



ACHIEVING YOUR GOALS WITH LOCAL DIGITAL TWINS

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Ignacio Garcia Vega is a seasoned Senior Innovation and Research Consultant and Project Manager with extensive experience in driving cutting-edge advancements across AI, Big Data, IoT & Edge Computing, Urban Mobility, Cybersecurity, Wireless Communications (WiFi, 5G), and Smart City solutions.

With a background in Telecommunication Engineering, specializing in industrial organization and business management, he focuses his career on ICT-related European R&D&I projects.

Ignacio's expertise lies in steering innovation strategies and managing large-scale, international projects, including those centered on Smart Cities and IoT solutions.

He has led numerous successful initiatives under programs like Horizon Europe, EIC Accelerator, and H2020. His career is marked by a deep passion for technology, innovation, and entrepreneurship, helping SMEs and large enterprises increase their participation in EU projects. As a mentor, independent EU project evaluator, and technical dissemination expert, Ignacio remains committed to fostering growth, strategy, and technological evolution.



EU supporting initiatives

Increasing awareness and readiness, supporting EU communities that have not yet begun their digital transformation journey by providing resources, best practices, and training to develop digital strategies.

Scaling deployment of digital infrastructure, assisting communities with existing digital transformation strategies in deploying enabling digital infrastructures and tools based on commonly agreed standards.

Promoting Local Digital Twins, creating a European Local Digital Twin (LDT) toolbox that will facilitate the deployment of digital twins for innovative urban planning and sustainable solutions.



SET UP YOUR DIGITAL TWIN STRATEGY (3 STEPS)

Step 1



**LOCAL DIGITAL TWINS TO
SUPPORT DECISION
MAKING TOWARDS
ACHIEVING
SUSTAINABILITY GOALS**

Step 2



**MEASURING AND
MONITORING THE
DIGITAL MATURITY**

Step 3



**DIGITAL
TRANSFORMATION
ROADMAP**

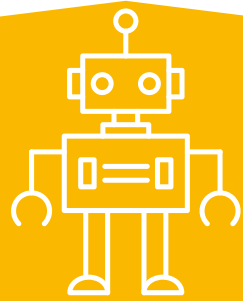


The Twin Green and Digital Transition Go Hand in Hand

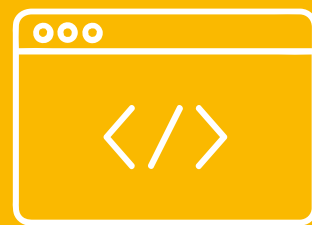
- The digital transformation is taking place against a backdrop of rapid climate change
- The EU's policy agenda looks at digital twins as far-reaching technologies that can support smart cities in contributing to the European green deal strategy, enhancing energy efficiency, adaptation of society to climate change and resilience of urban centres.
- Placed into urban contexts, digital twins help smart cities to reassess their urban planning, transforming how cities are displayed, monitored and managed



Monitoring and
Tracking



Simulation and
Forecasting



System
Management



Virtualisation



Information and
Communication
Technologies



What is a Local Digital Twin?

A Digital Twin is a continuous learning digital copy of real-world assets, systems and processes...



