The European Commission's 100 Intelligent Cities Challenge

16th June 2021

ICC Advisory Board

2nd advisory board meeting

We will get started at 1.30pm CET

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13:30
-
13:40

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Introduction and policy context

Agenda

13.30 - 13.40	**Introduction** and **policy context**
13.40 – 14.00	**Update on ICC activities** + Q&A • **State of play** and **progress** • **Local Green Deal Blueprint** and **Mayors Summit** • **Cities Guide on Reskilling** of the local workforce • **Tech4Good initiative**
14.00 - 14.55	Discussion on **digital and decarbonisation transition**, **implementation** and **funding**
14.55 - 15.00	**Next steps** and **time plan**

ICC Advisory Board members

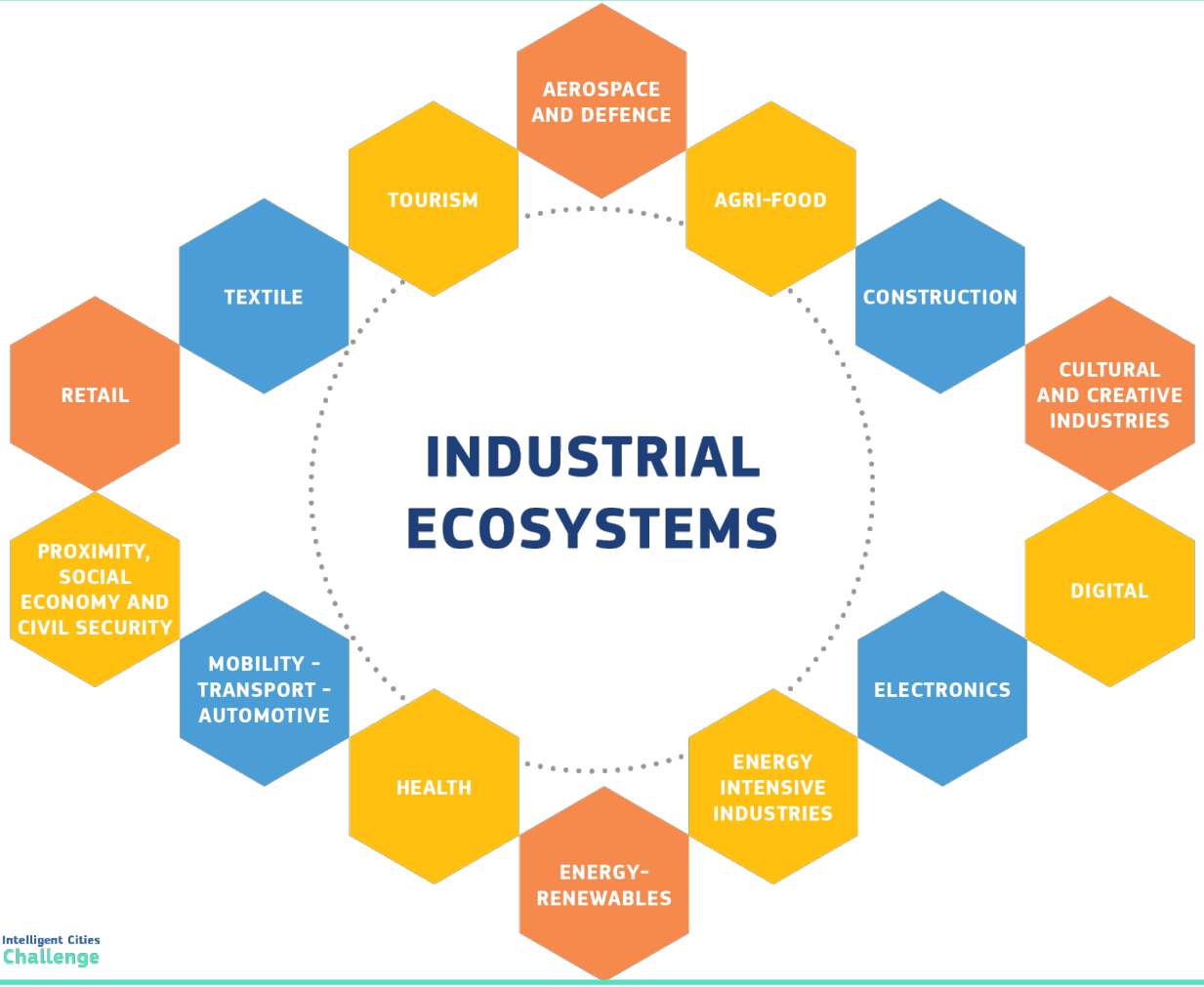
Name	Organisation	Position
Alice Charles	World Economic Forum	Lead Cities, Infrastructure & Urban Services
Anna Lisa Boni	Eurocities	Secretary General
Bob Bennett	Cities Today Institute	Chair
Carlo Ratti	MIT SENSEable City Lab	Professor of Urban Technologies and Planning Director, SENSEable City Lab
Christophe Rouillon	European Committee of the Regions, Recovery and Resilience Facility, Coulaines, Association of French Mayors	Member, Rapporteur, Mayor, Vice-President
Daniel Gonzalez-Bootello	Smart City Cluster	Director General
Emilia Saiz	United Cities and Local Government	Secretary General
Frank Lee	European Investment Bank	Head of Division, Advisory Services
Jorn Verbeeck	Global Covenant of Mayors for Climate and Energy	Head of Research & Innovation
Hugh Lim	Centre for Liveable Cities, Singapore	Executive Director
Leonie van den Beuken	Amsterdam Economic Board	Programme Director of Amsterdam Smart City
Margit Tünnemann	German Federal Ministry of the Interior, Building and Community	Head of Division SW III 2 – Smart Cities
Mark Hidson	ICLEI	Deputy Regional Director, Global Director Sustainable Procurement
Martina Otto	United Nations Environment Programme	Head of Cities Unit & Head of Secretariat, Global Alliance for Buildings and Construction, Economy Division
Soo-Jin Kim	OECD Centre for Entrepreneurship, SMEs, Regions and Cities	Head of the Urban Policies and Reviews Unit & Deputy Head of the Cities, Urban Policies and Sustainable Development Division

Mandate of the Advisory Board

- **Advise on latest global urban trends, technological and scientific developments** and potential high-impact actions;
- Steer the **high-level direction** of ICC and beyond;
- **Maximize synergies** with relevant European and international initiatives and dissemination of outcomes.

