per capita (PPP \$)	40,511	47,173	43,048	45,937	+2,889

### PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
You are comfortable with face recognition technologies to lower crime  
You feel the availability of online information has increased your trust in authorities  
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

### STRUCTURES

#### Health & Safety

Basic sanitation meets the needs of the poorest areas  
Recycling services are satisfactory  
Public safety is not a problem  
Air pollution is not a problem  
Medical services provision is satisfactory  
Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Score



#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution  
A website or App allows residents to easily give away unwanted items  
Free public wifi has improved access to city services  
CCTV cameras has made residents feel safer  
A website or App allows residents to effectively monitor air pollution  
Arranging medical appointments online has improved access

### TECHNOLOGIES

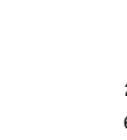
Score



#### Mobility

Traffic congestion is not a problem  
Public transport is satisfactory

Score



#### Mobility

Car-sharing Apps have reduced congestion  
Apps that direct you to an available parking space have reduced journey time  
Bicycle hiring has reduced congestion  
Online scheduling and ticket sales has made public transport easier to use  
The city provides information on traffic congestion through mobile phones



#### Activities

Green spaces are satisfactory  
Cultural activities (shows, bars, and museums) are satisfactory

Score



#### Activities

Online purchasing of tickets to shows and museums has made it easier to attend

Score



#### Opportunities (Work & School)

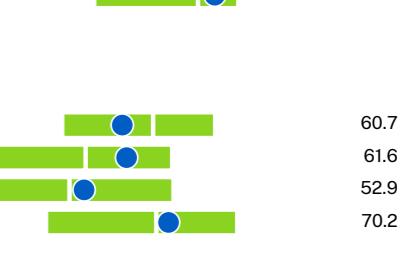
Employment finding services are readily available  
Most children have access to a good school  
Lifelong learning opportunities are provided by local institutions  
Businesses are creating new jobs  
Minorities feel welcome

Score



#### Opportunities (Work & School)

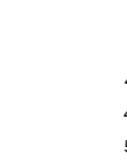
Online access to job listings has made it easier to find work  
IT skills are taught well in schools  
Online services provided by the city has made it easier to start a new business  
The current internet speed and reliability meet connectivity needs



#### Governance

Information on local government decisions are easily accessible  
Corruption of city officials is not an issue of concern  
Residents contribute to decision making of local government  
Residents provide feedback on local government projects

Score



#### Governance

Online public access to city finances has reduced corruption  
Online voting has increased participation  
An online platform where residents can propose ideas has improved city life  
Processing Identification Documents online has reduced waiting times



# Madrid

SMART  
CITY  
RANKING

**37**

Out of 141

37 out of 118  
in 2021

SMART  
CITY RATING

**BB**

BB in 2021

FACTOR  
RATINGS

**BB**

STRUCTURES

**BBB**

TECHNOLOGIES

GROUP  
**2**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
6,755,828      0.940

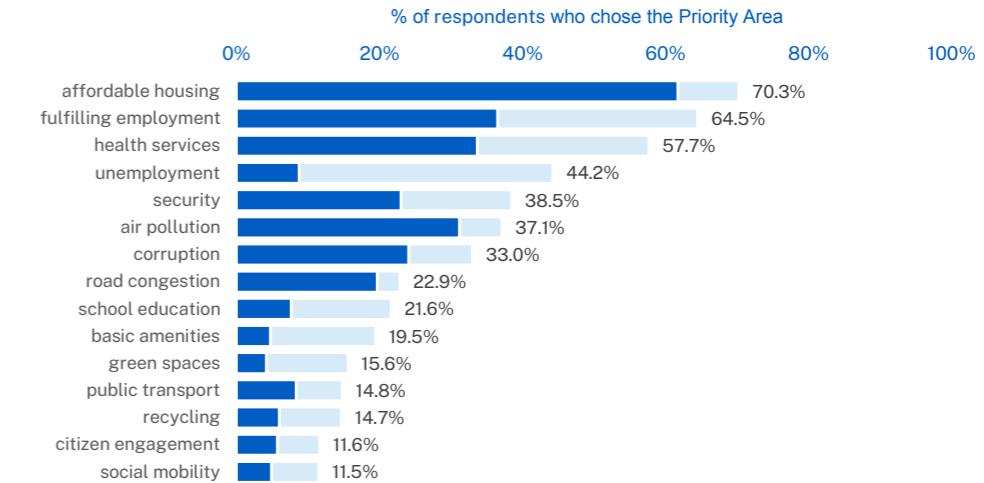
(Eurostat)



Country	2018	2019	2020	2021	1 yr change
HDI	0.893	0.904	0.899	0.905	+0.006
Life expectancy at birth	83.4	83.6	82.3	83.0	+0.7
Expected years of schooling	17.9	17.6	17.9	17.9	+0.0
Mean years of schooling	9.8	10.3	10.6	10.6	+0.0
GNI per capita (PPP \$)	35,041	40,975	36,516	38,354	+1,838

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

- ### Health & Safety
- Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Mobility

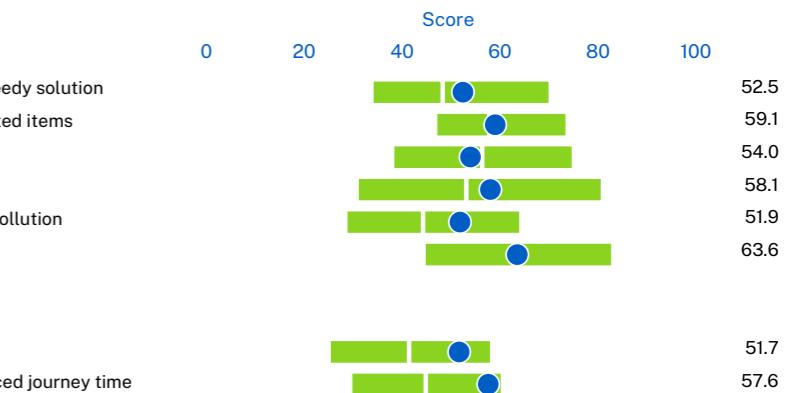
- Traffic congestion is not a problem
- Public transport is satisfactory



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



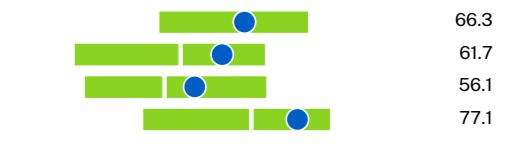
### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



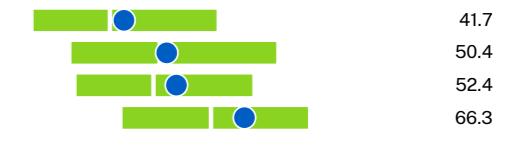
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



# Makassar

SMART  
CITY  
RANKING

**114**

Out of 141



102 out of 118  
in 2021

SMART  
CITY RATING

**CC**

C in 2021

FACTOR  
RATINGS

**CC**

STRUCTURES

**CC**

TECHNOLOGIES

GROUP  
**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
1,642,129      0.699

(UN World Urbanisation Prospects 2022  
estimate)

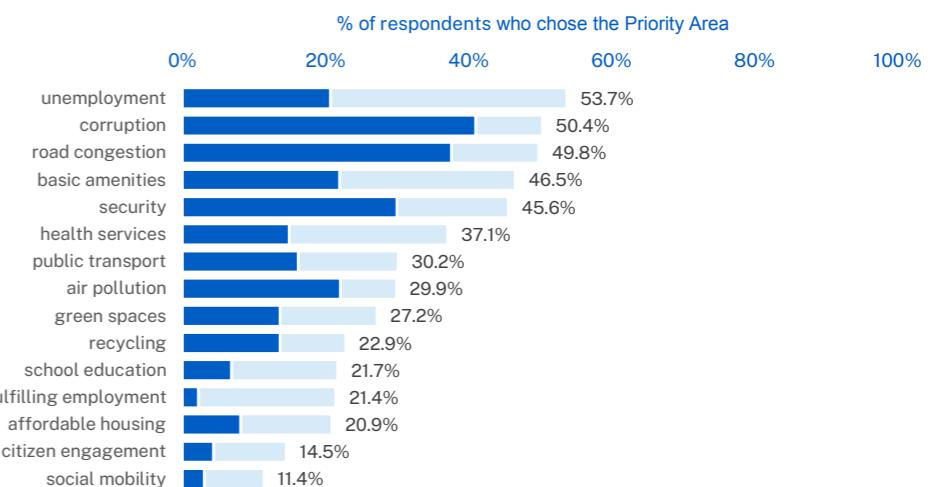


Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.707	0.718	0.709	0.705	-0.004
Life expectancy at birth	71.5	71.7	68.8	67.6	-1.2
Expected years of schooling	12.9	13.6	13.8	13.8	+0.0
Mean years of schooling	8.0	8.2	8.6	8.6	+0.0
GNI per capita (PPP \$)	11,256	11,459	11,142	11,466	+325

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement

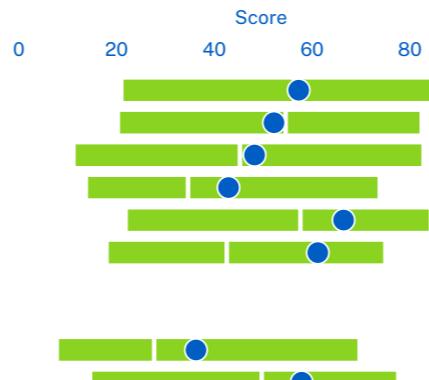


LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

- ### Health & Safety
- Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Governance

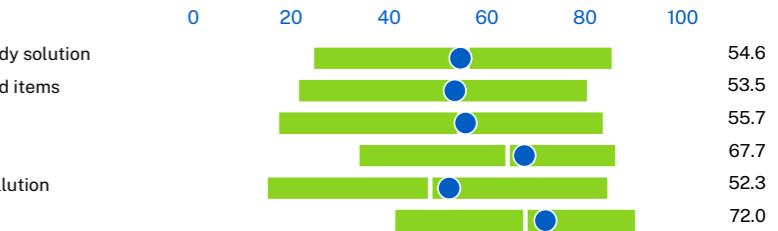
- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



## TECHNOLOGIES

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Manchester

SMART  
CITY  
RANKING

**73**

Out of 141



58 out of 118  
in 2021

SMART  
CITY RATING

**BB**

BB in 2021

FACTOR  
RATINGS

**BB**

STRUCTURES

**BB**

TECHNOLOGIES

GROUP  
**2**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
553,230      0.915

(Eurostat)



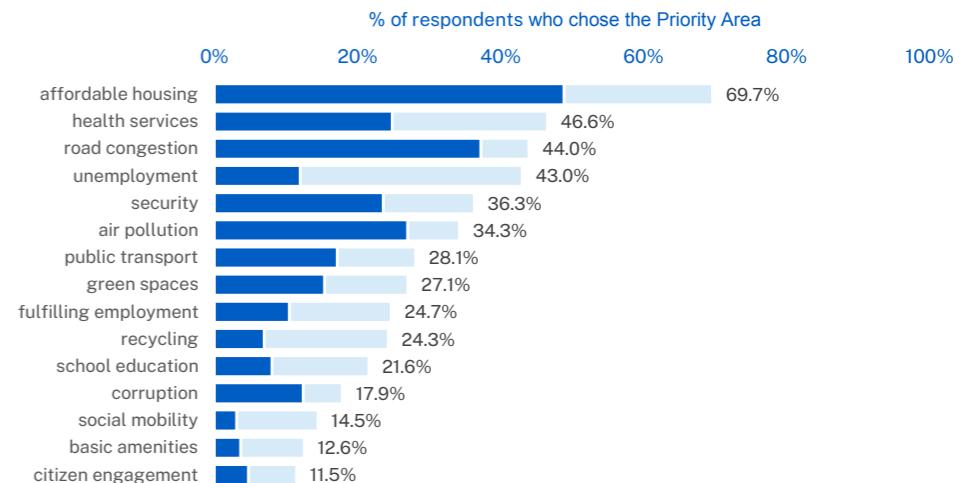
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.932	0.924	0.929	+0.005
Life expectancy at birth	81.2	81.3	80.4	80.7	+0.3
Expected years of schooling	17.4	17.5	17.3	17.3	+0.0
Mean years of schooling	13.0	13.2	13.4	13.4	+0.0
GNI per capita (PPP \$)	39,507	46,071	42,375	45,225	+2,850

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Score

0 20 40 60 80 100

66.8 69.0 40.8 36.8 57.7 34.8

### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES

### Technologies

Score

0 20 40 60 80 100

45.9 63.4 58.9 58.3 32.3 52.4

### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

### Opportunities (Work & School)

- Employment finding services are readily available

69.2 66.8

### Opportunities (Work & School)

- Most children have access to a good school

67.6 63.0

### Opportunities (Work & School)

- Lifelong learning opportunities are provided by local institutions

63.3 52.1

### Opportunities (Work & School)

- Businesses are creating new jobs

60.3 69.3

### Opportunities (Work & School)

- Minorities feel welcome

66.8 54.7

### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

# Manila

SMART  
CITY  
RANKING

**115**

Out of 141



100 out of 118  
in 2021

SMART  
CITY RATING

**C**

C in 2021

FACTOR  
RATINGS

**C**

STRUCTURES

**CC**

TECHNOLOGIES

GROUP

**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 1,846,513  
(UN Data)

HDI 0.760

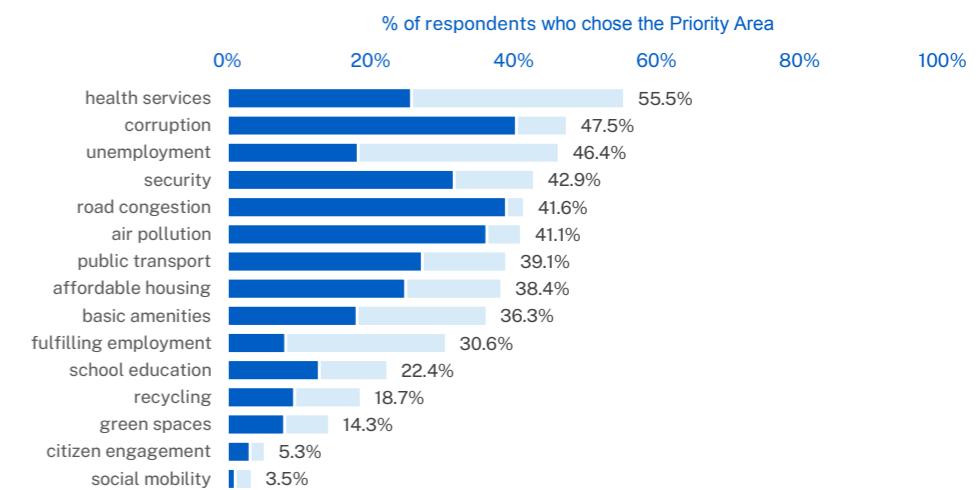


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.712	0.718	0.710	0.699	-0.011
Life expectancy at birth	71.1	71.2	72.1	69.3	-2.9
Expected years of schooling	12.7	13.1	13.1	13.1	+0.0
Mean years of schooling	9.4	9.4	9.0	9.0	+0.0
GNI per capita (PPP \$)	9,540	9,778	8,559	8,920	+362

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Score



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES

Score



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory
- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

Score



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory
- Online purchasing of tickets to shows and museums has made it easier to attend

Score



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome
- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

Score



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects
- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

Score



All ratings range  
from AAA to D

# Marseille

SMART  
CITY  
RANKING  
**101**

Out of 141



91 out of 118  
in 2021

SMART  
CITY RATING

**CC**

CC in 2021

FACTOR  
RATINGS

**CC**

STRUCTURES

**CC**

TECHNOLOGIES

GROUP  
**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
5,116,360      0.899

(Eurostat)

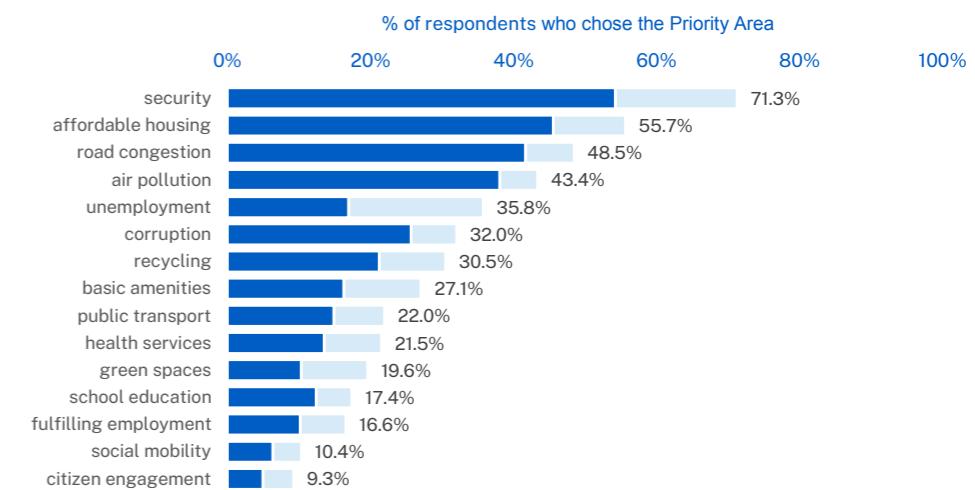


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.891	0.901	0.898	0.903	+0.005
Life expectancy at birth	82.5	82.7	82.2	82.5	+0.3
Expected years of schooling	15.5	15.6	15.8	15.8	+0.0
Mean years of schooling	11.4	11.5	11.6	11.6	+0.0
GNI per capita (PPP \$)	40,511	47,173	43,048	45,937	+2,889

## PRIORITY AREAS

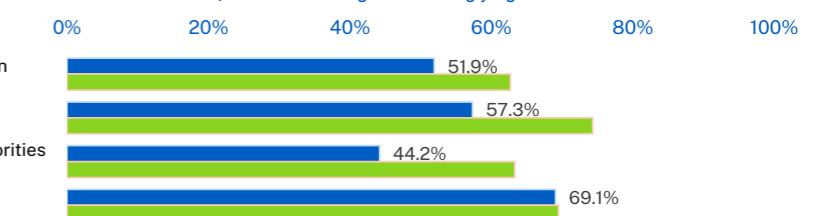
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



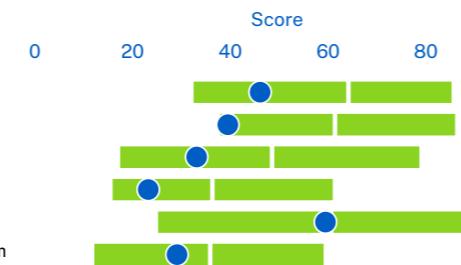
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Health & Safety

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

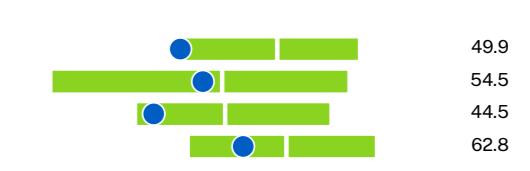


### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Mecca

SMART  
CITY  
RANKING

**52**

Out of 141

not out of 118  
in 2021

SMART  
CITY RATING

**B**

not in 2021

FACTOR  
RATINGS

**B**

STRUCTURES

**B**

TECHNOLOGIES

GROUP  
**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
2,114,675      0.871

(UN World Urbanisation Prospects 2022  
estimate)



not out of 118

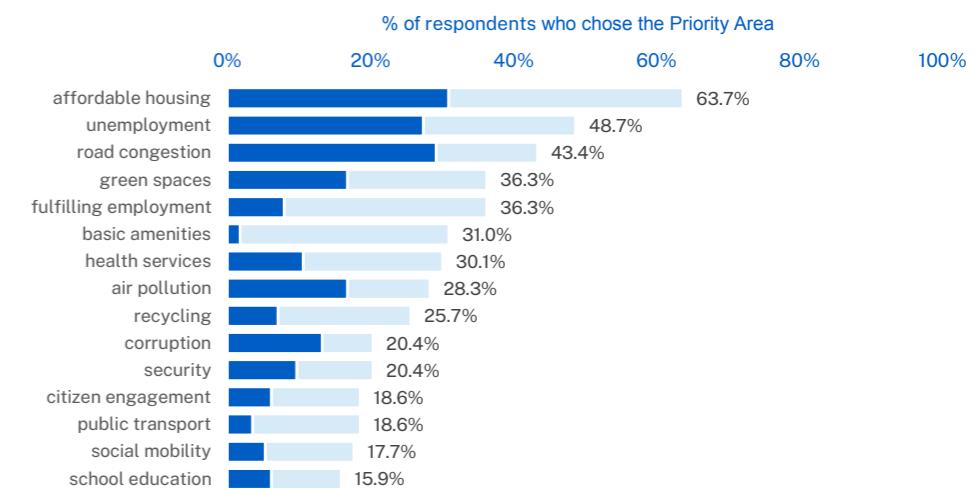
in 2021

### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.865	0.873	0.870	0.875	+0.005
Life expectancy at birth	77.2	77.3	76.2	76.9	+0.7
Expected years of schooling	15.7	16.0	16.1	16.1	+0.0
Mean years of schooling	10.6	8.3	8.3	8.3	+0.0
GNI per capita (PPP \$)	5,072	5,307	5,601	5,745	+143

## PRIORITY AREAS

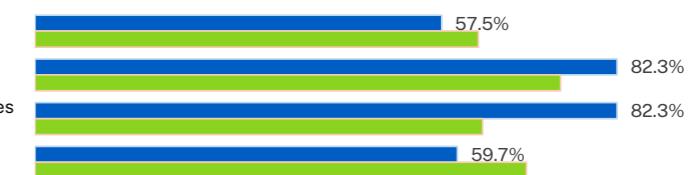
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



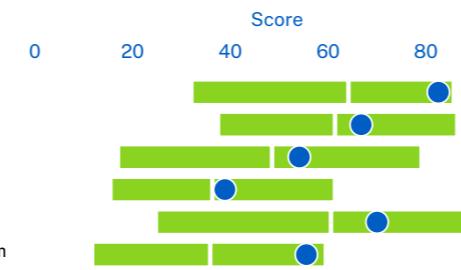
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



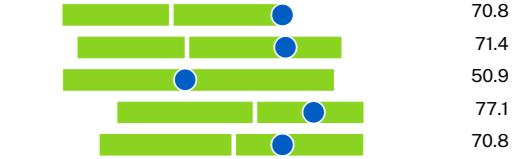
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



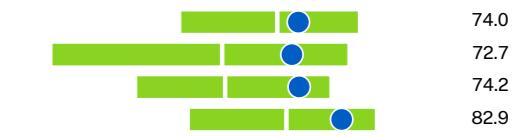
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Medan

SMART  
CITY  
RANKING

**112**

Out of 141



96 out of 118  
in 2021

SMART  
CITY RATING

**CC**

C in 2021

FACTOR  
RATINGS

**CC**

STRUCTURES

**CC**

TECHNOLOGIES

GROUP

**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 2,435,252  
(UN Data)

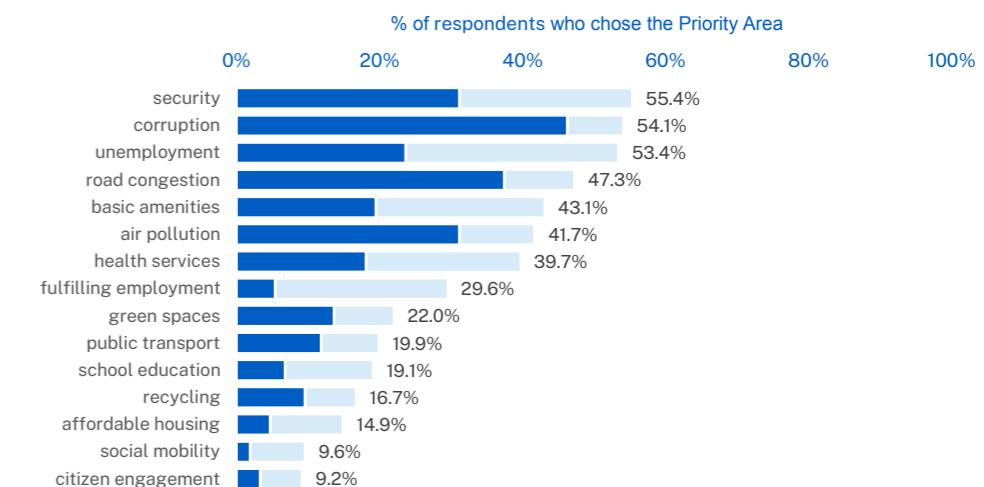
HDI 0.711



Country	2018	2019	2020	2021	1 yr change
HDI	0.707	0.718	0.709	0.705	-0.004
Life expectancy at birth	71.5	71.7	68.8	67.6	-1.2
Expected years of schooling	12.9	13.6	13.8	13.8	+0.0
Mean years of schooling	8.0	8.2	8.6	8.6	+0.0
GNI per capita (PPP \$)	11,256	11,459	11,142	11,466	+325

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement

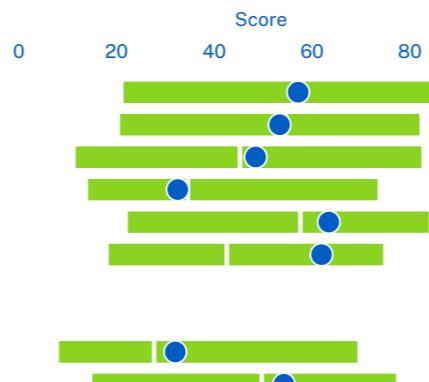


LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

- ### Health & Safety
- Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem



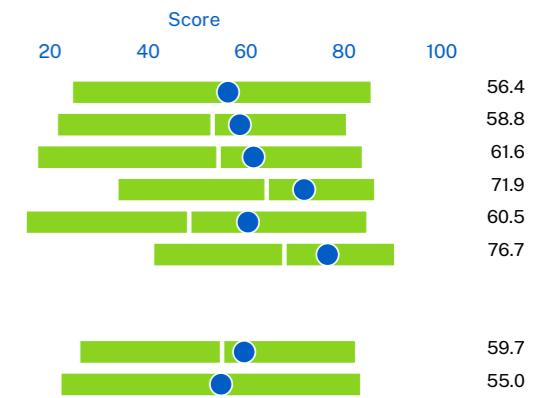
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

# Medellin

SMART  
CITY  
RANKING

**118**

Out of 141



99 out of 118  
in 2021

SMART  
CITY RATING

**C**

C in 2021

FACTOR  
RATINGS

**C**

STRUCTURES

TECHNOLOGIES

GROUP

**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 2,372,330  
(UN Data)

HDI 0.757



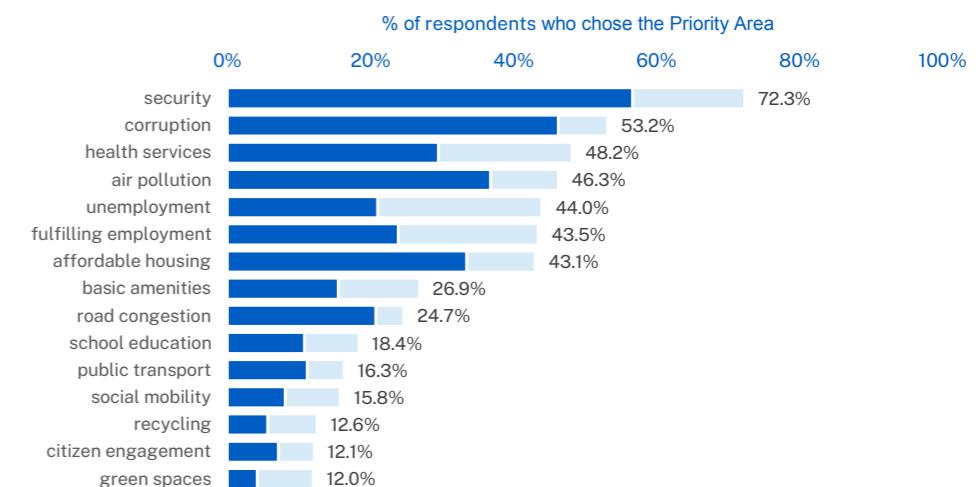
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.761	0.767	0.756	0.752	-0.004
Life expectancy at birth	77.1	77.3	74.8	72.8	-1.9
Expected years of schooling	14.6	14.4	14.4	14.4	+0.0
Mean years of schooling	8.3	8.5	8.9	8.9	+0.0
GNI per capita (PPP \$)	12,896	14,257	13,185	14,384	+1,199

## PRIORITY AREAS

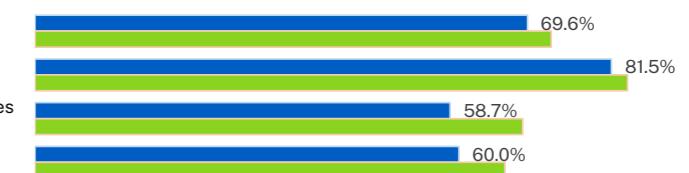
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



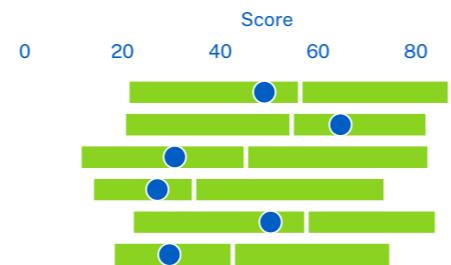
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



Score

49.1

64.6

30.7

27.2

50.3

29.6

### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



Score

27.0

60.7

### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



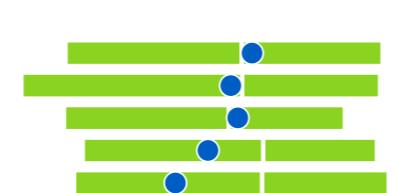
Score

73.1

75.0

### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



Score

57.6

53.2

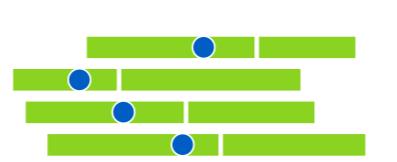
54.6

48.5

41.9

### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



Score

47.7

22.3

31.3

43.4

## TECHNOLOGIES

Score

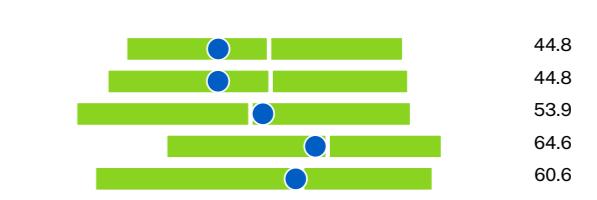
### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



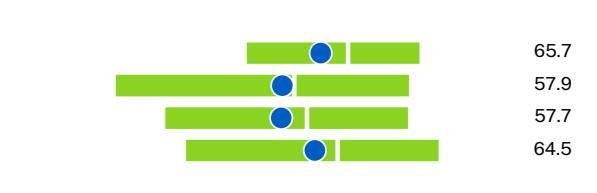
### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



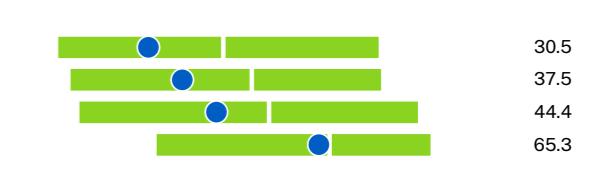
### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Medina

SMART  
CITY  
RANKING

**85**

Out of 141

79 out of 118  
in 2021

SMART  
CITY RATING

**CCC**

CCC in 2021

FACTOR  
RATINGS

**CCC**

STRUCTURES

**CCC**

TECHNOLOGIES

GROUP  
**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

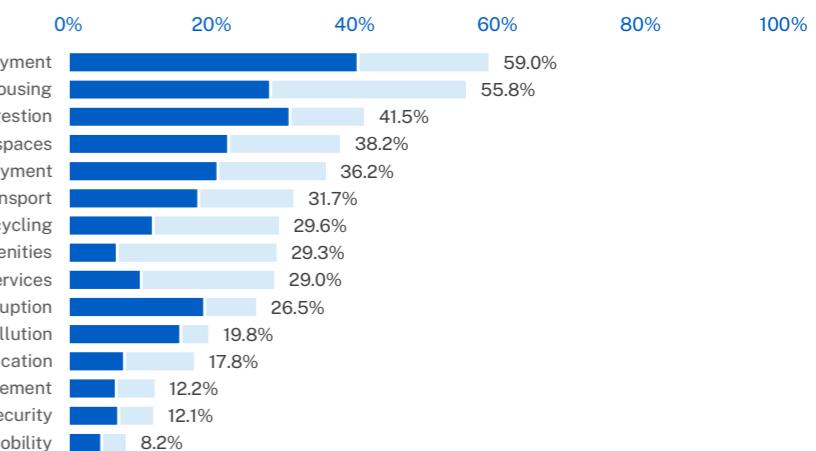
Population      HDI  
154,542      0.871

(UN World Urbanisation Prospects 2022  
estimate)



## ATTITUDES

% of respondents who chose the Priority Area

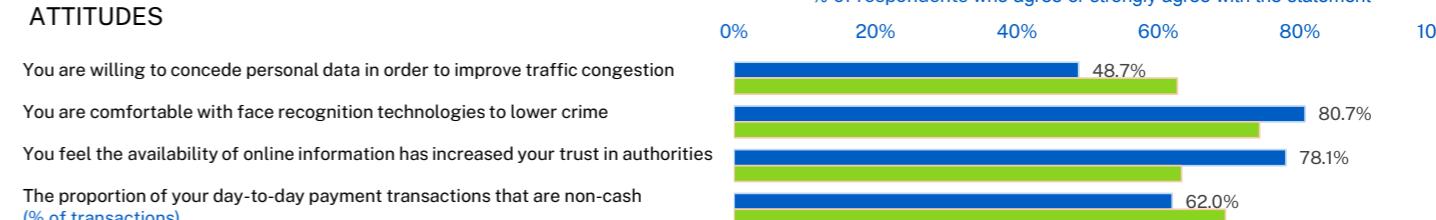


## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.

The left-hand, dark blue section of each bar shows the Alignment, i.e. the proportion of those respondents who also answered the survey on the corresponding area by giving it low priority. A strong Alignment (i.e. consistency across both areas explained) means that these areas may benefit from close observation.