Unique Value Proposition of LDTs



Connect legacy systems

**Make data
understandable**

Explore policy impact

**Influence better public
decisions**

**Experiment and innovate
in cities and across
regions**



Application Use Case

1

Urban Planning / Zoning / Development

2

Asset & Infrastructure Management

3

Environmental & Climate Monitoring

4

Public Safety and Crowd Dynamics

5

Transportation and Pedestrian Planning

6

Facilities Management

Land use

Building footprints
Shadow and wind patterns

Asset tagging

IoT Sensors
Infrastructure data

IoT sensors

Topography
Water and Climate Models

Optical sensors

Video
GPS

Lighting

Traffic
Ped counting

Building details

HVAC and utilities
Optical sensors

GIS

Planning

Public works
Economic development

Parks

Transportation

Environment

Police

Fire

Emergency management

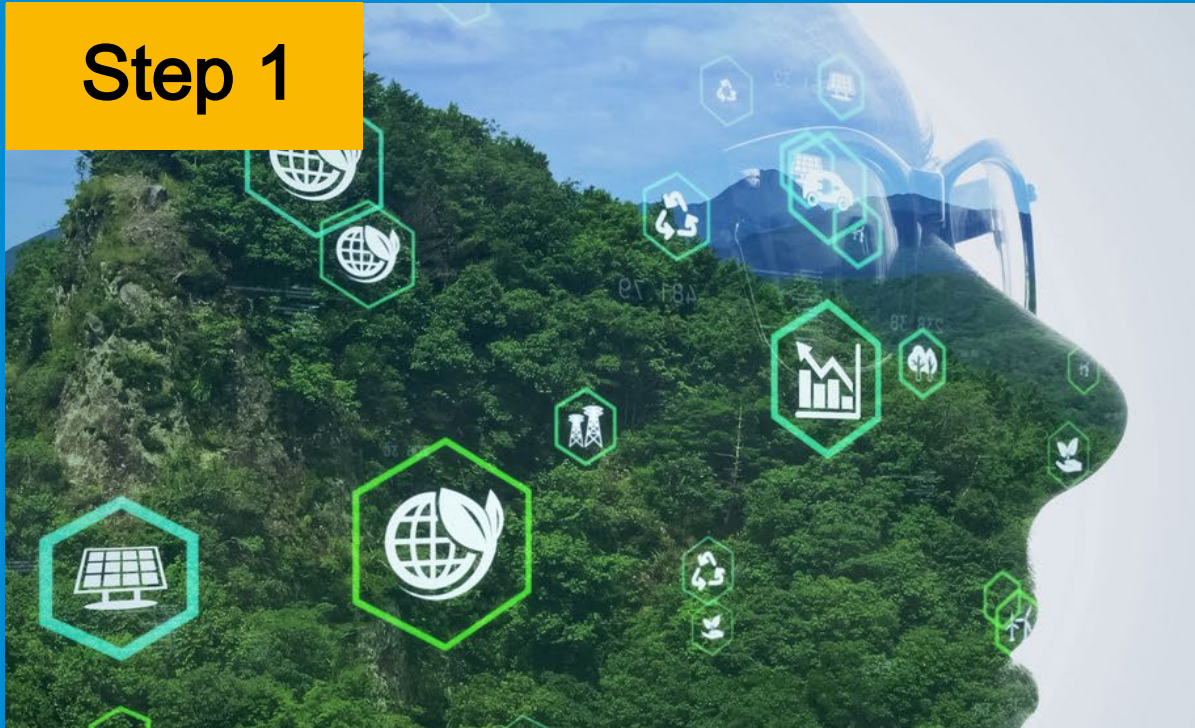
Public safety

Facilities
management

🌿 Data, the new soil 🌿

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The LORDIMAS Tool

An interactive tool helping local and regional governments to understand where they are in their digital transformation journey