Membership of the Board is on a **voluntary basis**; there is **no contractual obligation** to deliver information to the project or to attend meetings

All Board members are entitled to claim reasonable **expenses with respect to travelling** to meetings, although a virtual format is foreseen in light of COVID-19 for 2021



Monitoring the Single Market:
an annual analysis of the state of the Single Market, including across 14 industrial ecosystems.

THE EU BUDGET POWERING THE RECOVERY PLAN FOR EUROPE

#EUbudget #EUSolidarity #StrongerTogether

The scope of the RRF is structured around six pillars, all aimed at supporting the economic recovery, creating jobs and laying the foundations for a stronger, more resilient Europe.

- GREEN TRANSITION
- DIGITAL TRANSFORMATION
- GROWTH, JOBS AND COHESION
- SOCIAL AND TERRITORIAL COHESION
- HEALTH, ECONOMIC, SOCIAL AND INSTITUTIONAL RESILIENCE
- POLICIES FOR THE NEXT GENERATION

RECOVERY AND RESILIENCE FACILITY

Twin Transitions: Green and Digital

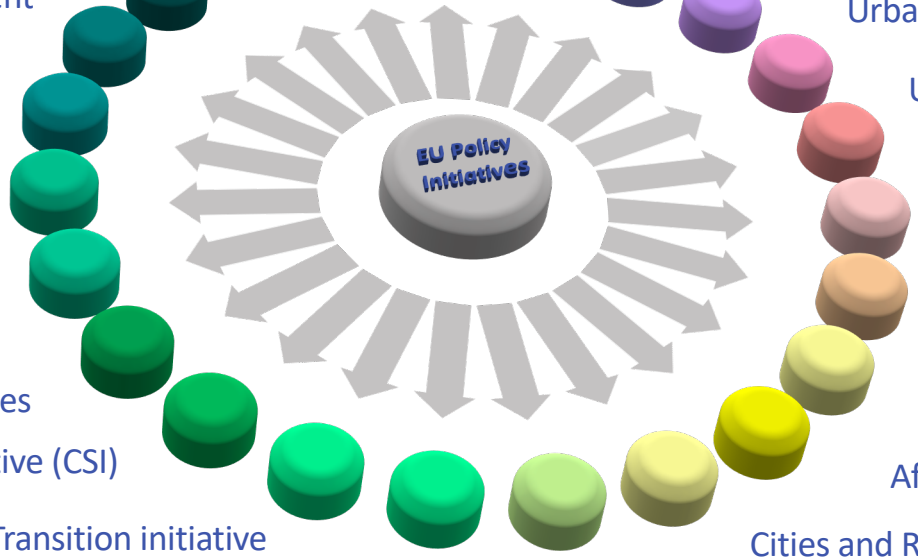
Each recovery and resilience plan will have to include

a minimum of **37 %** of expenditure for **CLIMATE** investments and reforms

a minimum of **20 %** of expenditure to foster the **DIGITAL** transition

The Commission will assess national plans against these targets.

City Mapping of ongoing EU supported activities and policy initiatives targeting cities



100 Climate-neutral Cities by 2030

Horizon 2020 Lighthouse Projects

New European Bauhaus

100 Intelligent Cities Challenge

Community of Practice on Cities

Living-in.EU Movement

Urban Agenda Partnerships

Smart Cities Marketplace

URBACT programme

100 Positive Energy Districts

Urban Innovative Actions

Green Cities Accord

European Urban Initiative

European Climate Pact

Smart Tourism Destinations

Covenant of Mayors

European Capitals of Culture

BiodiverCities

Affordable Housing Initiative

City Science Initiative (CSI)

Cities and Regions for Integration of Migrants

Coal Regions in Transition initiative

European Mobility Week Award

EIT Climate KIC, Healthy Clean Cities

Civitas

Involving 15 Directorates General

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ICC

The Intelligent Cities Challenge

Making the most of advanced technologies for Green and Digital Recovery and Social Resilience

136 cities
5 thematic tracks

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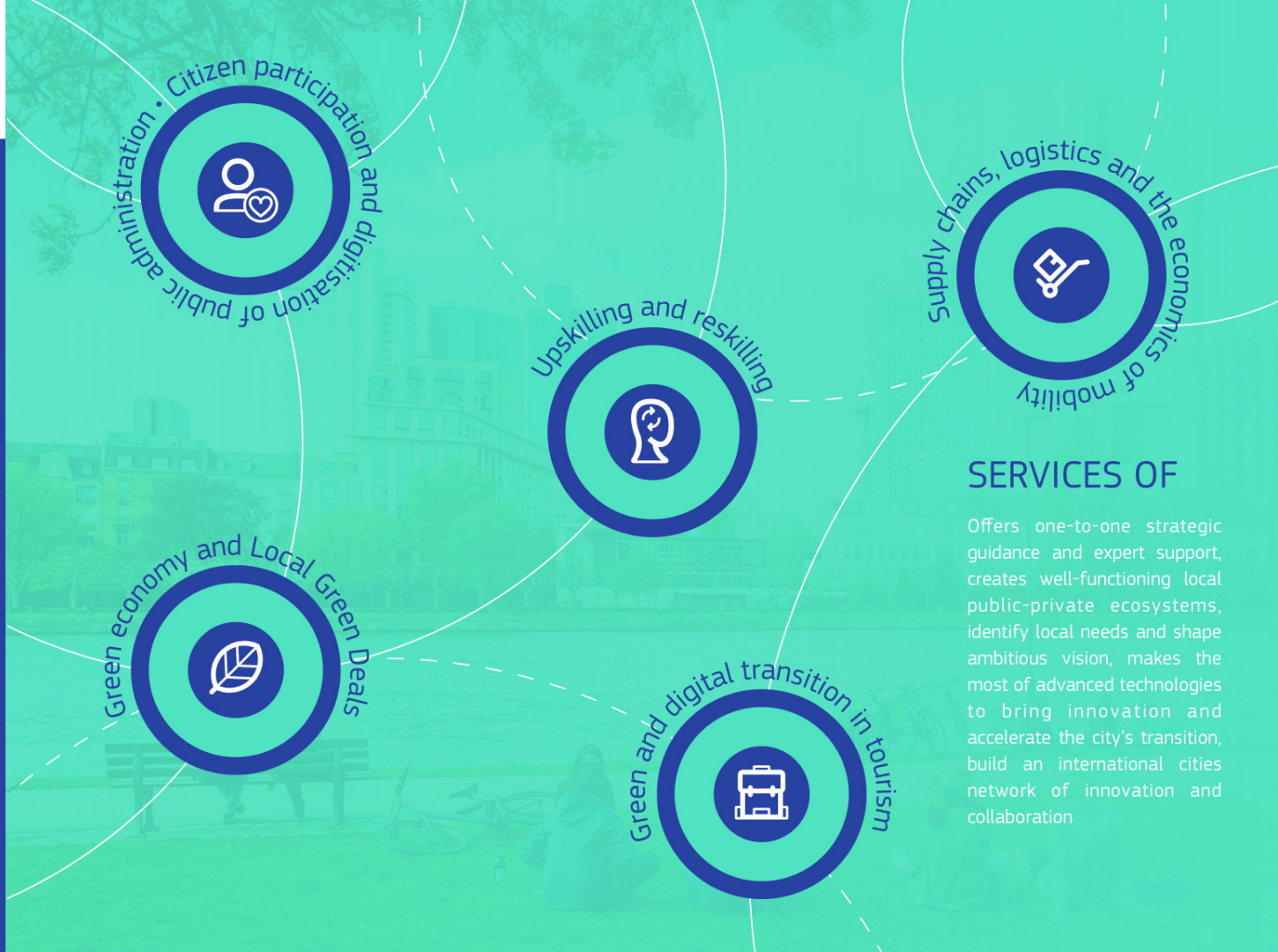

