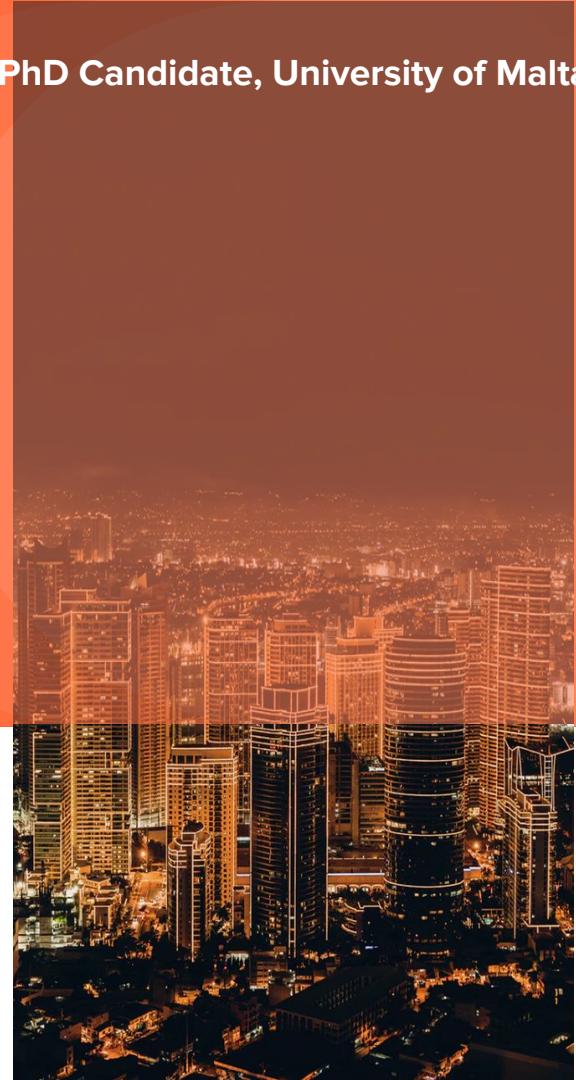
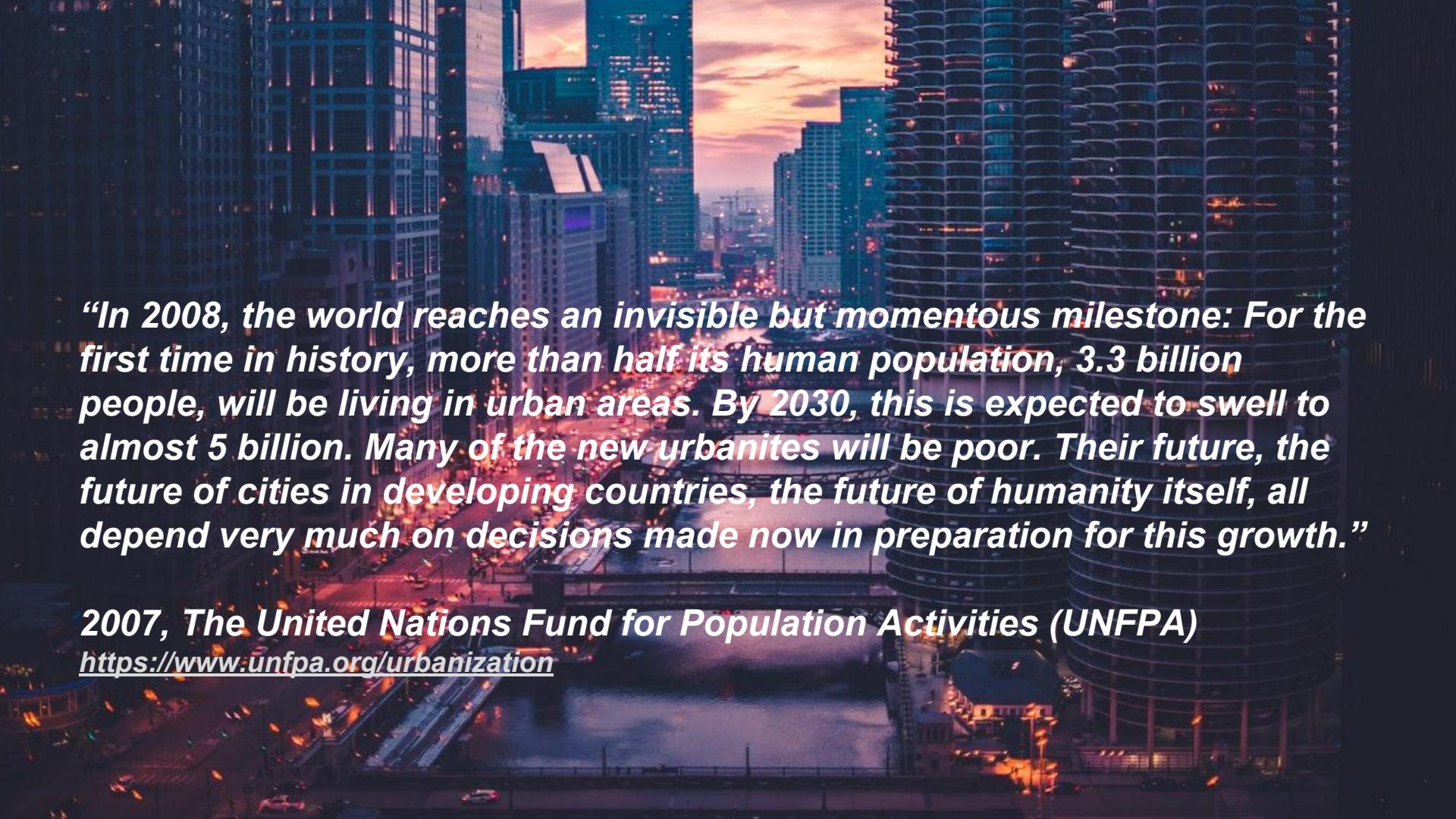


