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15-minute cities: How to develop people-centred streets and mobility

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Pursuing a 15-minute city strategy means reimagining streets and public space in neighbourhoods across the city in a way that benefits local people of all backgrounds, ages and abilities. It means reclaiming space for people not driving to build thriving neighbourhoods with vibrant main streets, where walking and cycling are the main ways of getting around. This article looks at actions that cities can take to design people-centred streets, space and mobility as a key principle of the 15-minute city, drawing on the good-practice ideas and experience of cities leading the charge, as well as research on *Green and thriving neighbourhoods* by Arup and C40.

The 15-minute city integrates a set of four complementary, overlapping principles for people-centred urban development. It ties together and builds on strands of equitable urban climate action to create a model that helps to build more liveable, human-scale cities – prioritising the most underserved neighbourhoods and disadvantaged groups. Already, there are cities adopting this approach around the world; every city can join them. Read about [what the 15-minute city offers](#), [about common myths and misunderstandings](#), and our [series of four articles on how to design and implement a 15-minute city strategy](#). Also find relevant policies and initiatives in our [15-minute city initiatives explorer](#).

Inject life into streets by reclaiming space for social, community-building and productive uses

Coupled with street upgrades to encourage walking and cycling (see below) and investing in public transport to support longer journeys, the vast amount of space currently devoted to car-based travel and storing private vehicles can be transformed to create lively, people-centred streets. The space can be used for outdoor dining, green parks and more for the benefit of local people, community events, entrepreneurs and businesses. Street transformations can happen quickly, cheaply and with little risk through 'tactical urbanism'. Consider setting targets for long-lasting change – for example, a percentage of streets to be pedestrianised or upgraded to prioritise those not driving, or a number of square kilometres of new public space.

- **Enable businesses, non-profits and residents to transform their on- and off-street parking spaces.** When parking spaces belong to the owners/tenants of neighbouring buildings, transformation for alternative use – be it commercial or residential – is often most keenly accepted when they have the chance to use the space themselves. To support this idea, cities can publicise the opportunity, waive permitting fees, develop standards and guidelines, and more. *Ideas to Accelerate Parking Reform* looks at ways to update parking policies for cleaner, more equitable cities (focusing on the United States).
- **Work with local residents and businesses to transform larger car-dominated spaces.** Hundreds of cities around the world have already transformed streets into safe, attractive and economically vibrant places that put people first. Streets designed with children in mind, as the most vulnerable users, are more likely to be successful spaces for people of all ages and abilities. *Designing Streets for Kids*, a detailed guide by the Global Designing Cities Institute which builds on the *Global Street Design Guide*, and Arup's *Cities Alive: Designing for Urban Childhoods* include advice and examples from cities around the world. Large-scale street transformations will typically be most successful when implemented as part of a citywide, City-led strategy that engages strongly with local people. Good examples include Vancouver's Pop-Up Plazas, Barcelona's Superblocks and Milan's Piazze Aperte programme (see below).
- **Organise events to temporarily reclaim spaces from cars for seasonal, occasional or weekend recreational, sporting or cultural activities.** This is a form of tactical urbanism and can help to gather support and practical experience for permanent change. For instance, Addis Ababa's popular monthly car-free days turn over roads in the heart of the city to pedestrians, cyclists, skateboarders, group exercise events and more. The events have helped to pave the way for investment in cycling infrastructure, and other cities in Ethiopia are now organising their own car-free days.¹ Kigali's car-free day, which began as a monthly event in 2016, became fortnightly in 2017 thanks to its popularity with residents of all ages and backgrounds.² Events can work on a parking-space scale, too. PARK(ing) Day is an annual event where, in participating cities, people are encouraged to convert street parking spaces into small parks. The event started in 2005 in San Francisco, where it inspired the City's Pavement to Parks initiative and subsequent Places for People ordinance, and has since

been adopted by cities including Krakow, Pittsburgh, Hamburg and Seattle.³



Cities can also **activate building frontages at street level on neighbourhood main streets**. Streets flanked by buildings with active frontages, which are in use throughout the day and week, help to create pleasant, lived-in streets for pedestrians and support the local economy. Cities can update planning rules, promote the flexible use of these spaces throughout the day and week, and encourage temporary activation through ‘meanwhile’ uses or ‘temporary urbanism’. These approaches are all explained in *[How to build a 15-minute city: creating complete neighbourhoods](#)*.