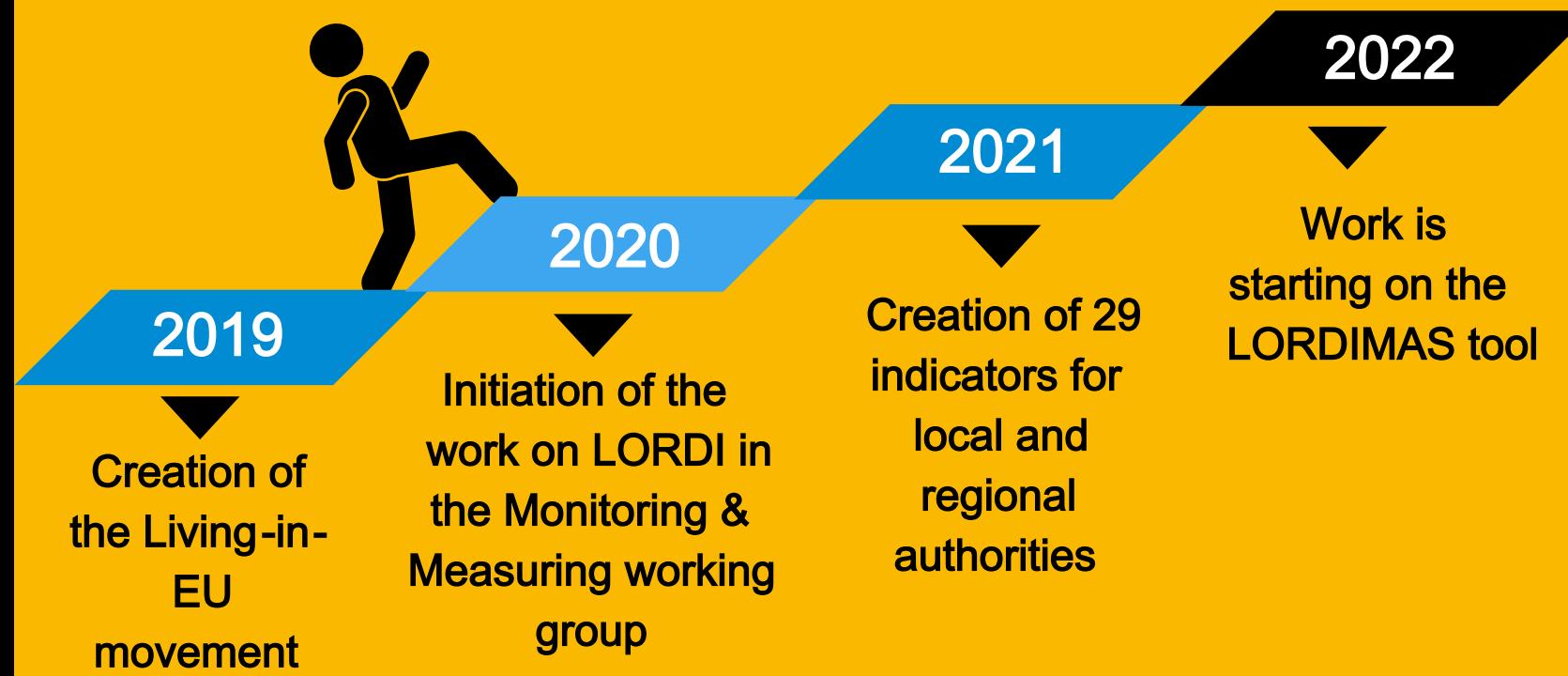
HOW WAS LORDIMAS CREATED



A collaborative process with many stakeholders engaged in its creation and its deployment.



WHERE DOES IT COME FROM?



Rooted in the discussions that are currently taking place within the Living-in.EU and topics with direct linkages with the Digital Europe Programme.

WHO DOES IT ADDRESS?