Digitisation, learning cities and social change

The role of technology for citizen engagement and social change in learning cities

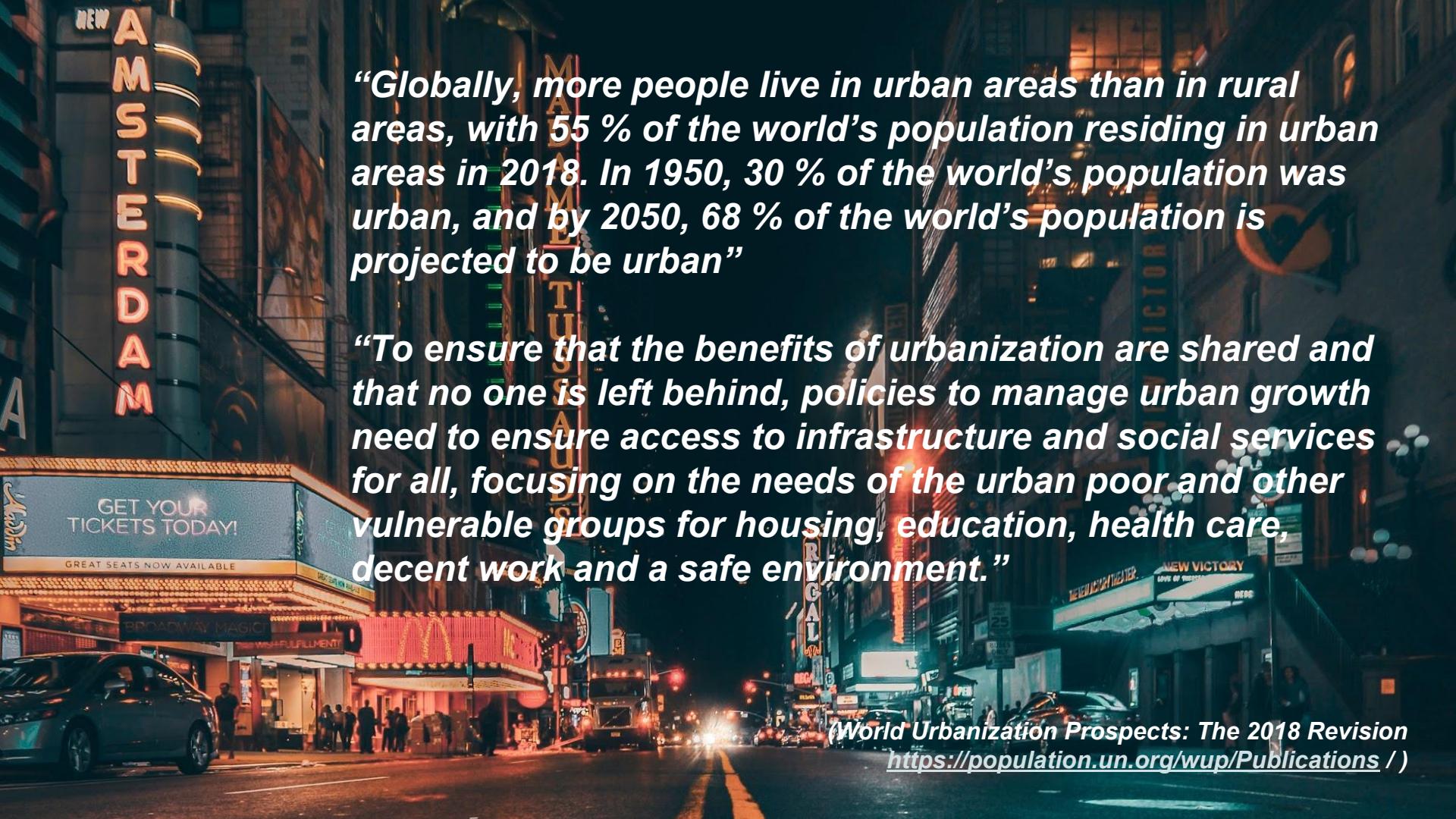
Link to these slides: <https://goo.gl/XrA1oa>