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

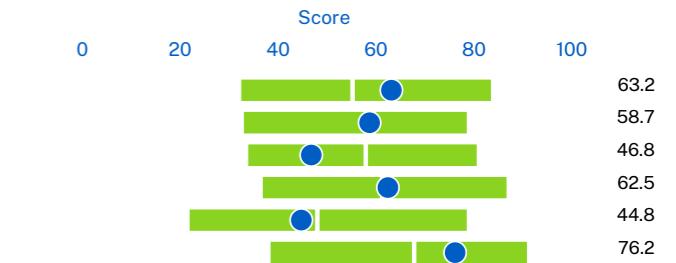
### Health & Safety

Basic sanitation meets the needs of the poorest areas  
Recycling services are satisfactory  
Public safety is not a problem  
Air pollution is not a problem  
Medical services provision is satisfactory  
Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

Online reporting of city maintenance problems provides a speedy solution  
A website or App allows residents to easily give away unwanted items  
Free public wifi has improved access to city services  
CCTV cameras has made residents feel safer  
A website or App allows residents to effectively monitor air pollution  
Arranging medical appointments online has improved access



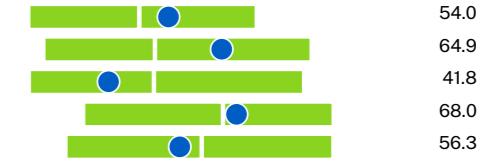
### Mobility

Traffic congestion is not a problem  
Public transport is satisfactory



### Mobility

Car-sharing Apps have reduced congestion  
Apps that direct you to an available parking space have reduced journey time  
Bicycle hiring has reduced congestion  
Online scheduling and ticket sales has made public transport easier to use  
The city provides information on traffic congestion through mobile phones



### Activities

Green spaces are satisfactory  
Cultural activities (shows, bars, and museums) are satisfactory



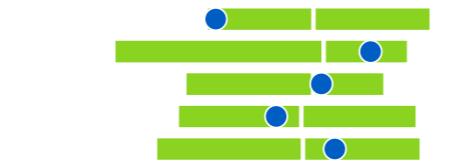
### Activities

Online purchasing of tickets to shows and museums has made it easier to attend



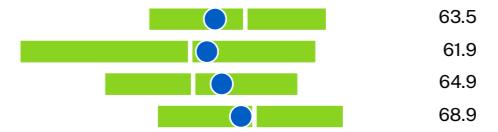
### Opportunities (Work & School)

Employment finding services are readily available  
Most children have access to a good school  
Lifelong learning opportunities are provided by local institutions  
Businesses are creating new jobs  
Minorities feel welcome



### Opportunities (Work & School)

Online access to job listings has made it easier to find work  
IT skills are taught well in schools  
Online services provided by the city has made it easier to start a new business  
The current internet speed and reliability meet connectivity needs



### Governance

Information on local government decisions are easily accessible  
Corruption of city officials is not an issue of concern  
Residents contribute to decision making of local government  
Residents provide feedback on local government projects



### Governance

Online public access to city finances has reduced corruption  
Online voting has increased participation  
An online platform where residents can propose ideas has improved city life  
Processing Identification Documents online has reduced waiting times



# Melbourne

SMART  
CITY  
RANKING

**31**

Out of 141



36 out of 118  
in 2021

SMART  
CITY RATING

**A**

BB in 2021

FACTOR  
RATINGS

**BBB**

STRUCTURES

**A**

TECHNOLOGIES

GROUP  
**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
4,196,198      0.948

(UN Data)



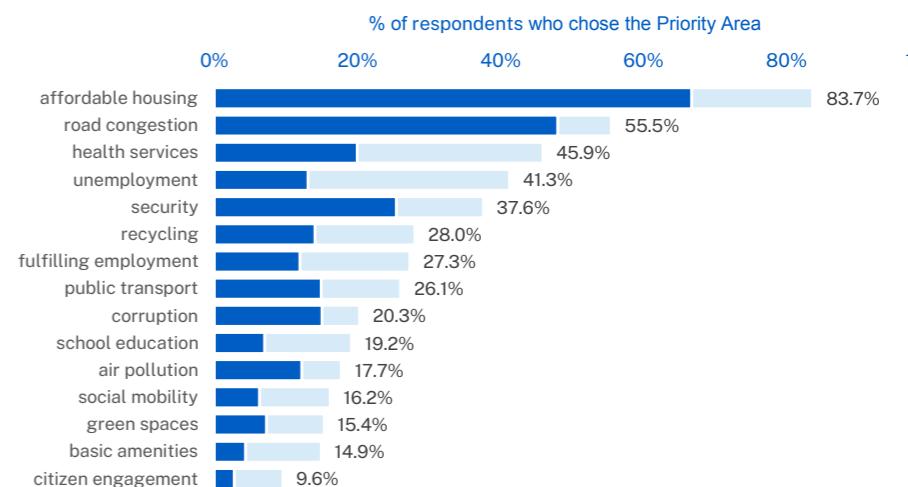
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.941	0.941	0.947	0.951	+0.004
Life expectancy at birth	83.4	83.1	84.3	84.5	+0.2
Expected years of schooling	18.0	18.0	18.0	18.0	+0.0
Mean years of schooling	12.6	12.1	12.4	12.4	+0.0
GNI per capita (PPP \$)	43,821	52,085	49,392	52,293	+2,901

## PRIORITY AREAS

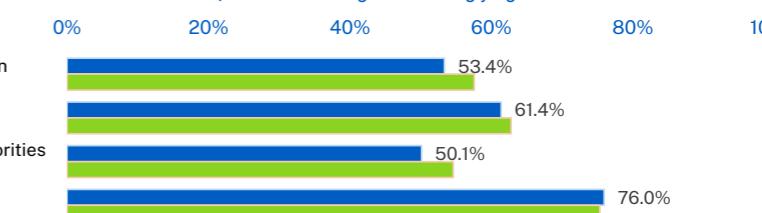
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

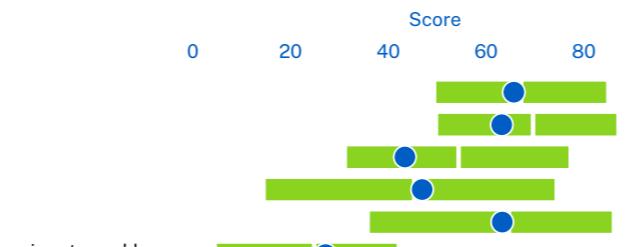
% of respondents who agree or strongly agree with the statement



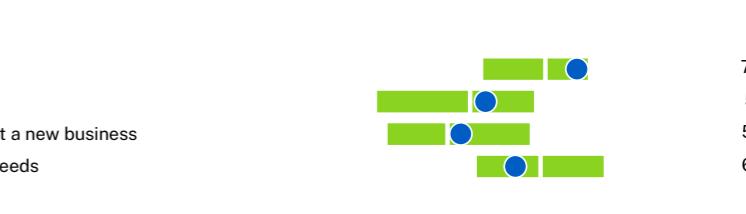
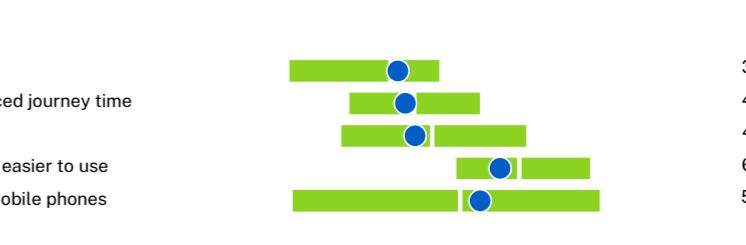
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES



## TECHNOLOGIES



# Mexico City

SMART  
CITY  
RANKING  
**121**

Out of 141

110 out of 118  
in 2021

SMART  
CITY RATING

**C**

C in 2021

FACTOR  
RATINGS

**C**

STRUCTURES

**CC**

TECHNOLOGIES

GROUP  
**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
22,085,139      0.815

(UN World Urbanisation Prospects 2022  
estimate)

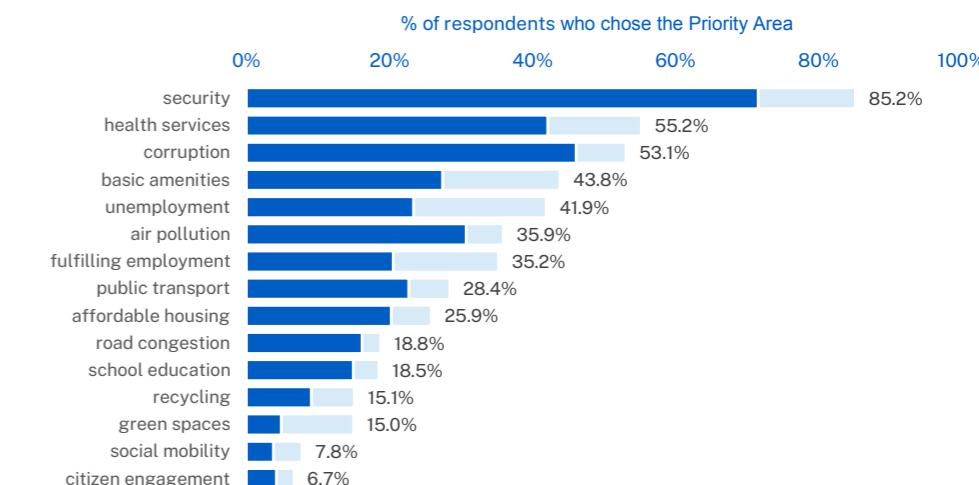


Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.767	0.779	0.756	0.758	+0.002
Life expectancy at birth	75.0	75.1	70.1	70.2	+0.1
Expected years of schooling	14.3	14.8	14.9	14.9	+0.0
Mean years of schooling	8.6	8.8	9.2	9.2	+0.0
GNI per capita (PPP \$)	17,628	19,160	17,235	17,896	+662

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



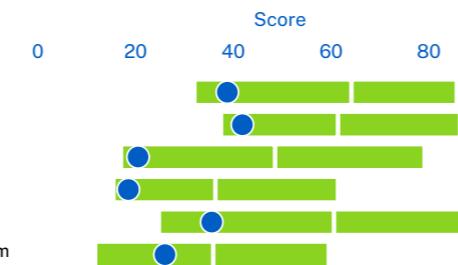
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



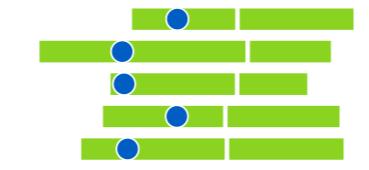
### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



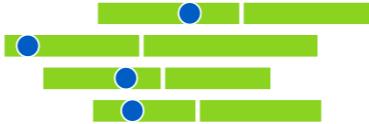
### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



## SMART CITY RANKING

**82**

Out of 141

69 out of 118  
in 2021

## SMART CITY RATING

**BB**

CC in 2021

## FACTOR RATINGS

**BB**

## STRUCTURES

**BB**

## TECHNOLOGIES

## GROUP 2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

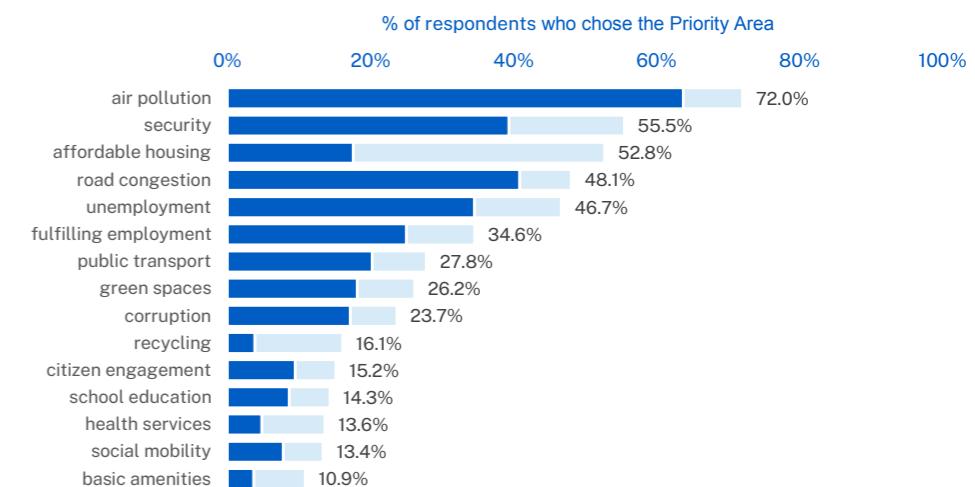
Population 9,981,554  
(Eurostat)



Country	2018	2019	2020	2021	1 yr change
HDI	0.883	0.892	0.889	0.895	+0.006
Life expectancy at birth	83.4	83.5	82.4	82.9	+0.4
Expected years of schooling	16.2	16.1	16.2	16.2	+0.0
Mean years of schooling	10.2	10.4	10.7	10.7	+0.0
GNI per capita (PPP \$)	36,141	42,776	39,901	42,840	+2,939

### PRIORITY AREAS

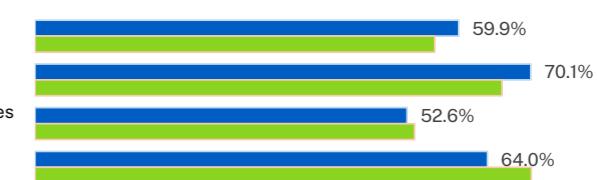
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

### STRUCTURES

- #### Health & Safety
- Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem



#### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



#### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



#### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



#### Governance

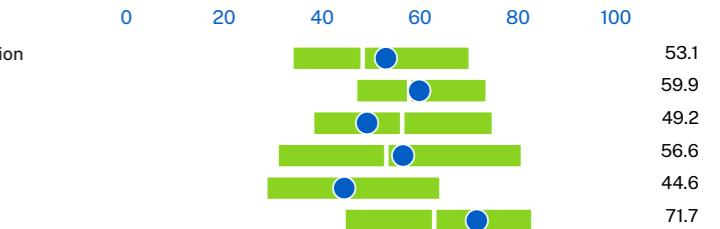
- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### TECHNOLOGIES

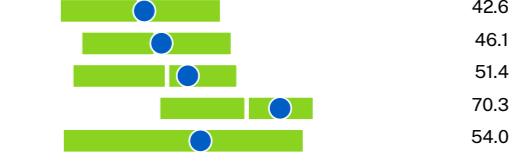
#### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



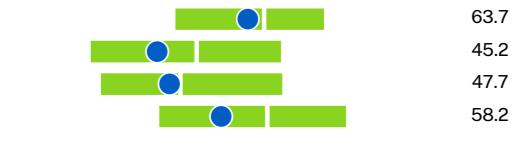
#### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



#### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



#### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Montreal

SMART  
CITY  
RANKING

**69**

Out of 141

55 out of 118  
in 2021

SMART  
CITY RATING

**BB**

BB in 2021

FACTOR  
RATINGS

**BBB**

STRUCTURES

**B**

TECHNOLOGIES

GROUP  
**2**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
1,704,690      0.923

(UN Data)

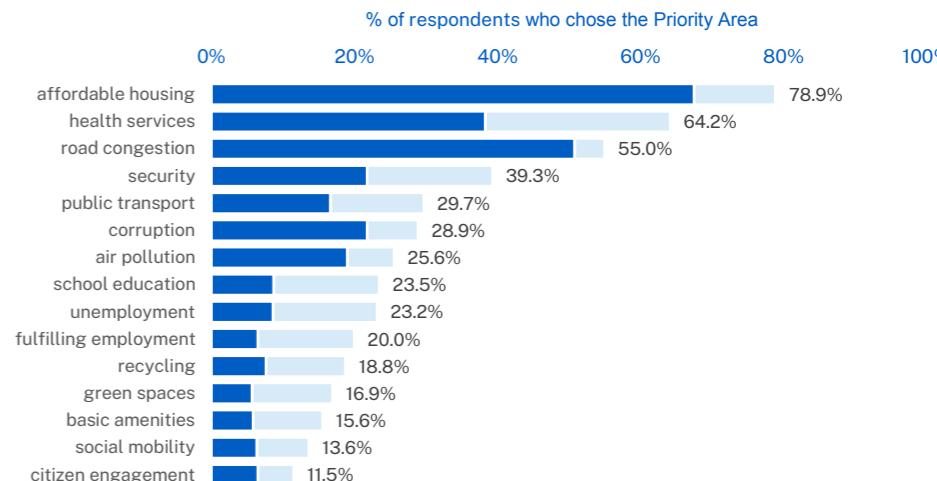


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.933	0.937	0.931	0.936	+0.005
Life expectancy at birth	82.1	82.4	82.1	82.7	+0.6
Expected years of schooling	16.2	16.4	16.4	16.4	+0.0
Mean years of schooling	13.8	8.7	8.8	8.8	+0.0
GNI per capita (PPP \$)	18,371	18,486	18,754	19,974	+1,220

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



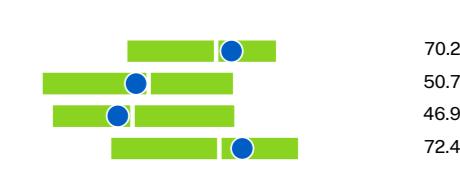
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Mumbai

SMART  
CITY  
RANKING  
**109**

Out of 141



95 out of 118  
in 2021

SMART  
CITY RATING

**CC**

CC in 2021

FACTOR  
RATINGS

**CC**

STRUCTURES

**CCC**

TECHNOLOGIES

GROUP

**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
20,961,473      0.688

(UN World Urbanisation Prospects 2022  
estimate)



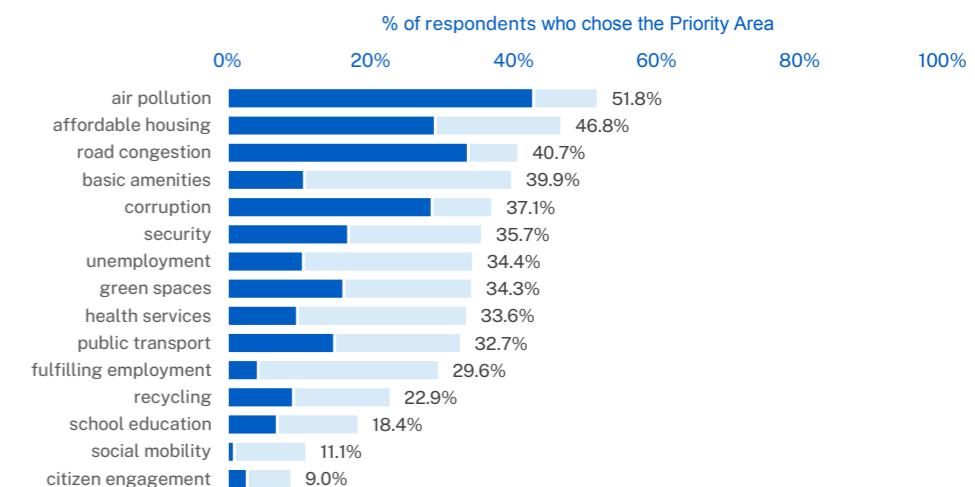
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.647	0.645	0.642	0.633	-0.009
Life expectancy at birth	69.4	69.7	70.2	67.2	-2.9
Expected years of schooling	12.3	12.2	11.9	11.9	+0.0
Mean years of schooling	6.5	6.5	6.7	6.7	+0.0
GNI per capita (PPP \$)	6,829	6,681	6,107	6,590	+482

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



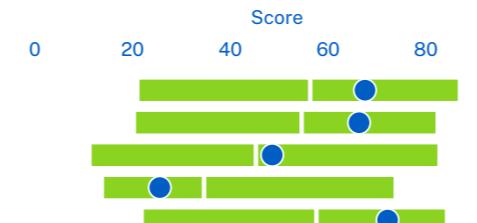
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

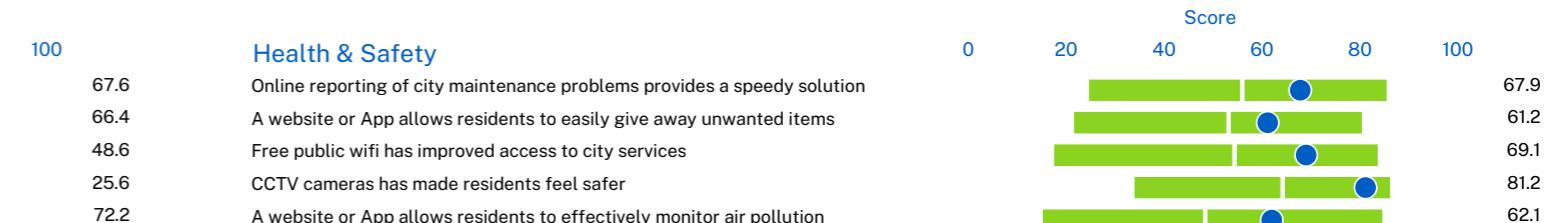
### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



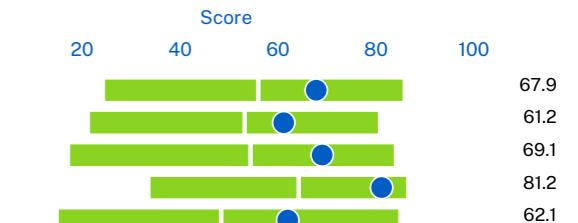
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



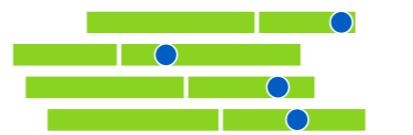
### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



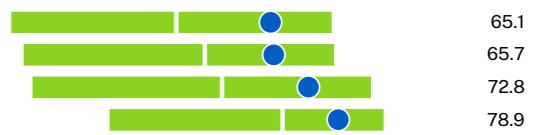
### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Munich

SMART  
CITY  
RANKING

**20**

Out of 141



15 out of 118  
in 2021

SMART  
CITY RATING

**AA**

AA in 2021

FACTOR  
RATINGS

**AA**

STRUCTURES

**A**

TECHNOLOGIES

GROUP  
**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

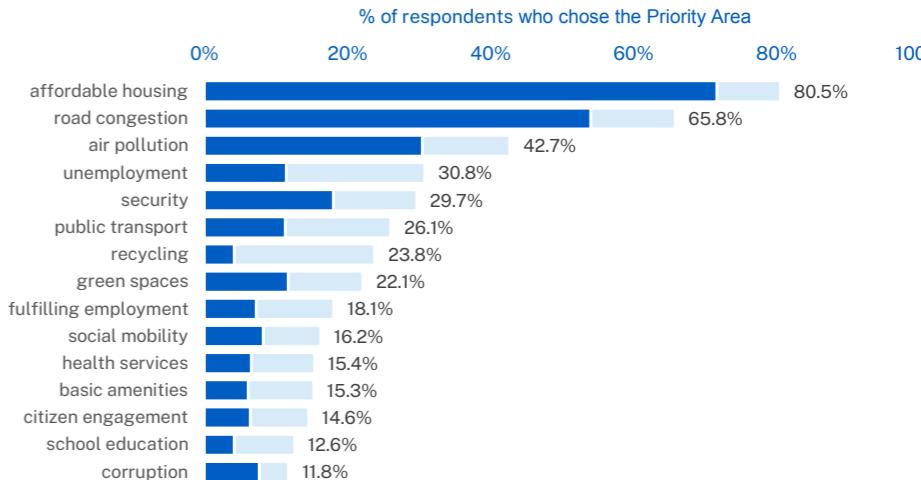
Population      HDI  
13,140,183      0.950  
(Eurostat)



Country	2018	2019	2020	2021	1 yr change
HDI	0.939	0.947	0.944	0.942	-0.002
Life expectancy at birth	81.2	81.3	81.2	80.6	-0.5
Expected years of schooling	17.1	17.0	17.0	17.0	+0.0
Mean years of schooling	14.1	14.2	14.1	14.1	+0.0
GNI per capita (PPP \$)	46,946	55,314	53,078	54,534	+1,457

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement

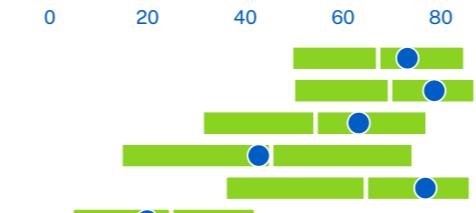


LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

Score



## TECHNOLOGIES

Score



### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Muscat

SMART  
CITY  
RANKING  
**96**

Out of 141

not out of 118  
in 2021

SMART  
CITY RATING

**B**

not in 2021

FACTOR  
RATINGS

**B**

STRUCTURES

**CCC**

TECHNOLOGIES

GROUP

**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
162,262      0.816

(UN World Urbanisation Prospects 2022  
estimate)



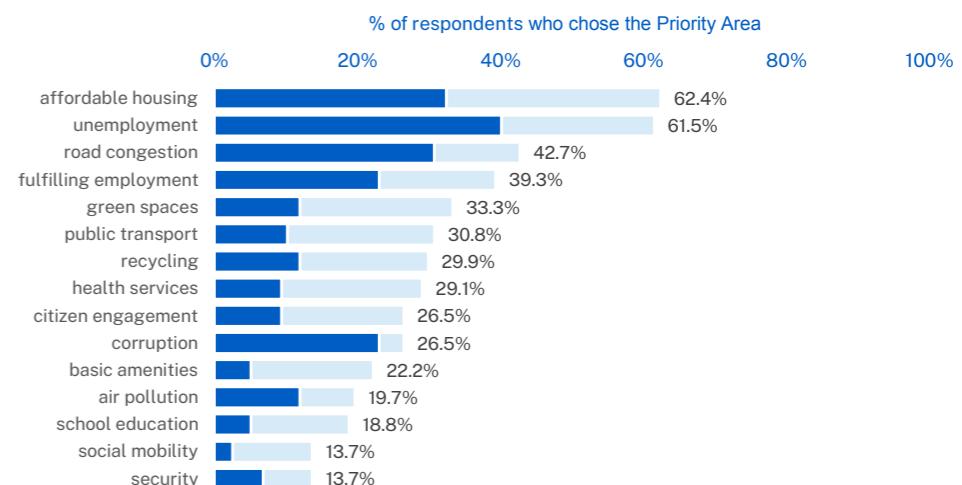
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.834	0.839	0.827	0.816	-0.011
Life expectancy at birth	78.0	78.0	74.8	72.5	-2.2
Expected years of schooling	14.1	14.3	14.6	14.6	+0.0
Mean years of schooling	10.8	11.2	11.7	11.7	+0.0
GNI per capita (PPP \$)	30,632	29,071	27,277	27,054	-223

## PRIORITY AREAS

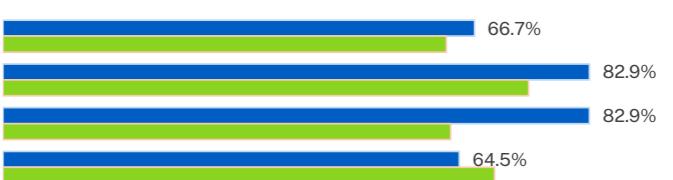
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

The left-hand, dark blue section of each bar shows the Alignment, i.e. the proportion of those respondents who also answered the survey on the corresponding area by giving it low priority. A strong Alignment (i.e. consistency across both areas explained) means that these areas may benefit from close observation.

% of respondents who agree or strongly agree with the statement



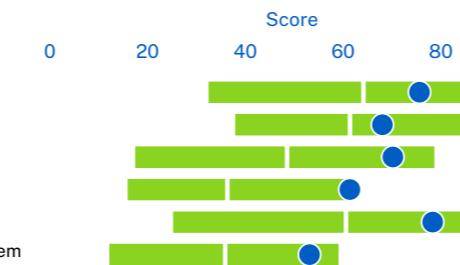
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

Basic sanitation meets the needs of the poorest areas  
Recycling services are satisfactory  
Public safety is not a problem  
Air pollution is not a problem  
Medical services provision is satisfactory  
Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

Online reporting of city maintenance problems provides a speedy solution  
A website or App allows residents to easily give away unwanted items  
Free public wifi has improved access to city services  
CCTV cameras has made residents feel safer  
A website or App allows residents to effectively monitor air pollution  
Arranging medical appointments online has improved access

## TECHNOLOGIES



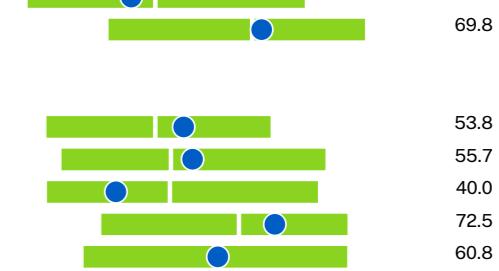
### Mobility

Traffic congestion is not a problem  
Public transport is satisfactory



### Mobility

Car-sharing Apps have reduced congestion  
Apps that direct you to an available parking space have reduced journey time  
Bicycle hiring has reduced congestion  
Online scheduling and ticket sales has made public transport easier to use  
The city provides information on traffic congestion through mobile phones



### Activities

Green spaces are satisfactory  
Cultural activities (shows, bars, and museums) are satisfactory



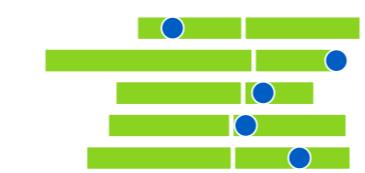
### Activities

Online purchasing of tickets to shows and museums has made it easier to attend



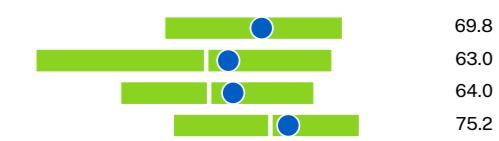
### Opportunities (Work & School)

Employment finding services are readily available  
Most children have access to a good school  
Lifelong learning opportunities are provided by local institutions  
Businesses are creating new jobs  
Minorities feel welcome



### Opportunities (Work & School)

Online access to job listings has made it easier to find work  
IT skills are taught well in schools  
Online services provided by the city has made it easier to start a new business  
The current internet speed and reliability meet connectivity needs



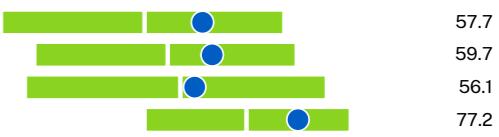
### Governance

Information on local government decisions are easily accessible  
Corruption of city officials is not an issue of concern  
Residents contribute to decision making of local government  
Residents provide feedback on local government projects



### Governance

Online public access to city finances has reduced corruption  
Online voting has increased participation  
An online platform where residents can propose ideas has improved city life  
Processing Identification Documents online has reduced waiting times



# Nairobi

SMART  
CITY  
RANKING

**131**

Out of 141



115 out of 118  
in 2021

SMART  
CITY RATING

**C**

D in 2021

FACTOR  
RATINGS

**C**

STRUCTURES

**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
5,118,844      0.636

(UN World Urbanisation Prospects 2022  
estimate)



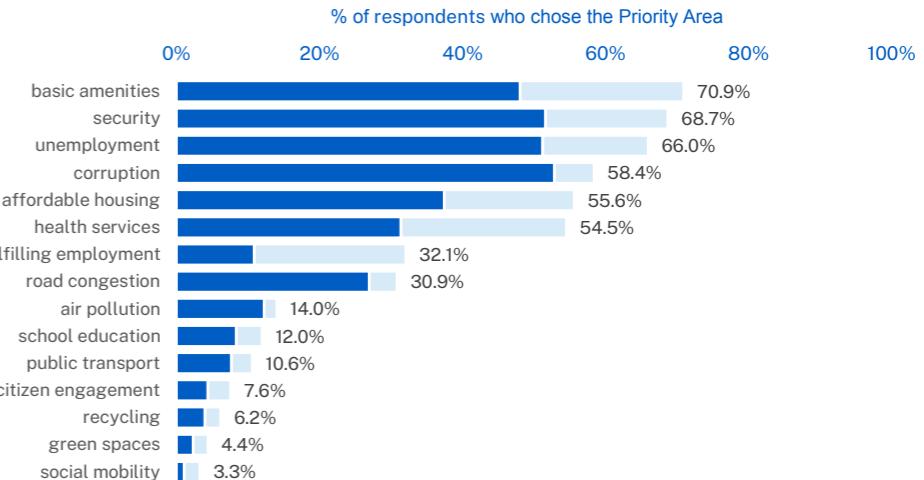
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.579	0.601	0.578	0.575	-0.003
Life expectancy at birth	66.3	66.7	62.7	61.4	-1.3
Expected years of schooling	11.1	11.3	10.7	10.7	+0.0
Mean years of schooling	6.6	6.6	6.7	6.7	+0.0
GNI per capita (PPP \$)	3,052	4,244	4,267	4,474	+207

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



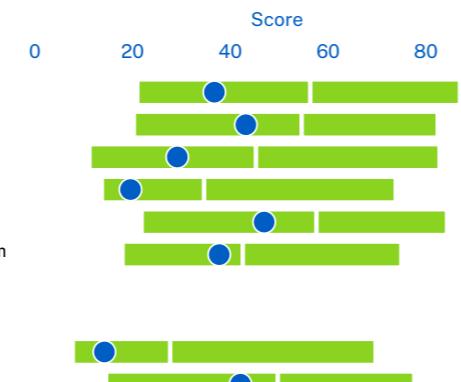
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

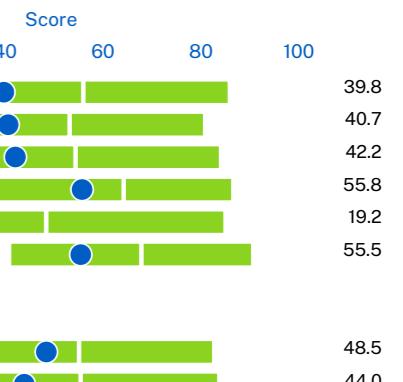
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



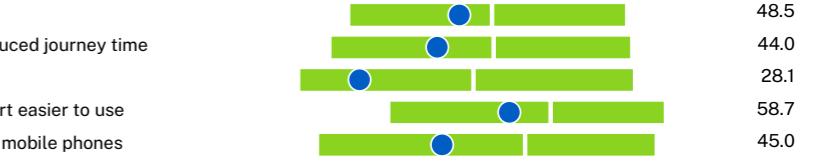
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



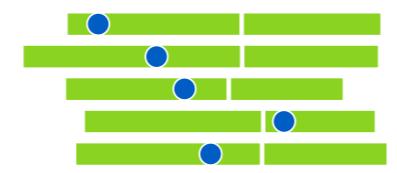
### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



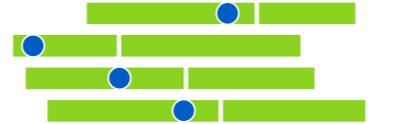
### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Nanjing

SMART  
CITY  
RANKING

**58**

Out of 141

57 out of 118  
in 2021

SMART  
CITY RATING

**CCC**

CCC in 2021

FACTOR  
RATINGS

**CCC**

STRUCTURES

**CCC**

TECHNOLOGIES

GROUP  
**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
9,429,381      0.810

(UN World Urbanisation Prospects 2022  
estimate)



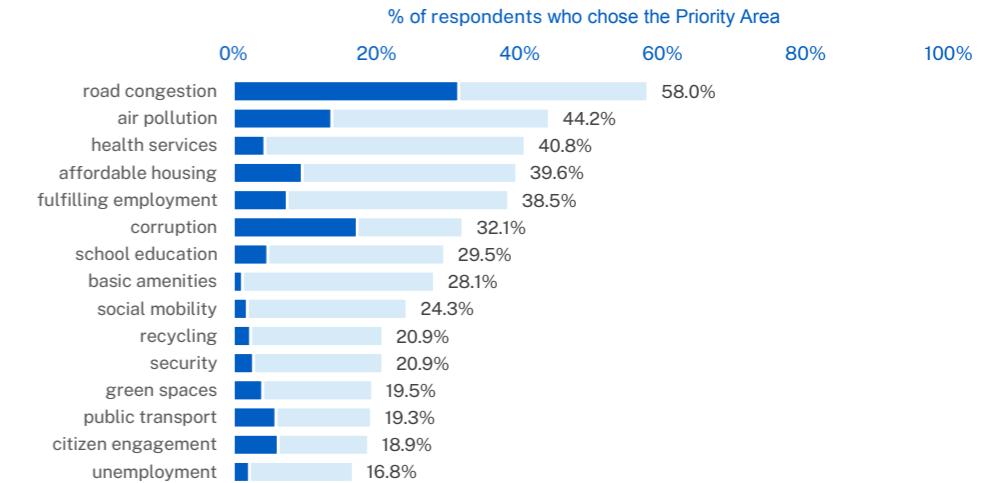
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.758	0.761	0.764	0.768	+0.004
Life expectancy at birth	76.7	76.9	78.1	78.2	+0.1
Expected years of schooling	13.9	14.0	14.2	14.2	+0.0
Mean years of schooling	7.9	8.1	7.6	7.6	+0.0
GNI per capita (PPP \$)	16,127	16,057	16,201	17,504	+1,303

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



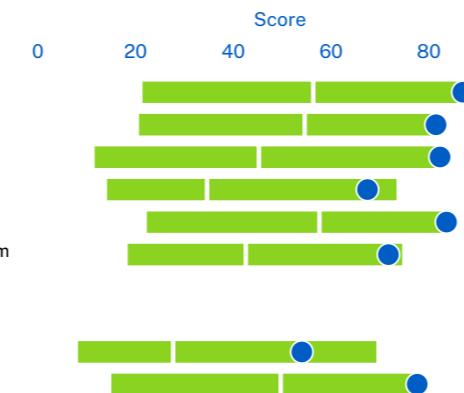
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

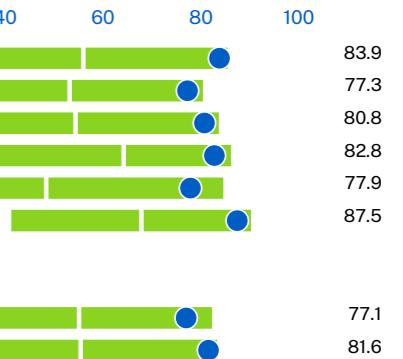
- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

## STRUCTURES



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



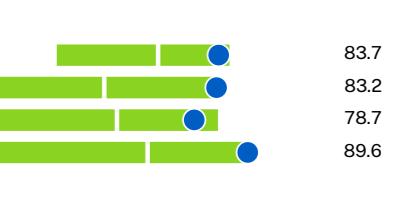
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