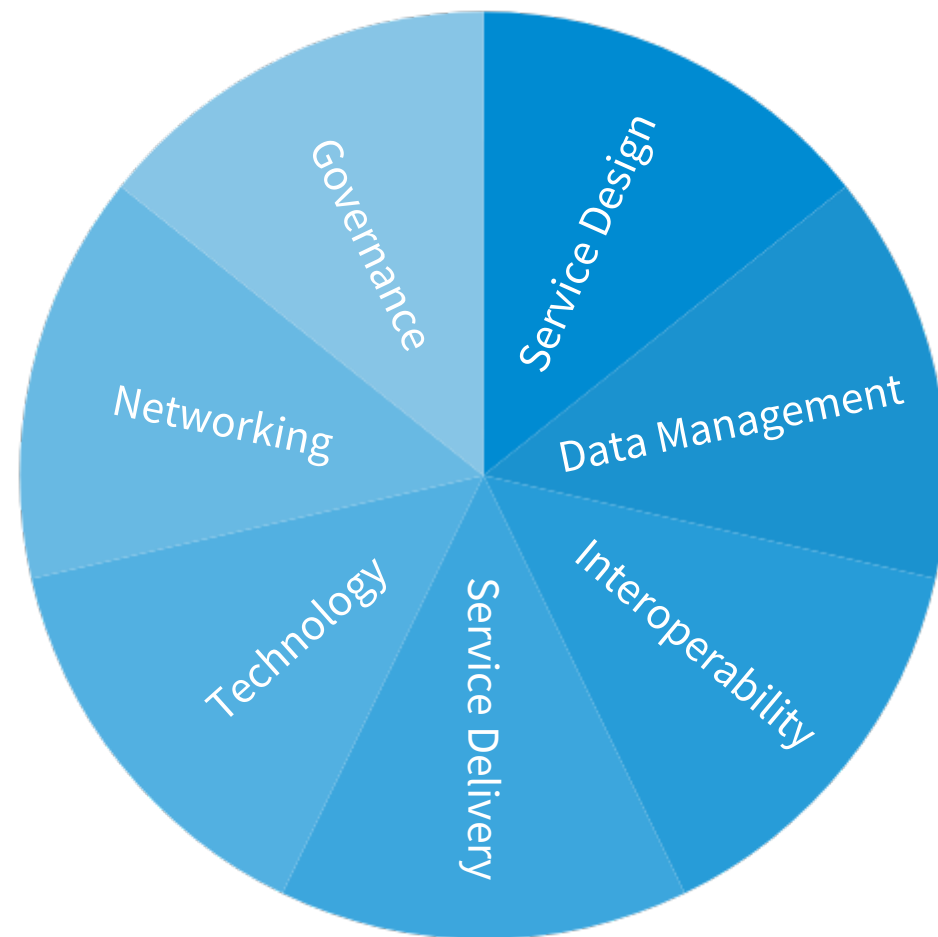


A wide range of cities, municipalities and regions at different stages of their digital transformation journey.

The Use Case for LORDIMAS

Dimensions of the tool

7 selfassessment dimensions



6 levels of maturity

*Digital
Native*

*Digitally
Optimized*

*Digitally
Purposeful*

*Digitally
Emerging*

*Digitally
Emerging*

*Digitally
Nascent*

Functionalities

Evaluate: A tool to help you assess your digital maturity and monitor progress made towards digital transition.

Compare: An interactive dashboard to benchmark your city to other similar cities.

Share: A repository of good practices to showcase your initiatives and results and to draw inspiration from other cities.

Learn: Learn about emerging topics and receive policy advice.

Questions it Helps Answer

- Is my city above/below the EU median?
- How do I rank compared to other cities of similar size, urban/rural cities, cities in my country?
- Are there dimensions that my city over/under performs compared to the median?
- What are my city's progresses towards digital maturity?

Facilitates

- Review of achievements and plans for continuation of transformation effort
- Assessment of local enablers
- Identification of opportunities, areas for improvement and how the ecosystem could work together to achieve goals



Get policy advice, promote and learn from best practices



LORDIMAS is an interactive digital maturity assessment tool aimed at helping local, metropolitan and regional governments to understand where they are in their digital transition journey.

[Participate](#)[Explore](#)

Promoted by



Analyse and visualise

Analyse and visualise

Overall Digital Maturity

About this dashboard

This module assesses the overall digital maturity of public administrations, looking into the seven LORDIMAS topics: Governance, Service design, Data Management, Interoperability, Service delivery, Technology and Networking.

Search and filter

Filter by country

Finland

Filter by type

No category selected

The Digital Maturity Assessment is calculated for the selection you see on the Map. You can select one or multiple public authorities using the Map or Search and Filter section.