A vibrant, nighttime cityscape featuring illuminated skyscrapers and a bridge over water. The sky is filled with warm, orange and yellow hues from the setting sun. The city lights reflect off the water, creating a dynamic and modern urban scene.

“In 2008, the world reaches an invisible but momentous milestone: For the first time in history, more than half its human population, 3.3 billion people, will be living in urban areas. By 2030, this is expected to swell to almost 5 billion. Many of the new urbanites will be poor. Their future, the future of cities in developing countries, the future of humanity itself, all depend very much on decisions made now in preparation for this growth.”

2007, The United Nations Fund for Population Activities (UNFPA)
<https://www.unfpa.org/urbanization>



“Globally, more people live in urban areas than in rural areas, with 55 % of the world’s population residing in urban areas in 2018. In 1950, 30 % of the world’s population was urban, and by 2050, 68 % of the world’s population is projected to be urban”

“To ensure that the benefits of urbanization are shared and that no one is left behind, policies to manage urban growth need to ensure access to infrastructure and social services for all, focusing on the needs of the urban poor and other vulnerable groups for housing, education, health care, decent work and a safe environment.”

Digitisation, learning cities and social change

What is **digitisation**? (Aka *digitalisation*)

“**Digitalisation** is understood as ‘the way in which many *domains* of social life are restructured around digital communication and media infrastructure’ [...]” (Wildemeersch & Jütte, 2017, citing Brennan & Kreis, 2014.)

Digitisation, learning cities and social change

What is a **learning city**?

Is a **smart city** a learning city, if so, how?

How does **digitisation** affect **citizens** in their surroundings?

How can we support **social change** through **digitisation**?

How do we prepare citizens for **digitised life**?

“participation in digitally mediated collaborative activities in UK cities vary widely by age, ethnicity and social condition, with the wealthy and educated benefiting the most”

(Winden & Carvalho, 2017, p. 12)

Winden & Carvalho, CITIES AND DIGITALIZATION (2017)
<https://drive.google.com/open?id=1c4XuFIDzeEh7L3LowD0nKV5XEr6y0aMP>

Digitisation, learning cities and social change

Is a **smart city** a learning city?

“Advocating ‘**smart learning**’ plays a cultural leading role for stimulating vitality for urban innovation and it also provides scientific support for citizens’ livable experiences. In fact, it is the ultimate target of **smart city** construction to let humans have better urban living environments.” (Huang et al., 2017)

Read the paper:

<https://drive.google.com/open?id=1HeuduG5YDgkJOinEdx2H64coXqTdOjW>

Digitisation, learning cities and social change

Should a city be a learning city?

“*Digital skills are in great need*, but the education system – on all levels – is slow to adapt, and also further education is needed to empower and update employees with digital skills. *Cities need to actively drive the change in this respect...*” (Winden & Carvalho, 2017, p. 14)

Digitisation, learning cities and social change

What is social change in the context of a learning city?

“Social change may include changes in nature, social institutions, social behaviours, or social relations...”

Wikipedia

Social change might involve **non-human (data)** as well as **human agents**.

“... (non-sensitive) government data should be increasingly available online through easy-to-access formats [...] to enhance transparency and accountability to their constituents...” (p. 15)

“Most cities have launched some sort of hack-days competitions in which they ask groups of programmers ... designers, business people, etc., to think about new solutions and new ways to think about urban challenges, namely by making use of several types of data (open or not).” (p. 16)

(Winden & Carvalho 2017)

Digitisation, learning cities and social change

ARUP blogger Ran Wang, on digitalised social change:

“In the digital era, in order to thrive cities must offer **innovative** digital services that support the **rapidly changing** lifestyles and behaviours of their populations”

“Internet-powered smartphone apps have started to **transform** many daily tasks, changing the way we think about the provision of goods and services, from travel to food shopping”

“In dense and diverse cities, developing new mobile businesses is easier with a larger addressable market for **new services** and established interest in innovation. **Digital and location-based** services are helping entrepreneurs, individuals and even governments to rethink services in new ways.”