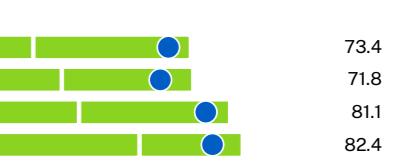
### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# New York

SMART  
CITY  
RANKING

**21**

Out of 141



19 out of 118  
in 2021

SMART  
CITY RATING

**BBB**

AA in 2021

FACTOR  
RATINGS

**BBB**

STRUCTURES

**A**

TECHNOLOGIES

GROUP

**2**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 8,804,190  
(UN Data)

HDI 0.938

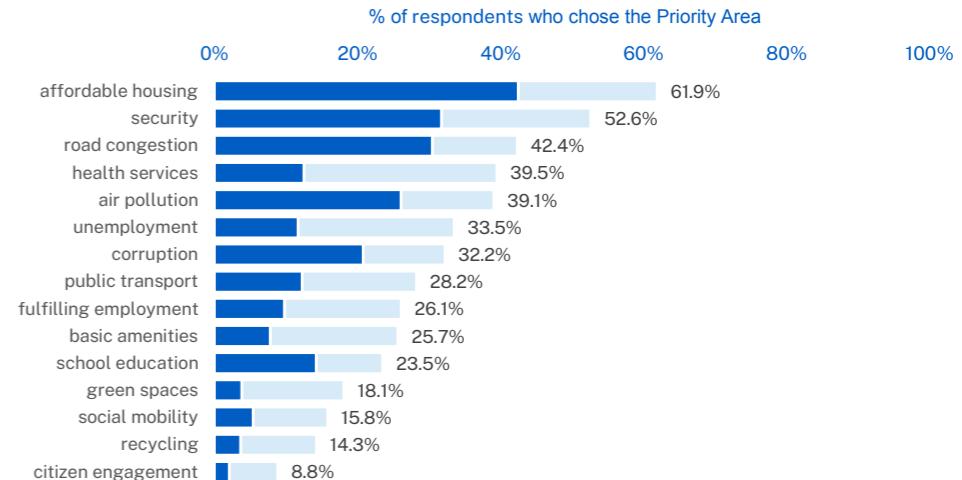


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.920	0.926	0.920	0.921	+0.001
Life expectancy at birth	78.9	78.9	77.4	77.2	-0.2
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.7	13.7	+0.0
GNI per capita (PPP \$)	56,140	63,826	61,462	64,765	+3,304

## PRIORITY AREAS

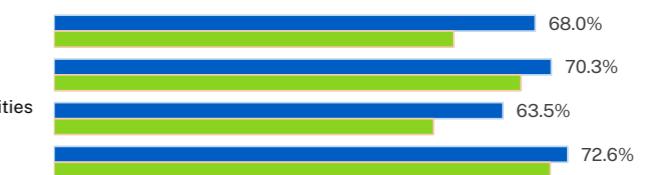
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

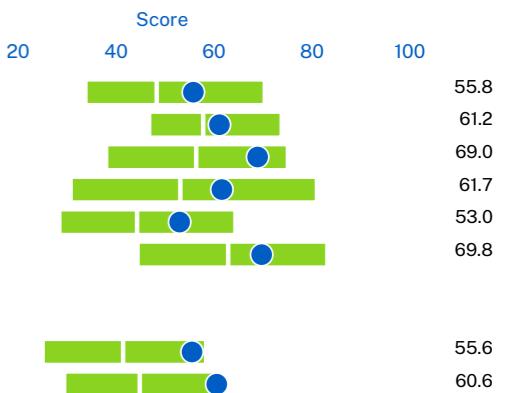
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



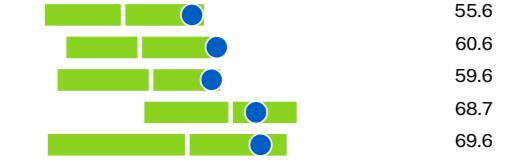
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



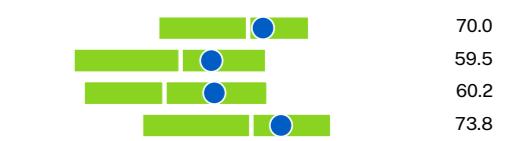
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



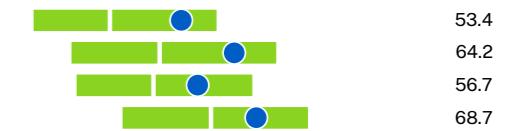
### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Newcastle

SMART  
CITY  
RANKING

**77**

Out of 141



61 out of 118  
in 2021

SMART  
CITY RATING

**CCC**

CCC in 2021

FACTOR  
RATINGS

**B**

STRUCTURES

**CC**

TECHNOLOGIES

GROUP  
**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 2,656,980  
(Eurostat)

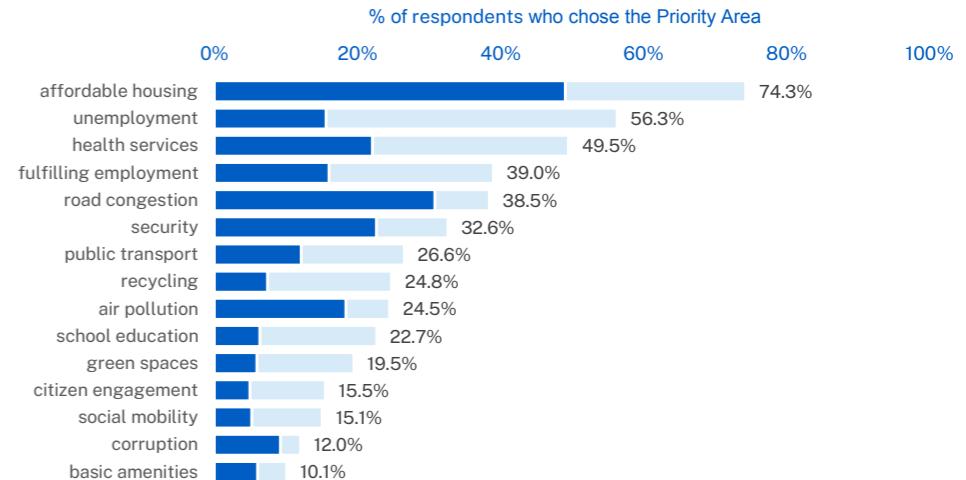


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.920	0.932	0.924	0.929	+0.005
Life expectancy at birth	81.2	81.3	80.4	80.7	+0.3
Expected years of schooling	17.4	17.5	17.3	17.3	+0.0
Mean years of schooling	13.0	13.2	13.4	13.4	+0.0
GNI per capita (PPP \$)	39,507	46,071	42,375	45,225	+2,850

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

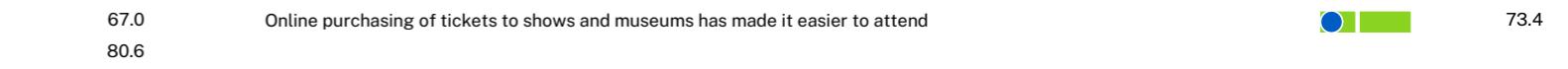


### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

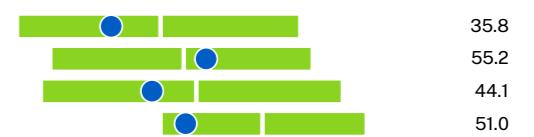
- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Nicosia

SMART  
CITY  
RANKING

**117**

Out of 141

not out of 118  
in 2021

SMART  
CITY RATING

**C**

not in 2021

FACTOR  
RATINGS

**CC**

STRUCTURES

**C**

TECHNOLOGIES

GROUP

**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
896,007      0.896

(Eurostat)



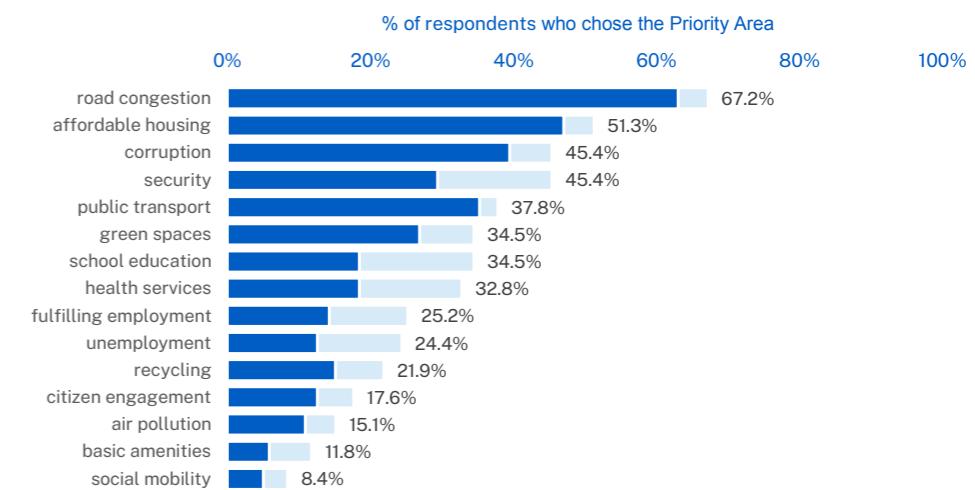
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.892	0.897	0.894	0.896	+0.002
Life expectancy at birth	81.4	81.4	81.4	81.2	-0.2
Expected years of schooling	15.4	15.7	15.7	15.7	+0.0
Mean years of schooling	12.3	12.4	12.4	12.4	+0.0
GNI per capita (PPP \$)	38,544	39,568	36,519	38,188	+1,669

## PRIORITY AREAS

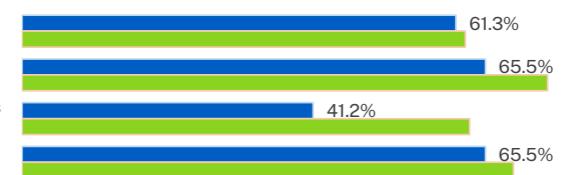
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

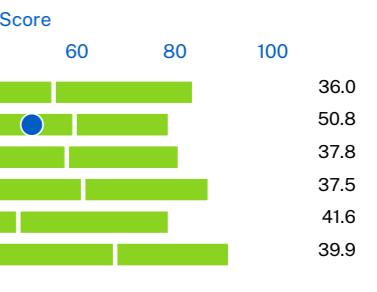
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



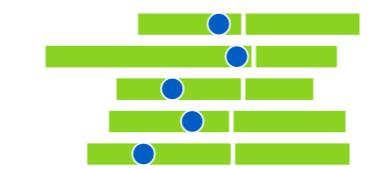
### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



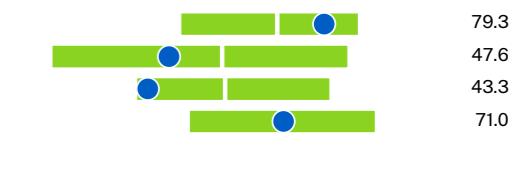
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



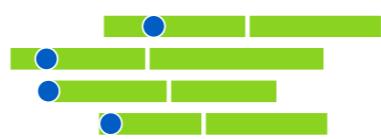
### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



## SMART CITY RANKING

**98**

Out of 141



90 out of 118  
in 2021

## SMART CITY RATING

**B**

CCC in 2021

## FACTOR RATINGS

**BB**

## STRUCTURES

## TECHNOLOGIES

**CCC**

## GROUP 2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population 2,752,412  
(UN Data)

HDI 0.928

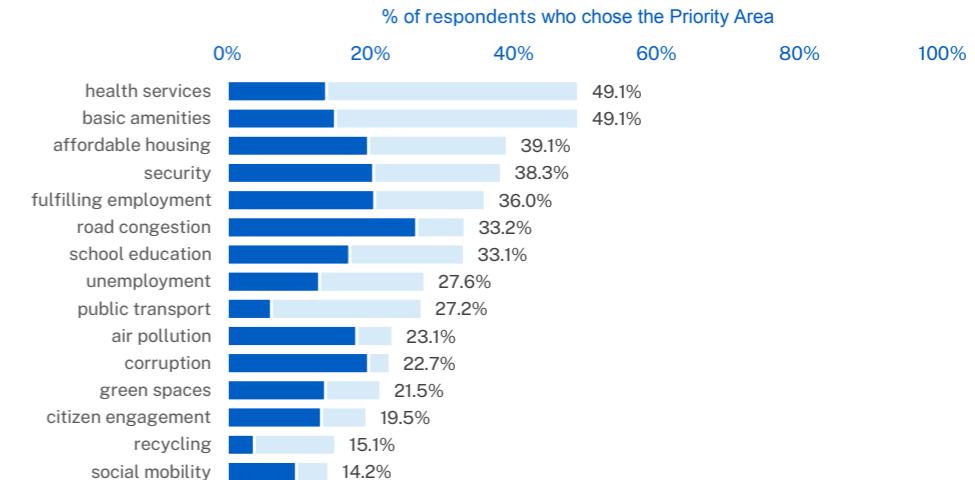


#### Country

	2018	2019	2020	2021	1 yr change
HDI	0.915	0.919	0.923	0.925	+0.002
Life expectancy at birth	84.5	84.6	84.7	84.8	+0.1
Expected years of schooling	15.2	15.2	15.2	15.2	+0.0
Mean years of schooling	12.8	12.9	13.4	13.4	+0.0
GNI per capita (PPP \$)	40,799	42,932	41,487	42,274	+787

### PRIORITY AREAS

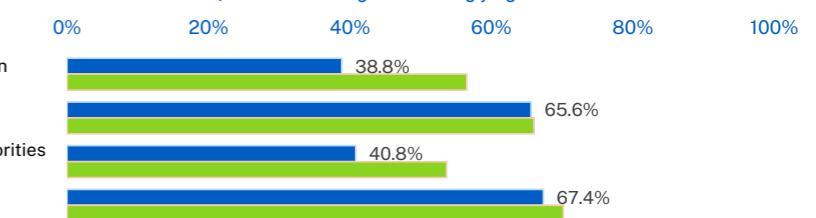
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



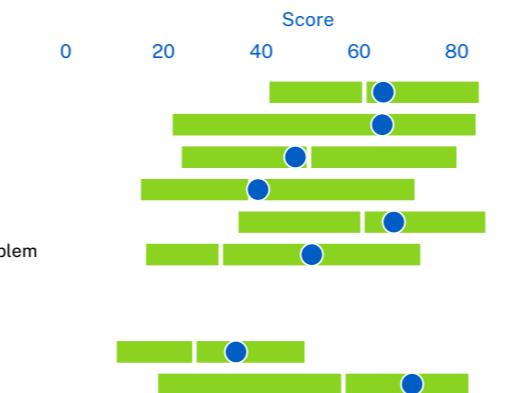
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

### STRUCTURES

#### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



#### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



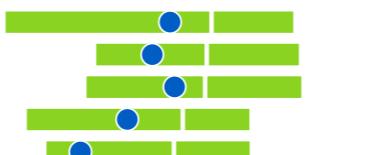
#### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



#### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



#### Governance

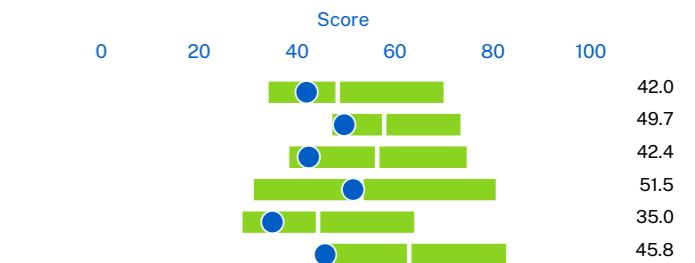
- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### TECHNOLOGIES

#### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



#### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



#### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



#### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



## SMART CITY RANKING

**2**

Out of 141

2 out of 118  
in 2021

## SMART CITY RATING

**AAA**

AAA in 2021

FACTOR RATINGS

**AAA**

STRUCTURES

**A**

TECHNOLOGIES

GROUP 1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population      HDI  
693,494      0.980

(Eurostat)



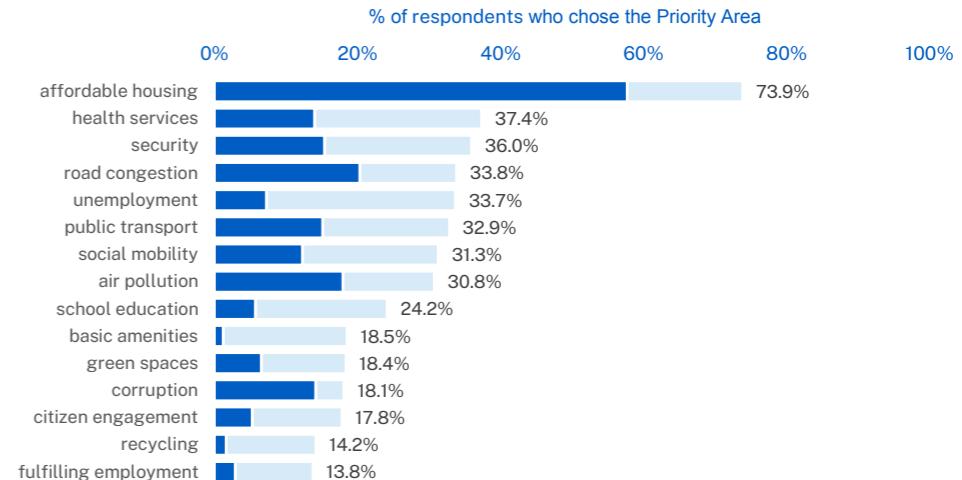
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

#### Country

	2018	2019	2020	2021	1 yr change
HDI	0.954	0.957	0.959	0.961	+0.002
Life expectancy at birth	82.3	82.4	83.2	83.2	+0.0
Expected years of schooling	18.1	18.1	18.0	18.0	+0.0
Mean years of schooling	12.6	12.9	13.0	13.0	+0.0
GNI per capita (PPP \$)	68,059	66,494	62,573	64,660	+2,087

### PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
You are comfortable with face recognition technologies to lower crime  
You feel the availability of online information has increased your trust in authorities  
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



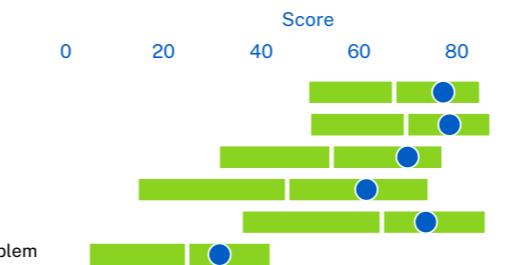
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

### STRUCTURES

#### Health & Safety

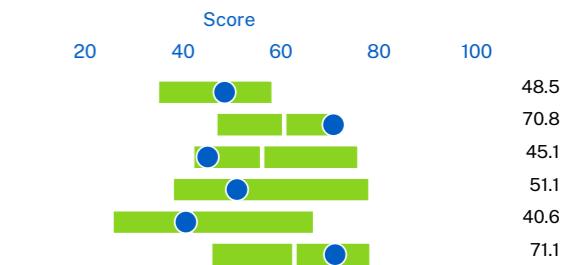
Basic sanitation meets the needs of the poorest areas  
Recycling services are satisfactory  
Public safety is not a problem  
Air pollution is not a problem  
Medical services provision is satisfactory  
Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### TECHNOLOGIES

#### Health & Safety

Online reporting of city maintenance problems provides a speedy solution  
A website or App allows residents to easily give away unwanted items  
Free public wifi has improved access to city services  
CCTV cameras has made residents feel safer  
A website or App allows residents to effectively monitor air pollution  
Arranging medical appointments online has improved access



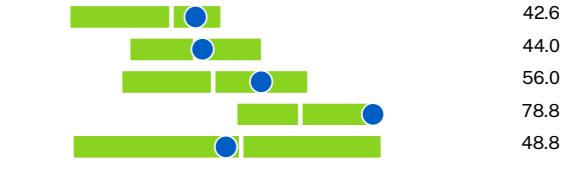
#### Mobility

Traffic congestion is not a problem  
Public transport is satisfactory



#### Mobility

Car-sharing Apps have reduced congestion  
Apps that direct you to an available parking space have reduced journey time  
Bicycle hiring has reduced congestion  
Online scheduling and ticket sales has made public transport easier to use  
The city provides information on traffic congestion through mobile phones



#### Activities

Green spaces are satisfactory  
Cultural activities (shows, bars, and museums) are satisfactory



#### Activities

Online purchasing of tickets to shows and museums has made it easier to attend



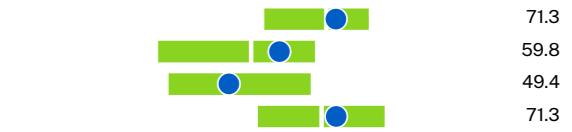
#### Opportunities (Work & School)

Employment finding services are readily available  
Most children have access to a good school  
Lifelong learning opportunities are provided by local institutions  
Businesses are creating new jobs  
Minorities feel welcome



#### Opportunities (Work & School)

Online access to job listings has made it easier to find work  
IT skills are taught well in schools  
Online services provided by the city has made it easier to start a new business  
The current internet speed and reliability meet connectivity needs



#### Governance

Information on local government decisions are easily accessible  
Corruption of city officials is not an issue of concern  
Residents contribute to decision making of local government  
Residents provide feedback on local government projects



#### Governance

Online public access to city finances has reduced corruption  
Online voting has increased participation  
An online platform where residents can propose ideas has improved city life  
Processing Identification Documents online has reduced waiting times



# Ottawa

SMART  
CITY  
RANKING

**40**

Out of 141

not out of 118  
in 2021

SMART  
CITY RATING

**A**

not in 2021

FACTOR  
RATINGS

**AA**

STRUCTURES

**BBB**

TECHNOLOGIES

GROUP  
**1**

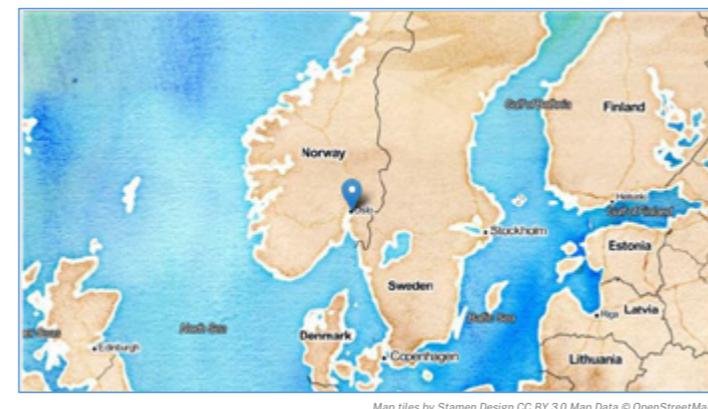
All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
934,240      0.943

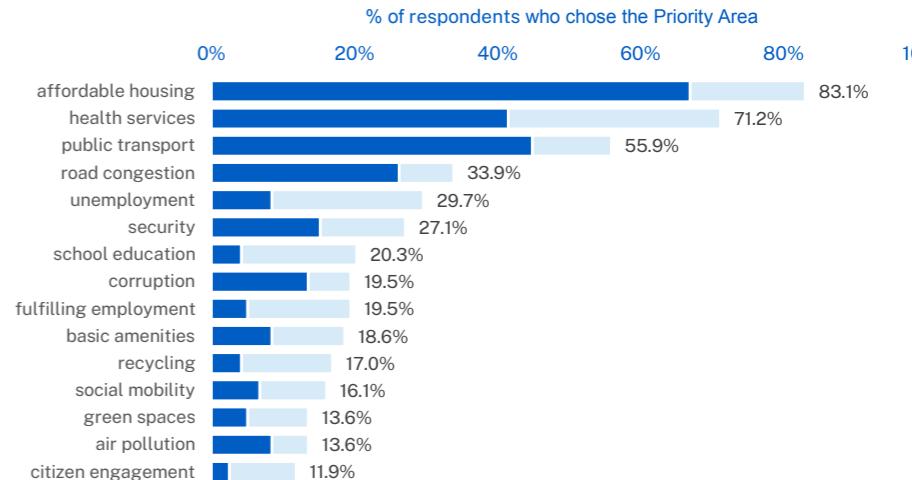
(UN Data)



Country	2018	2019	2020	2021	1 yr change
HDI	0.933	0.937	0.931	0.936	+0.005
Life expectancy at birth	82.1	82.4	82.1	82.7	+0.6
Expected years of schooling	16.2	16.4	16.4	16.4	+0.0
Mean years of schooling	13.8	8.7	8.8	8.8	+0.0
GNI per capita (PPP \$)	18,371	18,486	18,754	19,974	+1,220

## PRIORITY AREAS

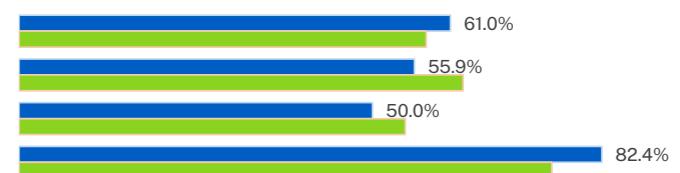
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



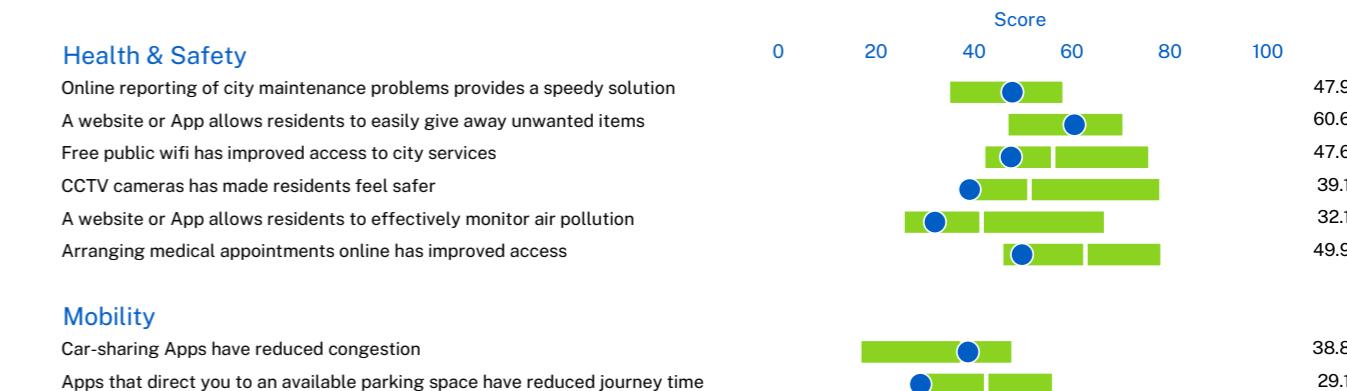
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES



## TECHNOLOGIES



## Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

## Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

## Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

## Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

## Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

## Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

# Paris

## SMART CITY RANKING

**46**

Out of 141



49 out of 118  
in 2021

## SMART CITY RATING

**BBB**

BBB in 2021

## FACTOR RATINGS

**BB**

## STRUCTURES

**A**

## TECHNOLOGIES

## GROUP 1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population      HDI  
2,147,716      0.949

(Eurostat)



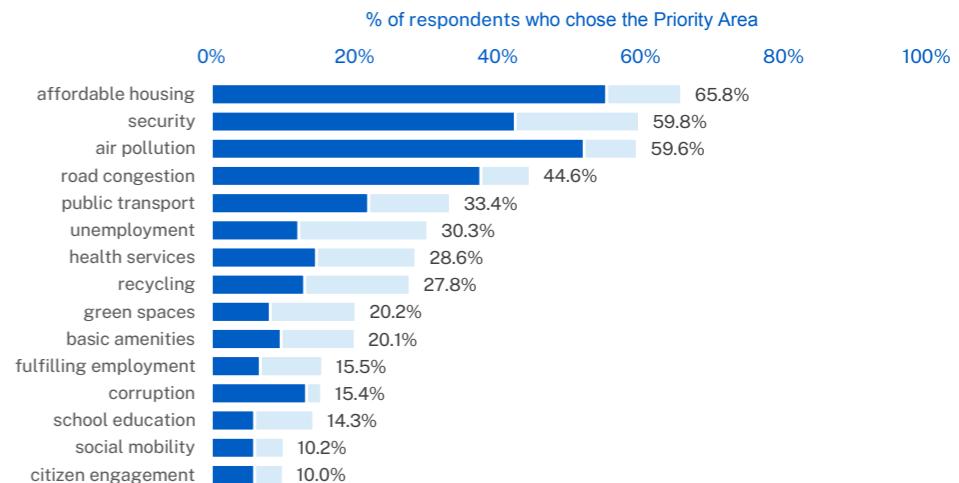
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

#### Country

	2018	2019	2020	2021	1 yr change
HDI	0.891	0.901	0.898	0.903	+0.005
Life expectancy at birth	82.5	82.7	82.2	82.5	+0.3
Expected years of schooling	15.5	15.6	15.8	15.8	+0.0
Mean years of schooling	11.4	11.5	11.6	11.6	+0.0
GNI per capita (PPP \$)	40,511	47,173	43,048	45,937	+2,889

### PRIORITY AREAS

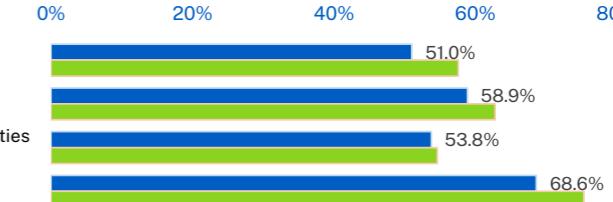
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



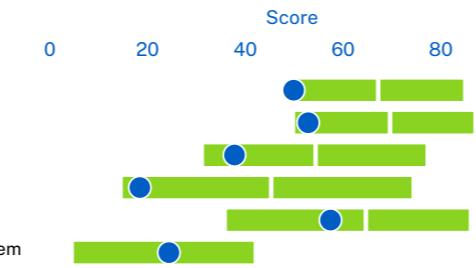
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

### STRUCTURES

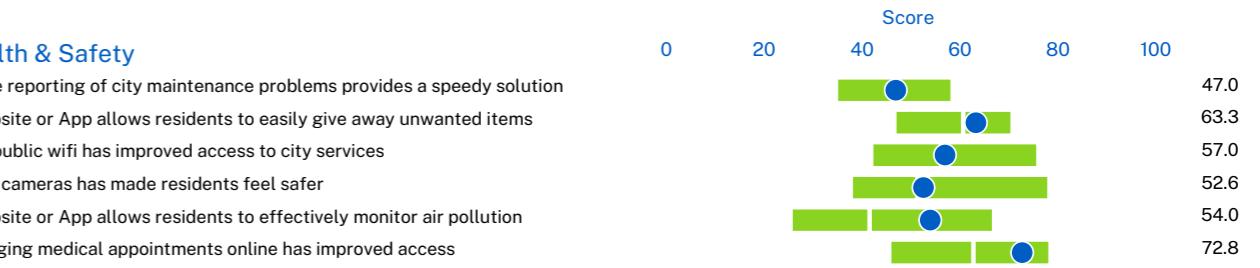
#### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



#### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



#### Mobility

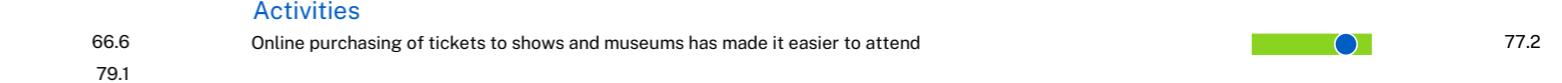
- Traffic congestion is not a problem
- Public transport is satisfactory

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

#### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

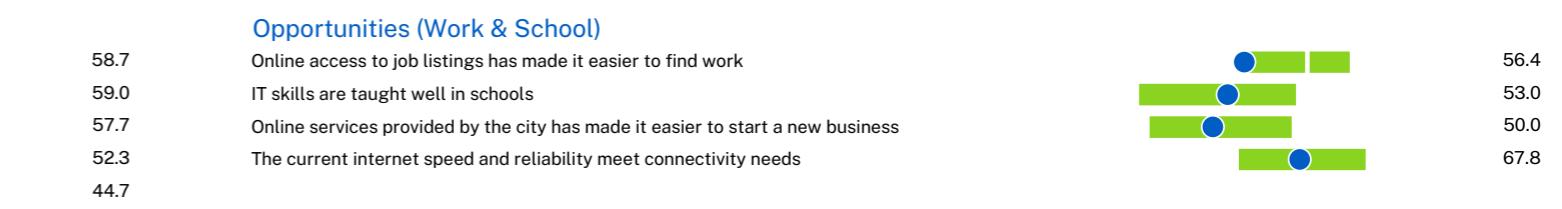


#### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

#### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

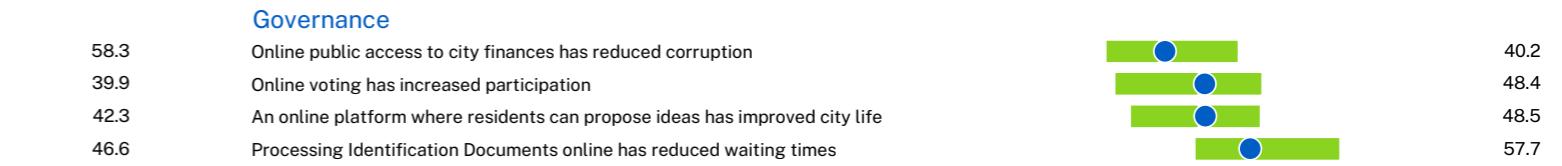


#### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

#### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

# Philadelphia

SMART  
CITY  
RANKING  
**92**

Out of 141

85 out of 118  
in 2021

SMART  
CITY RATING

**B**

B in 2021

FACTOR  
RATINGS

**B**

STRUCTURES

**B**

TECHNOLOGIES

GROUP  
**2**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

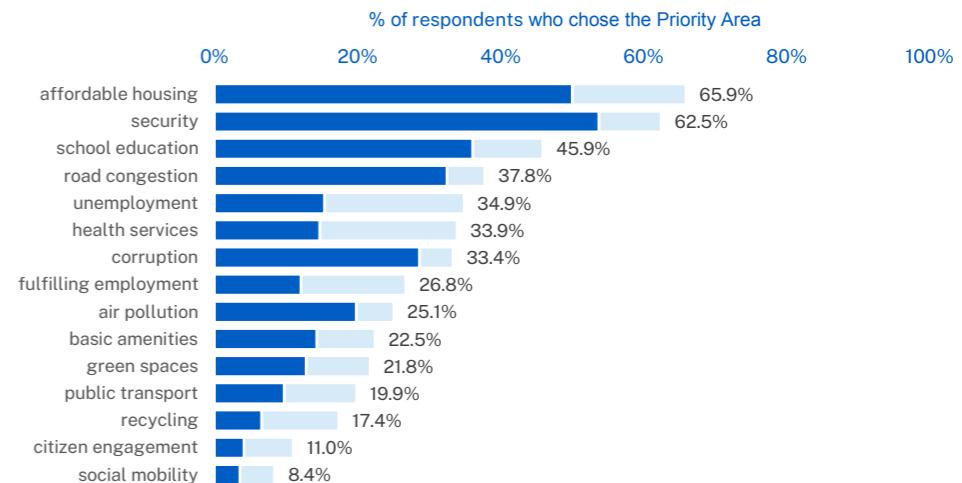
Population 1,603,797  
(UN Data)



Country	2018	2019	2020	2021	1 yr change
HDI	0.920	0.926	0.920	0.921	+0.001
Life expectancy at birth	78.9	78.9	77.4	77.2	-0.2
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.7	13.7	+0.0
GNI per capita (PPP \$)	56,140	63,826	61,462	64,765	+3,304

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



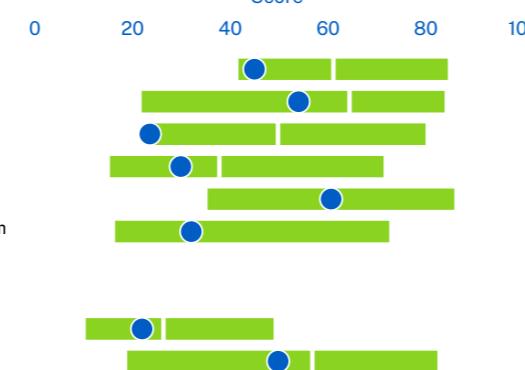
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

- ### Health & Safety
- Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Score: 0 20 40 60 80 100