SERVICES OF

Offers one-to-one strategic guidance and expert support, creates well-functioning local public-private ecosystems, identify local needs and shape ambitious vision, makes the most of advanced technologies to bring innovation and accelerate the city's transition, build an international cities network of innovation and collaboration

ICC Cities

MENTOR

CORE

CITIES

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Update on ICC activities + Q&A

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State of play and progress

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The ICC transformation journey: Where we are now

1 Preparation & assessment

5 months:
September 2020 – January 2020

2 Ambition & roadmap

5 months:
February 2021 – June 2021

3 Implementation

12 months
July 2021 – July 2022

4 Review & way forward

2 months
August 2022 – September 2022

	1 Preparation & assessment	2 Ambition & roadmap	3 Implementation	4 Review & way forward
Summary	Find out **where a city is, where it should go** and who in the ecosystem is going to **mobilise make things happen**	Develop a **concrete plan** to achieve **measured improvements**, collaborating with the community; push action with immediate benefits	Get "big moves" **done** and **see results**; take **action in partnership** with others	Measure success, and commit to **keep connections and improvements going**
Major activities (detailed next)	• Host a launch • Excite your ecosystem • Run city assessments • Form a strategy	• Define a detailed roadmap for the rest of the programme • Set KPIs • Begin material collaboration with others	• Deliver on your plan • Pause every 5 months to review progress and refocus • Regularly meet with ecosystem and experts to keep up momentum	• Re-run assessment • Reflect on what has been learnt • Agree to continue local and ICC-level activities

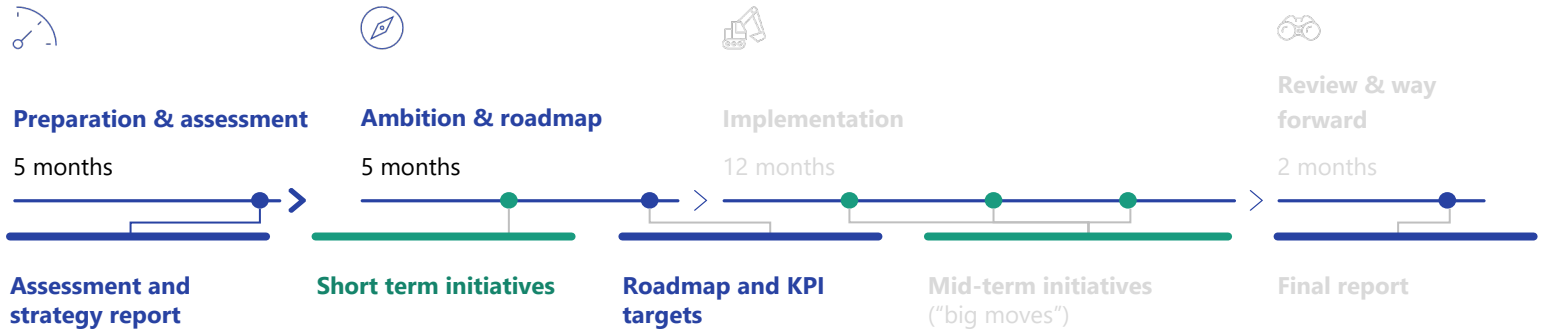
Achievements by the end of the Ambition and roadmap phase

Main deliverables Major actions

By the end of this phase, cities will have…

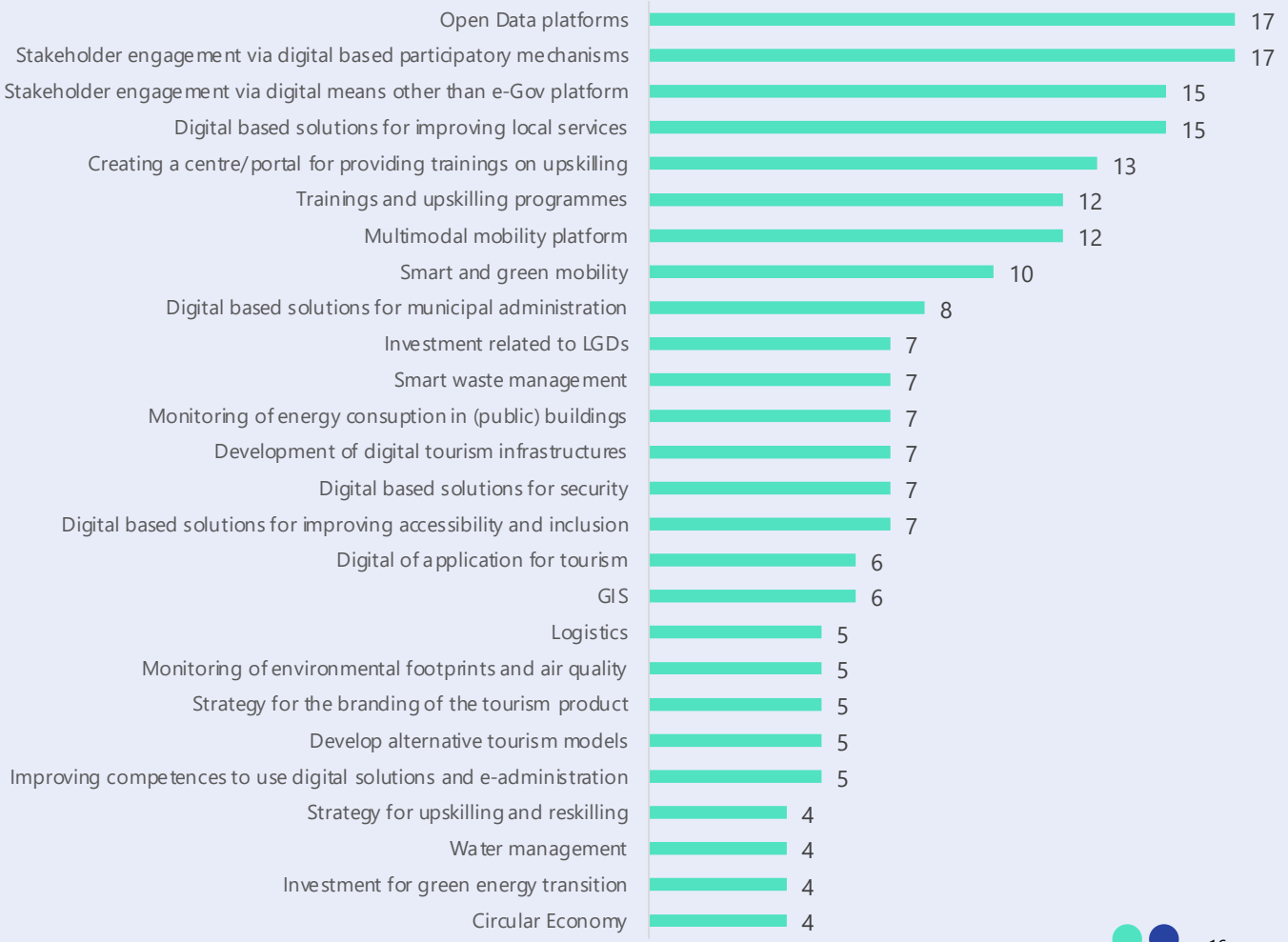
- ❑ Achieved **first progress** on short term initiatives
- ❑ Agreed on **collaboration** and **ownership** over actions with ecosystem players
- ❑ Defined **target KPIs** and a **monitoring strategy** to keep track of progress
- ❑ Determined **budget allocation** and potential **funding opportunities**
- ❑ **Detailed actions for the first 5 months** of the implementation phase
- ❑ **High level actions for the following 12 months** of the implementation phase