<https://www.arup.com/perspectives/how-the-digital-world-is-shaping-our-cities> | https://en.wikipedia.org/wiki/Arup_Group

Digitisation, learning cities and social change



What are the issues, implications, considerations and dangers of **digital life**?

What are the benefits of **digital life**?

How do we prepare society for **digital life**?

What is **digital literacy**?

Jane Secker on literacies:

<https://diglitunpacked.wordpress.com/2019/01/20/the-continuing-trouble-with-terminology/>

Digitisation, learning cities and social change

Problems

- **Privacy** of citizens
- **Ownership** of data
- **Use** of data
- **Sharing** of data
- **Access** to apps and Internet
- **Digital skills** of citizens



#datasociety
#data
#ethics
#edtech



Digitisation, learning cities and social change

Benefits

- **Empowerment:** of citizens in local decision making
- **Communication:** between citizens & decision makers
- **Information:** access to facts & data
- **Skills:** for digital employment and civic life
- **Sustainability:** local environment initiatives and efficient citywide resource use



International policies, organisations, strategies

UNESCO Global
Network of
Learning Cities

UNESCO Skills
for a Connected
World

European Commission
Digital Competence
Framework

UNESCO Designing Inclusive
Digital Solutions &
Developing Digital Skills

EAEA
European Association for
the Education of Adults

European Commission
ICT Skills in work

G20 Adult Training in
the Digital Age

EPALE
Adult Learning
in Europe

Click on the squares to go to each section

UNESCO Global Network of Learning Cities

DEFINITION: A Learning City is a city which effectively mobilises its resources in every sector to:

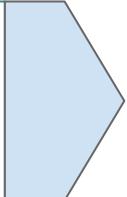
- promote **inclusive learning** from basic to higher education;
- re-vitalise learning in families and communities;
- facilitate learning for and in the workplace;
- extend the use of **modern learning technologies**;
- enhance quality and excellence in learning; and
- foster a culture of learning throughout life.

Unesco Key Features of Learning Cities, 2013

UNESCO Global Network of Learning Cities

1. Wider benefits of building a learning city
2. Major building blocks of a learning city
3. Fundamental conditions for building a learning city

Key Features of Learning Cities, UNESCO, 2013. The Framework of the Key Features of Learning Cities; *A list of key features and measurements*



View the features tables here:

https://drive.google.com/open?id=1WKN4Rv09NMw-QHj-3_elhpelaI5QSZ7k

UNESCO Global Network of Learning Cities

Generating enthusiasm is crucial to the success of a learning city. The more people and organizations that react positively to the idea of a learning city and engage with it, the better its chances of flourishing are.



Unesco Key Guidelines for Building Learning Cities, 2015

View the document

https://drive.google.com/open?id=1_ZAbwxvoKO8DkjAYHmmNRucB-lf2SQzW

Organize a learning festival in places where people gather. Make this a joyful event and invite all relevant organizations to exhibit their courses, products and materials and offer hands-on activities that encourage all citizens to get involved.

UNESCO Skills for a connected world

“Digital skills have moved from ‘optional’ to ‘critical’ and need to be complemented with transversal ‘soft skills’ such as the ability to communicate effectively in both online and offline mediums.”

Skills for a connected world: report of the UNESCO Mobile Learning Week 2018

View the document

<https://drive.google.com/open?id=1zXRgN-hXGXeDbAR-BnUKqjlikYwP6LVs>

“During [...] discussions, participants noted that often the challenges in using technology stem from a lack of teacher skills.”

“... the ‘percentage of youth and adults who have achieved at least a minimum level of proficiency in digital literacy skills’ is one of the indicators of progress towards achieving SDG4.”

(<https://sustainabledevelopment.un.org/sdg4> & <https://www.un.org/sustainabledevelopment/education/>)

“The representative of the Smart Learning Institute of Beijing Normal University, China, argued that the key challenge is to make digital skills mainstream.”

European Commission Digital Competence Framework for CITIZENS

1) Information and data literacy: To articulate information needs, to locate and retrieve digital data, information and content. To judge the relevance of the source and its content. To store, manage, and organise digital data, information and content.

2) Communication and collaboration: To interact, communicate and collaborate through digital technologies while being aware of cultural and generational diversity. To participate in society through public and private digital services and participatory citizenship. To manage one's digital identity and reputation.