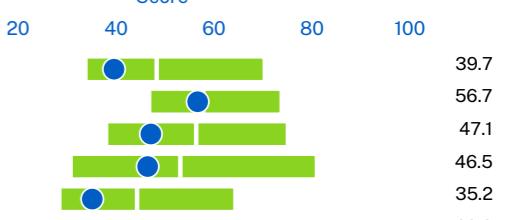
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

Score: 0 20 40 60 80 100



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



Score: 0 20 40 60 80 100



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



Score: 0 20 40 60 80 100

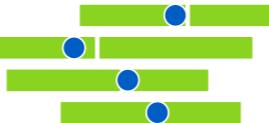


### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



Score: 0 20 40 60 80 100



# Phoenix

SMART  
CITY  
RANKING

**93**

Out of 141



77 out of 118  
in 2021

SMART  
CITY RATING

**CC**

CC in 2021

FACTOR  
RATINGS

**CCC**

STRUCTURES

**CC**

TECHNOLOGIES

GROUP  
**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 1,608,139  
(UN Data)

HDI 0.908



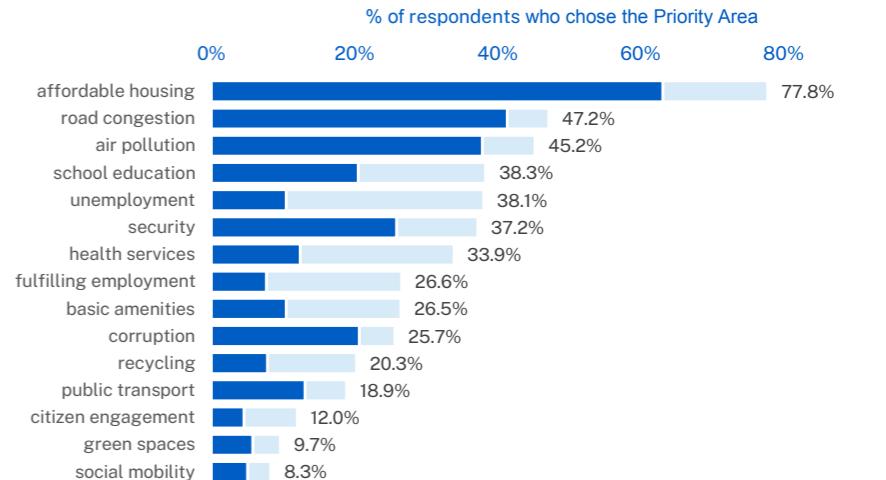
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.920	0.926	0.920	0.921	+0.001
Life expectancy at birth	78.9	78.9	77.4	77.2	-0.2
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.7	13.7	+0.0
GNI per capita (PPP \$)	56,140	63,826	61,462	64,765	+3,304

## PRIORITY AREAS

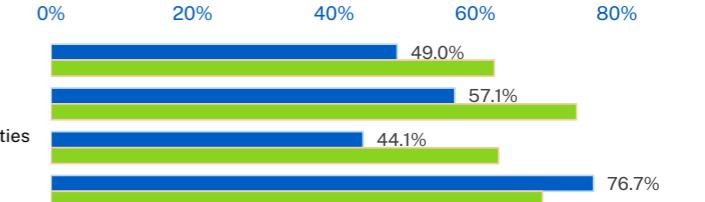
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

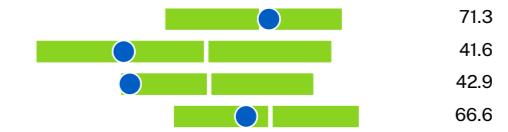


### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Prague

SMART  
CITY  
RANKING

**14**

Out of 141



10 out of 118  
in 2021

SMART  
CITY RATING

**AA**

A in 2021

FACTOR  
RATINGS

**A**

STRUCTURES

**A**

TECHNOLOGIES

GROUP  
**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
1,335,084      0.960

(Eurostat)

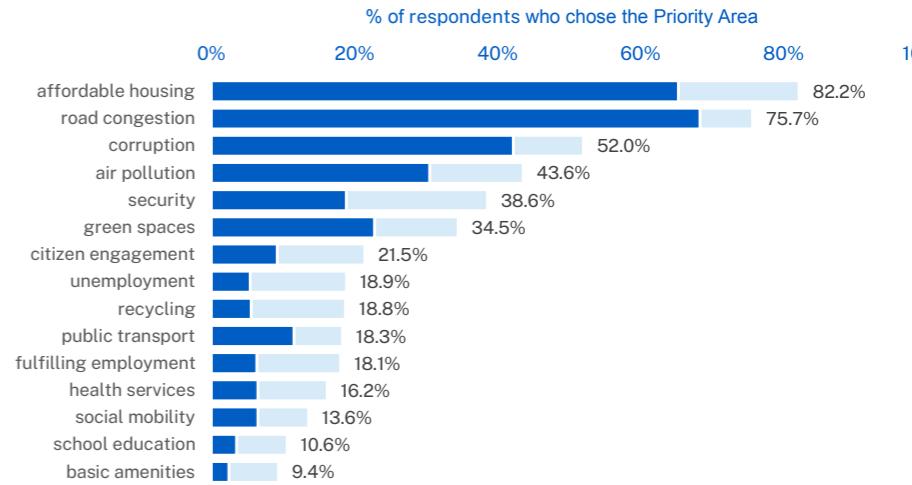


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.891	0.900	0.892	0.889	-0.003
Life expectancy at birth	79.2	79.4	78.6	77.7	-0.8
Expected years of schooling	16.8	16.8	16.2	16.2	+0.0
Mean years of schooling	12.7	12.7	12.9	12.9	+0.0
GNI per capita (PPP \$)	31,597	38,109	37,551	38,745	+1,194

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

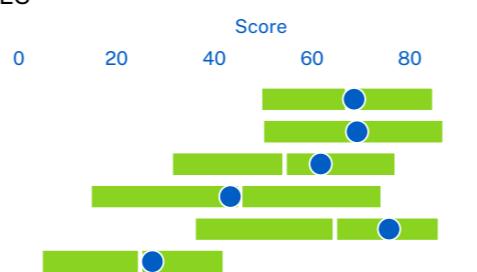
## STRUCTURES

Score: 0 20 40 60 80 100

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

Score: 0 20 40 60 80 100

Score: 0 20 40 60 80 100

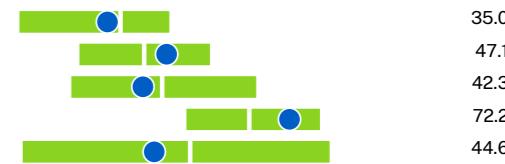
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



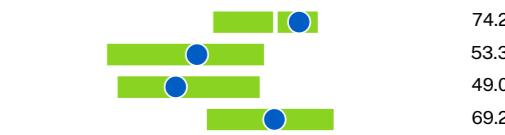
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



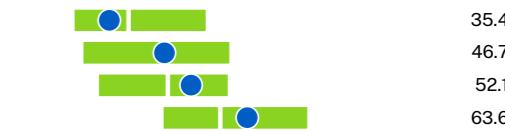
### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



## SMART CITY RANKING

**126**

Out of 141



109 out of 118  
in 2021

## SMART CITY RATING

**C**

C in 2021

## FACTOR RATINGS

**C**

## STRUCTURES

**C**

## TECHNOLOGIES

**4**

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population 193,193 HDI 0.702

(UN World Urbanisation Prospects 2022 estimate)

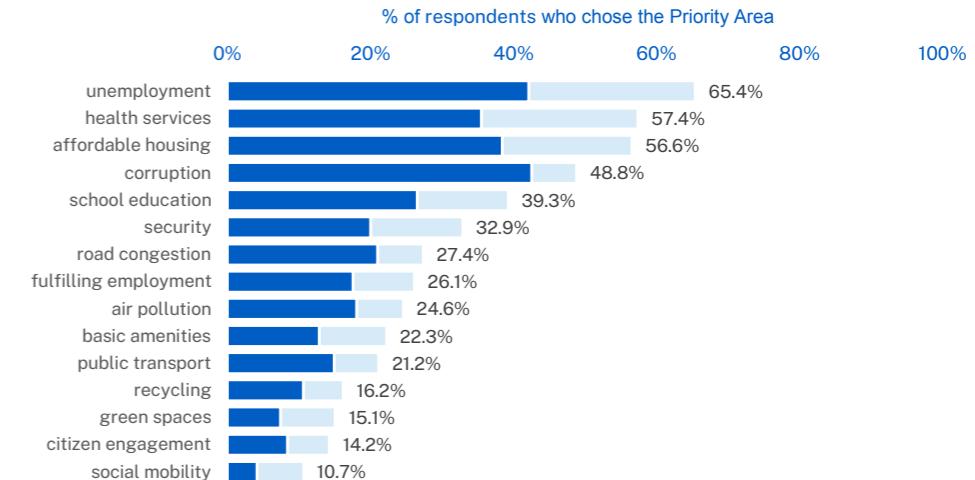


Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.676	0.686	0.679	0.683	+0.004
Life expectancy at birth	76.5	76.7	73.9	74.0	+0.1
Expected years of schooling	13.1	13.7	14.2	14.2	+0.0
Mean years of schooling	5.5	5.6	5.9	5.9	+0.0
GNI per capita (PPP \$)	7,480	7,368	6,882	7,303	+421

### PRIORITY AREAS

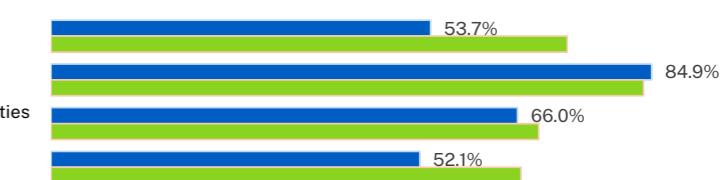
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



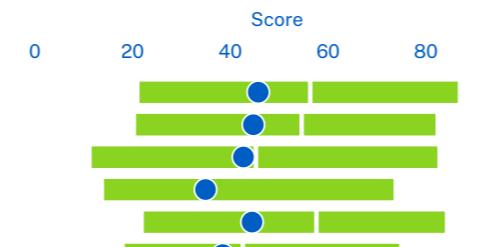
LEGEND: GROUP MEAN CITY

### STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

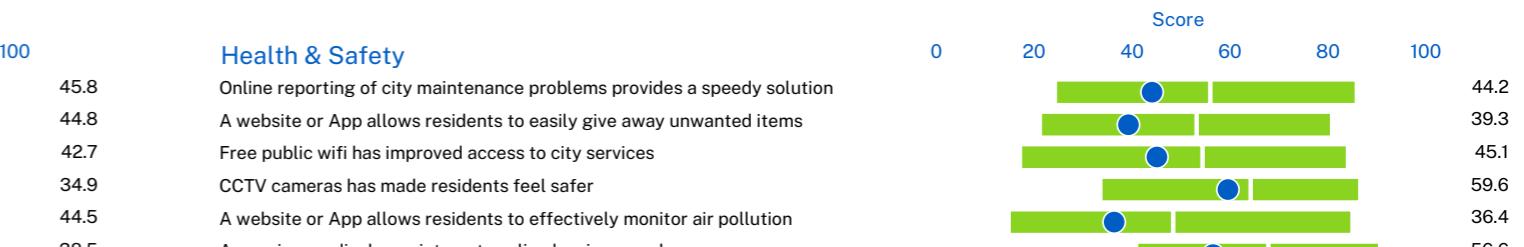
#### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



#### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



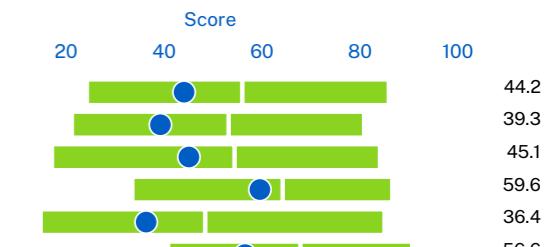
#### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



#### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



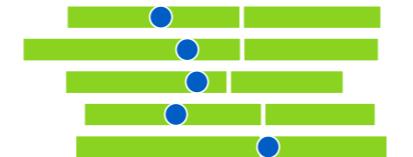
#### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



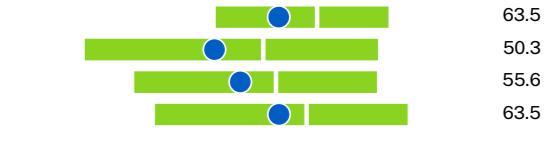
#### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



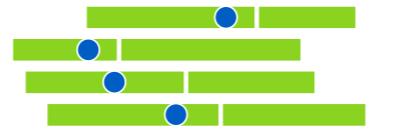
#### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



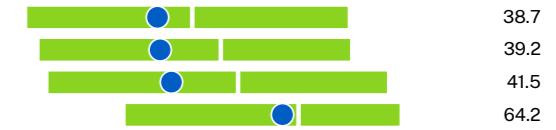
#### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



#### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Reykjavik

SMART  
CITY  
RANKING

**26**

Out of 141

not out of 118  
in 2021

SMART  
CITY RATING

**BBB**

not in 2021

FACTOR  
RATINGS

**A**

STRUCTURES

**BBB**

TECHNOLOGIES

GROUP  
**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
236,528      0.959

(Eurostat)



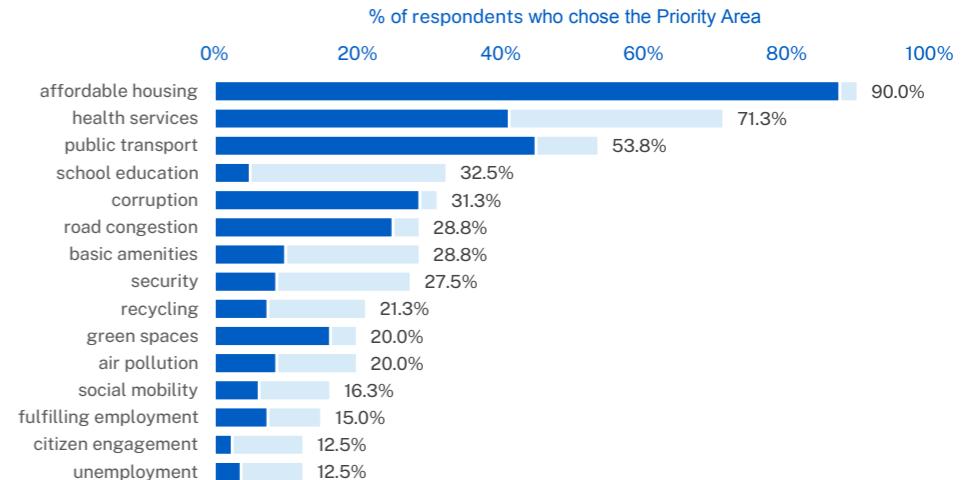
not out of 118  
in 2021

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.959	0.960	0.957	0.959	+0.002
Life expectancy at birth	82.8	82.4	82.6	82.7	+0.1
Expected years of schooling	18.0	18.0	18.0	18.0	+0.0
Mean years of schooling	13.6	13.7	13.8	13.8	+0.0
GNI per capita (PPP \$)	56,492	58,055	54,141	55,782	+1,641

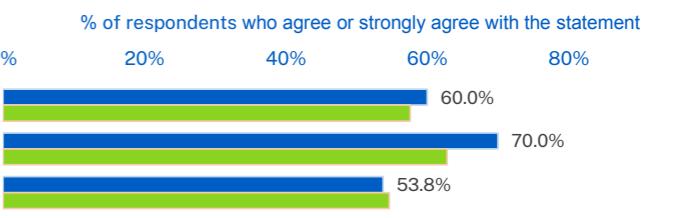
## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



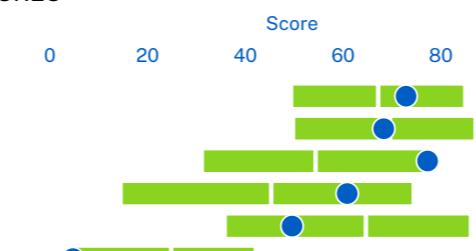
## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion



LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES



## Mobility



## Activities



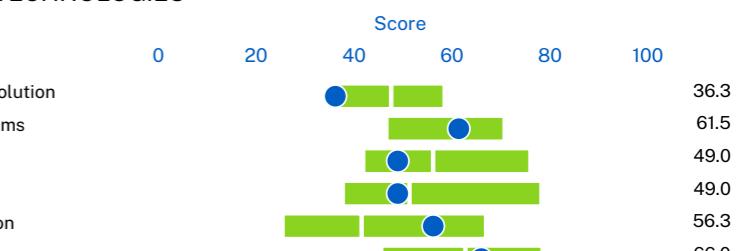
## Opportunities (Work & School)



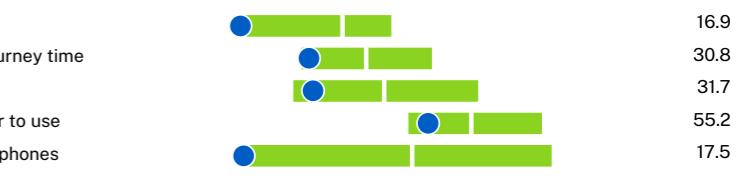
## Governance



## TECHNOLOGIES



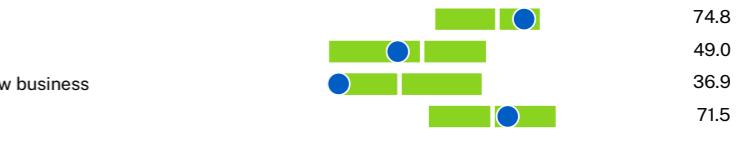
## Mobility



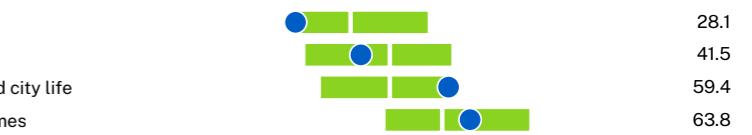
## Activities



## Opportunities (Work & School)



## Governance



## SMART CITY RANKING

**83**

Out of 141

not out of 118  
in 2021

## SMART CITY RATING

**B**

not in 2021

## FACTOR RATINGS

**B**

## STRUCTURES

**B**

## TECHNOLOGIES

**2**

All ratings range  
from AAA to D

### BACKGROUND INFORMATION

#### City

Population      HDI  
614,618      0.929

(Eurostat)



Out of 141

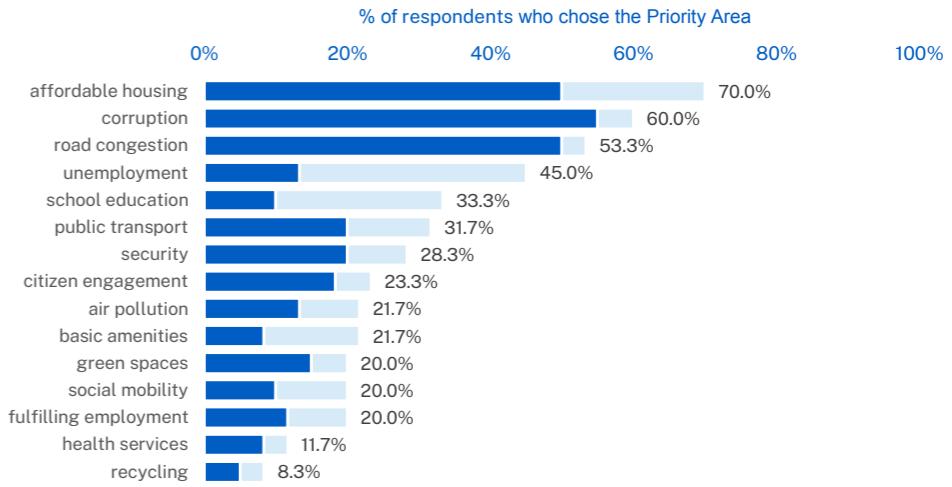
not out of 118  
in 2021

#### Country

	2018	2019	2020	2021	1 yr change
HDI	0.866	0.871	0.871	0.863	-0.008
Life expectancy at birth	75.0	75.5	75.5	73.6	-1.9
Expected years of schooling	16.2	16.2	16.2	16.2	+0.0
Mean years of schooling	13.2	13.3	13.3	13.3	+0.0
GNI per capita (PPP \$)	29,895	31,059	31,102	32,803	+1,701

### PRIORITY AREAS

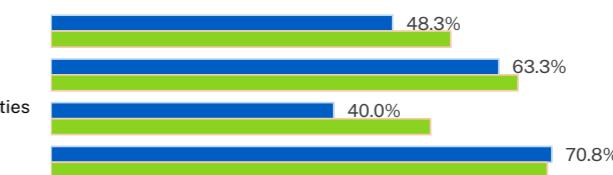
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
You are comfortable with face recognition technologies to lower crime  
You feel the availability of online information has increased your trust in authorities  
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

### STRUCTURES

#### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Score

0 20 40 60 80 100

50.0

62.2

58.9

48.1

46.4

34.2

#### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

Score

0 20 40 60 80 100

47.2

53.1

55.3

55.6

40.8

63.1

#### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

35.6

38.9

42.5

64.2

49.4

#### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

73.9

#### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

72.5

42.5

47.5

70.8

#### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

#### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

25.3

36.4

37.5

45.3

# Rio de Janeiro

SMART  
CITY  
RANKING  
**136**

Out of 141

118 out of 118  
in 2021

SMART  
CITY RATING

**D**

D in 2021

FACTOR  
RATINGS

**D**  
STRUCTURES

TECHNOLOGIES

**4**

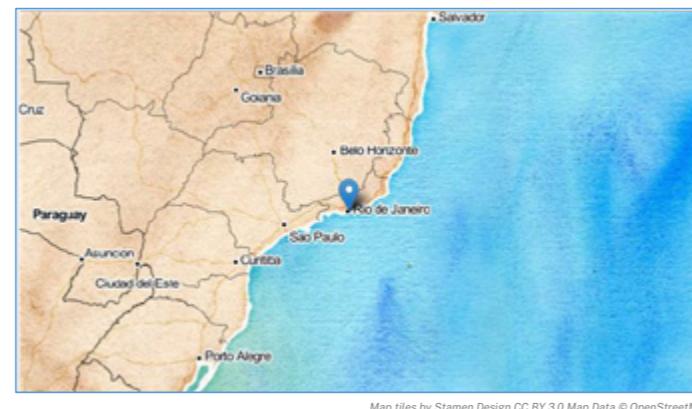
All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 13,634,274 HDI 0.783

(UN World Urbanisation Prospects 2022 estimate)

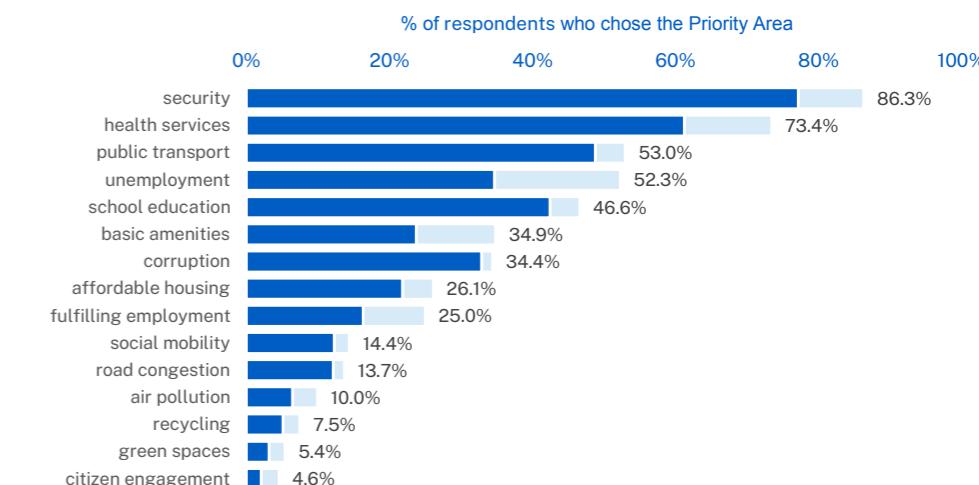


Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.764	0.766	0.758	0.754	-0.004
Life expectancy at birth	75.1	75.3	74.0	72.8	-1.3
Expected years of schooling	15.7	15.6	15.6	15.6	+0.0
Mean years of schooling	8.0	10.6	10.9	10.9	+0.0
GNI per capita (PPP \$)	21,972	23,261	22,286	24,563	+2,277

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

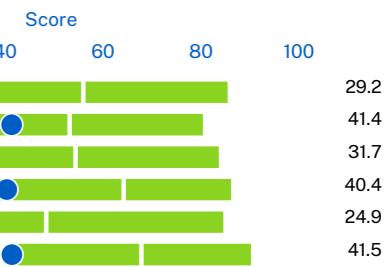
- ### Health & Safety
- Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

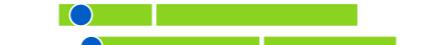
- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Riyadh

SMART  
CITY  
RANKING

**30**

Out of 141

▲  
39 out of 118  
in 2021

SMART  
CITY RATING

**BB**

B in 2021

FACTOR  
RATINGS

**B**

STRUCTURES  
TECHNOLOGIES

**BB**

GROUP  
3

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
75,382      0.900

(UN World Urbanisation Prospects 2022  
estimate)

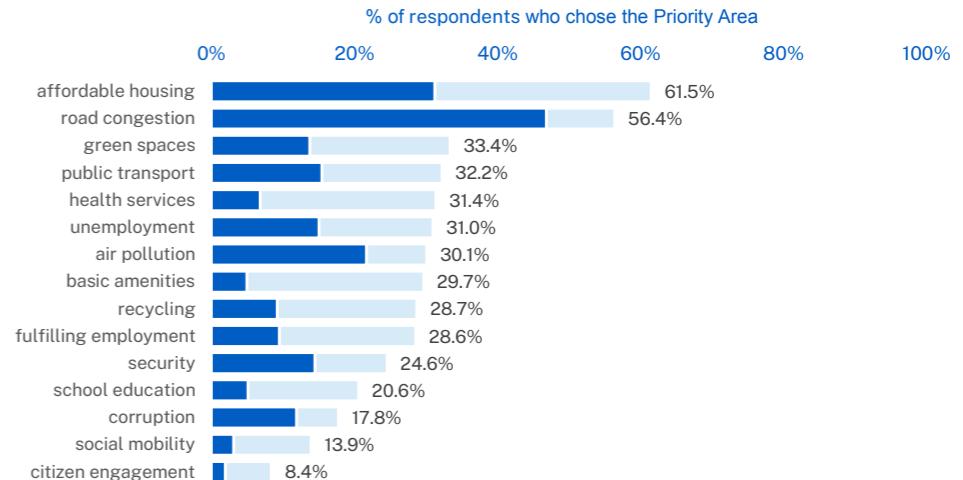


Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.865	0.873	0.870	0.875	+0.005
Life expectancy at birth	77.2	77.3	76.2	76.9	+0.7
Expected years of schooling	15.7	16.0	16.1	16.1	+0.0
Mean years of schooling	10.6	8.3	8.3	8.3	+0.0
GNI per capita (PPP \$)	5,072	5,307	5,601	5,745	+143

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES



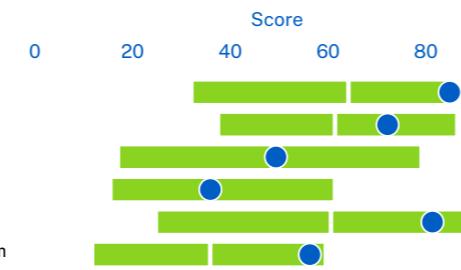
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

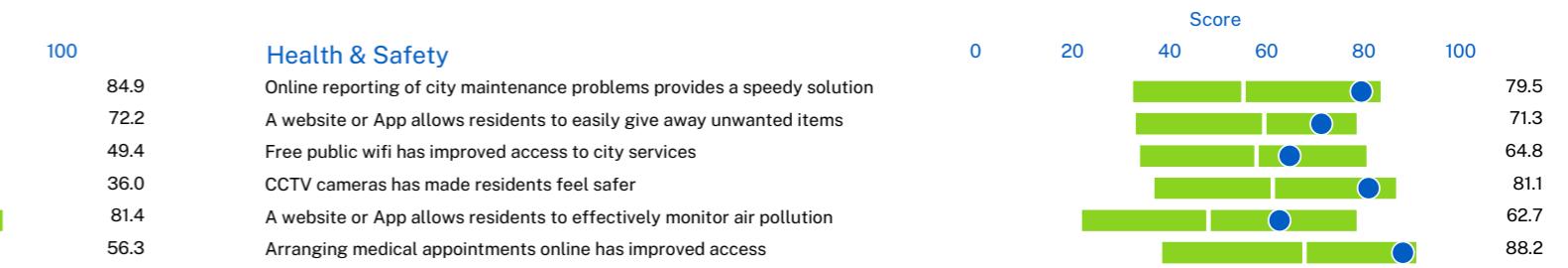


### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

## TECHNOLOGIES

## STRUCTURES



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects
- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects
- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

## SMART CITY RANKING

**122**

Out of 141



111 out of 118  
in 2021

## SMART CITY RATING

**CCC**

CCC in 2021

## FACTOR RATINGS

**CCC**

## STRUCTURES

## TECHNOLOGIES

## GROUP 2

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population 5,730,399 HDI 0.917  
(Eurostat)

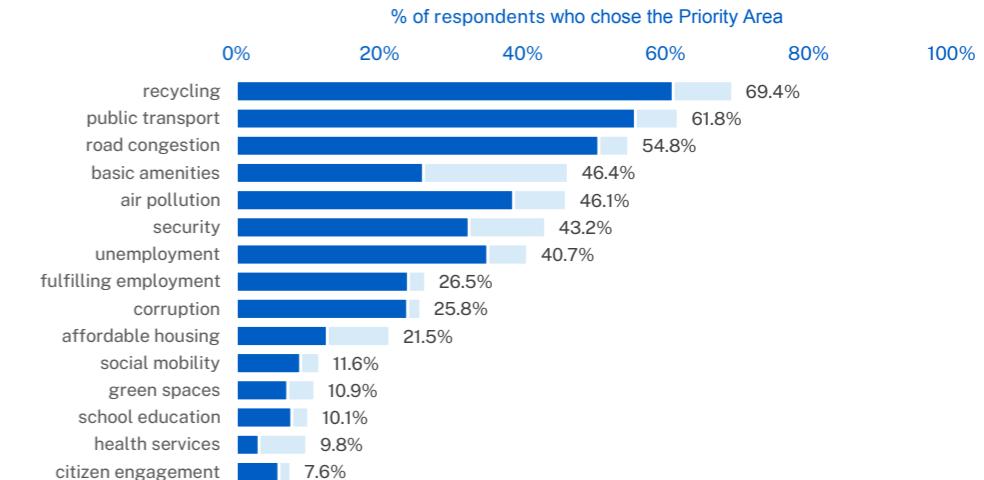


#### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.883	0.892	0.889	0.895	+0.006
Life expectancy at birth	83.4	83.5	82.4	82.9	+0.4
Expected years of schooling	16.2	16.1	16.2	16.2	+0.0
Mean years of schooling	10.2	10.4	10.7	10.7	+0.0
GNI per capita (PPP \$)	36,141	42,776	39,901	42,840	+2,939

### PRIORITY AREAS

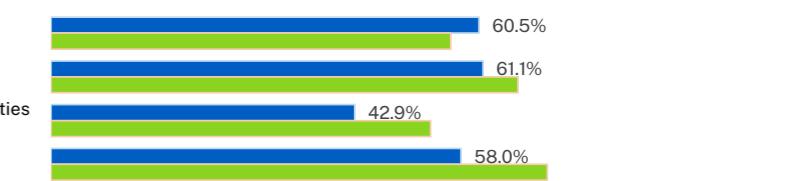
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

### STRUCTURES

#### Health & Safety

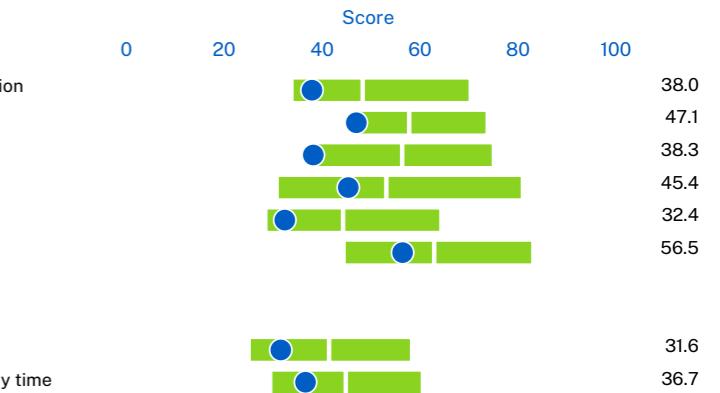
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



#### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

### TECHNOLOGIES



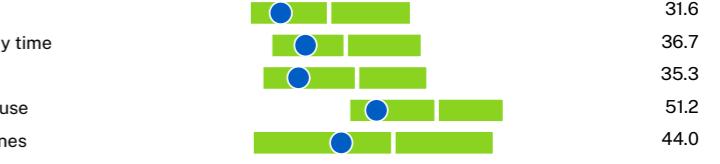
#### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



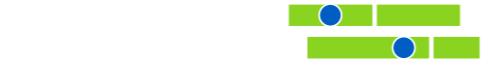
#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



#### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



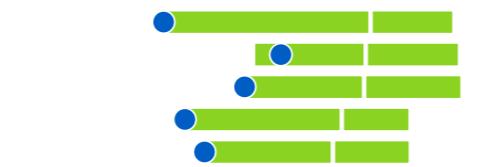
#### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



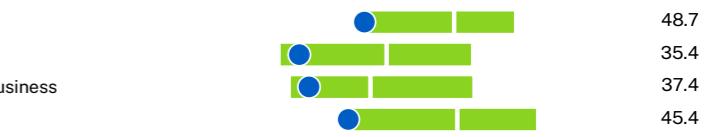
#### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



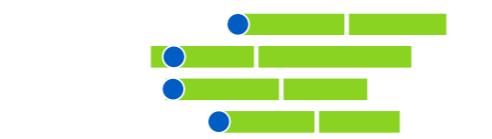
#### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



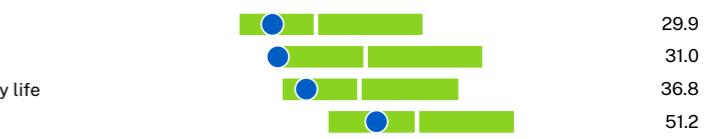
#### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



#### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Rotterdam

SMART  
CITY  
RANKING

**41**

Out of 141



43 out of 118  
in 2021

SMART  
CITY RATING

**A**

BB in 2021

FACTOR  
RATINGS

**BBB**

STRUCTURES

**A**

TECHNOLOGIES

GROUP

**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
3,726,050      0.941  
(Eurostat)



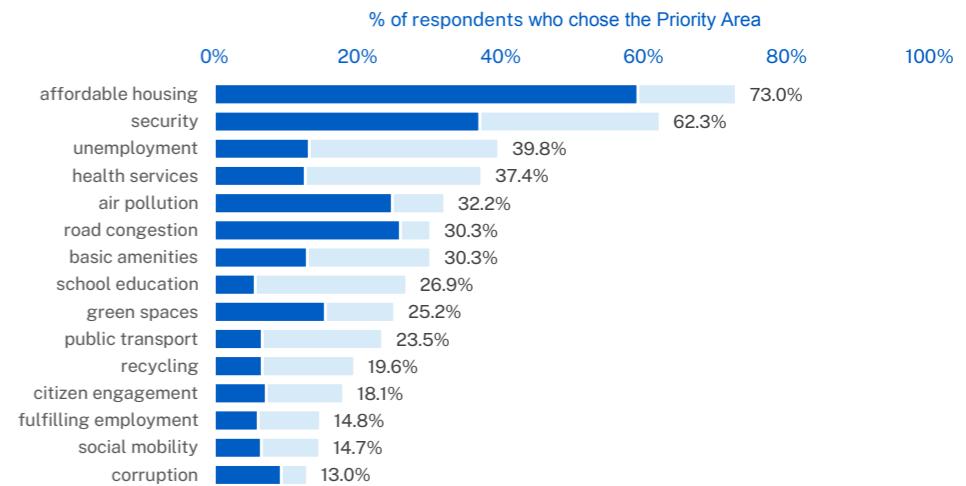
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.934	0.944	0.939	0.941	+0.002
Life expectancy at birth	82.1	82.3	81.6	81.7	+0.0
Expected years of schooling	18.0	18.5	18.0	18.0	+0.0
Mean years of schooling	12.2	12.4	12.6	12.6	+0.0
GNI per capita (PPP \$)	50,013	57,707	53,504	55,979	+2,476