Deliverable overview



ICC phase I solutions

ca. 70% of solutions are on **Citizen participation and digitisation of public administration** & **Green economy and Local Green Deals**



Based on count of solutions using a preliminary typology

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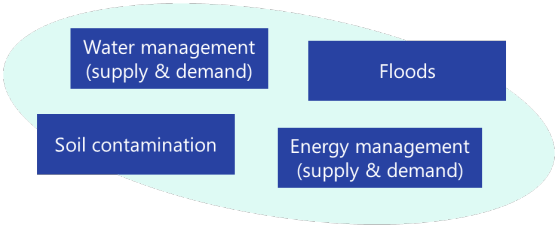
Phase II progress example - Stad Mechelen Digital Twin

4 potential use cases in scope at the end of Phase 1 (see image to the right).

A feasibility study on **each of the 4 potential use cases**, conducted in order to refine the conditions and define the **business case** for each of the 4 use cases and to objectify the city's final decision on which use case would be selected and developed into the Digital Twin solution



To clarify the feasibility and business case for each case, the city team conducted a **series of interviews** with several local expert organizations (both public and private), such as:

- **IT Platform Providers**: such as Microsoft and Esri
- **Data Providers**: such as OVAM (the Flemish Waste & Soil Management Company), VMM (the Flemish Environmental Agency) , etc.
- **Model providers**: such Ingenium (an Engineering Firm with expertise in Sustainable Buildings and Design) and Bentley systems (a Software Company).

These interviews allowed the team to **describe** and **analyze** the **feasibility** and ultimately the **business case** for each of these 4 potential cases. During these interviews, the city team focused on elements such as:

- The **complexity** of the case: has it been successfully implemented somewhere before?;
- The **estimated implementation time** (ranging from 1 year to 3 years);
- The **cost** and **necessary budget**;
- The **necessary partners** for implementation;
- The **necessary data sources** and **inputs** for the Digital Twin;
- The **variables** or **policy options** to play with / simulate;
- The **possible outputs** from the Digital Twin;
- The **benefits** for policymakers and civilians.

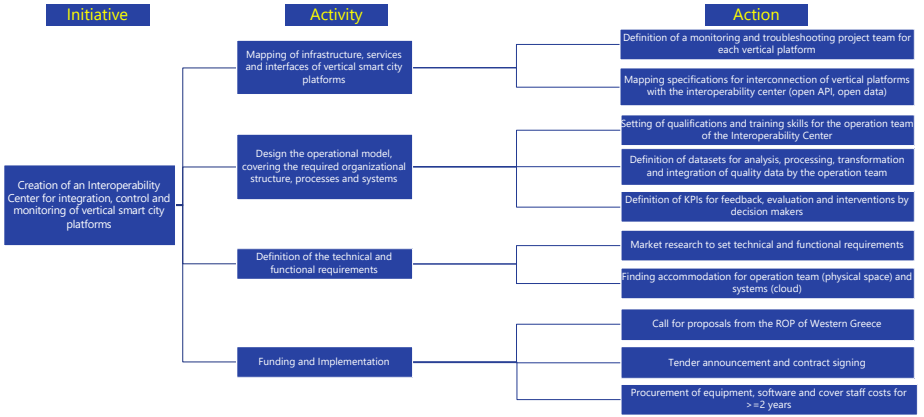
Phase II progress example - *PATREUS: PATRas E-city Urban Strategy*

The city roadmap includes 3 moving and growing solutions agreed with the stakeholders, as a result of the Patras Maturity Workshop:

1. **<u>Solution 1</u>: Interoperability Center of the Municipality of Patras**
2. **<u>Solution 2</u>: Patras Open Data Platform**
3. **<u>Solution 3</u>: Upskilling - Reskilling**

- Their technical maturity will be driven by an equally strong stakeholder network
- For each solution special Initiatives, Activities and Actions are mapped
- Financial resources are sought for implementation, operation and maintenance