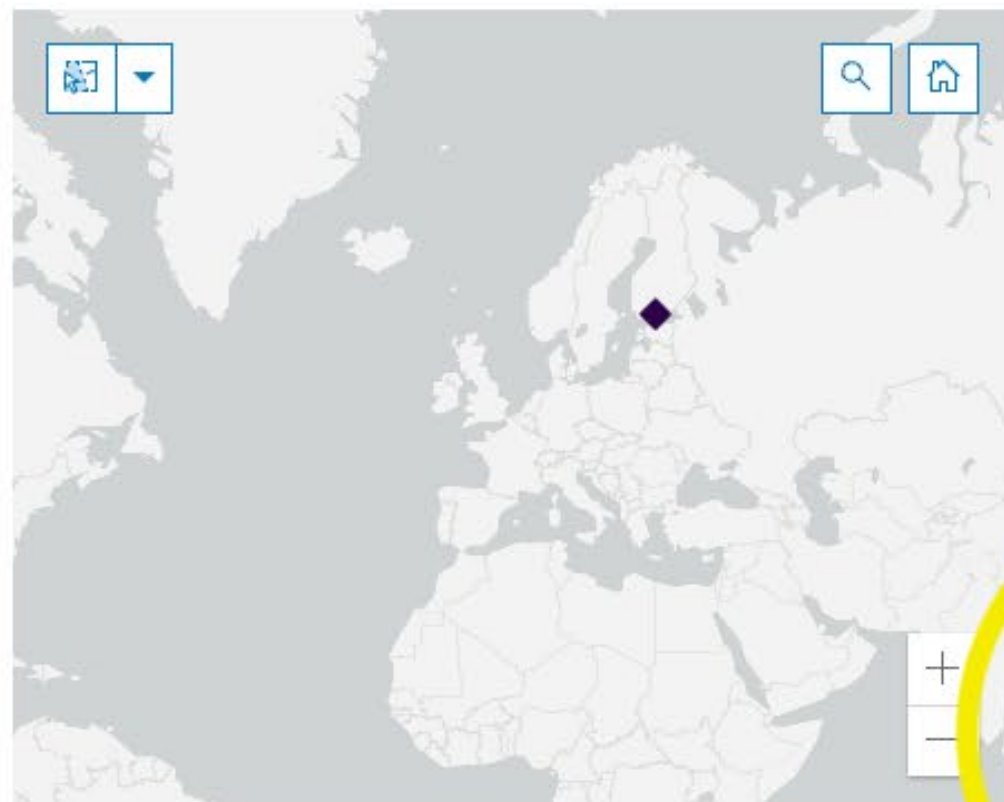
Maturity Assessment

- Digitally native
Very high levels of digital transition
- Digitally optimised
High levels of digital transition
- Digitally purposeful
Moderate levels of digital transition
- Digitally emerging
Low levels of digital transition
- Digitally reactive
Very low levels of digital transition
- Digitally nascent
Lacking digital transition