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



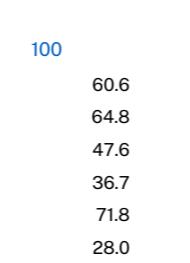
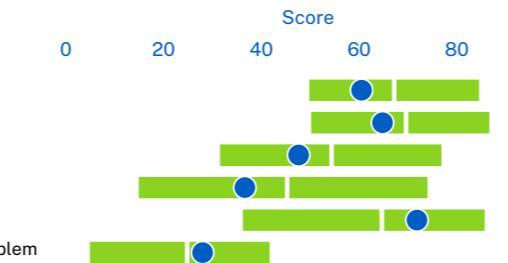
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



## TECHNOLOGIES

### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# San Francisco

SMART  
CITY  
RANKING

**68**

Out of 141

54 out of 118  
in 2021

SMART  
CITY RATING

**BB**

B in 2021

FACTOR  
RATINGS

**BB**

STRUCTURES

**BB**

TECHNOLOGIES

GROUP  
**2**

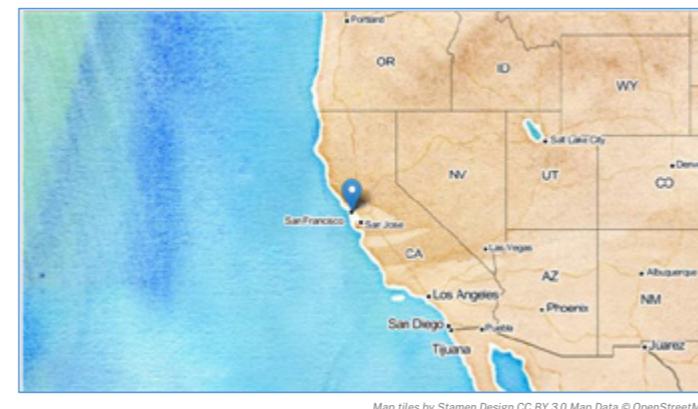
All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
873,965      0.931

(UN Data)



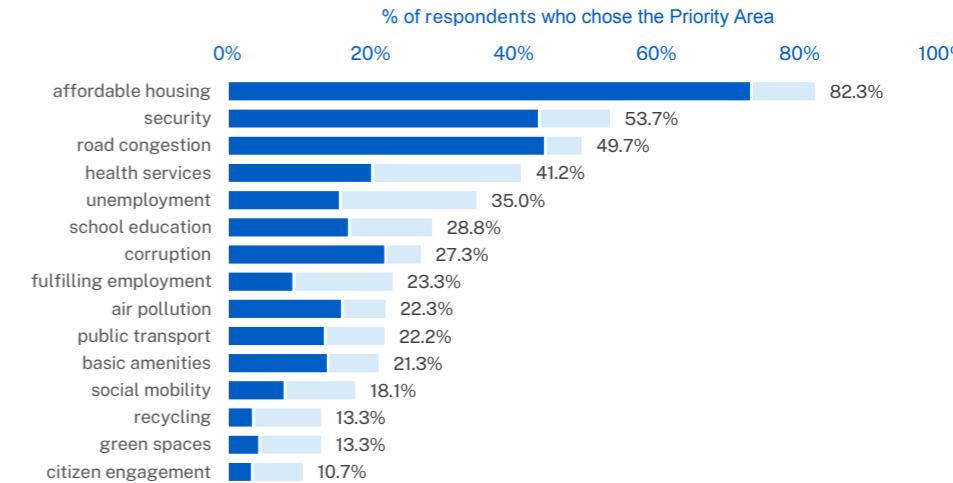
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.920	0.926	0.920	0.921	+0.001
Life expectancy at birth	78.9	78.9	77.4	77.2	-0.2
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.7	13.7	+0.0
GNI per capita (PPP \$)	56,140	63,826	61,462	64,765	+3,304

## PRIORITY AREAS

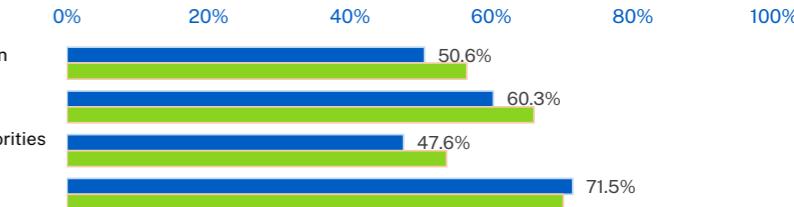
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

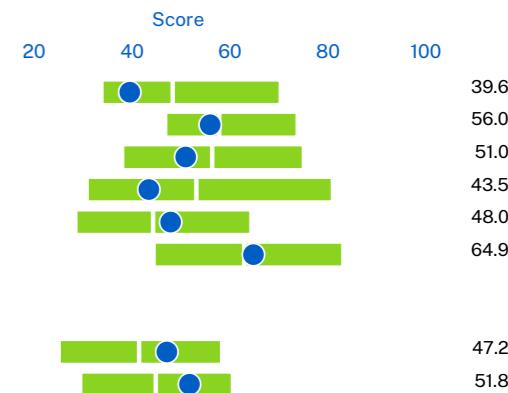
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



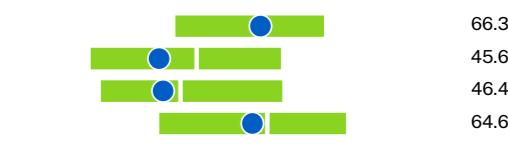
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# San José

SMART  
CITY  
RANKING

**127**

Out of 141



112 out of 118  
in 2021

SMART  
CITY RATING

**C**

D in 2021

FACTOR  
RATINGS

**CC**

STRUCTURES

**C**

TECHNOLOGIES

GROUP  
**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
351,958      0.826

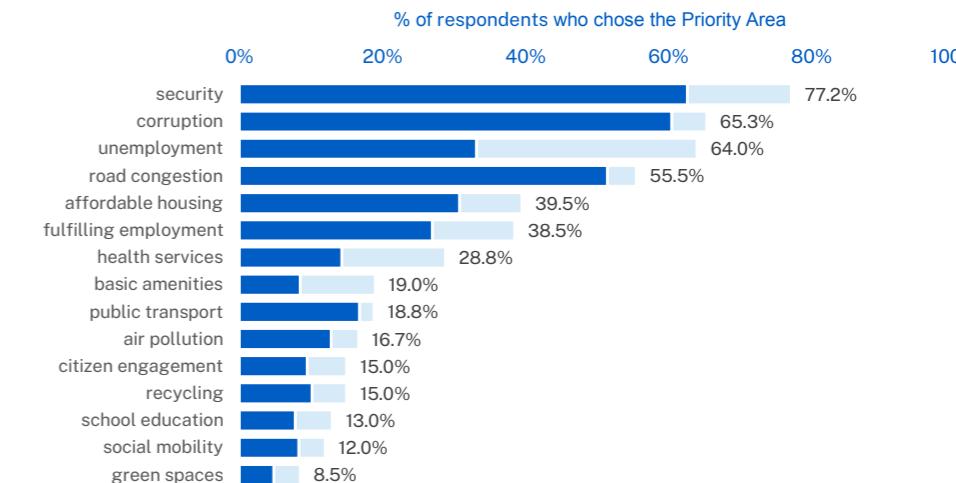
(UN Data)



Country	2018	2019	2020	2021	1 yr change
HDI	0.811	0.819	0.816	0.809	-0.007
Life expectancy at birth	79.5	79.4	79.3	77.0	-2.3
Expected years of schooling	15.9	16.6	16.6	16.6	+0.0
Mean years of schooling	8.7	12.8	12.9	12.9	+0.0
GNI per capita (PPP \$)	41,779	48,511	47,946	49,452	+1,506

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement

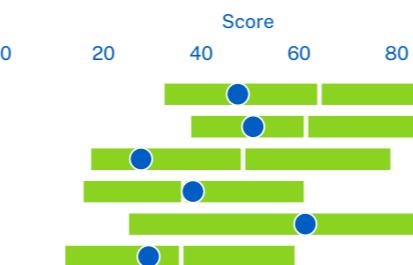


LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

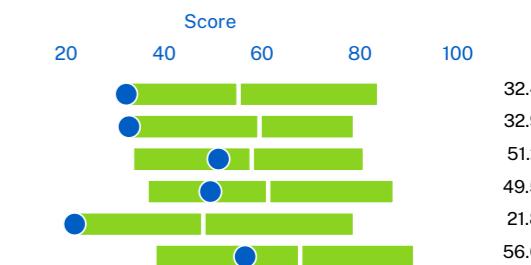
- ### Health & Safety
- Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



## SMART CITY RANKING

**140**

Out of 141

not out of 118  
in 2021

## SMART CITY RATING

**D**

not in 2021

## FACTOR RATINGS

**D**

## STRUCTURES

**4**

All ratings range  
from AAA to D

### BACKGROUND INFORMATION

#### City

Population      HDI  
3,181,655      0.521

(UN World Urbanisation Prospects 2022  
estimate)



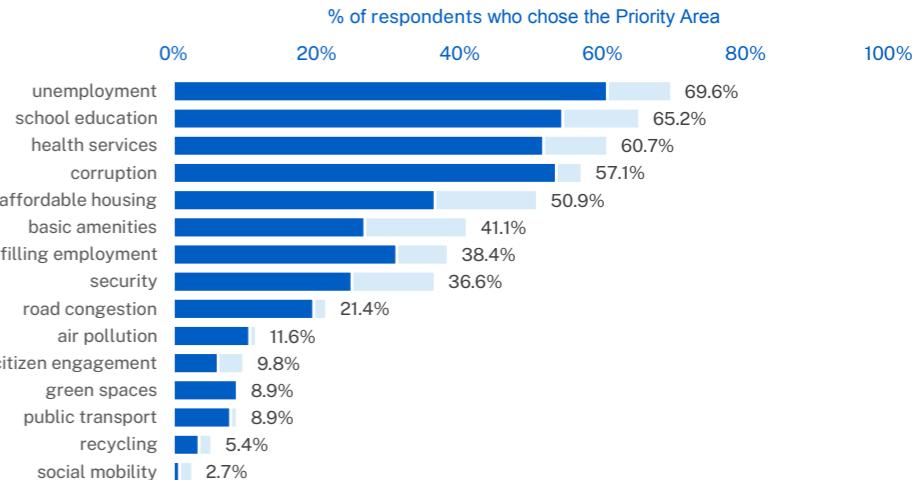
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

#### Country

	2018	2019	2020	2021	1 yr change
HDI	0.459	0.461	0.460	0.455	-0.005
Life expectancy at birth	64.6	65.1	64.7	63.8	-0.9
Expected years of schooling	9.1	9.1	9.1	9.1	+0.0
Mean years of schooling	3.2	3.2	3.2	3.2	+0.0
GNI per capita (PPP \$)	1,342	1,350	1,371	1,314	-56

### PRIORITY AREAS

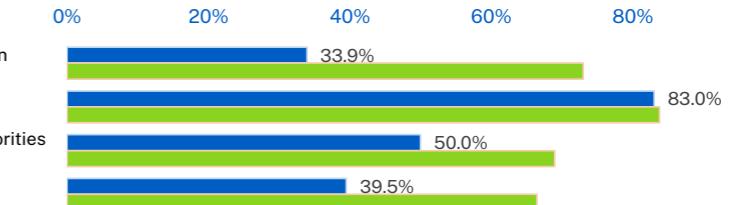
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



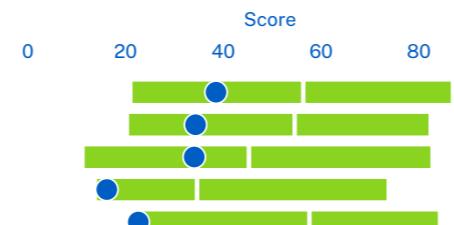
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

### STRUCTURES

#### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



#### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

#### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

#### Mobility

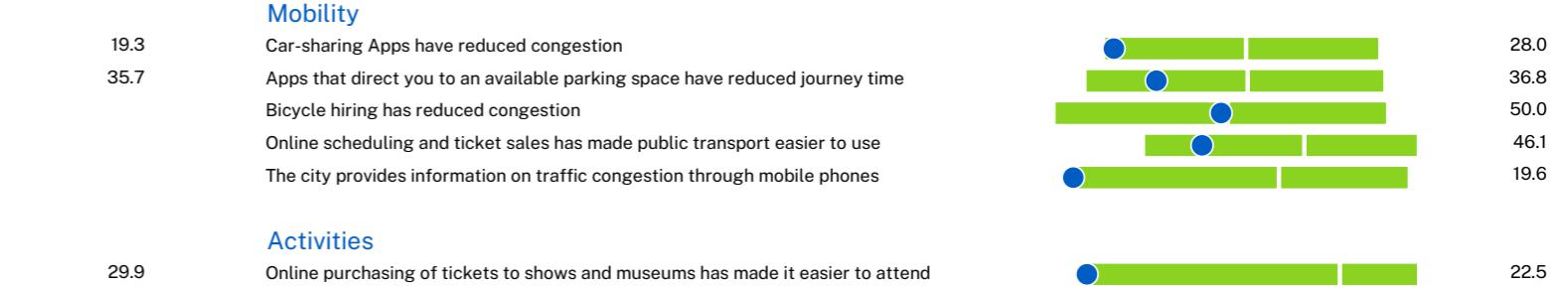
- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

#### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



#### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

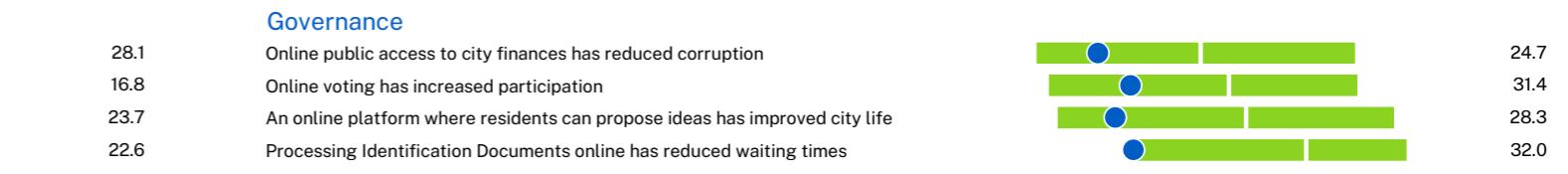
#### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

#### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects
- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

#### Governance



# Santiago

SMART  
CITY  
RANKING  
**119**

Out of 141

107 out of 118  
in 2021

SMART  
CITY RATING

**C**

C in 2021

FACTOR  
RATINGS

**C**

STRUCTURES

**C**

TECHNOLOGIES

GROUP  
**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
527,014      0.886

(UN Data)

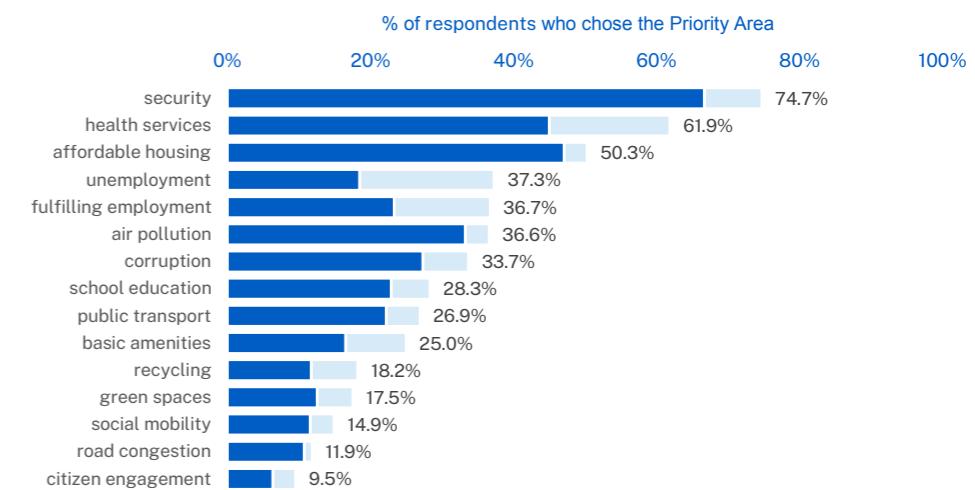


Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.847	0.851	0.852	0.855	+0.003
Life expectancy at birth	80.0	80.2	79.4	78.9	-0.4
Expected years of schooling	16.5	16.4	16.7	16.7	+0.0
Mean years of schooling	10.4	10.6	10.9	10.9	+0.0
GNI per capita (PPP \$)	21,972	23,261	22,286	24,563	+2,277

## PRIORITY AREAS

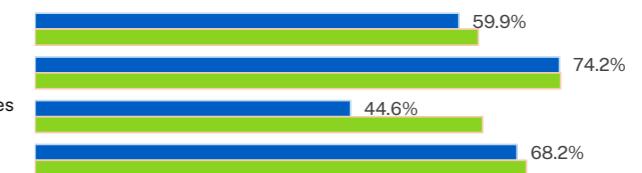
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



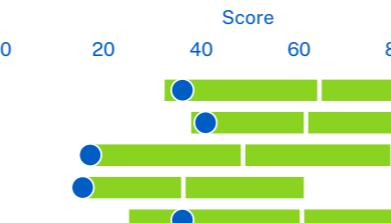
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

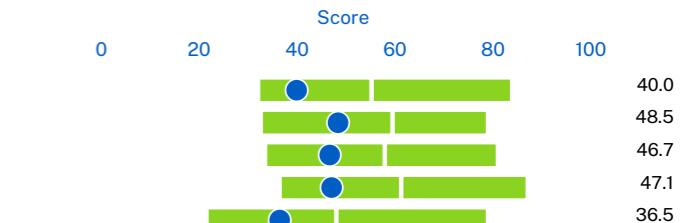
### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



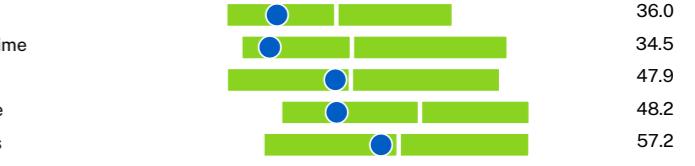
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



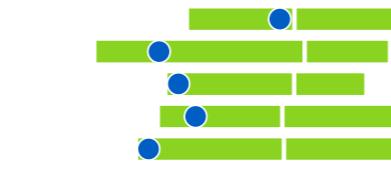
### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



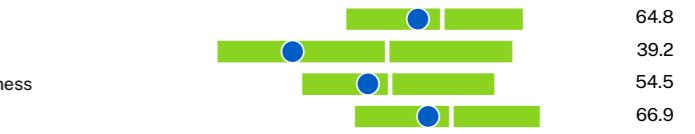
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Sao Paulo

SMART  
CITY  
RANKING  
**130**

Out of 141

117 out of 118  
in 2021

SMART  
CITY RATING

**D**

D in 2021

FACTOR  
RATINGS

**D**

STRUCTURES

**C**

TECHNOLOGIES

GROUP

**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
22,429,799      0.780

(UN World Urbanisation Prospects 2022  
estimate)

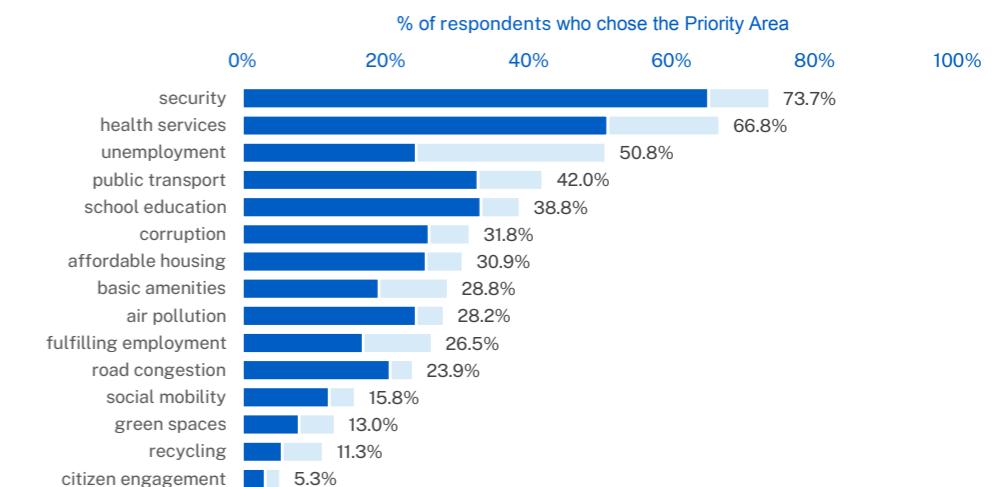


Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.764	0.766	0.758	0.754	-0.004
Life expectancy at birth	75.1	75.3	74.0	72.8	-1.3
Expected years of schooling	15.7	15.6	15.6	15.6	+0.0
Mean years of schooling	8.0	10.6	10.9	10.9	+0.0
GNI per capita (PPP \$)	21,972	23,261	22,286	24,563	+2,277

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



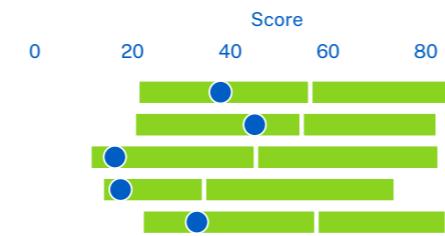
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



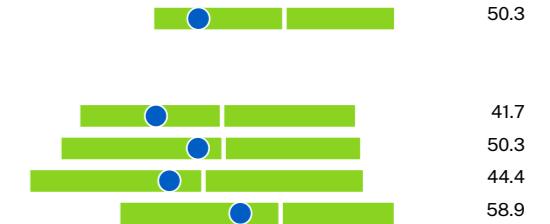
### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



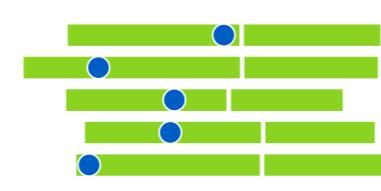
### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



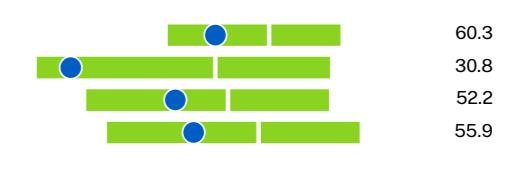
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



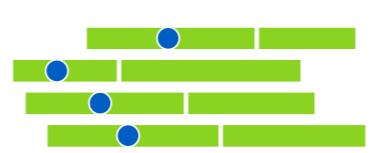
### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



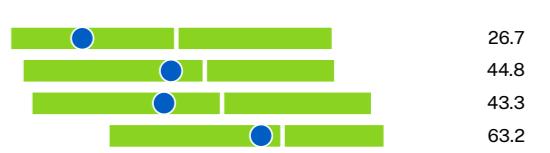
### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Seattle

SMART  
CITY  
RANKING

**55**

Out of 141



38 out of 118  
in 2021

SMART  
CITY RATING

**BB**

BBB in 2021

FACTOR  
RATINGS

**BB**

STRUCTURES

**B**

TECHNOLOGIES

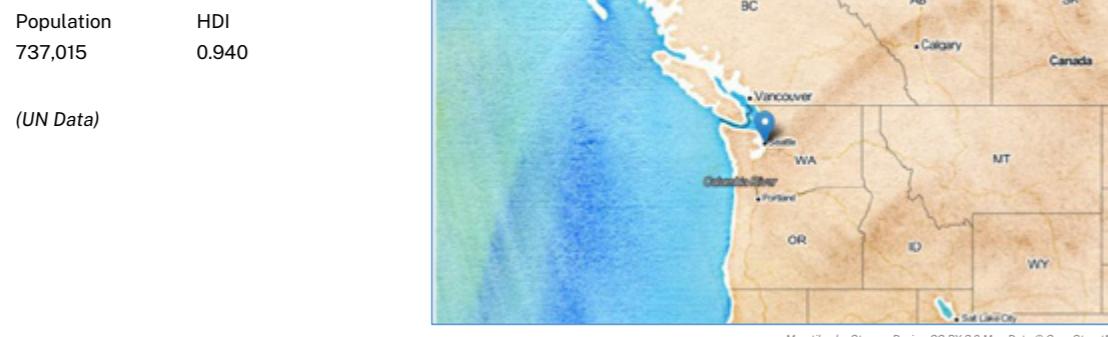
GROUP  
**2**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 737,015  
(UN Data)



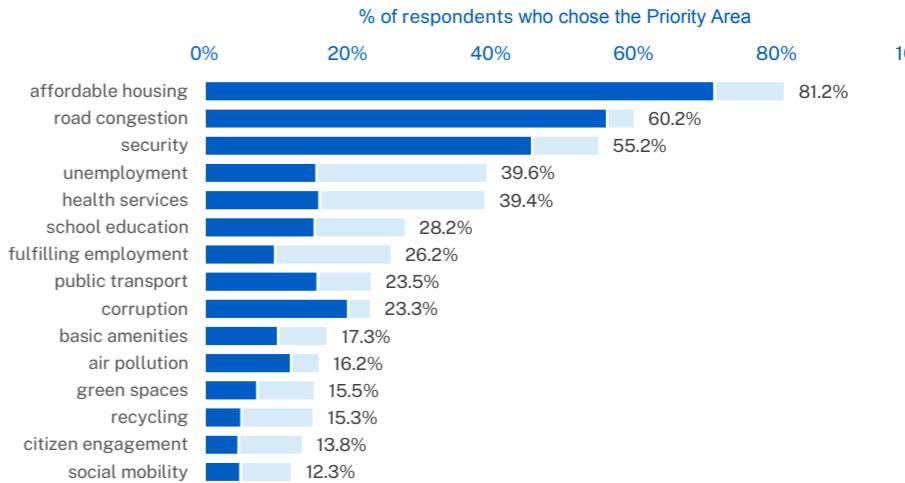
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.920	0.926	0.920	0.921	+0.001
Life expectancy at birth	78.9	78.9	77.4	77.2	-0.2
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.7	13.7	+0.0
GNI per capita (PPP \$)	56,140	63,826	61,462	64,765	+3,304

## PRIORITY AREAS

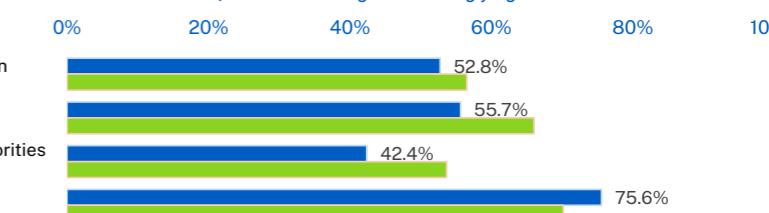
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

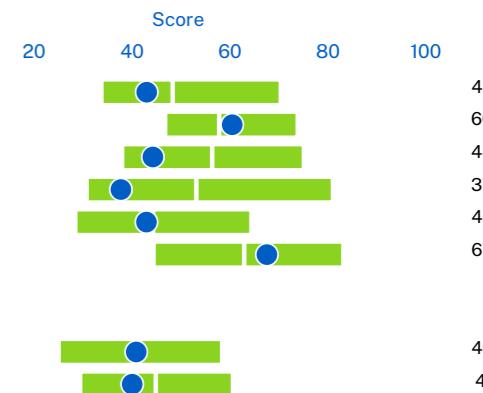
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Seoul

SMART  
CITY  
RANKING

**16**

Out of 141



18 out of 118  
in 2021

SMART  
CITY RATING

**AA**

AA in 2021

FACTOR  
RATINGS

**BBB**

STRUCTURES

**AAA**

TECHNOLOGIES

GROUP  
**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
9,601,693      0.952

(UN Data)



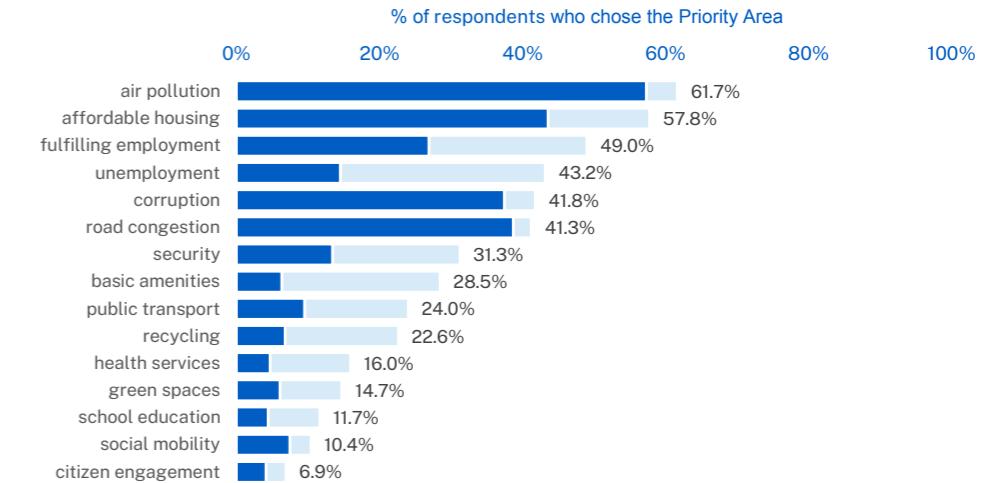
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.906	0.916	0.922	0.925	+0.003
Life expectancy at birth	82.8	83.0	83.6	83.7	+0.1
Expected years of schooling	16.4	16.5	16.5	16.5	+0.0
Mean years of schooling	12.2	12.2	12.5	12.5	+0.0
GNI per capita (PPP \$)	36,757	43,044	42,698	44,501	+1,803

## PRIORITY AREAS

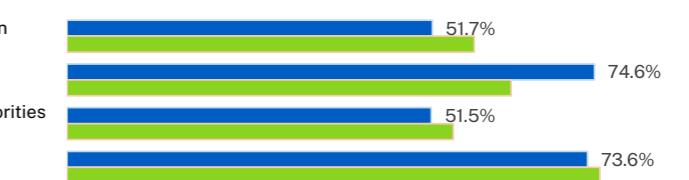
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



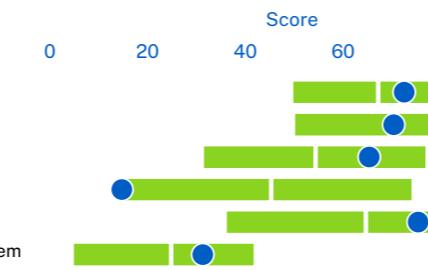
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

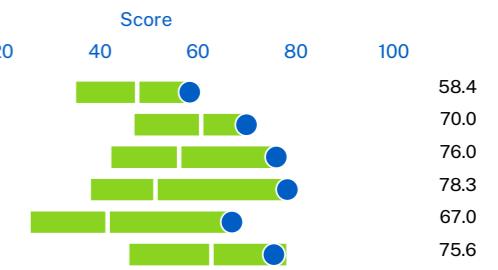
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

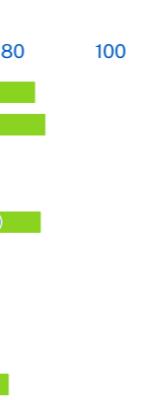
## TECHNOLOGIES



### Mobility

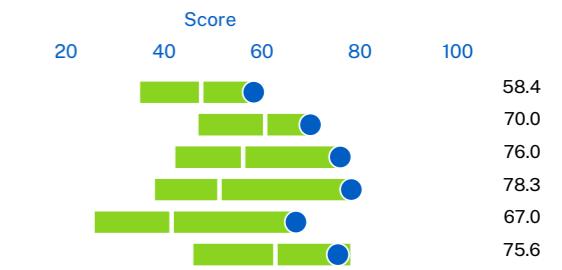
- Traffic congestion is not a problem
- Public transport is satisfactory

Score



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

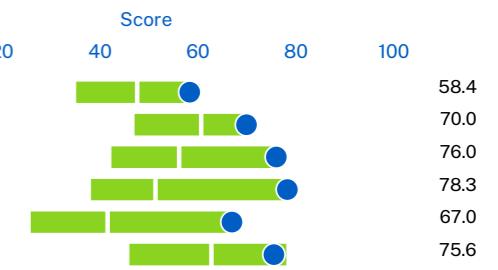
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

Score



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

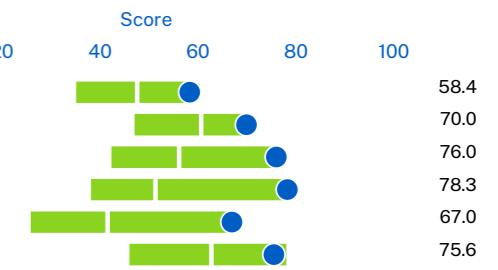
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

Score



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

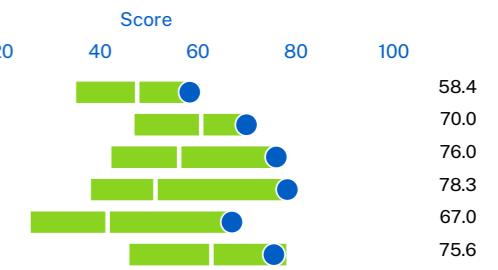
- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

Score



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Shanghai

SMART  
CITY  
RANKING

**25**

Out of 141



32 out of 118  
in 2021

SMART  
CITY RATING

**BB**

BB in 2021

FACTOR  
RATINGS

**BB**

STRUCTURES

**BB**

TECHNOLOGIES

GROUP  
**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
28,516,903      0.880

(UN World Urbanisation Prospects 2022  
estimate)

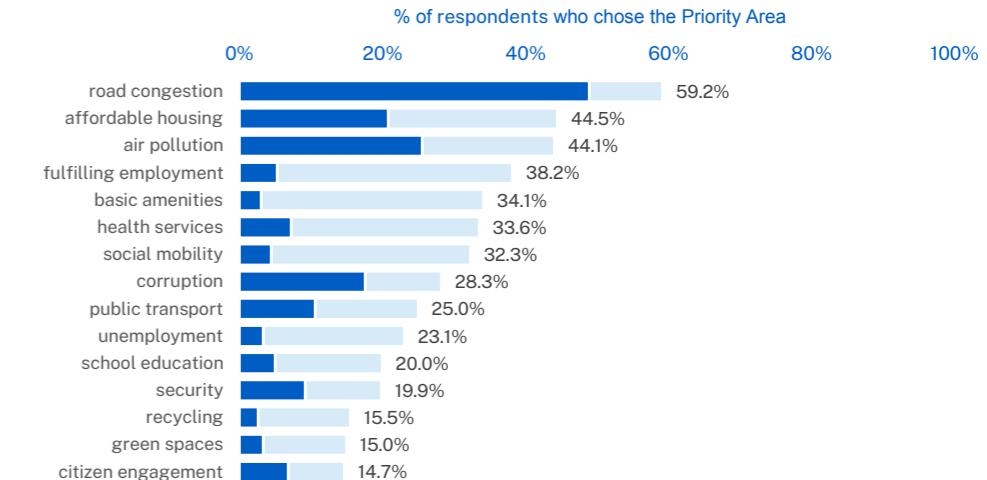


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.758	0.761	0.764	0.768	+0.004
Life expectancy at birth	76.7	76.9	78.1	78.2	+0.1
Expected years of schooling	13.9	14.0	14.2	14.2	+0.0
Mean years of schooling	7.9	8.1	7.6	7.6	+0.0
GNI per capita (PPP \$)	16,127	16,057	16,201	17,504	+1,303

## PRIORITY AREAS

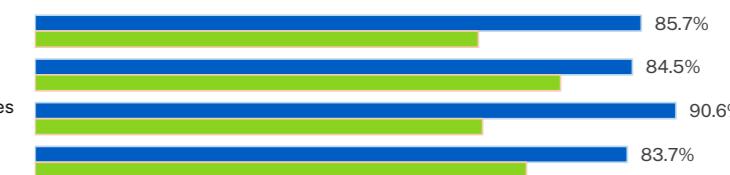
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