Consider repurposing multi-storey car-parks

On-street parking is usually the most visible and valuable space for injecting life into streets, and cities can prioritise these parking spaces for active uses. However, as reliance on private cars declines – and to encourage drivers to shift to other modes of transport – large car-parking buildings can also be repurposed for active, productive use. Alternative uses already implemented in cities include [last-mile logistics hubs](#), cultural or event spaces, bike parking, rooftop gardens and data-processing centres. Read *[How to build a 15-minute city: creating complete neighbourhoods](#)* and follow the links for more on using [infill](#), [redevelopment](#) and the [flexible or temporary use of space](#) to help neighbourhoods thrive.

Milan has created new, popular public squares from space once dedicated to cars

The City of Milan established the [Piazze Aperte](#) (Open Plazas) programme in 2018 to accelerate the creation of public spaces, after the Milan 2030 Master Plan and Neighbourhoods Plan identified an immediate need for more, better-quality public spaces. Early survey results for one of the first, Piazza Dergano, found that an overwhelming 84% of people would like the redesigned space to become permanent. Building on this early success and in reaction to the COVID-19 pandemic, the programme ramped up in 2020, creating another 15 piazzas.

Green the streets and expand green public space in every neighbourhood

High-quality green space is an essential component of a ‘complete neighbourhood’; a 15-minute city strategy should aim to ensure that everyone is able to access open green space within a short walk or cycle from home. Green spaces, especially large green spaces, boost both mental and physical wellbeing, provide space for social and community activities and create more enjoyable routes for walking or cycling. Green space also reduces the risks associated with [heat](#), flooding and drought, sequesters carbon



As well as repurposing parking for on-street greenery and parklets, cities can expand green space on a larger scale and improve its quality by:

- **Reclaiming vacant plots and underutilised space.** Disused or underutilised plots can be a way to create larger areas of green space within dense urban areas, particularly in lower-income neighbourhoods. Buenos Aires, for instance, transformed a disused urban landfill into a wetland nature reserve. Since the 1970s, in New York City more than 500 abandoned lots across all five boroughs have been transformed into community gardens though the city-run GreenThumb initiative, with the support of volunteers.
- **Upgrade existing green spaces to better serve the needs of the city and community.** Higher-quality spaces with more vegetation, benches, outdoor sport facilities and other infrastructure will deliver bigger benefits. Examples include Portland's restoration of Crystal Springs Creek floodplain as parkland and the transformation of an underused lawn into a multi-purpose community garden in Gladsaxe, Denmark. Buenos Aires has pedestrianised the streets around parks to increase public space, like the streets beside the Plaza Parques Nacionales Argentinos in the photograph below, as part of a suite of pedestrian and bike infrastructure improvements. Temporary ‘meanwhile’ uses of vacant plots and the flexible use of underutilised spaces can also help, as Paris is doing by opening school grounds to the public as small neighbourhood parks. Read more about ‘meanwhile’ and flexible uses in How to build a 15-minute city: creating complete neighbourhoods.



- **Implementing neighbourhood and/or citywide schemes to plant trees and vegetation.** The City of Melbourne's guide, *How to grow an urban forest*, offers advice on expanding and maintaining tree cover, while the *Urban Street Stormwater Guide* focuses on street-level green infrastructure (particularly in flood-prone areas). Cities can also introduce bylaws and guidance to convert roofs to green roofs. Read the City of Barcelona's *Guide to living terrace roofs and green roofs* for more information. Other good examples include Singapore's *One Million Trees* project, which will see a million trees planted in the decade to 2030, and Tallinn's plan to transform a power-line air-cable network into a 13.5-kilometre 'pollinator' corridor, linking neighbourhoods with green space reserved for pedestrians and cyclists.
- **Engaging local people to develop green spaces that meet local needs.** Take a neighbourhood-level approach to expanding and upgrading green spaces in collaboration with local people. Areas with young families will need more children's playgrounds, for example. Ottawa, for instance, opened a park tailored to the needs of elderly people, which prioritises accessibility, social seating areas and space for low-impact sports.⁴

Use tactical urbanism to help people imagine how their neighbourhood could change

'Tactical' or 'user-generated' urbanism means making temporary or removable and low-cost changes to