Roadmap



Key Performance Indicators

Solution	Activities – Inputs and actions	Solution Maturity - outputs	City performance – outcomes and impacts
S1 - Interoperability Center of the Municipality of Patras	1. # of employees of the Municipality of Patras with digital skills 2. # of vertical smart city platforms with open API 3. # of datasets with open data for feeding the interoperability center platform 4. % cover of Patras area of vertical smart platforms (for each platform) 5. % of Patras citizens using the request management platform (sense.city) 6. # of Patras citizens using the GIS platform 7. % online monitoring of municipal street lighting 8. % cover of Patras area by free (municipal) WiFi hotspots 9. % reduction of time of collecting waste bins by the use of dynamic collection route planning 10. # of Patras citizens using the smart parking spaces 11. % pollution reduction in areas with environmental monitoring	1. # of datasets for their integration in the interoperability center 2. # of new applications created 3. # of reports generated by the combination of existing datasets 4. % of new datasets produced by combining existing datasets 5. # of new advanced digital skills of the operation team 6. # of companies offering ready solutions for integration of smart city platforms 7. Average annual cost for the operation of the interoperability center	1. # of new generated datasets to be available for further exploitation by the academic and research community 2. # of open data types provided by the interoperability center

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Local Green Deal Blueprint and Mayors Summit

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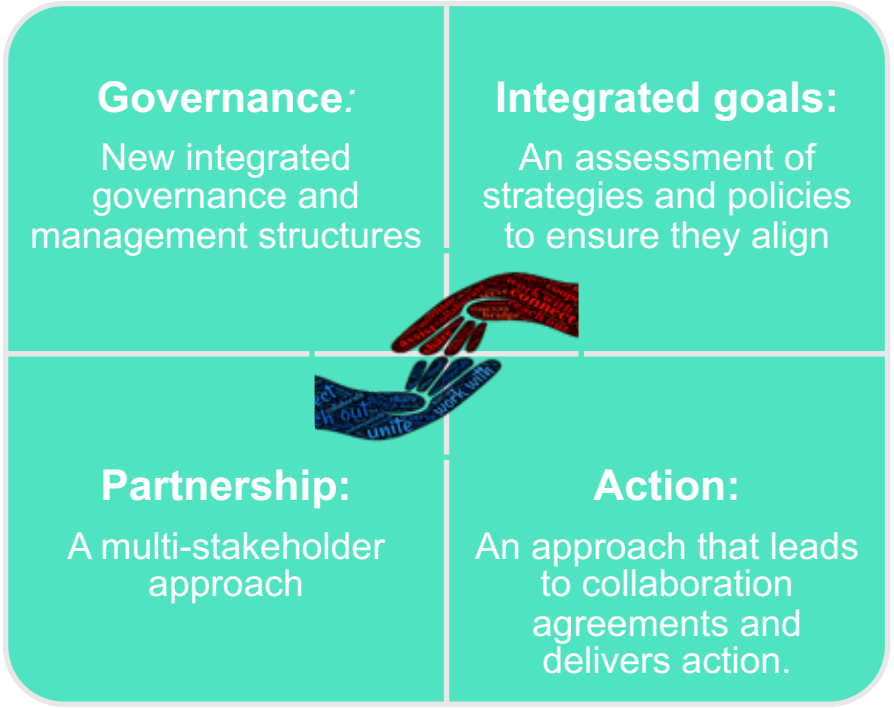
Refresher: What is a Local Green Deal?

- Most cities already have strategies and policies supporting the goals of the EU Green Deal
- But they need better integrated governance and delivery mechanisms to accelerate and scale-up implementation → **Local Green Deals**
- A Local Green Deal supports effective implementation, based on **4 founding principles**

LGDs: 4 key principles



Local Green Deals in the ICC

Most ICC cities already have **strong foundations** to develop LGDs, including:

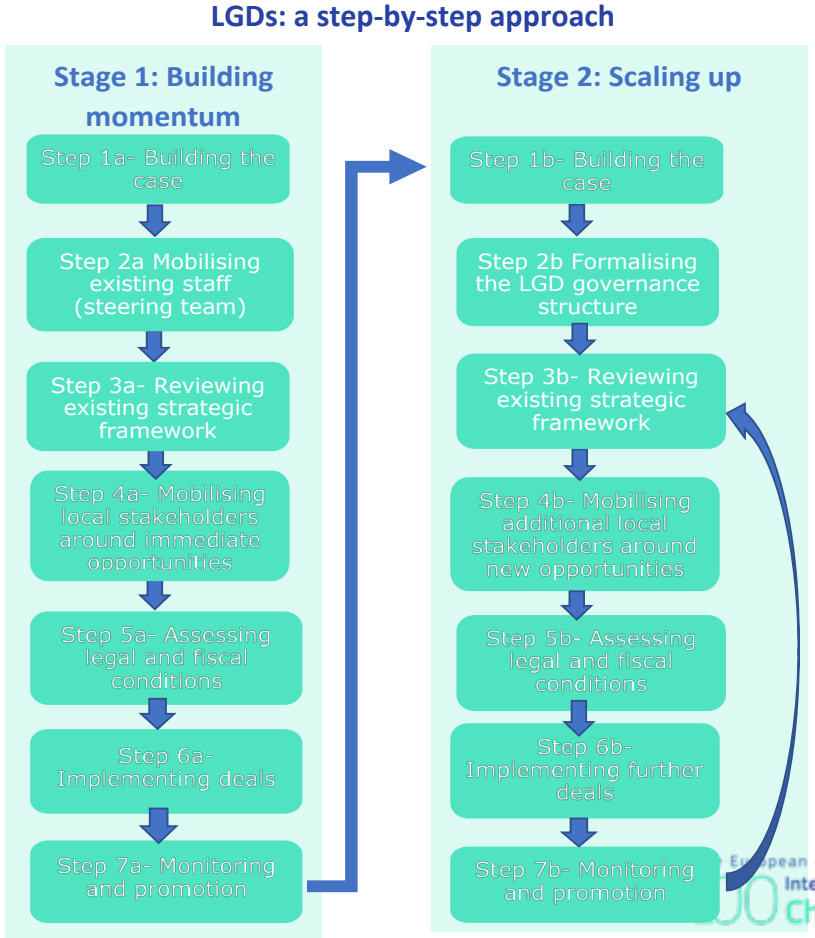
- A commitment to sustainability
- Existing roadmaps, policies, goals and initiatives
- Good relationships with local stakeholders

Adopting a Local Green Deal approach can help:

- Support the delivery of your city's ICC roadmap
- **Accelerate and scale-up** your city's sustainable transformation

The ICC Blueprint on Local Green Deals

- Upcoming guidance introducing the principles of a LGD (June 2021)
- **7 steps** approach to help cities get started with a LGD
- **8+ best practice examples** from cities pioneering LGD mechanisms to deliver their sustainability goals
- Highlighting **financing opportunities** for LGDs



Upcoming events

- **1-17 June 2021: 3rd ICC City Lab** – Validation of the Local Green Deals Blueprint
- **22 June 2021: Mayors event on Local Green Deals** – A blueprint for action - ***calling for statements***
- **September 2021**: Upcoming Call for proposals: SMP-COSME-2021 - Social Economy and Local Green Deals supporting SMEs to become more resilient