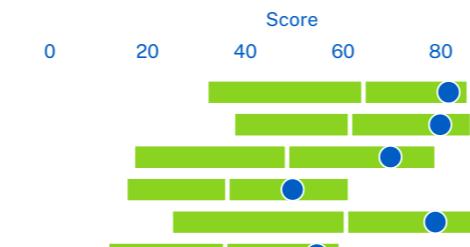
LEGEND: GROUP MEAN CITY

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Shenzhen

SMART  
CITY  
RANKING

**66**

Out of 141

60 out of 118  
in 2021

SMART  
CITY RATING

**CCC**

CCC in 2021

FACTOR  
RATINGS

**CCC**

STRUCTURES

**CCC**

TECHNOLOGIES

GROUP

**4**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
1,283,133      0.799

(UN World Urbanisation Prospects 2022  
estimate)



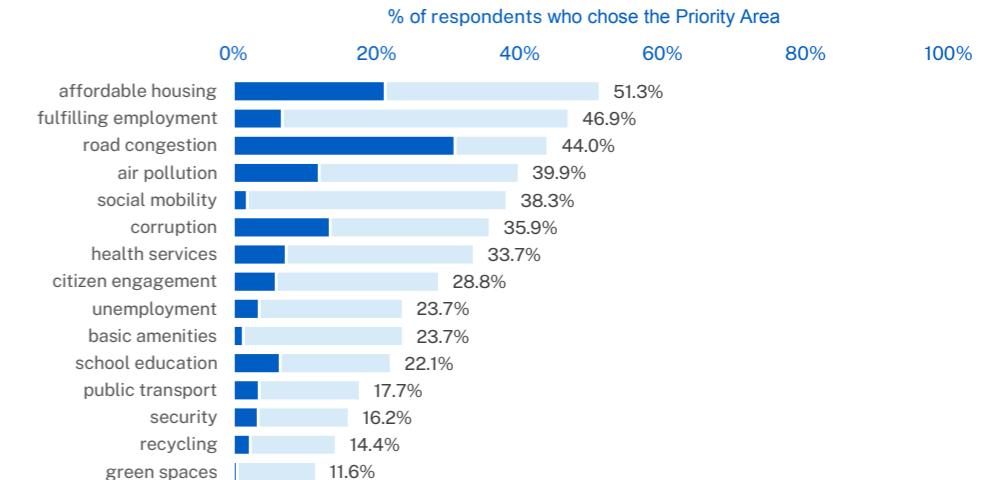
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

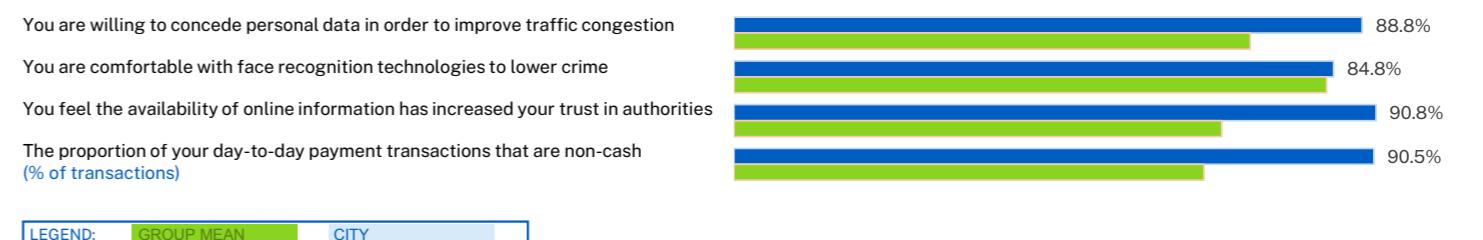
Country	2018	2019	2020	2021	1 yr change
HDI	0.758	0.761	0.764	0.768	+0.004
Life expectancy at birth	76.7	76.9	78.1	78.2	+0.1
Expected years of schooling	13.9	14.0	14.2	14.2	+0.0
Mean years of schooling	7.9	8.1	7.6	7.6	+0.0
GNI per capita (PPP \$)	16,127	16,057	16,201	17,504	+1,303

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Score  
0 20 40 60 80 100

85.7  
82.4  
76.5  
68.5  
82.0  
67.2

### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

Score  
0 20 40 60 80 100

53.4  
74.5

### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

Score  
0 20 40 60 80 100

83.4  
84.8

### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

Score  
0 20 40 60 80 100

84.2  
77.0  
70.2  
82.5  
81.5

### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

Score  
0 20 40 60 80 100

76.9  
63.6  
67.6  
74.0

## TECHNOLOGIES

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

Score  
0 20 40 60 80 100

84.1  
80.4  
84.1  
83.5  
80.4  
90.0

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

Score  
0 20 40 60 80 100

72.9  
83.8  
82.9  
90.7  
88.8

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

Score  
0 20 40 60 80 100

90.1

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

Score  
0 20 40 60 80 100

86.3  
83.5  
83.9  
90.2

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

Score  
0 20 40 60 80 100

75.0  
77.6  
83.4  
86.5

# Singapore

SMART  
CITY  
RANKING

**7**

Out of 141

7 out of 118  
in 2021

SMART  
CITY RATING

**A**

A in 2021

FACTOR  
RATINGS

**A**

STRUCTURES

**A**

TECHNOLOGIES

GROUP  
**2**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
5,453,566      0.939

(UN Data)



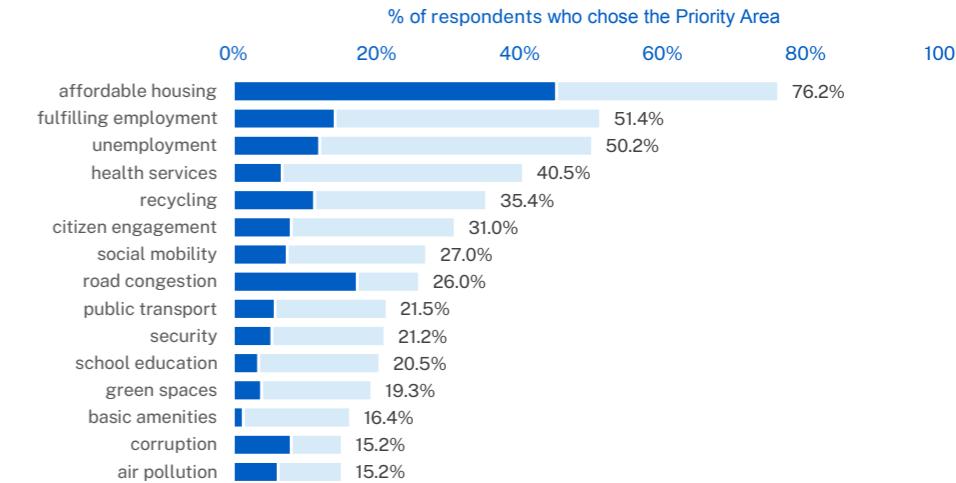
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.935	0.938	0.939	0.939	+0.000
Life expectancy at birth	83.5	83.6	82.9	82.8	-0.1
Expected years of schooling	16.3	16.4	16.5	16.5	+0.0
Mean years of schooling	11.5	11.6	11.9	11.9	+0.0
GNI per capita (PPP \$)	83,793	88,155	81,035	90,919	+9,884

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Score

0 20 40 60 80 100

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

Score

0 20 40 60 80 100

### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

Score

0 20 40 60 80 100

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

Score

0 20 40 60 80 100

### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

Score

0 20 40 60 80 100

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

Score

0 20 40 60 80 100

### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

Score

0 20 40 60 80 100

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

Score

0 20 40 60 80 100

### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

Score

0 20 40 60 80 100

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

Score

0 20 40 60 80 100

## SMART CITY RANKING

**111**

Out of 141



103 out of 118  
in 2021

## SMART CITY RATING

**CC**

C in 2021

## FACTOR RATINGS

**CC**

## STRUCTURES

**CC**

## TECHNOLOGIES

**3**

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population 2,085,071  
(Eurostat)

HDI 0.856

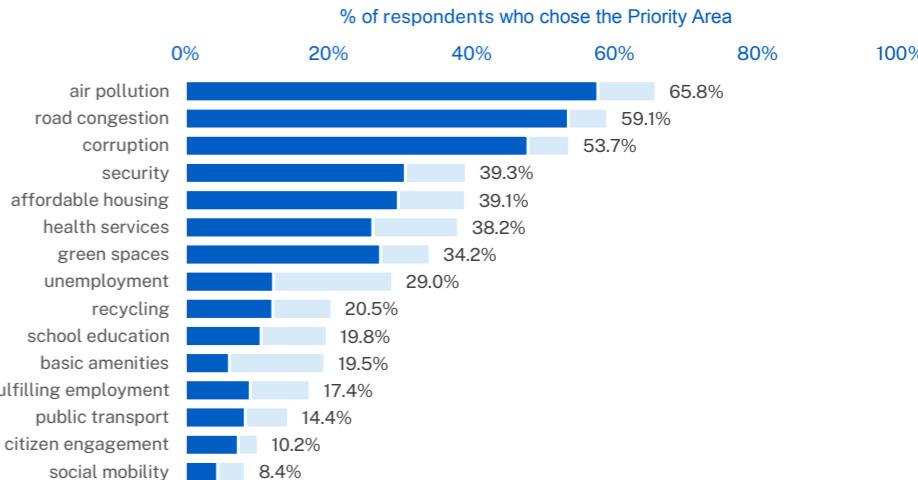


#### Country

	2018	2019	2020	2021	1 yr change
HDI	0.816	0.816	0.802	0.795	-0.007
Life expectancy at birth	74.9	75.1	73.7	71.8	-1.9
Expected years of schooling	14.8	14.4	13.9	13.9	+0.0
Mean years of schooling	11.8	11.4	11.4	11.4	+0.0
GNI per capita (PPP \$)	19,646	23,325	22,020	23,079	+1,058

### PRIORITY AREAS

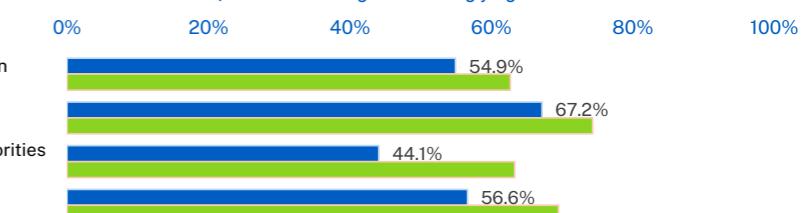
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



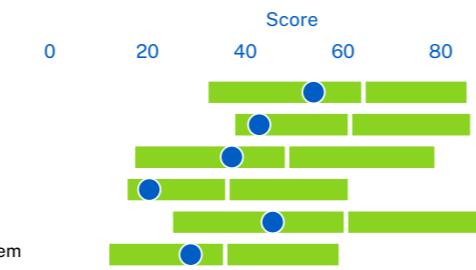
LEGEND: GROUP MEAN CITY

### STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

#### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



#### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

### TECHNOLOGIES



#### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



#### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



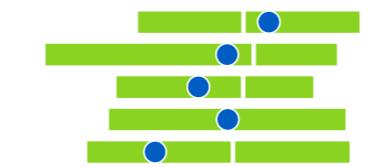
#### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



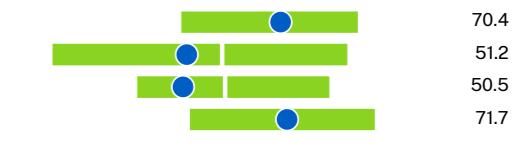
#### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



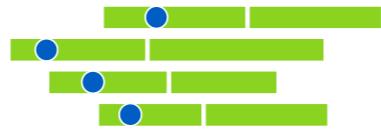
#### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



#### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



#### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Stockholm

SMART  
CITY  
RANKING

**10**

Out of 141



11 out of 118  
in 2021

SMART  
CITY RATING

**A**

A in 2021

FACTOR  
RATINGS

**A**

STRUCTURES

**A**

TECHNOLOGIES

GROUP  
**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 2,391,990  
(Eurostat)

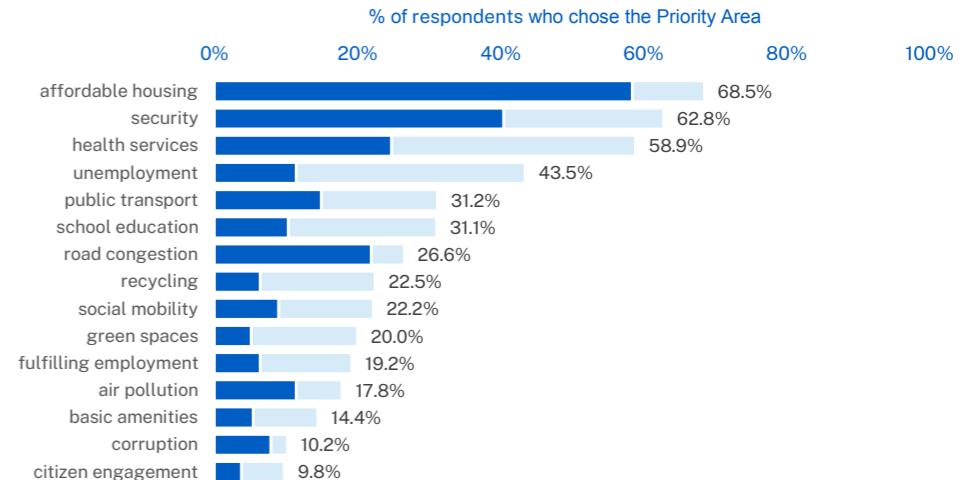


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.937	0.945	0.942	0.947	+0.005
Life expectancy at birth	82.7	82.8	82.4	83.0	+0.5
Expected years of schooling	18.8	19.5	18.0	18.0	+0.0
Mean years of schooling	12.4	12.5	12.6	12.6	+0.0
GNI per capita (PPP \$)	47,955	54,508	52,359	54,489	+2,130

## PRIORITY AREAS

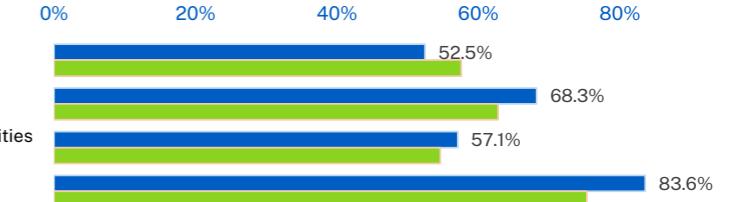
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



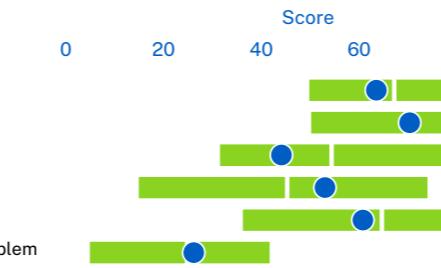
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES

Score

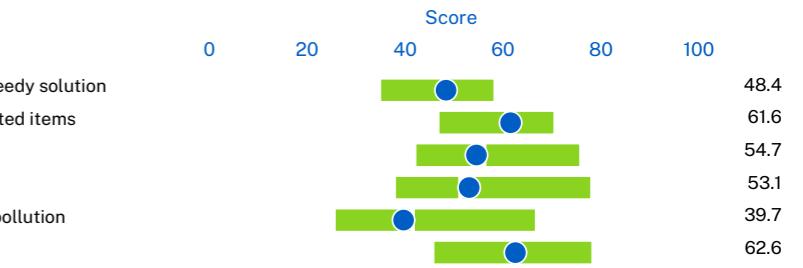
Score

### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

Score

Score

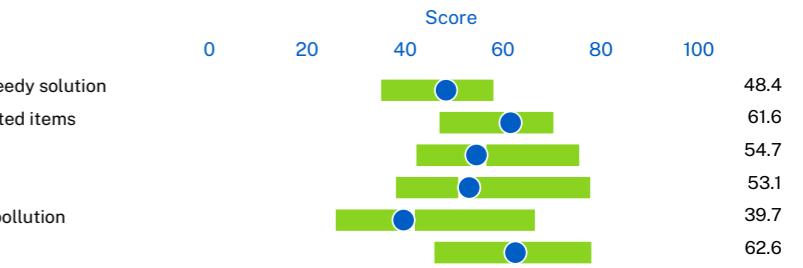


### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

Score

Score

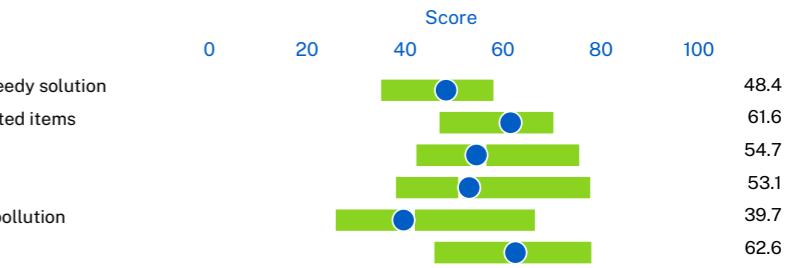


### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

Score

Score

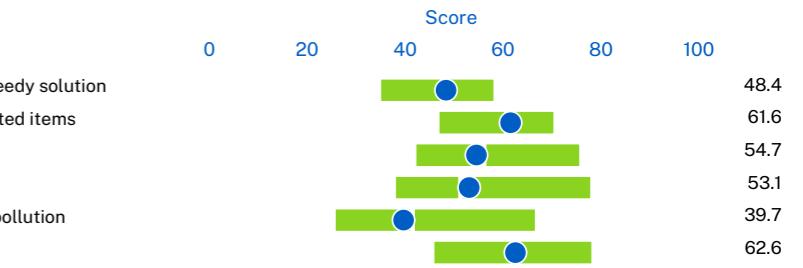


### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

Score

Score



# Sydney

SMART  
CITY  
RANKING

**18**

Out of 141



29 out of 118  
in 2021

SMART  
CITY RATING

**AA**

BB in 2021

FACTOR  
RATINGS

**A**

STRUCTURES

**AA**

TECHNOLOGIES

GROUP  
**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 4,321,535  
(UN Data)

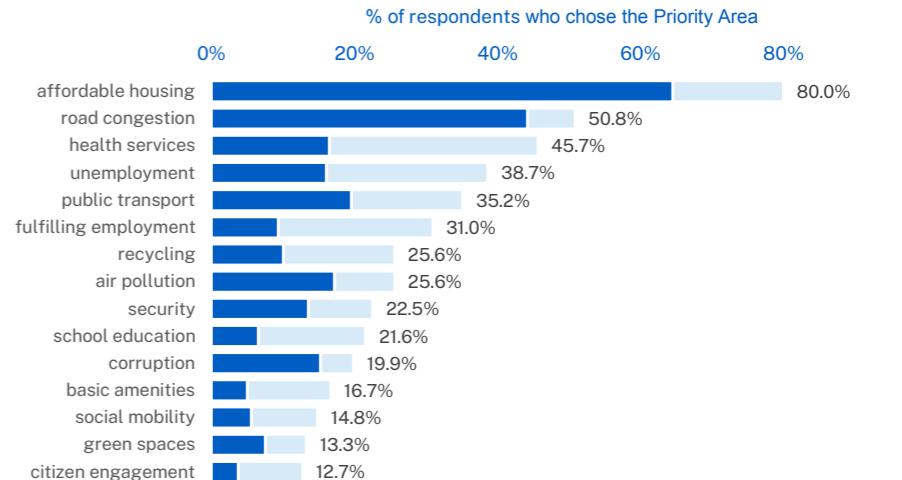


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.941	0.941	0.947	0.951	+0.004
Life expectancy at birth	83.4	83.1	84.3	84.5	+0.2
Expected years of schooling	18.0	18.0	18.0	18.0	+0.0
Mean years of schooling	12.6	12.1	12.4	12.4	+0.0
GNI per capita (PPP \$)	43,821	52,085	49,392	52,293	+2,901

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: MIN CITY MEAN GROUP MAX

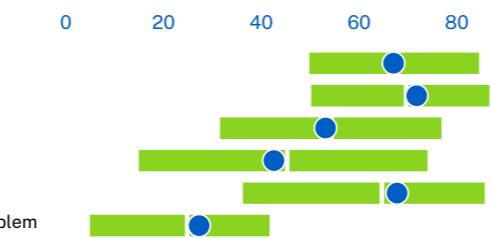
LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Score

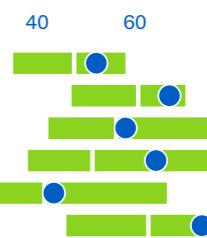


## TECHNOLOGIES

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

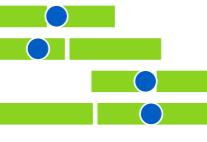
Score



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

Score



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

Score



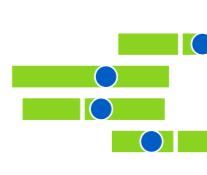
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

Score



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

Score



# Taipei City

SMART  
CITY  
RANKING

**29**

Out of 141

25 out of 118  
in 2021

SMART  
CITY RATING

**A**

B in 2021

FACTOR  
RATINGS

**BBB**

STRUCTURES

**A**

TECHNOLOGIES

GROUP  
**2**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 2,742,379 HDI (2019) 0.916

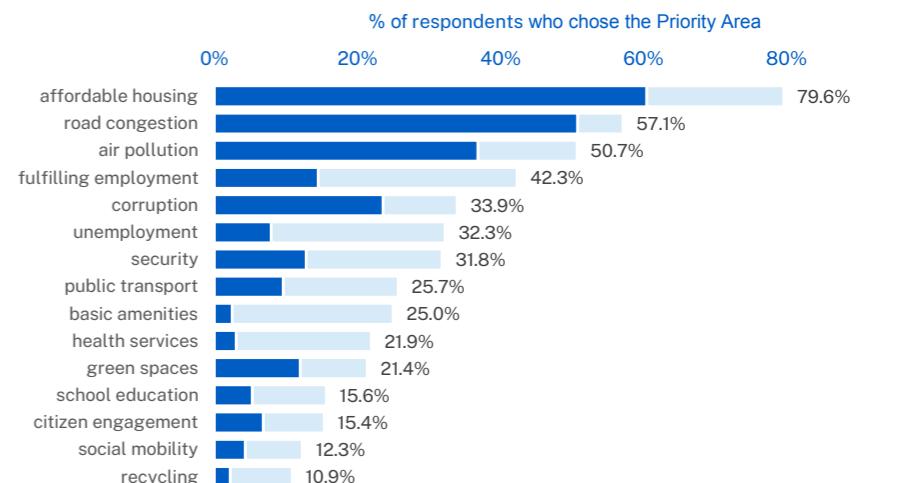
(UN World Urbanisation Prospects 2022 estimate)



Country	2018	2019	2020	2021	1 yr change
HDI	0.911	0.916	NA	NA	NA
Life expectancy at birth	80.7	80.9	NA	NA	NA
Expected years of schooling	16.5	16.5	NA	NA	NA
Mean years of schooling	12.2	12.3	NA	NA	NA
GNI per capita (PPP \$)	49,403	52,573	NA	NA	NA

## PRIORITY AREAS

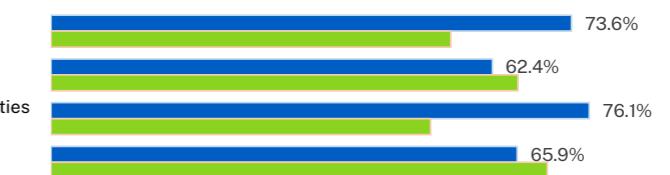
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

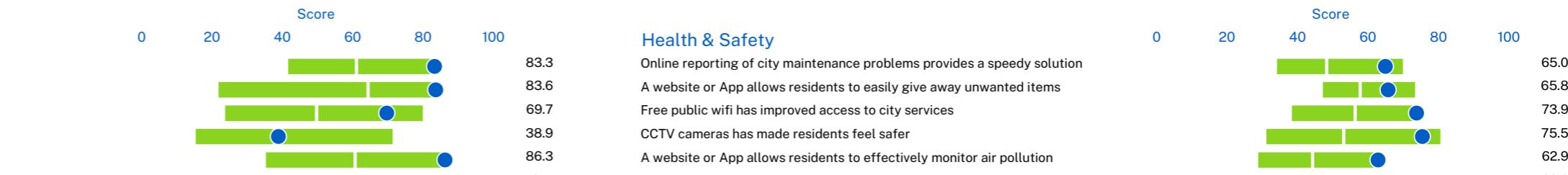
% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES



STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

TECHNOLOGIES

### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

GROUP  
**2**

### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

## SMART CITY RANKING

**32**

Out of 141

24 out of 118  
in 2021

## SMART CITY RATING

**BBB**

BBB in 2021

## FACTOR RATINGS

**BBB**

STRUCTURES

## TECHNOLOGIES

## GROUP 2

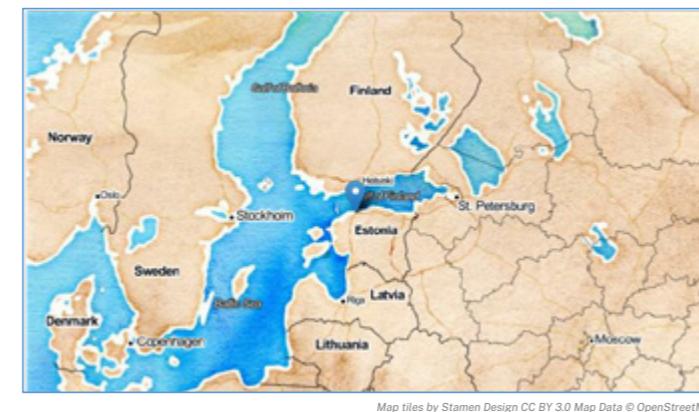
All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population      HDI  
613,158      0.932

(Eurostat)

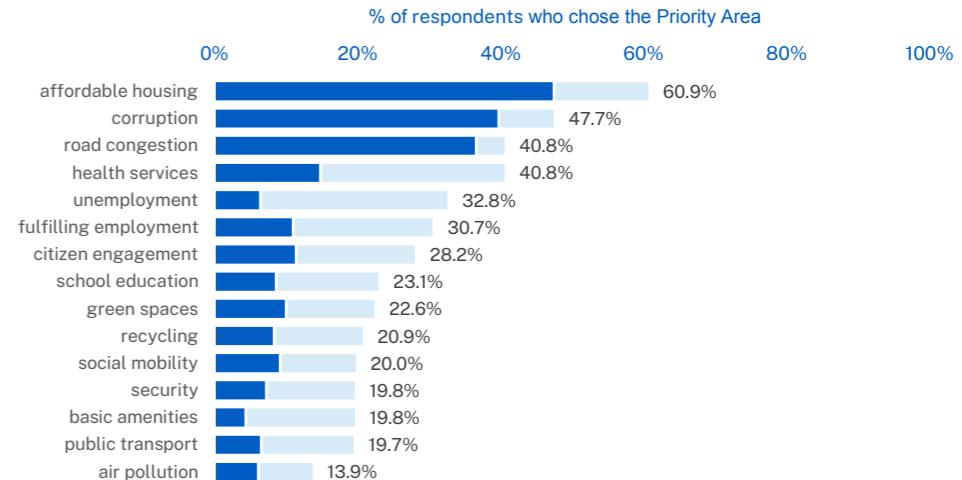


Country

	2018	2019	2020	2021	1 yr change
HDI	0.882	0.892	0.892	0.890	-0.002
Life expectancy at birth	78.6	78.8	78.3	77.1	-1.2
Expected years of schooling	16.1	16.0	15.9	15.9	+0.0
Mean years of schooling	13.0	13.1	13.6	13.6	+0.0
GNI per capita (PPP \$)	30,379	36,019	35,132	38,048	+2,916

### PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
You are comfortable with face recognition technologies to lower crime  
You feel the availability of online information has increased your trust in authorities  
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

### STRUCTURES

**Health & Safety**  
Basic sanitation meets the needs of the poorest areas  
Recycling services are satisfactory  
Public safety is not a problem  
Air pollution is not a problem  
Medical services provision is satisfactory  
Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Mobility

Traffic congestion is not a problem  
Public transport is satisfactory



### Activities

Green spaces are satisfactory  
Cultural activities (shows, bars, and museums) are satisfactory



### Opportunities (Work & School)

Employment finding services are readily available  
Most children have access to a good school  
Lifelong learning opportunities are provided by local institutions  
Businesses are creating new jobs  
Minorities feel welcome



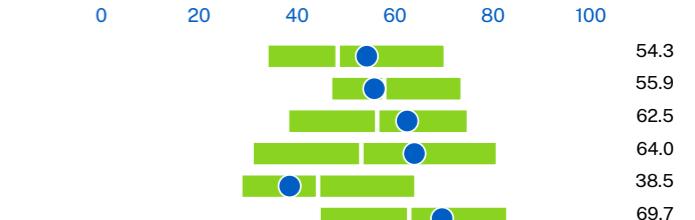
### Governance

Information on local government decisions are easily accessible  
Corruption of city officials is not an issue of concern  
Residents contribute to decision making of local government  
Residents provide feedback on local government projects



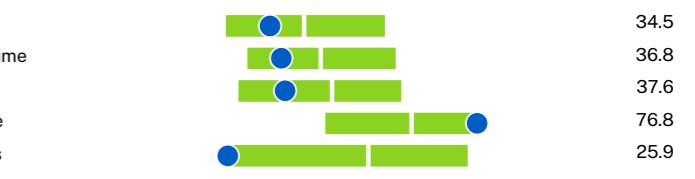
### TECHNOLOGIES

**Health & Safety**  
Online reporting of city maintenance problems provides a speedy solution  
A website or App allows residents to easily give away unwanted items  
Free public wifi has improved access to city services  
CCTV cameras has made residents feel safer  
A website or App allows residents to effectively monitor air pollution  
Arranging medical appointments online has improved access



### Mobility

Car-sharing Apps have reduced congestion  
Apps that direct you to an available parking space have reduced journey time  
Bicycle hiring has reduced congestion  
Online scheduling and ticket sales has made public transport easier to use  
The city provides information on traffic congestion through mobile phones



### Activities

Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

Online access to job listings has made it easier to find work  
IT skills are taught well in schools  
Online services provided by the city has made it easier to start a new business  
The current internet speed and reliability meet connectivity needs



### Governance

Online public access to city finances has reduced corruption  
Online voting has increased participation  
An online platform where residents can propose ideas has improved city life  
Processing Identification Documents online has reduced waiting times



# Tel Aviv

SMART  
CITY  
RANKING  
**91**

Out of 141

59 out of 118  
in 2021

SMART  
CITY RATING

**B**

BB in 2021

FACTOR  
RATINGS

**B**

STRUCTURES

**BB**

TECHNOLOGIES

GROUP  
**2**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 462,210  
(UN Data)

HDI 0.919



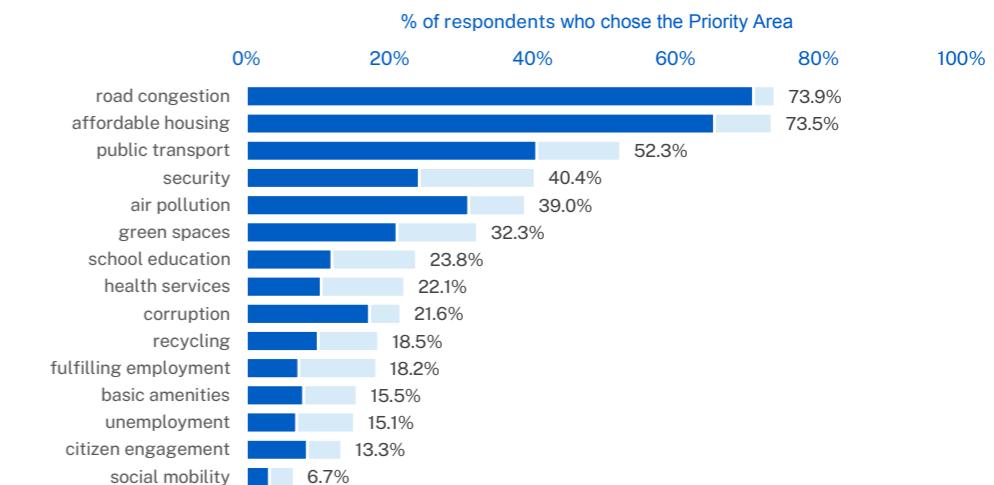
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.906	0.919	0.917	0.919	+0.002
Life expectancy at birth	82.8	83.0	82.4	82.3	-0.1
Expected years of schooling	16.0	16.2	16.1	16.1	+0.0
Mean years of schooling	13.0	13.0	13.4	13.4	+0.0
GNI per capita (PPP \$)	33,650	40,187	39,015	41,524	+2,509

## PRIORITY AREAS

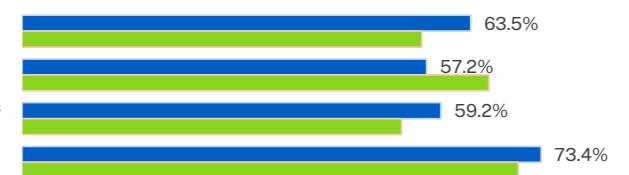
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



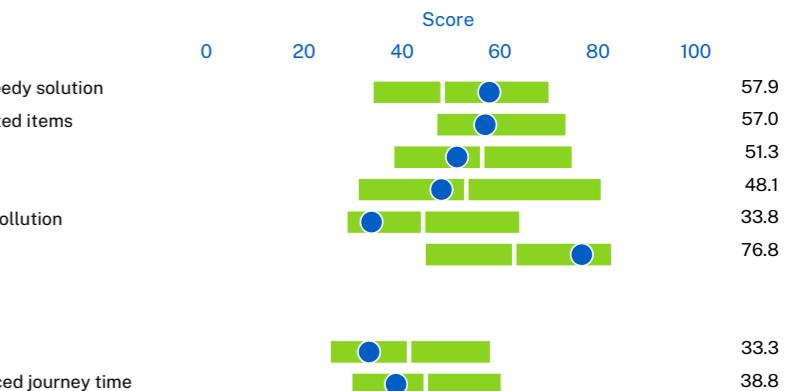
### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES

### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

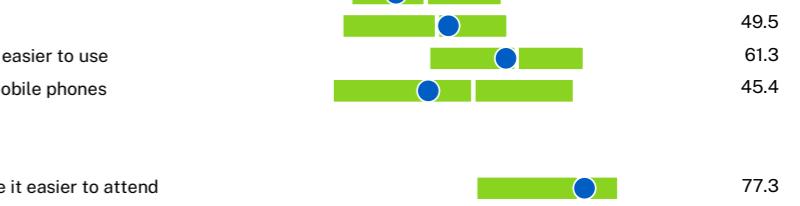


### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

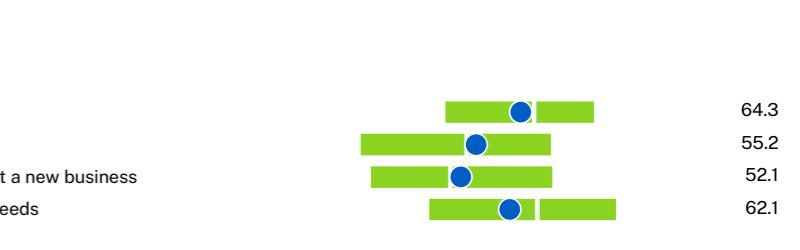


### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

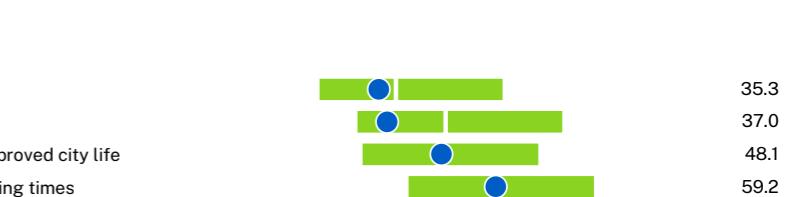


### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# The Hague

SMART  
CITY  
RANKING

**43**

Out of 141

35 out of 118  
in 2021

SMART  
CITY RATING

**A**

BB in 2021

FACTOR  
RATINGS

**A**

STRUCTURES

**A**

TECHNOLOGIES

GROUP  
**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

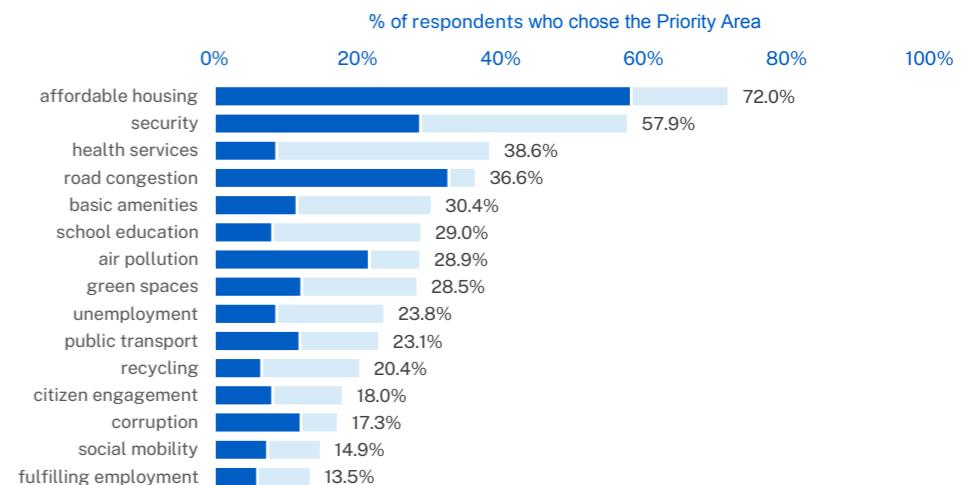
Population      HDI  
3,726,050      0.941