Population size

Maturity level: Digitally optimised

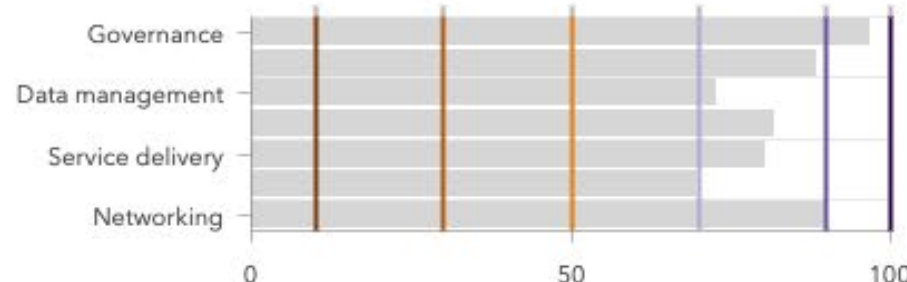
Maturity score: 82.5/100



Esri, TomTom, FAO, NOAA, USGS

Powered by Esri

Indicator scoring



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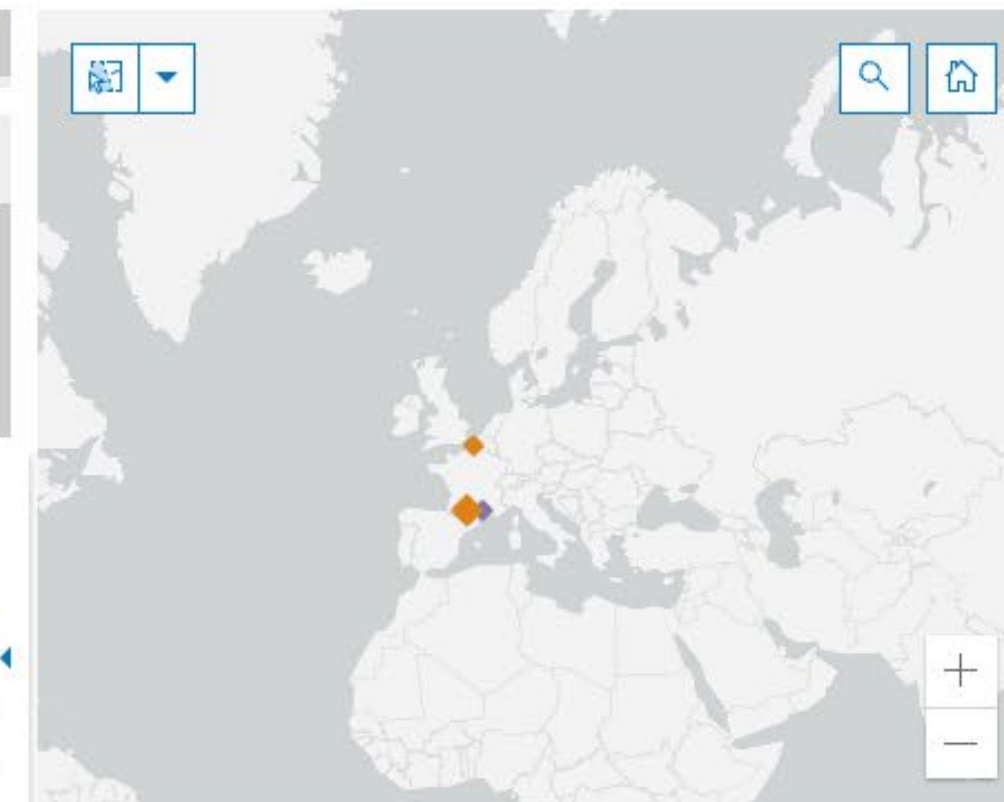
Filter by country

France

Filter by type

No category selected

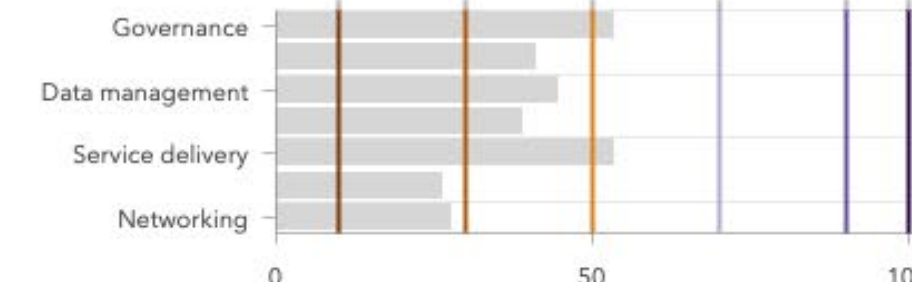
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Esri, TomTom, FAO, NOAA, USGS

Powered by Esri

Indicator scoring



All

Governance

Service design

Data management

Interoperability

Service delivery

Technology

Networking

Insert your best practice



[Draft example] Helsinki's innovation...

Forum Virium Helsinki (FVH) is the City of Helsinki innovation company. FVH co-creates...



[Draft example] Terrassa creates a m...