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Cities Guide on Reskilling of the local workforce

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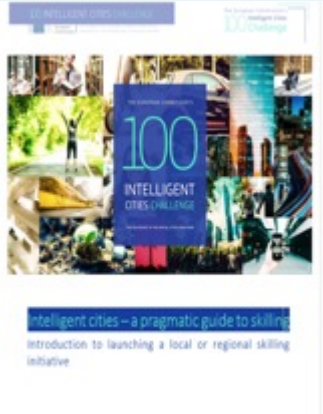
Objective of re-skilling in ICC

- **Prepare cities for transformation** – a practical guide with examples to design a reskilling strategy & information on funding opportunities
- **Support implementation to create impact** – on the ground advise for city stakeholders (public officials, private sector stakeholders and civil society) to advance their design of a cooperative reskilling strategy for the local workforce (including data-insights, operational support, and training modules)
- **Mobilise the community** – both within the local ecosystem as across cities to grow a network of excellence on reskilling
- **Foster cross-city collaboration** to support cities' journey to successful skilling strategies

A pragmatic guide to support cities' skilling initiatives

Investing in skilling and implementing a skilling revolution must be viewed as a **critical investment** for governments, industry, and education institutions alike. Some cities and regions have already taken important steps and made **significant progress** towards fulfilling their skilling agenda. Other cities are at the **beginning of their skilling journey** and can learn from front-runners. This guide is an introduction to launching a local or regional skilling initiative, and supports cities and regions with:



- A phased approach to developing and implementing a skilling strategy
- Description of these phases
- 20+ Good practices
- Lessons learned from practice
- Key success factors
- Tools and instruments
- Funding models and opportunities

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Tech4Good initiative

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Tech4Good Marketplace

Technology-powered solutions and business models designed to advance economic, social and environmental causes

- ✓ Help European **cities and social economy stakeholders** address the most pressing challenges with technology
- ✓ Solutions developed by **local SMEs, social enterprises** and **start-ups**.
- ✓ Access to **trustful, ethical, labelled, efficient** solutions
- ✓ **Purpose-driven, human-centered** development of technology and processes: e.g. AI for reskilling, circular industrial activities, assistive technology for job inclusion
- ✓ **Sustainable and social public procurement**.
- ✓ Cross-disciplinary **Makers Space, awards and hackathons** (e.g. green manufacturing, smart farming, smart teaching, energy efficiency, etc.)

Explore the ICC cities' solutions for common urban and community challenges in the beta version of our **Tech4Good Marketplace**

https://marketplace.intelligentcitieschallenge.eu/en

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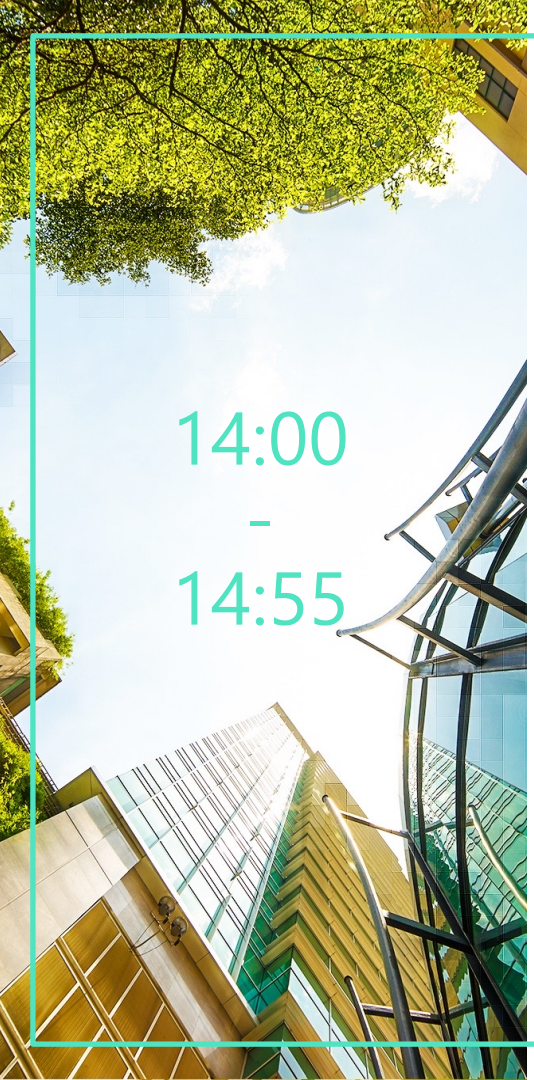
Q&A on ICC activities



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Discussion on digital and decarbonisation transition, implementation and funding

Questions for the advisory board members

1. **Looking into the future of the green transition:** What are the risks for European cities and related initiatives/solutions that European cities should be ready for in 2030 in order to achieve climate neutrality by 2050? How to motivate the local business community to decarbonise and to buy-in to the local green deal?
2. **Policy tools**: How do tools like the Local Green Deal Blueprint and the Cities Guide for Reskilling help in this process? How to further develop the Tech4Good Marketplace into a credible and trusted solutions and services partner?
3. **Focus on implementation and funding**: ICC is shortly moving from planning (strategy and roadmap phases) into the implementation phase. What are notable success factors for the implementation of technology-powered strategy at city-level?

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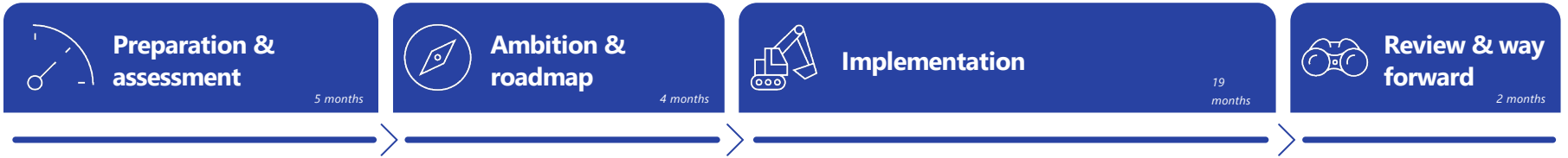
Next steps and **time plan**

Timeplan of the Intelligent Cities Challenge



Advisory Board meetings

1st meeting	2nd meeting	3rd meeting	4th meeting
November, 2020	June 16th, 2021	November 17th, 2021	June 15th, 2022

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Thank you!