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reshape streets and road space, creating more space for urban life and for active travel. It can be a cheap and engaging way for cities to pilot and refine new ideas for the use of space in collaboration with local people and to introduce initiatives in new neighbourhoods to support city-wide implementation. Common temporary, ‘tactical’ uses of street and road space include pop-up bike lanes, parklets, playstreets and ‘streeteries’, implemented using reversible paint, street furniture, tree planters and other movable props. Countless cities widened pathways and converted parking bays to provide space for people to shop, dine and more during the pandemic. The Arup guide to Tactical Urbanism introduces things to get right for effective tactical urbanism installations, and ITDP’s From Pilot to Permanent looks at how to scale tactical urbanism using lessons from the Global South. For more advice, read How to enable temporary use to activate your city.

Design streets, including neighbourhood streets, for active travel by all

This means investing in infrastructure that makes streets more pleasant, safe and accessible for pedestrians and cyclists: wider sidewalks, more street crossings, secure bike parking, protected cycling infrastructure, reduced vehicle speed limits, traffic-light priority for pedestrians and cyclists, and more. Reclaiming road space and on-road parking spaces is a way to build this infrastructure while making driving into and around a city less attractive. How to achieve a walking and cycling transformation in your city details the infrastructure, as well as initiatives, that can help to increase the walking and cycling mode share citywide, while How to grow cycling by improving equity and accessibility focuses on infrastructure and initiatives that can support people of all ages and abilities to travel by bike.

Most existing pedestrian infrastructure is not built for caregivers travelling with children or for physically disabled people, and most city-bike facilities are designed to suit confident and experienced riders, who tend to be adult male commuters.⁵ **A 15-minute city strategy (as with good, equitable walking and cycling investments generally) must also develop neighbourhood-focused walking and cycling infrastructure to serve local trips by people of all ages and abilities.**

As well as commuter and arterial routes, a network of quality, well-connected pedestrian routes and cycleways is needed within and between neighbourhoods. Cities should improve the quality of permanent walking and cycling infrastructure, plug gaps in existing networks and expand cycle routes to city periphery and underserved areas. This will give more people better access to jobs, services and opportunities locally and across the city, and encourage the widespread use of pedestrian and cycling facilities. Cities can also consider working with neighbouring municipalities to develop connected, expansive networks, as 29 Danish municipalities have done.

Infrastructure introduced temporarily, for example that installed by countless cities during the pandemic, or through ‘tactical urbanism’ such as pop-up bike lanes, wider pedestrian space or modal filters that close roads to through traffic, can be made permanent. Examples of cities doing so include Seattle’s Stay Healthy Streets; Milan’s Piazze Aperte (see box); Bogotá’s extensive network of temporary bike lanes;

and Paris, which has made a commitment to extend cycling infrastructure to the city  English creating bike lanes on every street by 2024, as part of the city's 15-minute city strategy.⁶

Resources that can support cities in designing streets, particularly neighbourhood streets, for pedestrians and cyclists of all abilities include:

- *Pedestrians First: Tools for a walkable city*, which draws on examples from cities around the world to explain walkability assessment, design and policy recommendations at three levels: citywide, neighbourhood and street.
- *Growing Cycling: A toolkit to rapidly grow cycling in your city* is an online tool to help cities think through barriers that prevent people from cycling, and provides a tailored action plan to quickly grow and improve cycling.
- *Designing for all ages and abilities: contextual guidance for high-comfort bike facilities*, which sets out the common needs and considerations of different rider groups, as well as bikeway designs for a wide variety of urban street types that better serve them all.
- *Streets for Walking and Cycling: Designing for Safety, Accessibility and Comfort in African Cities* applies these designs and approaches for African city streets.

15-minute cities and zero-emission areas are complimentary approaches

Zero-emission areas (ZEA) (also known as low-emission zones, clean air zones, or similar) typically target transport emissions through policies to reduce the number of vehicles on the roads and to shift remaining vehicles to electric – including through street modifications, improved public transport connectivity and other measures that are also central to the 15-minute city. A 15-minute neighbourhood is not a ZEA, or vice versa, but these visions and approaches can be implemented in tandem. Milan and Barcelona, for example, are pursuing both.