(Eurostat)



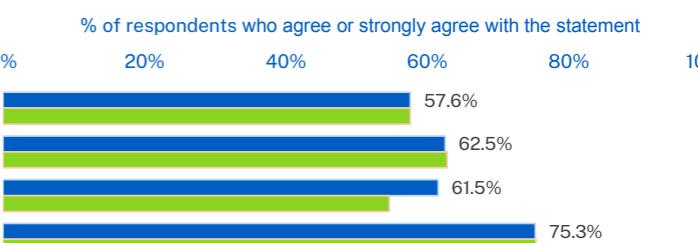
## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion



LEGEND: GROUP MEAN CITY

## STRUCTURES

Score: 0 20 40 60 80 100

LEGEND: MIN CITY MEAN GROUP MAX

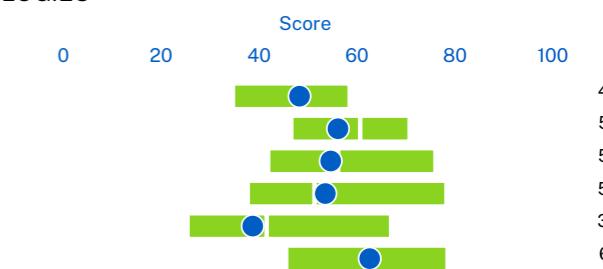
### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

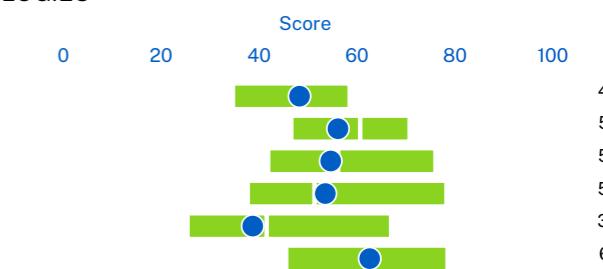
Score: 0 20 40 60 80 100

LEGEND: MIN CITY MEAN GROUP MAX

Score: 0 20 40 60 80 100

### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

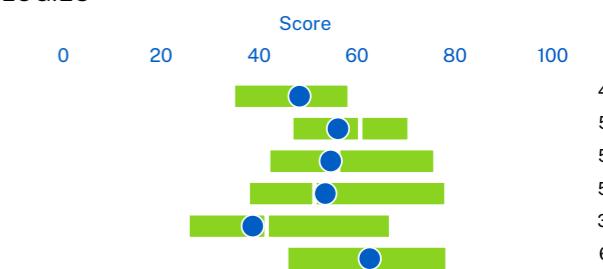
- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

Score: 0 20 40 60 80 100

LEGEND: MIN CITY MEAN GROUP MAX

### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



### Opportunities (Work & School)

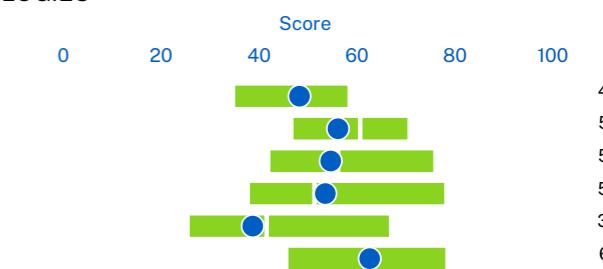
- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

Score: 0 20 40 60 80 100

LEGEND: MIN CITY MEAN GROUP MAX

### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

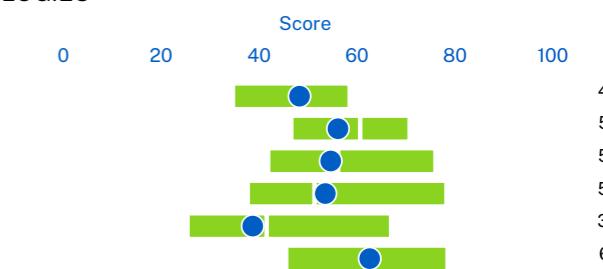
- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

Score: 0 20 40 60 80 100

LEGEND: MIN CITY MEAN GROUP MAX

### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



## SMART CITY RANKING

**67**

Out of 141



50 out of 118  
in 2021

## SMART CITY RATING

**BB**

BB in 2021

## FACTOR RATINGS

**B**

## STRUCTURES

**BB**

## TECHNOLOGIES

## GROUP 3

All ratings range from AAA to D

### BACKGROUND INFORMATION

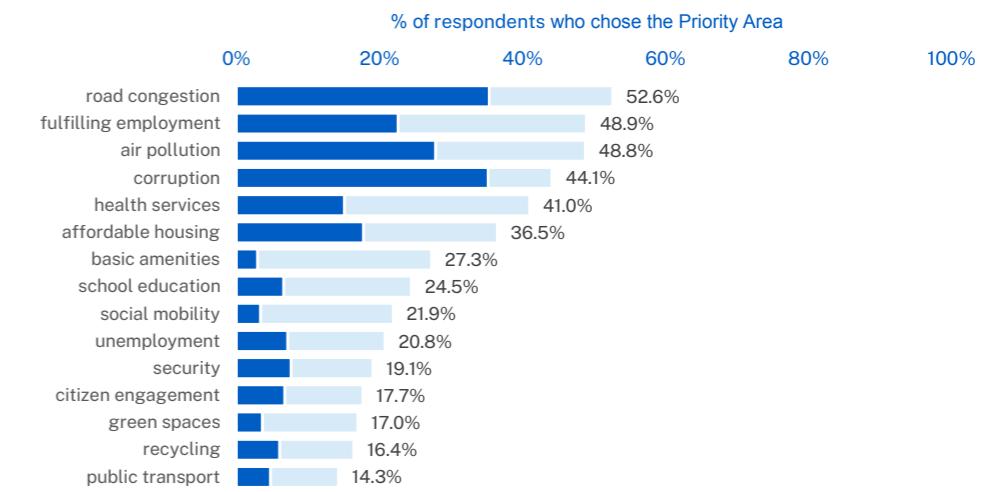
#### City

Population 14,011,828 HDI 0.844

(UN World Urbanisation Prospects 2022 estimate)

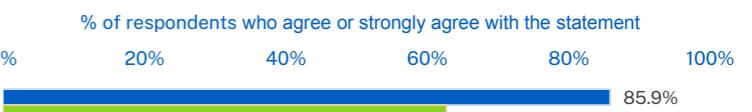


From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

You are willing to concede personal data in order to improve traffic congestion



You are comfortable with face recognition technologies to lower crime



You feel the availability of online information has increased your trust in authorities

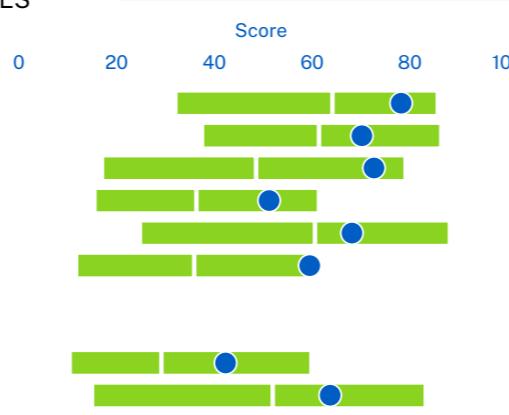


The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

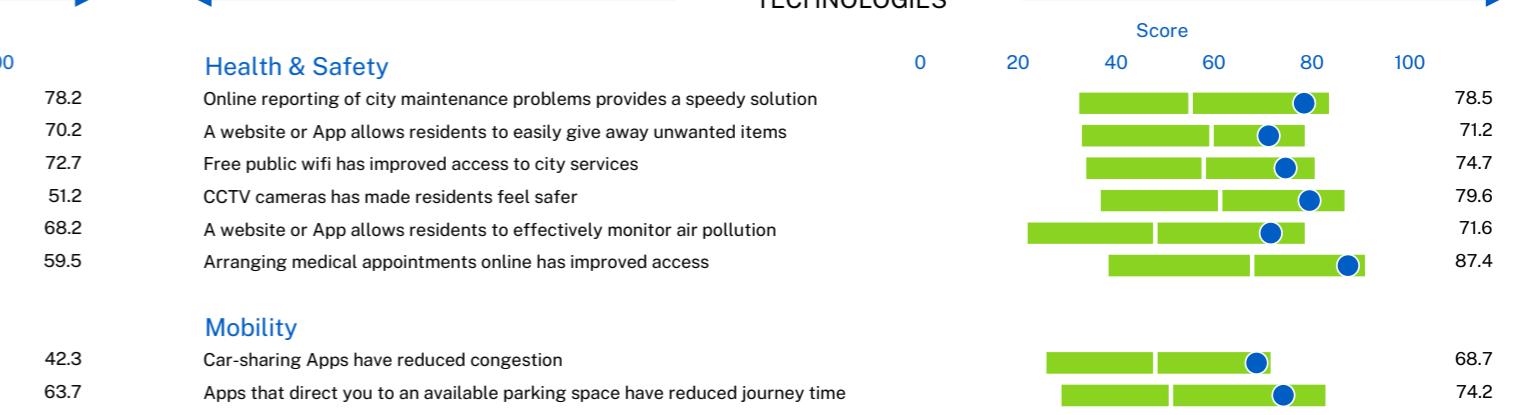


LEGEND: GROUP MEAN CITY

### STRUCTURES



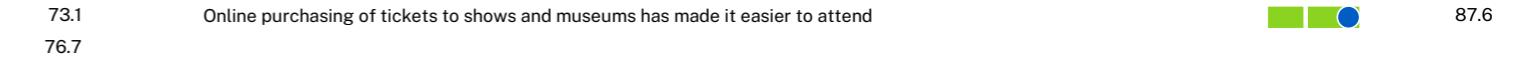
### TECHNOLOGIES



### Activities



### Activities



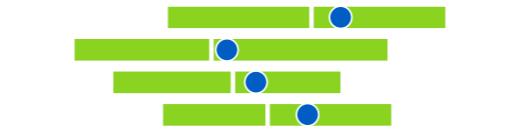
### Opportunities (Work & School)



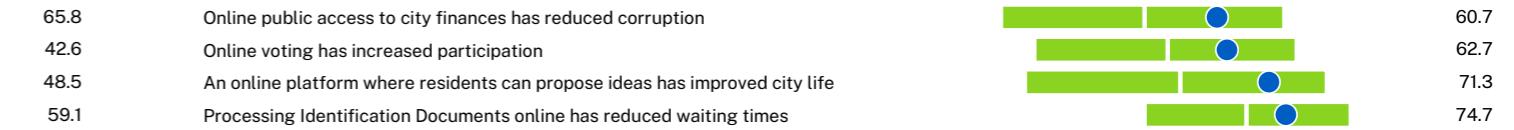
### Opportunities (Work & School)



### Governance



### Governance



# Tokyo

SMART  
CITY  
RANKING

**72**

Out of 141



67 out of 118  
in 2021

SMART  
CITY RATING

**BB**

BB in 2021

FACTOR  
RATINGS

**BB**

STRUCTURES

**BB**

TECHNOLOGIES

GROUP  
**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
9,733,276      0.951

(UN Data)

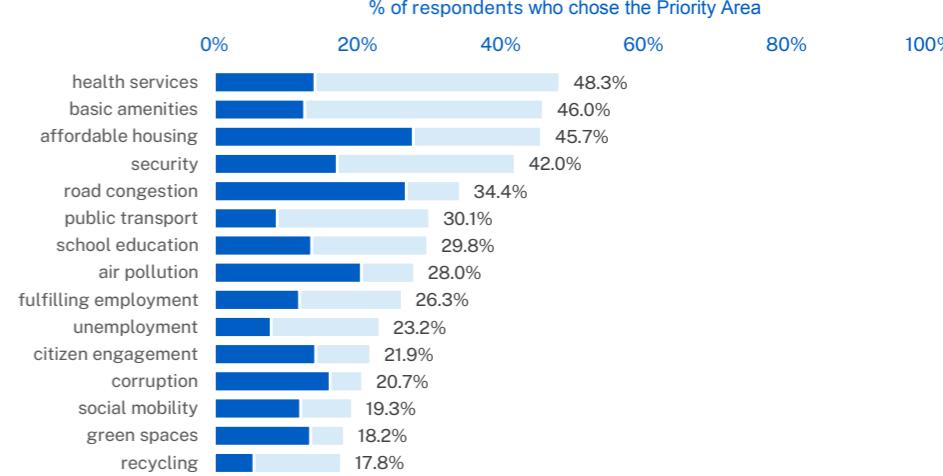


Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.915	0.919	0.923	0.925	+0.002
Life expectancy at birth	84.5	84.6	84.7	84.8	+0.1
Expected years of schooling	15.2	15.2	15.2	15.2	+0.0
Mean years of schooling	12.8	12.9	13.4	13.4	+0.0
GNI per capita (PPP \$)	40,799	42,932	41,487	42,274	+787

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion

% of respondents who agree or strongly agree with the statement

39.5%

You are comfortable with face recognition technologies to lower crime

60.1%

You feel the availability of online information has increased your trust in authorities

36.5%

The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

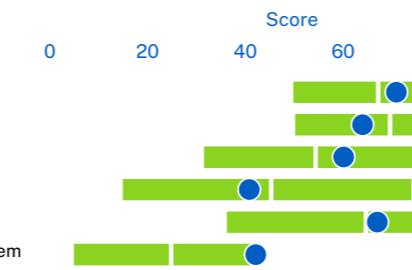
68.3%

LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

- Health & Safety**
  - Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem



Score

0

20

40

60

80

100

70.9

64.0

60.1

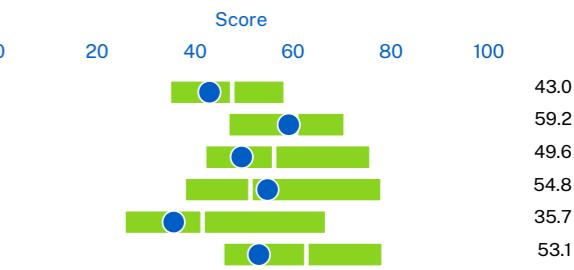
40.8

67.0

42.1

## TECHNOLOGIES

- Health & Safety**
  - Online reporting of city maintenance problems provides a speedy solution
  - A website or App allows residents to easily give away unwanted items
  - Free public wifi has improved access to city services
  - CCTV cameras has made residents feel safer
  - A website or App allows residents to effectively monitor air pollution
  - Arranging medical appointments online has improved access



Score

0

20

40

60

80

100

43.0

59.2

49.6

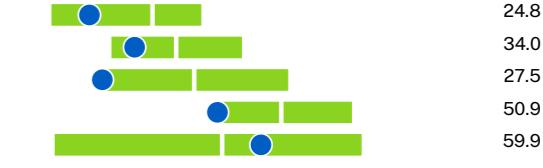
54.8

35.7

53.1

## Mobility

- Mobility**
  - Car-sharing Apps have reduced congestion
  - Apps that direct you to an available parking space have reduced journey time
  - Bicycle hiring has reduced congestion
  - Online scheduling and ticket sales has made public transport easier to use
  - The city provides information on traffic congestion through mobile phones



Score

0

20

40

60

80

100

24.8

34.0

27.5

50.9

59.9

## Activities

- Activities**
  - Online purchasing of tickets to shows and museums has made it easier to attend



Score

0

20

40

60

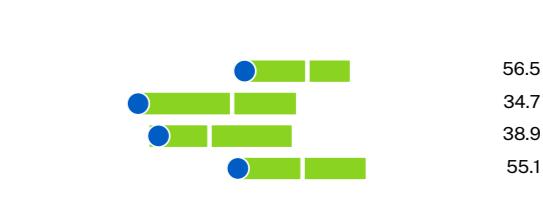
80

100

57.8

## Opportunities (Work & School)

- Opportunities (Work & School)**
  - Online access to job listings has made it easier to find work
  - IT skills are taught well in schools
  - Online services provided by the city has made it easier to start a new business
  - The current internet speed and reliability meet connectivity needs



Score

0

20

40

60

80

100

56.5

34.7

38.9

55.1

## Governance

- Governance**
  - Online public access to city finances has reduced corruption
  - Online voting has increased participation
  - An online platform where residents can propose ideas has improved city life
  - Processing Identification Documents online has reduced waiting times



Score

0

20

40

60

80

100

28.1

29.9

33.1

46.3

All ratings range  
from AAA to D

# Toronto

SMART  
CITY  
RANKING

**48**

Out of 141

31 out of 118  
in 2021

SMART  
CITY RATING

**BBB**

A in 2021

FACTOR  
RATINGS

**BBB**

STRUCTURES

**BBB**

TECHNOLOGIES

GROUP

**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 2,731,570  
(UN Data)

HDI 0.943

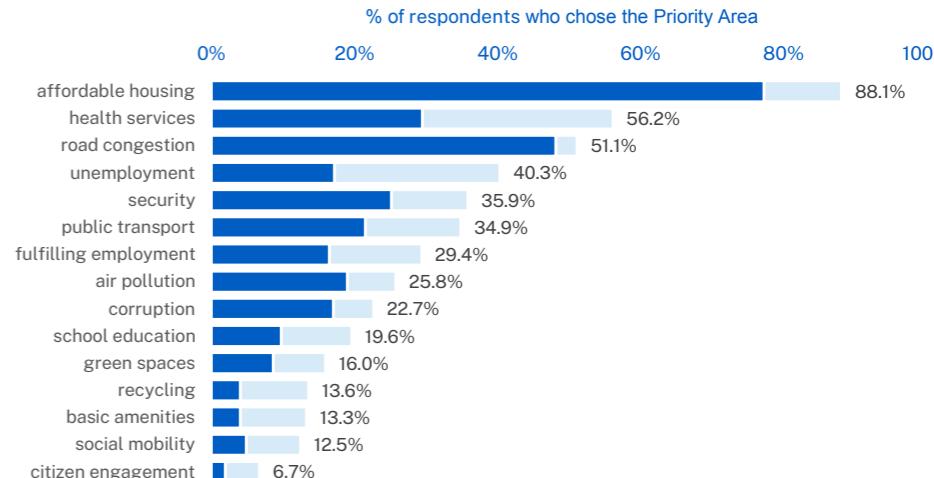


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.933	0.937	0.931	0.936	+0.005
Life expectancy at birth	82.1	82.4	82.1	82.7	+0.6
Expected years of schooling	16.2	16.4	16.4	16.4	+0.0
Mean years of schooling	13.8	8.7	8.8	8.8	+0.0
GNI per capita (PPP \$)	18,371	18,486	18,754	19,974	+1,220

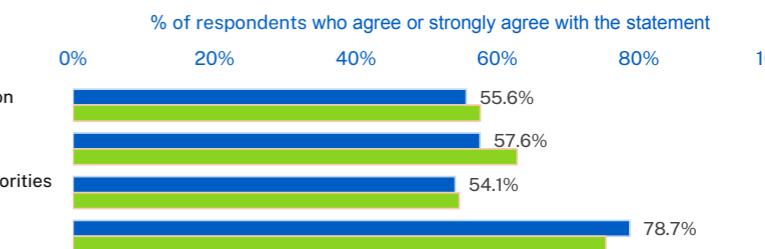
## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)



LEGEND: GROUP MEAN CITY

**BBB**

### STRUCTURES

#### STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

- Health & Safety**
  - Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem
- Mobility**
  - Traffic congestion is not a problem
  - Public transport is satisfactory

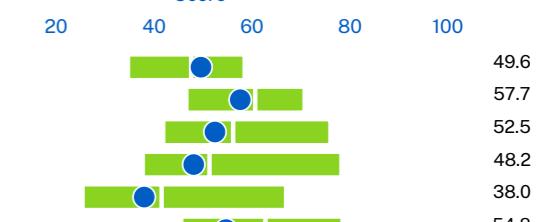
Score: 0 20 40 60 80 100



### TECHNOLOGIES

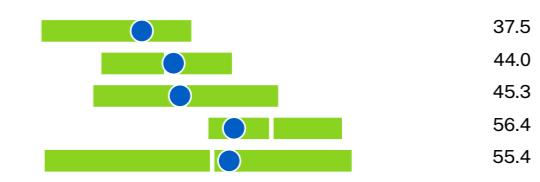
Score: 0 20 40 60 80 100

- Health & Safety**
  - Online reporting of city maintenance problems provides a speedy solution
  - A website or App allows residents to easily give away unwanted items
  - Free public wifi has improved access to city services
  - CCTV cameras has made residents feel safer
  - A website or App allows residents to effectively monitor air pollution
  - Arranging medical appointments online has improved access



### Mobility

- Mobility**
  - Car-sharing Apps have reduced congestion
  - Apps that direct you to an available parking space have reduced journey time
  - Bicycle hiring has reduced congestion
  - Online scheduling and ticket sales has made public transport easier to use
  - The city provides information on traffic congestion through mobile phones



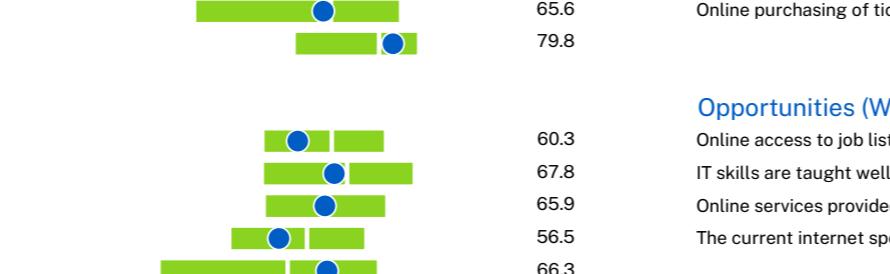
### Activities

- Activities**
  - Online purchasing of tickets to shows and museums has made it easier to attend



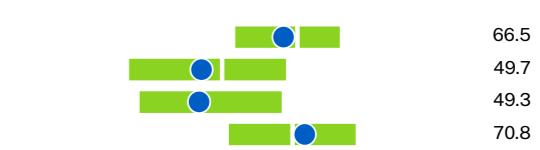
### TECHNOLOGIES

- Opportunities (Work & School)**
  - Employment finding services are readily available
  - Most children have access to a good school
  - Lifelong learning opportunities are provided by local institutions
  - Businesses are creating new jobs
  - Minorities feel welcome



### Opportunities (Work & School)

- Opportunities (Work & School)**
  - Online access to job listings has made it easier to find work
  - IT skills are taught well in schools
  - Online services provided by the city has made it easier to start a new business
  - The current internet speed and reliability meet connectivity needs



### Governance

- Governance**
  - Information on local government decisions are easily accessible
  - Corruption of city officials is not an issue of concern
  - Residents contribute to decision making of local government
  - Residents provide feedback on local government projects
  - Processing Identification Documents online has reduced waiting times



## SMART CITY RANKING

**137**

Out of 141

not out of 118  
in 2021

## SMART CITY RATING

**D**

not in 2021

## FACTOR RATINGS

**D**

STRUCTURES

**D**

TECHNOLOGIES

**4**

All ratings range  
from AAA to D

### BACKGROUND INFORMATION

#### City

Population      HDI  
2,439,404      0.775

(UN World Urbanisation Prospects 2022  
estimate)

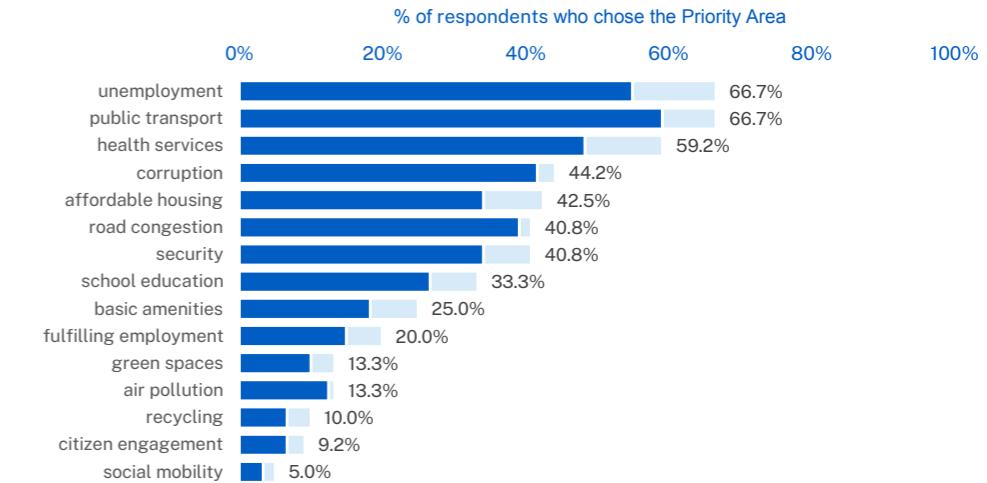


Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.743	0.745	0.737	0.731	-0.006
Life expectancy at birth	76.0	76.0	75.3	73.8	-1.5
Expected years of schooling	15.3	15.4	15.4	15.4	+0.0
Mean years of schooling	7.4	7.4	7.4	7.4	+0.0
GNI per capita (PPP \$)	11,027	10,910	10,046	10,258	+211

### PRIORITY AREAS

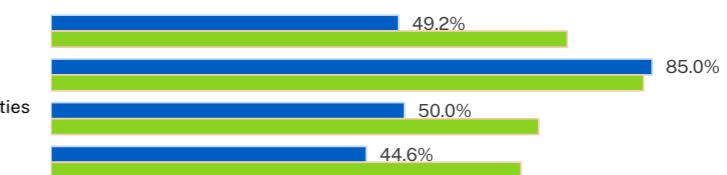
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



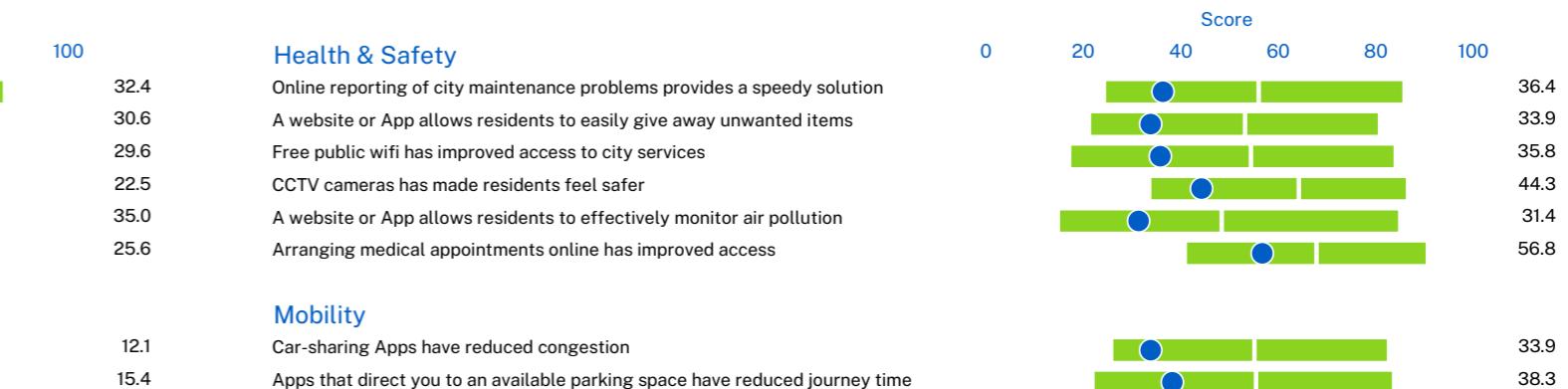
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

### STRUCTURES



### TECHNOLOGIES



### ACTIVITIES

Green spaces are satisfactory

Cultural activities (shows, bars, and museums) are satisfactory

### OPPORTUNITIES (WORK & SCHOOL)

Employment finding services are readily available

Most children have access to a good school

Lifelong learning opportunities are provided by local institutions

Businesses are creating new jobs

Minorities feel welcome

### Governance

Information on local government decisions are easily accessible

Corruption of city officials is not an issue of concern

Residents contribute to decision making of local government

Residents provide feedback on local government projects

# Vancouver

SMART  
CITY  
RANKING

**42**

Out of 141



28 out of 118  
in 2021

SMART  
CITY RATING

**A**

A in 2021

FACTOR  
RATINGS

**A**

STRUCTURES

**BBB**

TECHNOLOGIES

GROUP  
**1**

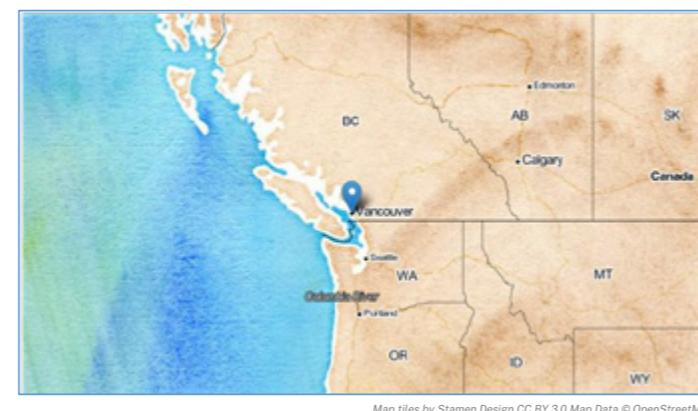
All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
631,490      0.944

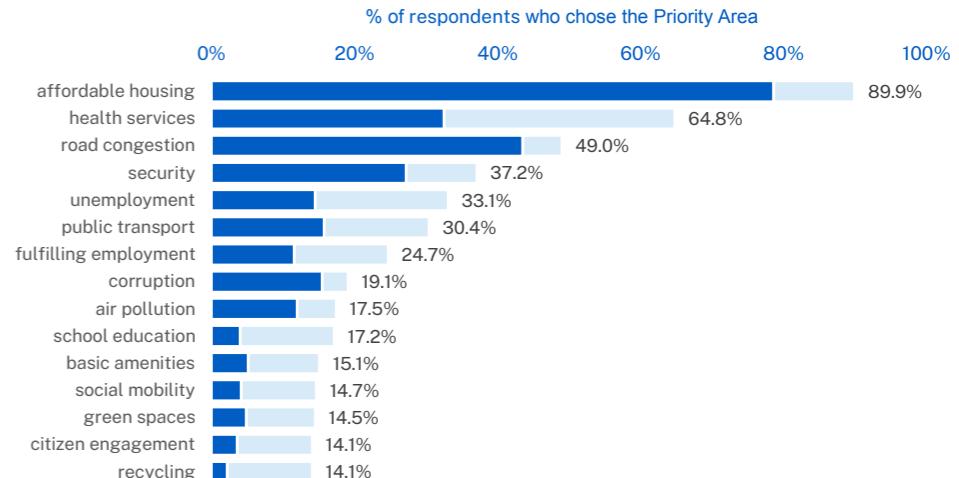
(UN Data)



Country	2018	2019	2020	2021	1 yr change
HDI	0.933	0.937	0.931	0.936	+0.005
Life expectancy at birth	82.1	82.4	82.1	82.7	+0.6
Expected years of schooling	16.2	16.4	16.4	16.4	+0.0
Mean years of schooling	13.8	8.7	8.8	8.8	+0.0
GNI per capita (PPP \$)	18,371	18,486	18,754	19,974	+1,220

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



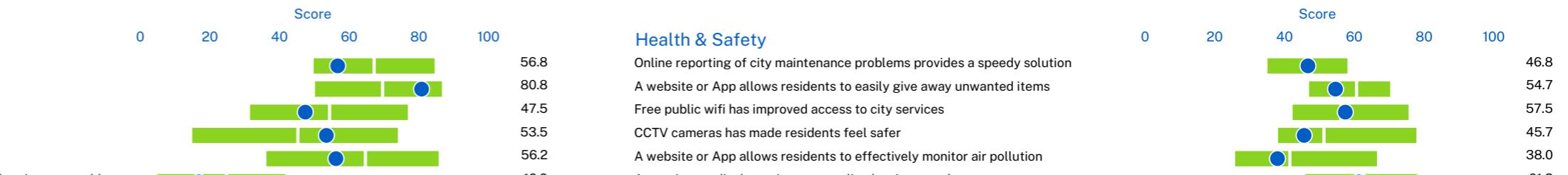
## ATTITUDES



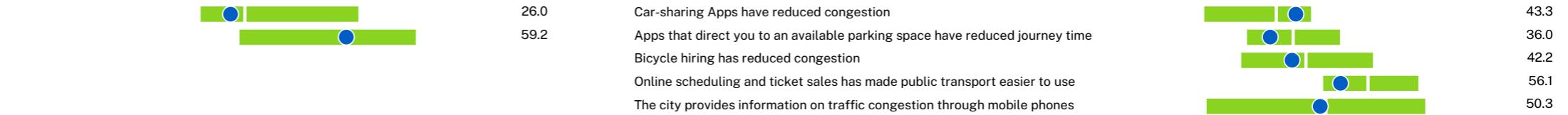
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

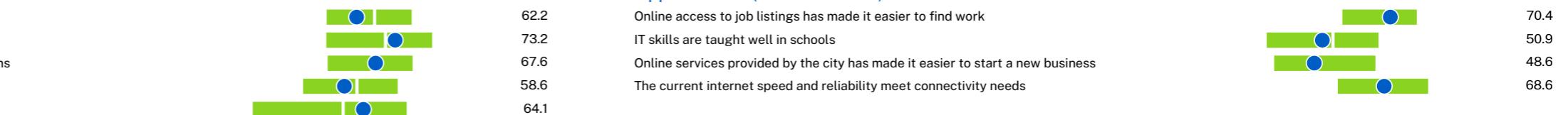
## STRUCTURES



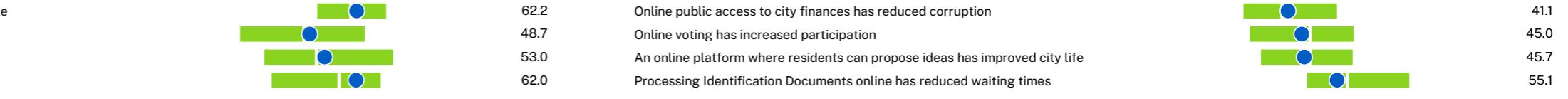
## ACTIVITIES



## OPPORTUNITIES (WORK & SCHOOL)



## Governance



# Vienna

SMART  
CITY  
RANKING

**28**

Out of 141

20 out of 118  
in 2021

SMART  
CITY RATING

**AA**

AA in 2021

FACTOR  
RATINGS

**AA**

STRUCTURES

**A**

TECHNOLOGIES

GROUP  
**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
1,920,949      0.942

(Eurostat)