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Backup

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Thematic track and planning overview

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ICC’s five thematic tracks

- Citizen participation and digitisation of public administration
- Green economy and local green Deals
- Upskilling and Reskilling
- Green and digital transition in tourism
- Supply chains, logistics and the economics of mobility

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ICC Planning

The ICC provides support in **4 main phases**

September 2020 – start for all ICC cities

Preparation & assessment	Find out where a city is, where it should go and who should be involved to get there
Ambition & roadmap	Develop a concrete plan to achieve improvements, collaborating with the community; push action with immediate benefits
Implementation	Get "big moves" done and see results
Review & way forward	Measure success, and commit to keep connections and improvements going

November 2022 – end of the programme

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ICC participants are grouped into thematic clusters based on city priorities, self-assessments, and shared needs

Process of allocation of themes to EU core cities

Thematic content

1. Participants vote on key objectives

As participants fill out the EOI to join the ICC, they are given 16 goals and **asked to prioritise four goals**

2. ICC presents thematic clusters to participants for pre-selection

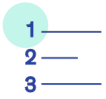
16 objectives have been grouped into **five thematic clusters**

During the 1st city lab, ICC will introduce the grouped thematic clusters. In the weeks that follow, participants will **prioritise a primary cluster** – **participants may also select a secondary cluster** provided they dedicate the necessary resources

3. Participants assess digital and advanced technology maturity and city performance

Each participant will conduct assessment of **city performance and local enablers in the first city assessment workshop.** The assessment includes **thematic specific issues** such as available technology infrastructure, key stakeholders, and any existing strategies

Assessments of technology maturity are then based on these themes, and discussed in the second city assessment workshop



4. Participants refine thematic cluster selection

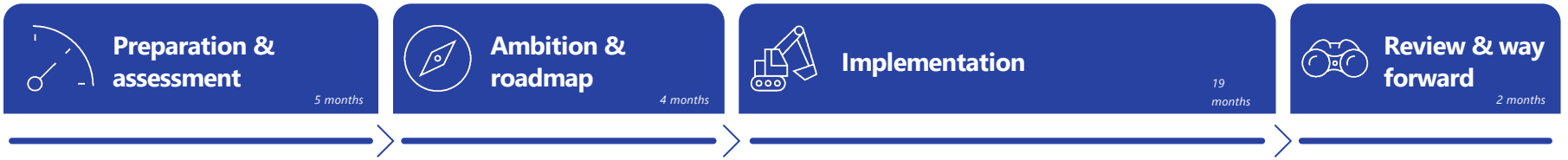
Participants will **work with lead experts** to adapt their learnings from the assessments in order **to determine final primary** and **optional secondary thematic track**

5. ICC assigns participants to their thematic tracks

The ICC will share participants' final thematic track assignments based on a combination of:

- **City preference**
- Lead expert **feedback**

Time plan – major events and deliverables



Major events

1st ICC City Lab	Mayors Summit	2nd ICC City Lab	3rd ICC City Lab	4th ICC City Lab	5th ICC City Lab	ICC closing event & Mayors Summit
28 September – 2 October, 2020	October 14, 2020	16-19 February, 2021	18-21 May, 2021	19-22 October, 2021	21-24 March, 2022	20-21 October, 2022

Deliverables

Indicative deadlines

Assessment and strategy report	Roadmap and KPI targets	Short term initiatives	Mid-term initiatives	Final report
(including "State of the City")			("big-moves")	
29 January 2021	7 May 2021	8 October 2021	11 March 2022	7 October 2022

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Additional slides on Reskilling

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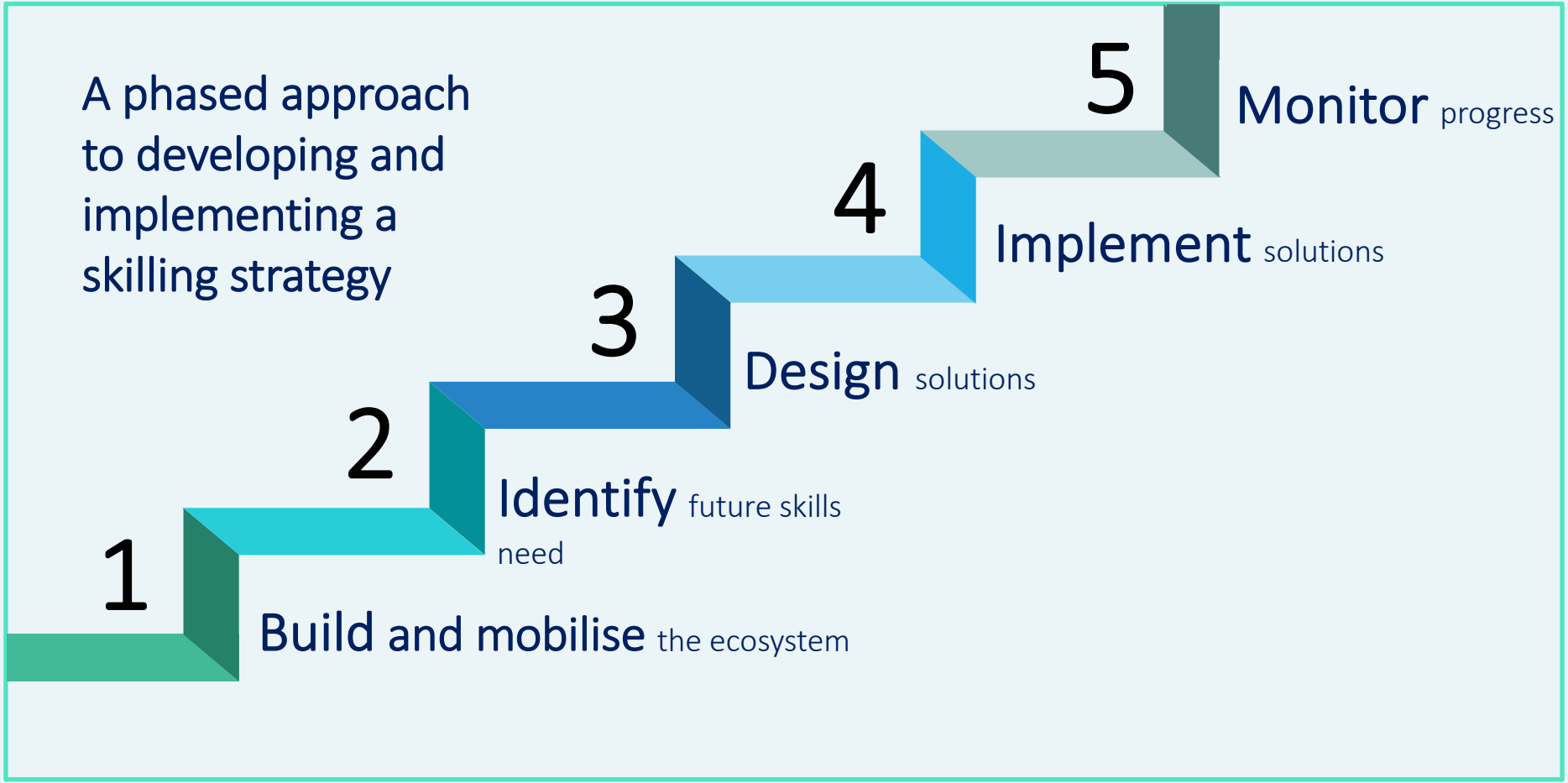
Cities face a re-skilling challenge, accelerated by COVID-19