1.1 Browsing, searching and filtering data, information and digital content

1.2 Evaluating data, information and digital content

1.3 Managing data, information and digital content

2.1 Interacting through digital technologies

2.2 Sharing through digital technologies

2.3 Engaging in citizenship through digital technologies

2.4 Collaborating through digital technologies

2.5 Netiquette

2.6 Managing digital identity

DigComp 2.1

<https://drive.google.com/open?id=1CaljQEZPIQsHE---9ZqqOdkAKn90TFOd>

European Commission Digital Competence Framework

for CITIZENS

- 3.1 Developing digital content
- 3.2 Integrating and re-elaborating digital content
- 3.3 Copyright and licences
- 3.4 Programming

-
- 4.1 Protecting devices
 - 4.2 Protecting personal data and privacy
 - 4.3 Protecting health and well-being
 - 4.4 Protecting the environment

-
- 5.1 Solving technical problems
 - 5.2 Identifying needs and technological responses
 - 5.3 Creatively using digital technologies
 - 5.4 Identifying digital competence gaps

3) Digital content creation: To create and edit digital content. To improve and integrate information and content into an existing body of knowledge while understanding how copyright and licences are to be applied. To know how to give understandable instructions for a computer system.

4) Safety: To protect devices, content, personal data and privacy in digital environments. To protect physical and psychological health, and to be aware of digital technologies for social well-being and social inclusion. To be aware of the environmental impact of digital technologies and their use.

5) Problem solving: To identify needs and problems, and to resolve conceptual problems and problem situations in digital environments. To use digital tools to innovate processes and products. To keep up-to-date with the digital evolution.

European Commission Digital Competence Framework for CITIZENS

Table 1: Main keywords that feature the proficiency levels				
Levels in DigComp 1.0	Levels in DigComp 2.1	Complexity of tasks	Autonomy	Cognitive domain
Foundation	1	Simple tasks	With guidance	Remembering
	2	Simple tasks	Autonomy and with guidance when needed	Remembering
Intermediate	3	Well-defined and routine tasks, and straightforward problems	On my own	Understanding
	4	Tasks, and well-defined and non-routine problems	Independent and according to my needs	Understanding
Advanced	5	Different tasks and problems	Guiding others	Applying
	6	Most appropriate tasks	Able to adapt to others in a complex context	Evaluating
Highly specialized	7	Resolve complex problems with limited solutions	Integrate to contribute to the professional practice and to guide others	Creating
	8	Resolve complex problems with many interacting factors	Propose new ideas and processes to the field	Creating

Fig 1. Keywords for Proficiency Levels [click to enlarge]



Fig 2. Jobs and Employment Example [click to enlarge]



Fig 3. Learning Example [click to enlarge]

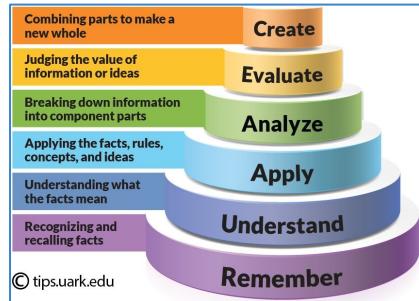


Fig 4. Blooms Revised Taxonomy
(JShabatura.tips.uark.edu)
[click to enlarge]