"Participa a Terrassa" (participa.terrassa.cat) is the online tool for citizen participation that...



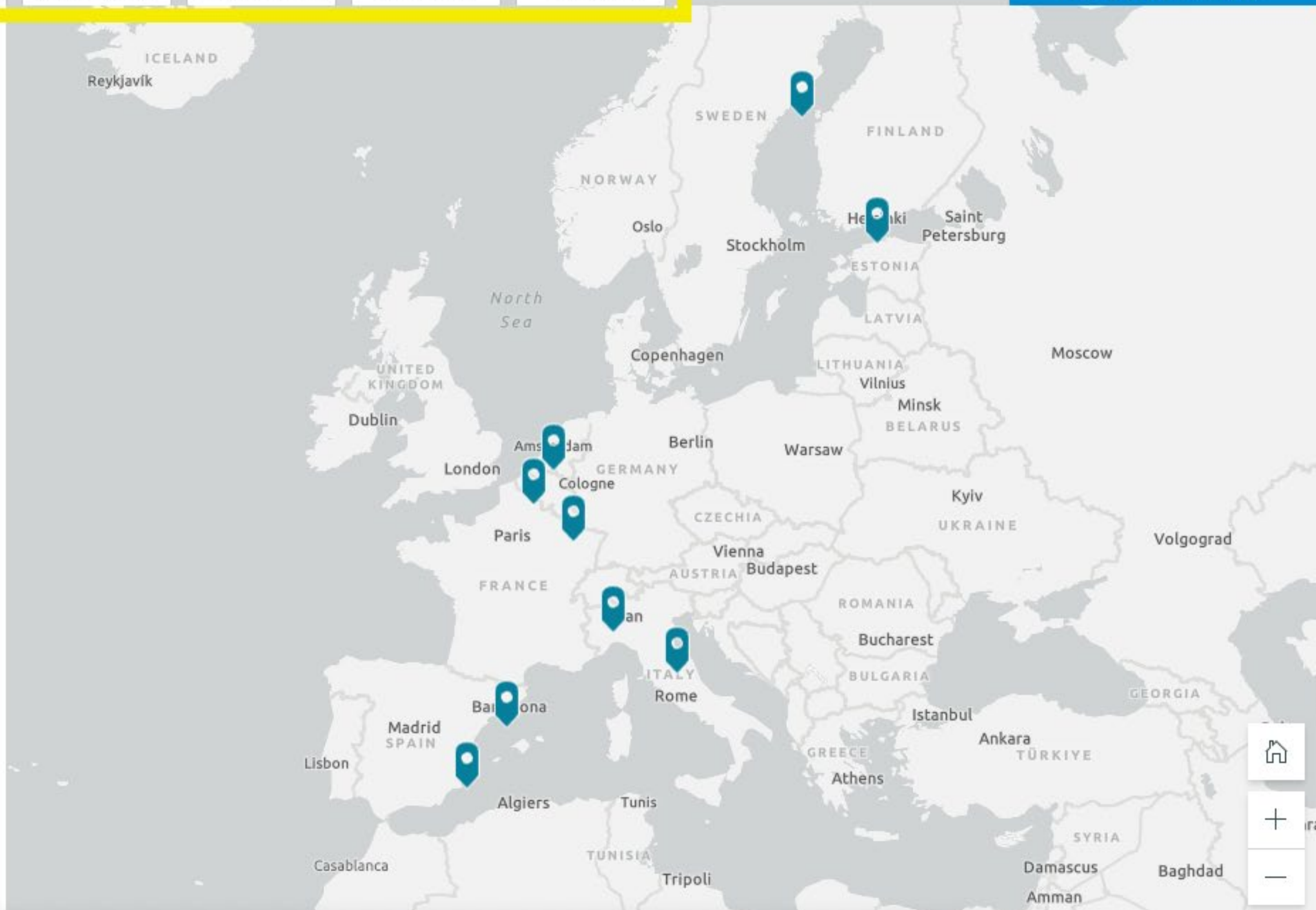
[Draft example] Amsterdam informs ...