- Covid-19 accentuated the need for agile structural and **cross-sectoral mobility of the workforce** e.g. towards green, healthcare, or tech jobs. These require new skills locally.
- **Cities, regions and local actors** are key to deliver on the major reskilling effort, as they **master their local needs and strengths**.
- The key success factor is a **well-functioning local reskilling ecosystem** capable of pooling local resources to achieve reskilling at scale; Involving local authorities, employers, candidates, training capacity (VETs, clusters, knowledge institutes, Fablabs, EENs, head-hunters) and funds.
- Many cities lead by example on **cross-sectoral reskilling programs** based on:
  - **Assessment** of the skills needs; **Matching** skills demand and supply; **Reskilling & job placement**.
  - **Technology-powered solutions** to aggregate training needs and providers, forecast future needs, optimize matchmaking and job placement
- Examples of ICC cities who joined **the Pact for Skills**: Valongo, Guimaraes (Potrugal), Arad (Romania), Pori (Finland), Skelleftea (Sweden), Budapest (Hungary), Alcobendas (Spain), Haskovo (Bulgaria)

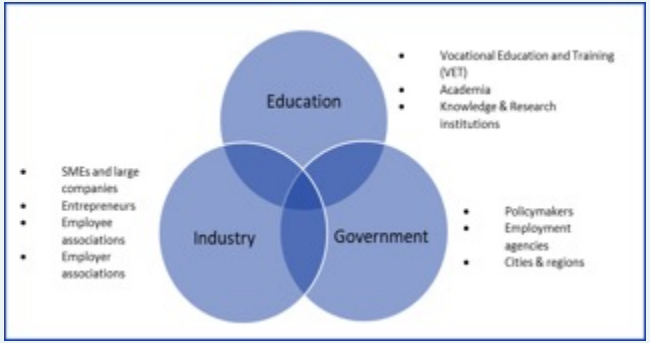
A phased approach to developing and implementing a skilling strategy



As example: *Phase 1: Build and mobilise the ecosystem*

- What is a skilling ecosystem and why is it important?
- Key actors and their responsibilities
- Considerations in developing the skilling ecosystem
- Tools and instruments
- Maturity phases in ecosystems
- Best practices for building a sustainable ecosystem

The Triple Helix relationships in a skills ecosystem



Maturity phases in ecosystem building

With local and regional examples of skills initiatives, such as:

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Examples of

good

practices on reskilling in ICC cities

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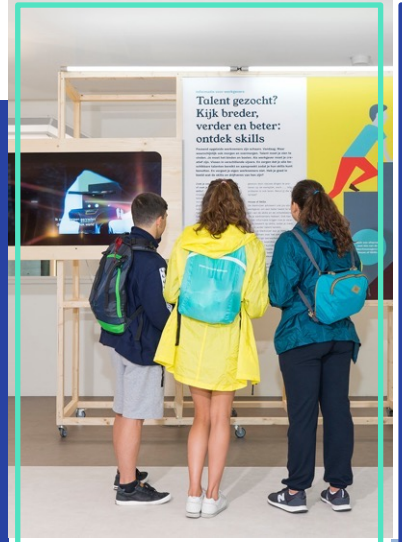

Aarhus

Aarhus is a smart city: digital technology is both a challenge and an opportunity to develop the city of the future. In the past 10 years, the city has expanded by 15,000 people. In the same period 20,000 jobs were created, the majority within the knowledge, service and innovation industries. The presence of a strong university with more than 40,000 students makes Aarhus a driver for growth for the entire region.

Ghent

Ghent is part of the Interreg project 'Skills Navigator' which aims at tackling the skills mismatch in the harbour regions of the Flemish-Dutch Delta in close cooperation with the employers. High number of job vacancies vs high unemployment rate. Skills Navigator consists of 14 organisations as full partner (co-financers) and other interested actors. Also with Antwerp and Rotterdam.

Amsterdam Metropolitan Area

Amsterdam House of Skills, public-private partnership in the Amsterdam Metropolitan Area, has a mission is to direct today's labour market towards a more skills-based focus, by making intersectoral mobility easier, and by approaching learning as a lifelong practice. To do this, it develops tools that facilitate skills matching for employers, employees, and for people who are currently looking for work.

Espoo

Espoo's innovative education system has led to citizens of all ages playing an active role in their city's economy and its future. Projects on co-creation between students and industry, and innovative models such as 'school as a service'. Heavily supporting many initiatives around new innovation platforms and R&D&I.

The Metropole Nice Côte d'Azur

The Metropole Nice Côte d'Azur supports local economy by offering training courses focused on the future needs of these partners. Developed a talent pool that will create jobs in the industries of tomorrow –esp key digital sector. The Metropole and more generally the Côte d'Azur ecosystem is home to a large number of training courses covering information technology, digital and private web.

Cork City

Cork City Council via the Regional Skills Forum and IT@Cork Skillnet offering industry-led, quality focused, cosset effective training courses that are locally delivered and supported by networking & knowledge sharing. Training courses are organised on the basis of requests from members and hence training courses are directly relevant to the needs of members across the IT sector.

City of Pori

City of Pori is leading the Robocoast Digital Innovation Hub. Initiatives such as the Robocoast-recruitment for closing skills gap for specialists in AI, automation, robotics – delivered 200 specialists for cluster companies. Also, training by RoboAI to generate more specialists in robotics and programming – wit industry and academia collaborating.

Rijeka's Digital Ri-wave

Rijeka's Digital Ri-wave programme aims to transition from an industrial base to an economically diverse city and to attract and retain digital talent for sustainable economic development and improved quality of life.

Algeciras

Algeciras: Bridge to Europe 'To pave the way towards a continuous digital transformation and modernisation process that will enable Algeciras to become the open, dynamic, social inclusive, and talent-based southernmost gateway of Europe as well as a worldwide reference for a citizens-driven sustainable mobility hub'