European Commission Digital Competence Framework for EDUCATORS

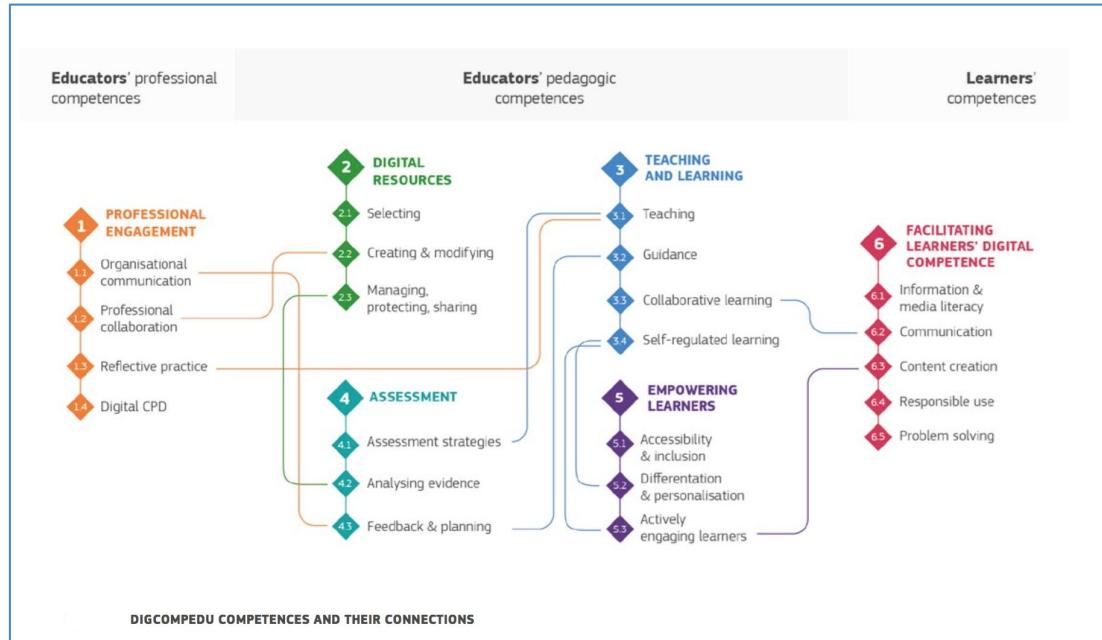


Fig 5. DigComp Edu Competences and their Connections.
[click to enlarge]

View the full document
https://drive.google.com/open?id=1qtA_mlVrCXNlF0RlgMEHjfbeKoOds7a

UNESCO Designing Inclusive Digital Solutions

... and Developing Digital Skills

User experience

- User digital and information literacy
- Tailor content to the users understanding
- Offer **good help guides and support**
- Offer training for key service platforms
- Measure how your users experience your services - **goal conversion, task and user journey completion, time on page, bounce rates.**

1. Design with the users, focusing on their needs and context
2. Focus on users' digital skills and competences
3. Ensure the clarity and relevance of content for low-skilled and low-literate users
4. Use appropriate media and tailor user interface for low-skilled and low-literate users
5. Provide initial and ongoing training and support
6. Constantly monitor, measure and improve

Unesco & Pearson Design Guide full document

<https://drive.google.com/open?id=12PrrJE51pcCIAFcHoujqA3sIBcqtGfy>

UNESCO Designing Inclusive Digital Solutions

... and Developing Digital Skills

Three main reasons to focus on the digital inclusion of low-skilled and low-literate people:

1. *Supporting literacy development*
2. *Increasing usage and uptake*
3. *Supporting development and inclusion*

Six general characteristics of low-skilled and low-literate people and technology:

1. **Cognitive** - Low literacy is not just an inability to read
2. **Trust** - Low-literate users are scared and sceptical of Technology
3. **Social** - Low-literate users don't use technology alone
4. **Gender** - Low-literate users are divided by gender
5. **Motivation** - Low-literate users are driven by motivation and aspiration
6. **Resources** - Low-skilled and low-literate users are often resource-constrained

UNESCO Designing Inclusive Digital Solutions

... and Developing Digital Skills

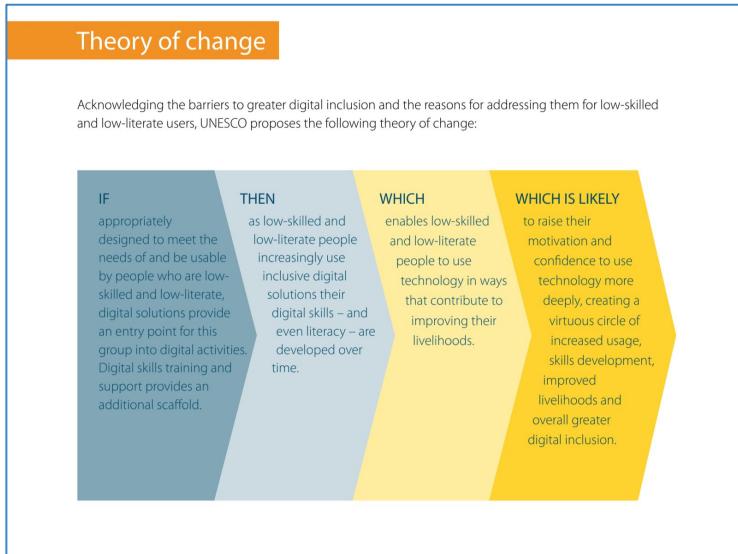


Fig 6. Unesco Theory of Change
[click to enlarge]