Healthy neighbourhood explorer

This tool allows cities to explore how they rank on nine healthy neighbourhood indicators. It allows urban planners to quickly identify which neighbourhoods might benefit most from an intervention and which interventions might be most effective. For those interested only in measuring the health, economic, and climate benefits of walking and cycling, you will need to request login details via the online tool. Find out more [here](#).

Develop and adapt initiatives to enable walking and cycling in every

neighbourhood



To get people on their feet or bikes as part of a 15-minute city strategy, cities need to pay special attention to the types of trip targeted by walking and cycling initiatives and who is taking them. Initiatives need to be designed to facilitate neighbourhood trips, as well as commuter trips, by people of all backgrounds, ages and abilities.

- **Expand the network of bike-hire stations to underserved neighbourhoods, outside the city centre.** People use bike share when it is convenient for the trip they are making. Providing convenience for all users requires a high density of stations across the whole cycle-hire network, including neighbourhoods outside the centre – especially low-income neighbourhoods, which are often most underserved. Read [this](#) for more on walkable station spacing for equitable bike share. The *Bike Share Station Siting Guide* provides guidance on bike-share station types, designs and siting options on different types of street. If managed well, dockless bike share offers a way to fill gaps in underserved areas. Cities can also couple expansive cycling networks with incentives and bike shares for e-bikes, which help to overcome issues of distance and topography.
- **Adapt incentive schemes to ensure they meet the needs of a wide variety of potential cyclists.** This might mean amending eligibility criteria and marketing for incentives and schemes like ‘cycle to work’, or targeted incentives for groups that are less likely to walk and cycle. The New Orleans’ BlueBikes bike-share scheme, for example, places stations in high-poverty neighbourhoods, where ridership has historically been lower, and includes a heavily discounted membership plan for low-income residents, who can pay by cash.⁷ *Strategies for engaging community: Developing Better Relationships Through Bike Share* gives advice on expanding access to bike share.
- **Adapt schemes and public communications campaigns to target neighbourhood activities, like grocery shopping or the school run.** ‘School streets’ initiatives, for instance, with restrictions on pass-through vehicle traffic at drop-off and pick-up times, along with improved local walking and cycling infrastructure, can encourage school journeys on foot or by bike. Bogotá is piloting children’s priority zones around childcare centres in Ciudad Bolívar (a low-income district), with lessons to be integrated into a plan that could transform the streets around 373 childcare centres in the city. The pilot involves traffic calming options, a ‘play-streets’ programme, pop-up parks, seating, wayfinding, improved crossings, sidewalks and landscaping, and signage to designate the area as child-friendly.⁸

Cities can also partner with local businesses and non-profits to help drive a transition to active local journeys and to support jobs and businesses associated with walking and cycling.

- **Facilitate and incentivise businesses and non-profits to provide facilities for employees and customers arriving by bike or on foot.** This includes bike-parking facilities and end-of-journey



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facilities, such as showers, changing facilities and lockers, and can be coupled with initiatives to repurpose carparking spaces. Gurugram, India, ran a bike-for-car parking pilot, with each parking space replaced with secure racks for up to 10 bikes.⁹ Larger, city-centre employers tend to have better provision; opportunities and incentives should be open to, or targeted at, smaller local businesses as well as major employers.

- **Support businesses and non-profits that support cycling.** This includes organisations offering cycle repair and maintenance, cycle proficiency and confidence training, tour guiding and the manufacture of bikes. For instance, in response to the pandemic, the City of Lima worked with local partners to develop a prototype for an inexpensive Peruvian bicycle to be manufactured locally as part of the city's economic recovery plan, which could be purchased for the cost of two months' travel on public transport. Lima has also vastly expanded its bike network, integrating the city's disjointed network to improve connections. In Bobigny, France, a new development includes an incubator focusing on new mobility, shared-bike and cargo-bike schemes, as well as the provision of 1,000 bicycle parking spaces.
- **Help businesses to shift to greener fleets.** Cargo bikes should be a particular focus, as reduced vehicle traffic makes walking and cycling more pleasant. A Mayor's Guide to Cargo Bikes, Cargo bikes: Safely delivering goods during the COVID-19 crisis and paving the way for a zero-emission freight future and a Guide to Planning Cycle Logistics Hubs are useful resources here. Berlin is among the cities pioneering the use of cargo bikes by citizens and businesses. Read How to decarbonise urban freight in your city for more.



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