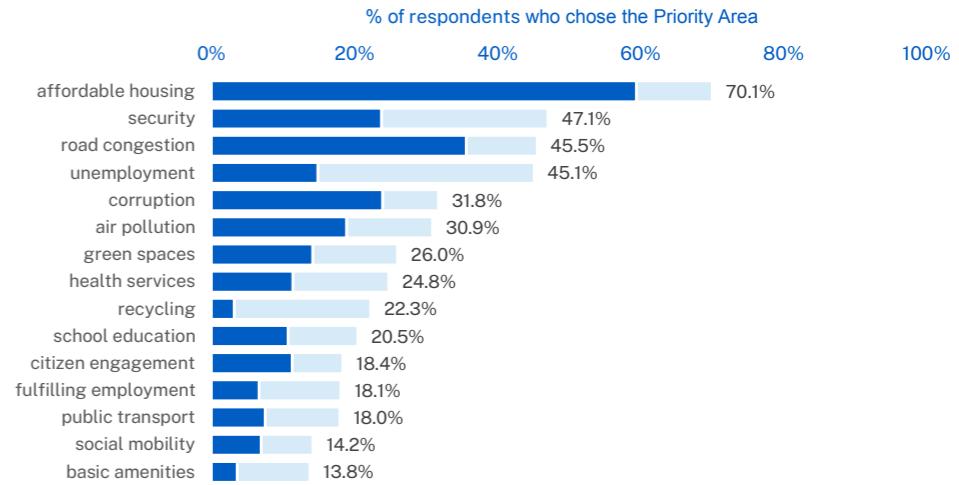
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

Country	2018	2019	2020	2021	1 yr change
HDI	0.914	0.922	0.913	0.916	+0.003
Life expectancy at birth	81.4	81.5	81.5	81.6	+0.1
Expected years of schooling	16.3	16.1	16.0	16.0	+0.0
Mean years of schooling	12.6	12.5	12.3	12.3	+0.0
GNI per capita (PPP \$)	46,231	56,197	51,574	53,619	+2,044

## PRIORITY AREAS

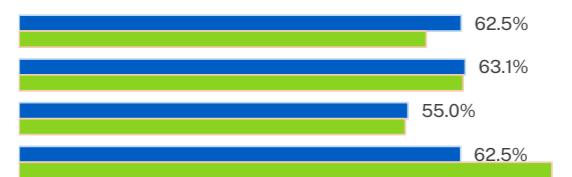
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



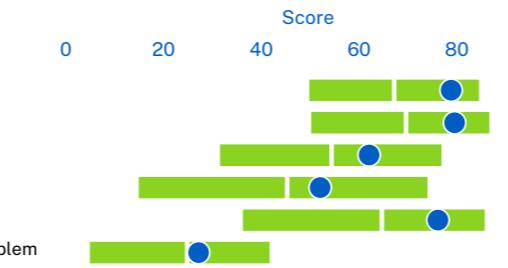
LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



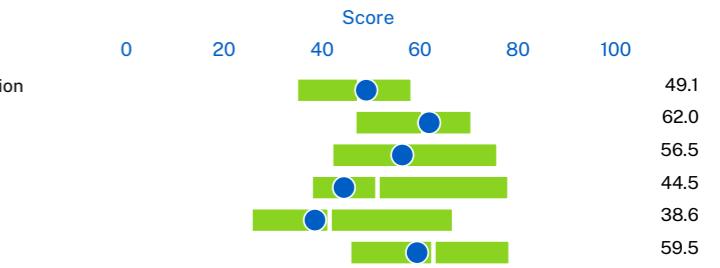
### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES

### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory
- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



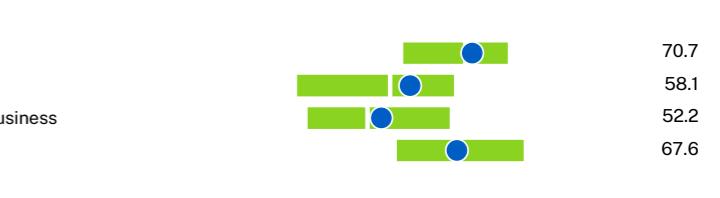
### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory
- Online purchasing of tickets to shows and museums has made it easier to attend



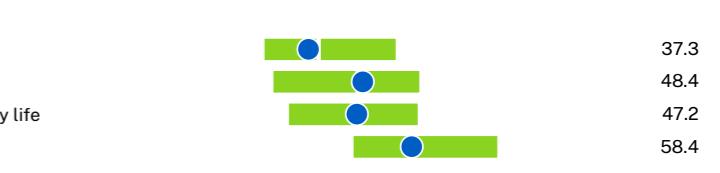
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome
- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects
- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



## SMART CITY RANKING

**65**

Out of 141

not out of 118  
in 2021

## SMART CITY RATING

**BB**

not in 2021

## FACTOR RATINGS

**BB**

## TECHNOLOGIES

**BBB**

## GROUP 2

All ratings range  
from AAA to D

### BACKGROUND INFORMATION

#### City

Population      HDI  
829,983      0.913  
(Eurostat)



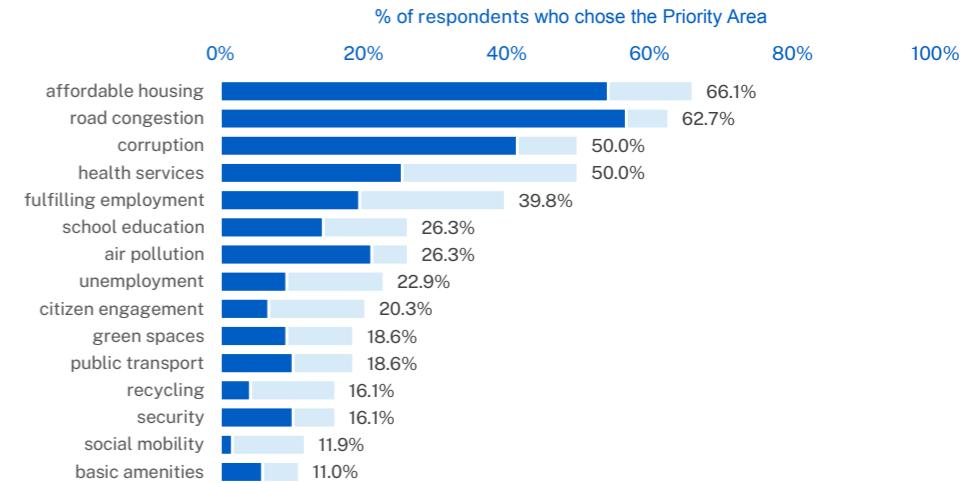
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

#### Country

	2018	2019	2020	2021	1 yr change
HDI	0.880	0.884	0.879	0.875	-0.004
Life expectancy at birth	75.7	76.2	75.1	73.7	-1.3
Expected years of schooling	16.6	16.3	16.3	16.3	+0.0
Mean years of schooling	13.3	13.4	13.5	13.5	+0.0
GNI per capita (PPP \$)	33,963	35,705	36,077	37,931	+1,855

### PRIORITY AREAS

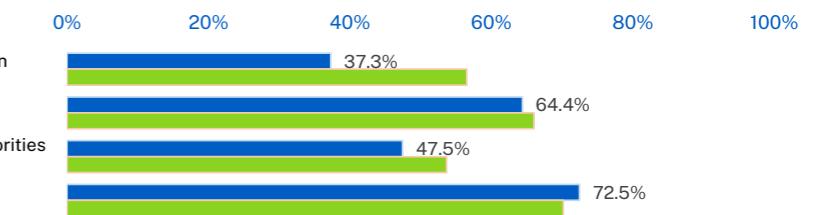
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

### STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

#### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem

Score

0 20 40 60 80 100

71.8 75.3 59.5 46.6 57.2 27.3

#### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory

#### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

Score

0 20 40 60 80 100

53.5 73.9 64.0 59.2 56.5 60.2

#### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory

#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

Score

0 20 40 60 80 100

37.4 47.9 42.9 75.8 55.4

#### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome

#### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

Score

0 20 40 60 80 100

76.1 67.2 56.2 78.2

#### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

#### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

Score

0 20 40 60 80 100

35.3 43.8 46.8 66.5



# Washington D.C.

SMART  
CITY  
RANKING

**39**

Out of 141

26 out of 118  
in 2021

SMART  
CITY RATING

**BB**

A in 2021

FACTOR  
RATINGS

**BB**

STRUCTURES

**BB**

TECHNOLOGIES

**2**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
689,545      0.940

(UN Data)

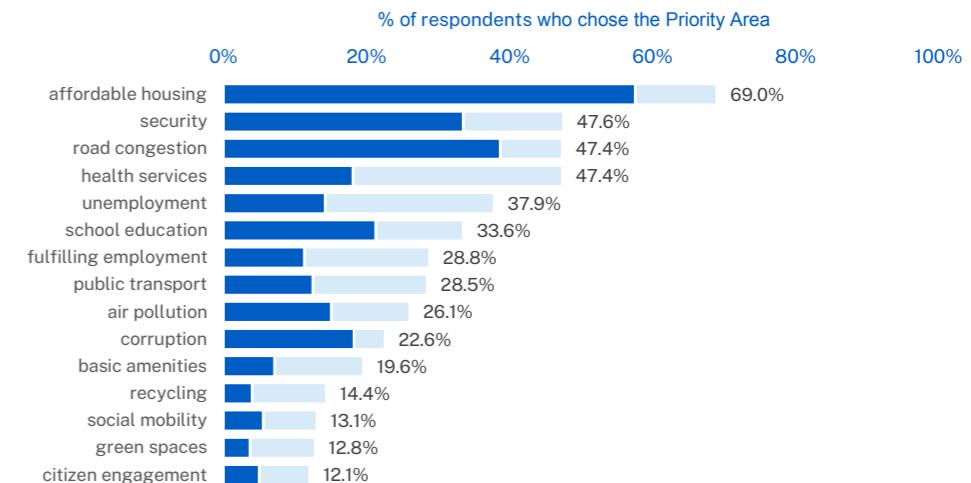


### Country

	2018	2019	2020	2021	1 yr change
HDI	0.920	0.926	0.920	0.921	+0.001
Life expectancy at birth	78.9	78.9	77.4	77.2	-0.2
Expected years of schooling	16.3	16.3	16.3	16.3	+0.0
Mean years of schooling	13.4	13.4	13.7	13.7	+0.0
GNI per capita (PPP \$)	56,140	63,826	61,462	64,765	+3,304

## PRIORITY AREAS

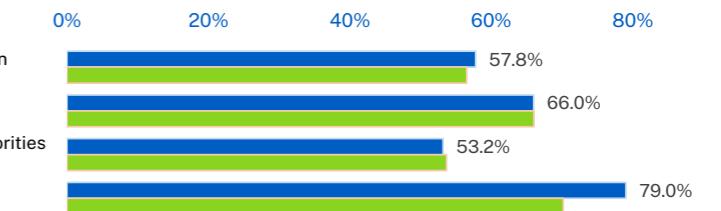
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

You are willing to concede personal data in order to improve traffic congestion  
You are comfortable with face recognition technologies to lower crime  
You feel the availability of online information has increased your trust in authorities  
The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

Score

0 20 40 60 80 100

### Health & Safety

Basic sanitation meets the needs of the poorest areas  
Recycling services are satisfactory  
Public safety is not a problem  
Air pollution is not a problem  
Medical services provision is satisfactory  
Finding housing with rent equal to 30% or less of a monthly salary is not a problem

### Health & Safety

Online reporting of city maintenance problems provides a speedy solution  
A website or App allows residents to easily give away unwanted items  
Free public wifi has improved access to city services  
CCTV cameras has made residents feel safer  
A website or App allows residents to effectively monitor air pollution  
Arranging medical appointments online has improved access

Score

0 20 40 60 80 100

### Mobility

Traffic congestion is not a problem  
Public transport is satisfactory

### Mobility

Car-sharing Apps have reduced congestion  
Apps that direct you to an available parking space have reduced journey time  
Bicycle hiring has reduced congestion  
Online scheduling and ticket sales has made public transport easier to use  
The city provides information on traffic congestion through mobile phones

Score

0 20 40 60 80 100

### Activities

Green spaces are satisfactory  
Cultural activities (shows, bars, and museums) are satisfactory

### Activities

Online purchasing of tickets to shows and museums has made it easier to attend

Score

0 20 40 60 80 100

### Opportunities (Work & School)

Employment finding services are readily available  
Most children have access to a good school  
Lifelong learning opportunities are provided by local institutions  
Businesses are creating new jobs  
Minorities feel welcome

### Opportunities (Work & School)

Online access to job listings has made it easier to find work  
IT skills are taught well in schools  
Online services provided by the city has made it easier to start a new business  
The current internet speed and reliability meet connectivity needs

Score

0 20 40 60 80 100

### Governance

Information on local government decisions are easily accessible  
Corruption of city officials is not an issue of concern  
Residents contribute to decision making of local government  
Residents provide feedback on local government projects

### Governance

Online public access to city finances has reduced corruption  
Online voting has increased participation  
An online platform where residents can propose ideas has improved city life  
Processing Identification Documents online has reduced waiting times

Score

0 20 40 60 80 100

# Wellington

SMART  
CITY  
RANKING

**23**

Out of 141

not out of 118  
in 2021

SMART  
CITY RATING

**A**

not in 2021

FACTOR  
RATINGS

**A**

STRUCTURES

**BBB**

TECHNOLOGIES

GROUP

**1**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population      HDI  
201,786      0.958

(UN Data)

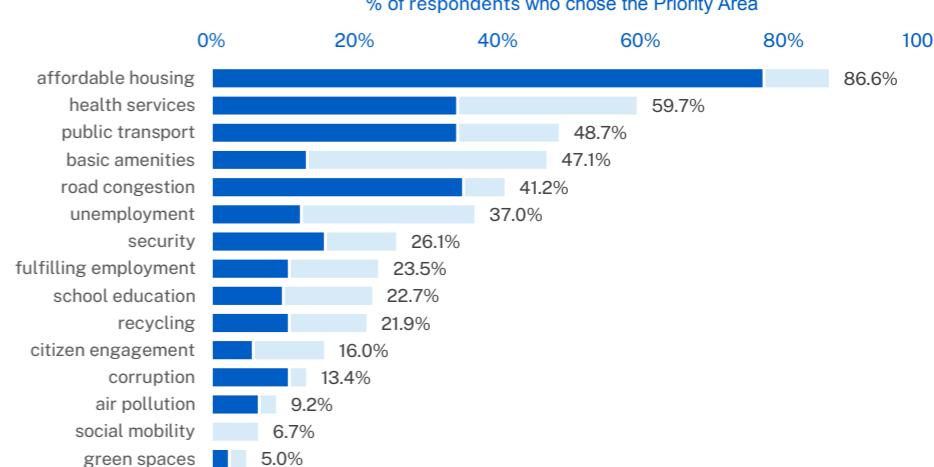


Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

Country	2018	2019	2020	2021	1 yr change
HDI	0.936	0.937	0.936	0.937	+0.001
Life expectancy at birth	82.4	82.6	82.7	82.5	-0.3
Expected years of schooling	18.0	18.0	18.0	18.0	+0.0
Mean years of schooling	13.1	7.9	8.7	8.7	+0.0
GNI per capita (PPP \$)	16,129	17,781	16,804	17,030	+226

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement

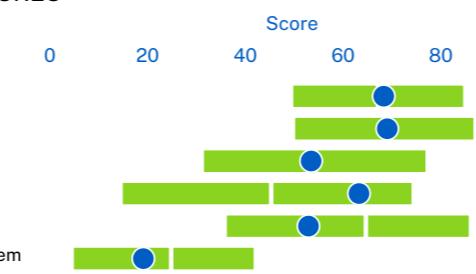


LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

## STRUCTURES

- ### Health & Safety
- Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



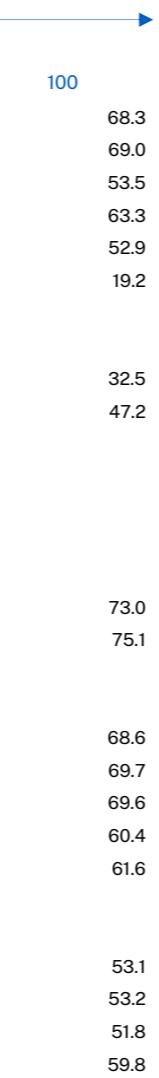
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Governance

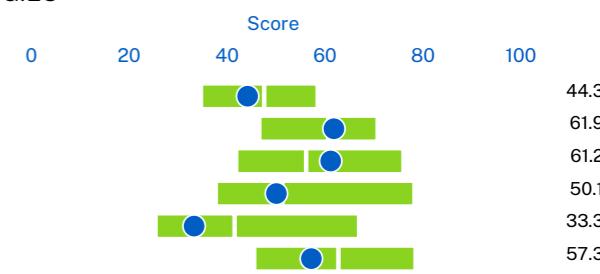
- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



## TECHNOLOGIES

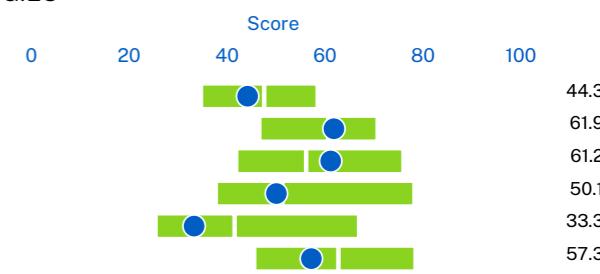
### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



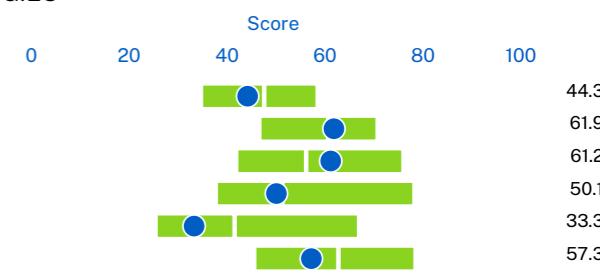
### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



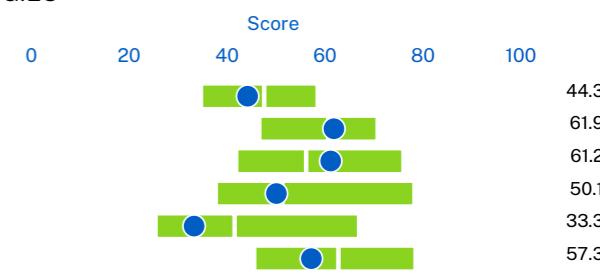
### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



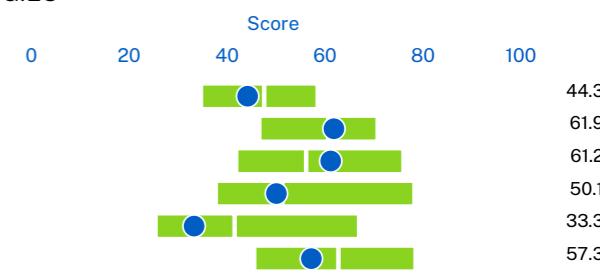
### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



## SMART CITY RANKING

**106**

Out of 141

not out of 118  
in 2021

## SMART CITY RATING

**CCC**

not in 2021

## FACTOR RATINGS

**B**

STRUCTURES

**CCC**

TECHNOLOGIES

## GROUP

**2**

All ratings range  
from AAA to D

### BACKGROUND INFORMATION

#### City

Population      HDI  
809,235      0.916

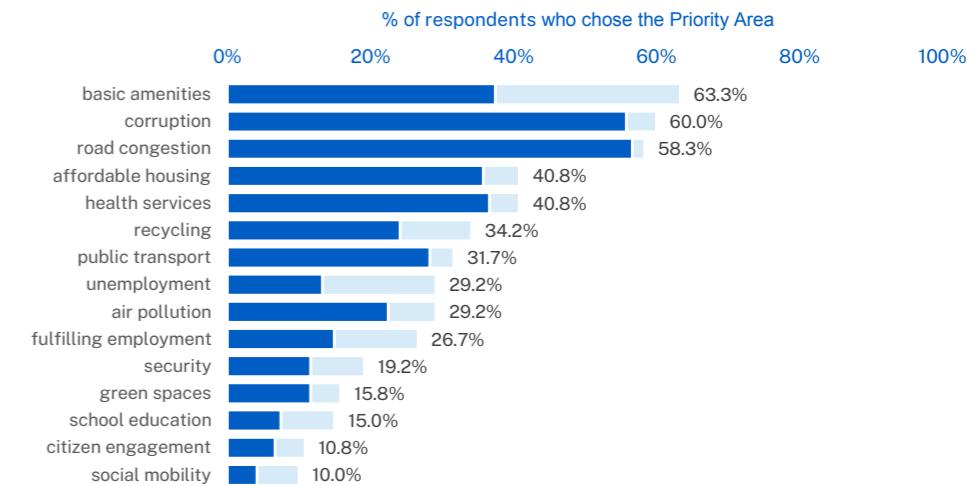
(Eurostat)



Country	2018	2019	2020	2021	1 yr change
HDI	0.856	0.861	0.855	0.858	+0.003
Life expectancy at birth	78.3	78.7	78.0	77.6	-0.4
Expected years of schooling	15.2	15.1	15.1	15.1	+0.0
Mean years of schooling	12.1	12.2	12.2	12.2	+0.0
GNI per capita (PPP \$)	27,784	28,898	27,185	30,132	+2,947

### PRIORITY AREAS

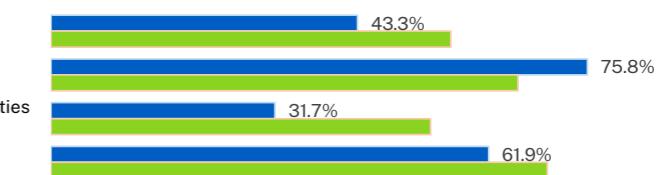
From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

### STRUCTURES

- #### Health & Safety
- Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem



#### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



#### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



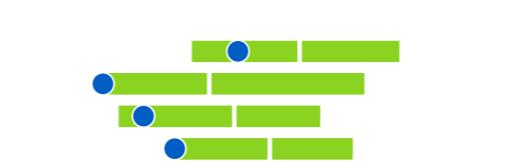
#### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



#### Governance

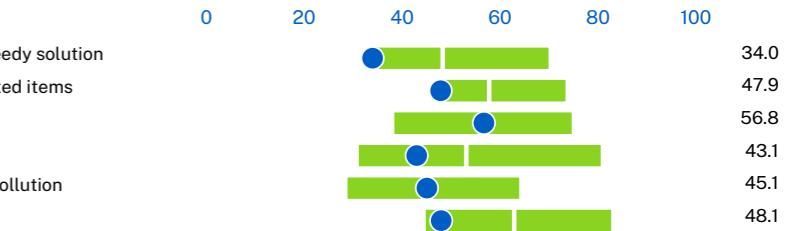
- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### TECHNOLOGIES

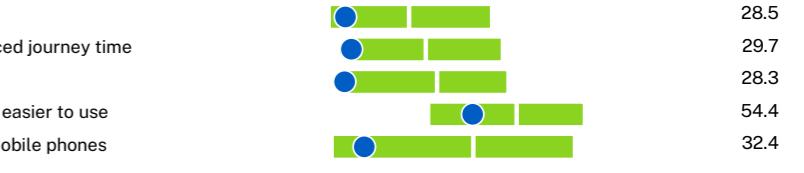
#### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access



#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



#### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



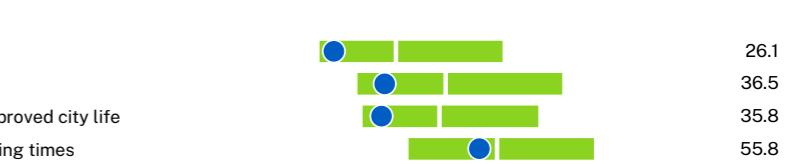
#### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



#### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



# Zaragoza

SMART  
CITY  
RANKING

**54**

Out of 141

51 out of 118  
in 2021

SMART  
CITY RATING

**CCC**

CCC in 2021

FACTOR  
RATINGS

**B**

STRUCTURES

**CC**

TECHNOLOGIES

GROUP

**3**

All ratings range  
from AAA to D

## BACKGROUND INFORMATION

### City

Population 1,331,133  
(Eurostat)



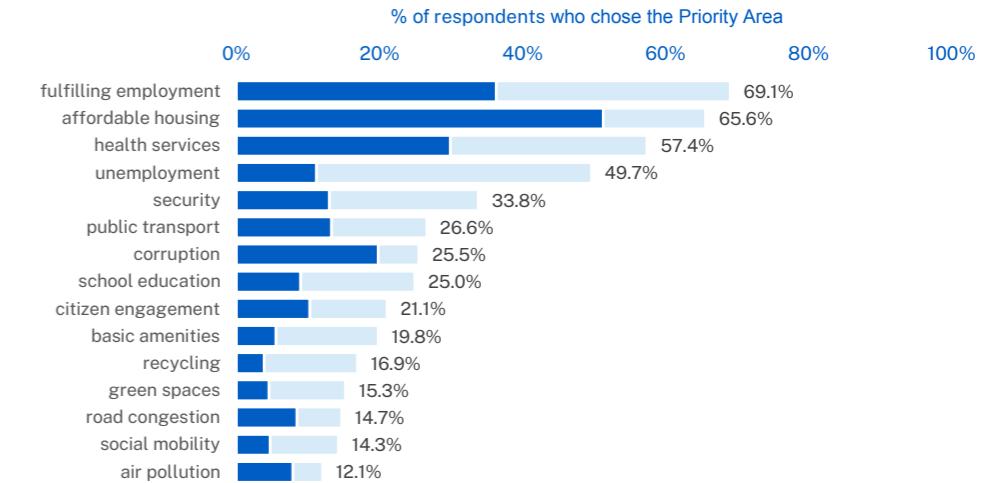
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

### Country

	2018	2019	2020	2021	1 yr change
HDI	0.893	0.904	0.899	0.905	+0.006
Life expectancy at birth	83.4	83.6	82.3	83.0	+0.7
Expected years of schooling	17.9	17.6	17.9	17.9	+0.0
Mean years of schooling	9.8	10.3	10.6	10.6	+0.0
GNI per capita (PPP \$)	35,041	40,975	36,516	38,354	+1,838

## PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



## ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

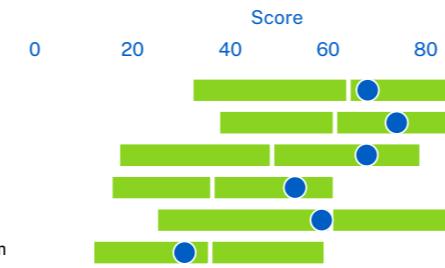
STRUCTURES

## STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

### Health & Safety

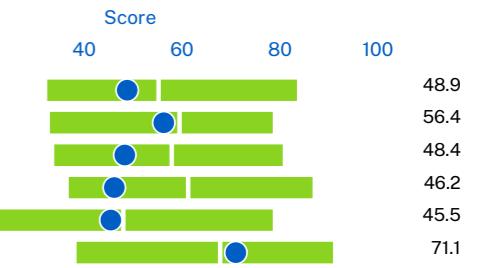
- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

## TECHNOLOGIES



### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



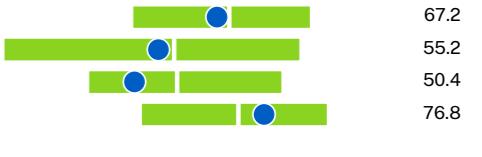
### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times



## SMART CITY RANKING

**60**

Out of 141



52 out of 118  
in 2021

## SMART CITY RATING

**CCC**

CCC in 2021

## FACTOR RATINGS

**CCC**

STRUCTURES

**CCC**

TECHNOLOGIES

## GROUP

**4**

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population 1,847,411  
HDI 0.799

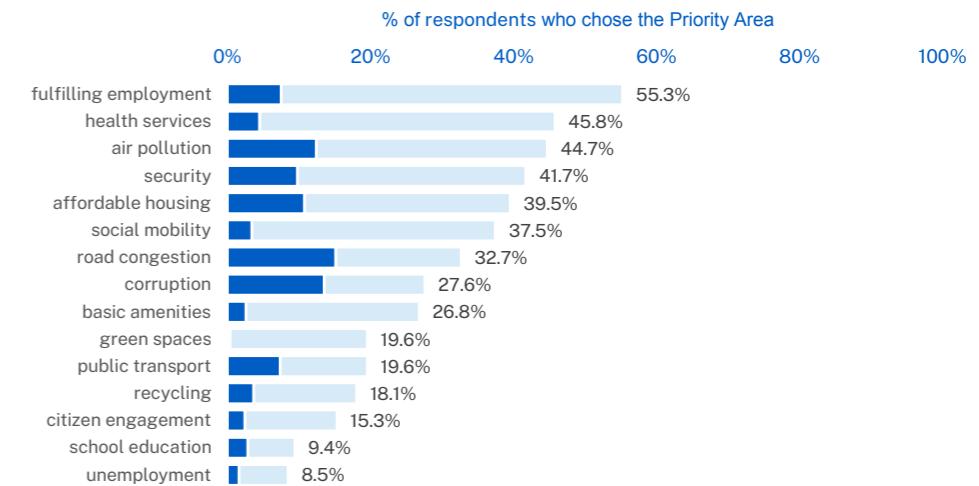
(UN World Urbanisation Prospects 2022 estimate)



Country	2018	2019	2020	2021	1 yr change
HDI	0.758	0.761	0.764	0.768	+0.004
Life expectancy at birth	76.7	76.9	78.1	78.2	+0.1
Expected years of schooling	13.9	14.0	14.2	14.2	+0.0
Mean years of schooling	7.9	8.1	7.6	7.6	+0.0
GNI per capita (PPP \$)	16,127	16,057	16,201	17,504	+1,303

### PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES

- You are willing to concede personal data in order to improve traffic congestion
- You are comfortable with face recognition technologies to lower crime
- You feel the availability of online information has increased your trust in authorities
- The proportion of your day-to-day payment transactions that are non-cash (% of transactions)

% of respondents who agree or strongly agree with the statement



LEGEND: GROUP MEAN CITY

LEGEND: MIN CITY MEAN GROUP MAX

### STRUCTURES

- #### Health & Safety
- Basic sanitation meets the needs of the poorest areas
  - Recycling services are satisfactory
  - Public safety is not a problem
  - Air pollution is not a problem
  - Medical services provision is satisfactory
  - Finding housing with rent equal to 30% or less of a monthly salary is not a problem



#### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



#### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



#### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



#### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects

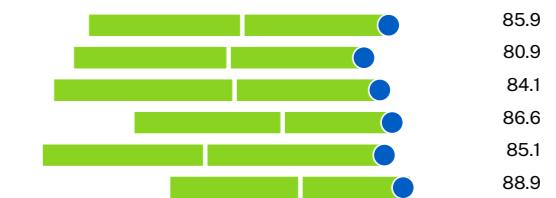


### TECHNOLOGIES

#### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

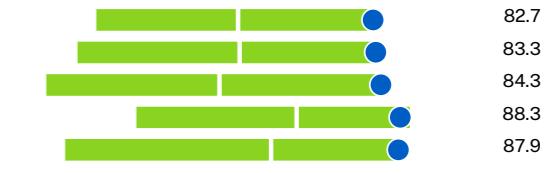
Score



#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones

Score



#### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend

Score



#### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs

Score



#### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

Score



## SMART CITY RANKING

1

Out of 141

1 out of 118  
in 2021

## SMART CITY RATING

**AAA**

AAA in 2021

## FACTOR RATINGS

**AAA**

## STRUCTURES

**A**

## TECHNOLOGIES

## GROUP 1

All ratings range from AAA to D

### BACKGROUND INFORMATION

#### City

Population 1,553,423 HDI 0.989  
(Eurostat)



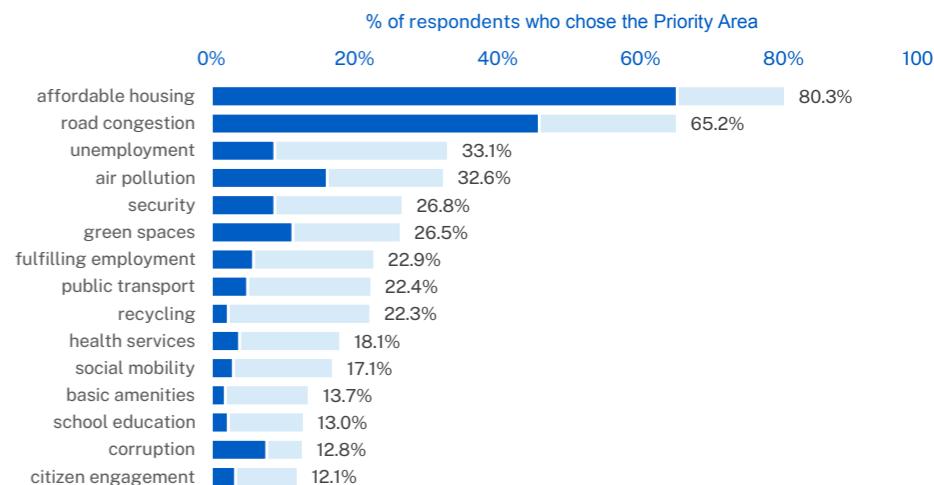
Map tiles by Stamen Design CC BY 3.0 Map Data © OpenStreetMap

#### Country

	2018	2019	2020	2021	1 yr change
HDI	0.946	0.955	0.956	0.962	+0.006
Life expectancy at birth	83.6	83.8	83.1	84.0	+0.9
Expected years of schooling	16.2	16.3	16.5	16.5	+0.0
Mean years of schooling	13.4	13.4	13.9	13.9	+0.0
GNI per capita (PPP \$)	59,375	69,394	65,011	66,933	+1,922

### PRIORITY AREAS

From a list of 15 indicators, survey respondents were asked to select 5 that they perceived as the most urgent for their city. This is the total bar. The higher the percentage of responses per area, the greater the priority for the city.



### ATTITUDES



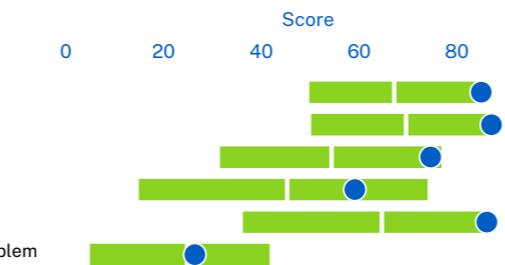
LEGEND: GROUP MEAN CITY

### STRUCTURES

LEGEND: MIN CITY MEAN GROUP MAX

#### Health & Safety

- Basic sanitation meets the needs of the poorest areas
- Recycling services are satisfactory
- Public safety is not a problem
- Air pollution is not a problem
- Medical services provision is satisfactory
- Finding housing with rent equal to 30% or less of a monthly salary is not a problem



#### Health & Safety

- Online reporting of city maintenance problems provides a speedy solution
- A website or App allows residents to easily give away unwanted items
- Free public wifi has improved access to city services
- CCTV cameras has made residents feel safer
- A website or App allows residents to effectively monitor air pollution
- Arranging medical appointments online has improved access

### TECHNOLOGIES



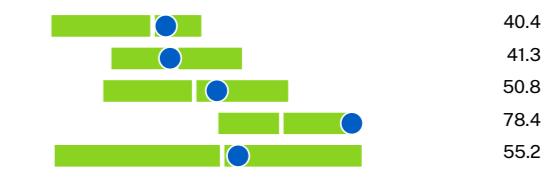
#### Mobility

- Traffic congestion is not a problem
- Public transport is satisfactory



#### Mobility

- Car-sharing Apps have reduced congestion
- Apps that direct you to an available parking space have reduced journey time
- Bicycle hiring has reduced congestion
- Online scheduling and ticket sales has made public transport easier to use
- The city provides information on traffic congestion through mobile phones



#### Activities

- Green spaces are satisfactory
- Cultural activities (shows, bars, and museums) are satisfactory



#### Activities

- Online purchasing of tickets to shows and museums has made it easier to attend



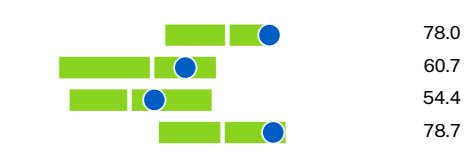
#### Opportunities (Work & School)

- Employment finding services are readily available
- Most children have access to a good school
- Lifelong learning opportunities are provided by local institutions
- Businesses are creating new jobs
- Minorities feel welcome



#### Opportunities (Work & School)

- Online access to job listings has made it easier to find work
- IT skills are taught well in schools
- Online services provided by the city has made it easier to start a new business
- The current internet speed and reliability meet connectivity needs



#### Governance

- Information on local government decisions are easily accessible
- Corruption of city officials is not an issue of concern
- Residents contribute to decision making of local government
- Residents provide feedback on local government projects



#### Governance

- Online public access to city finances has reduced corruption
- Online voting has increased participation
- An online platform where residents can propose ideas has improved city life
- Processing Identification Documents online has reduced waiting times