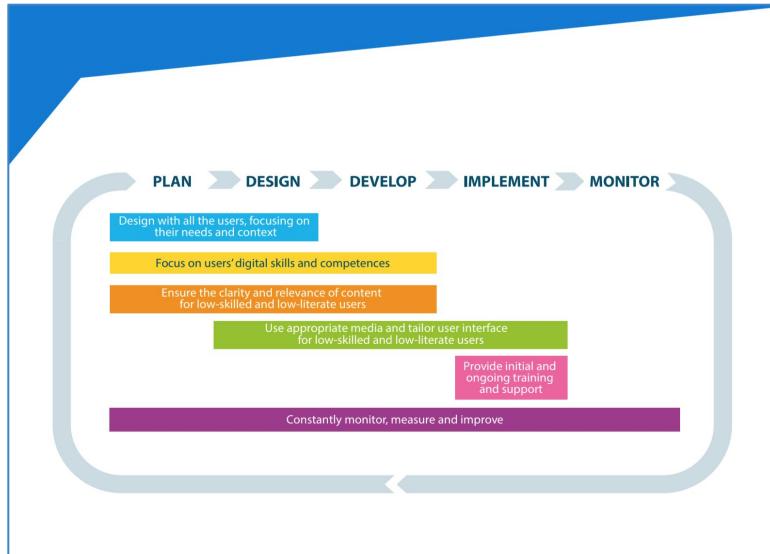


Fig 7. Guidelines for phases of project lifecycle
[click to enlarge]

EAEA: European Association for the Education of Adults

**“Employment and digitalisation:
Adult education is key when it comes
to improving employment prospects
and ensuring prepared citizens in the
digital world.”**

**“Digital Competences Development
System (DCDS) project aims to establish a
framework that will provide the low-skilled
adult European population with the basic
digital and transversal competences
needed for employment, personal
development, social inclusion and active
citizenship”**

View the webpages

- <https://eaea.org/why-adult-education-2/employment-and-digitalization/>
- <https://eaea.org/our-work/projects/dcdfs/>



EAEA: European Association for the Education of Adults

DIGITAL
COMPETENCES
DEVELOPMENT
SYSTEM

- Improving basic digital competences of adults with low digital skills
- Putting Digital Competence Framework (DigComp) into practice
- Self-assessment tool
- Blended (online, offline, and face-to-face) training approach
- Integrated modular online learning environment
- Gamification features
- Flexible and tailored learning pathways
- Validation of basic digital competences



“What is the profile of those EU citizens who are at risk of digital exclusion and what are the key motivation drivers for them to enrol in a digital upskilling pathway?”

DCDS is completely aligned to the European Digital Competence Framework for Citizens – DigComp and thus promotes its adoption in Europe

View the Project website
<http://www.dcds-project.eu/>
Read the report
https://drive.google.com/open?id=1Oktq81Gkljc49y_JMfYitqj9319hVsK

European Commission Digital Single Market

ICT for work: *Digital skills in the workplace*

the ‘digital economy’ can be broadly defined as the economy that is extensively based on digital computing technologies (p.4)

<https://ec.europa.eu/digital-single-market/en/news/ict-work-digital-skills-workplace>

‘digitisation’ covers a wide range of different digital technologies (e.g. computers, mobile devices, internet and the ‘Internet of Things’, robotics and automation), which have different implications in terms of their impacts on production and work (p.4)

View the full report
<https://drive.google.com/open?id=1OiyE3CyTIU832ypQudWjZEBbxEE06VD>

European Commission Digital Single Market

ICT for work: *Digital skills in the workplace*

Significant increase over time in the demand for high skilled individuals, equipped with cognitive skills and technical knowledge;

Bruegel think-tank estimations that 40% to 60% of the jobs in the European Union were at risk due to digitisation-induced automation;

Digitisation is favouring the emergence of new occupations and creating new jobs... leading to a higher demand of human workers because digital technology ‘enables enterprises to make existing products better and more efficiently, and to make new things’.

European Commission Digital Single Market

ICT for work: *Digital skills in the workplace*

Digital technologies are contributing significantly ... to an expected negative impact on the work-life balance e.g. increased stress, decreased protection ... related to working remotely, as well as pay rates. This is due to working from non-conventional places (e.g. mobile work), poorly paid micro-tasks (crowd employment), and long, or so-called anti-social hours to meet clients' or employers' demands

Estimates suggest that 90% of jobs need at least basic computer skills (European Commission 2014)... being able to use spreadsheets, word processing programs, digitalised systems such as accounting systems, is required in many middle-skilled jobs, as well as more occupationally specific digital skills

G20 - Adult Training in the Digital Age

Upgrading workers' proficiencies of theoretical, non-cognitive or digital skills in order to:

- keep them employable in the digital age
- strengthen their resilience to technological change
- enable them to utilize new technologies in order to increase their own productivity
- enhance their mobility across jobs, occupations and industries, particularly their upward mobility
- spare them from the need to take lower-paying services jobs that cannot (yet) be automated

“Establish adult training programs for employed workers with a focus on skills that complement technology”

View the full document

<https://drive.google.com/open?id=1FONhqwulnzPM1-d-tQBN9pStw001Jrmi>

G20 - Adult Training in the Digital Age

“Training programs should focus on enhancing workers’ proficiencies in theoretical, non-cognitive and digital skills:”

Theoretical skills are cognitive (intellectual) skills that determine the ability to learn, evaluate and take initiative

Non-cognitive skills are the characteristic patterns of values, behaviors and attitudes that determine a person’s stance on learning and taking initiative

Digital skills are cognitive skills that are specific to using digital technologies and working in digitized environments

EPALE - Electronic Platform for Adult Learning in Europe

Community is at the heart of EPALE. Members of the community can engage with adult learning colleagues across Europe through the site's features, including the forums, the communities of practice and the comments sections. You can find articles and resources around specific topics through the thematic areas. You can also look for projects and make professional connections using the Partner Search tool.

Go to the website

<https://ec.europa.eu/epale/en>



EPALE is a multilingual open membership community for teachers, trainers, researchers, academics, policy makers and anyone else with a professional role in adult learning across Europe

EPALE - Electronic Platform for Adult Learning in Europe

Adult Learners in Digital Learning Environments (Report)

Benefits of ICT and OER in Adult Learning

Extend and diversify the provision

Enable provision to be tailored in terms of content, time and place

Widen access, build on distance learning and provide new forms of non-traditional learning

Problems & issues of ICT and OER in Adult Learning

First-generation ICT tools still dominate

Strong challenges for OER development and take-up

A 'digital divide' exists amongst adult learning institutions

Informal learning provision is under-developed.

(Executive Summary, ii, iii)

The study aimed to ... the objectives set out in the Education and Training 2020 Strategy, which aims to raise the currently largely static rates of adult participation in learning towards the ET 2020 target of 15%, ... The study in particular focused on ICT-enhanced learning, including OER, in adult education/learning (AL)

View the document

<https://drive.google.com/open?id=1SiGQYCa5tddiOTGH9qYvSpoc7s25gOOOb>

Digitisation, learning cities and social change

Summary

- Digital literacy for work and citizen participation
- Focus on those with lower job skills, access or experience with technology
- Lifelong learning
- Create a culture of enthusiasm and engagement
- Bring learning into everyday life
- Access for all to learning
- Empower our citizens
- Improve quality of life
- Enhance local communities
- Encourage community engagement



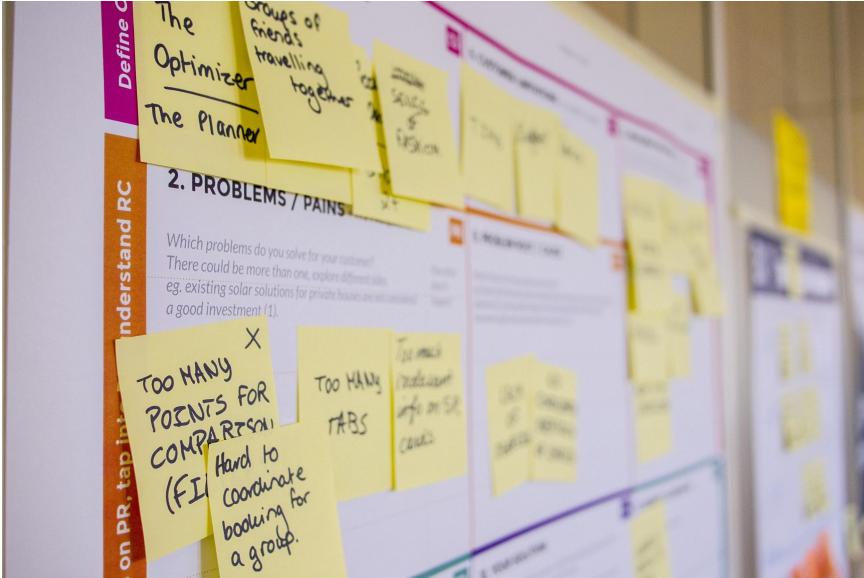
Digitisation, learning cities and social change

Initiatives, ideas, reasons for supporting digitally literate citizens

- Community **activism** (top down, bottom up)
- Supporting citizen **quality of life, social cohesion**
- **Jobs**, employment
- **Digital skills** training: informal and non formal
- National **policy input** and influence
- Democracy and **political engagement**
- **Data** to support and implement change



Digitisation, learning cities and social change



- How do we put these policies into practice?
- What are we trying to achieve?
- How can we prioritise?
- What are the obstacles?
- How can I best contribute?
- What about funding?
- What's already going on my my locality?
- *When can I start?*

Digitisation, learning cities and social change

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Digitisation, learning cities and social change

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