Private companies, research institutions and government organisations in Amsterdam mus...



[Draft example] Umeå integrates dat...

The Umeå urban data platform (UDP) integrates a wide number of data sources from both...



Digital Maturity

Dashboard

Describes the overall digital maturity of regions, looking into the seven dimensions: Governance, Service design, Data management, Interoperability, Service delivery, Technology and Networking.

Filter

Selected

by Selected

Selected

Population size Selected

Region Selected

Region Selected

The Maturity Assessment is calculated for each region on the Map. You can select specific authorities using the Map Filter section.

Maturity Assessment

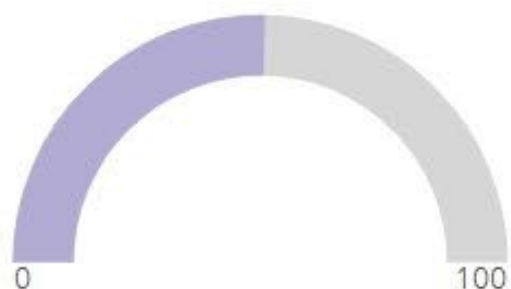
- Digitally native
Very high levels of digital transition
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Lacking digital transition

Population size

- > 5 000 000
- < 5 000

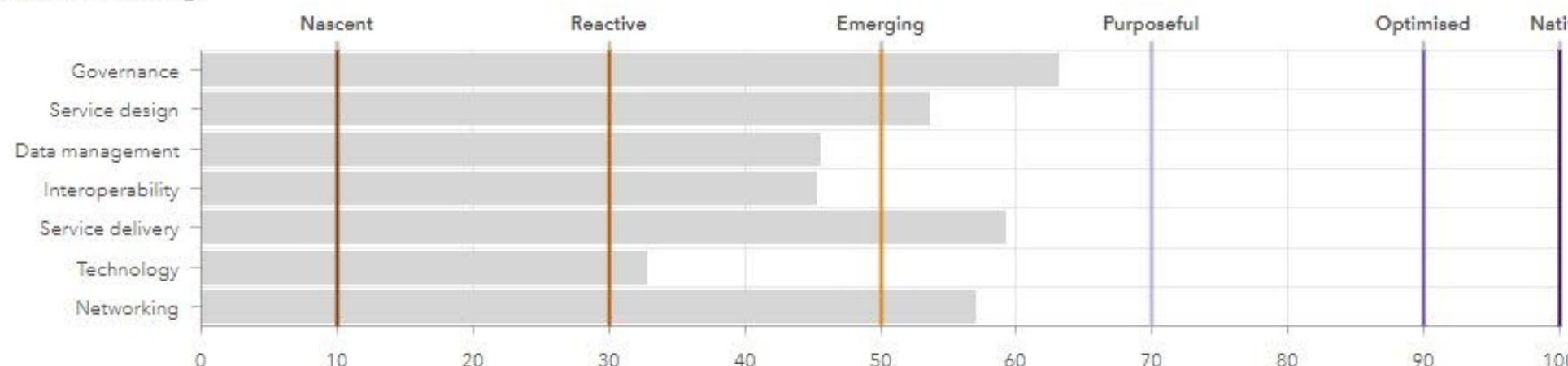
Maturity level: Digitally purposeful

Maturity score: 50.6/100



Esri, HERE, Garmin, FAO, NOAA, USGS

Indicator scoring



[Benchmark and consult](#)

You can access LORDIMAS at:



lordimas.espon.eu


If you want to contribute to shape the future development of the tool you can join the Monitoring & Measuring Working Group of Living-in.EU:





living-in.eu


Call to Action – How to Get Started

 Go to the platform, click on [participate](#) and download the offline form.

 Identify your list of key city stakeholders you would like to invite for the assessment. Share the questionnaire with the stakeholders.

 Organise a workshop to discuss the questionnaire and collect information on all dimensions.

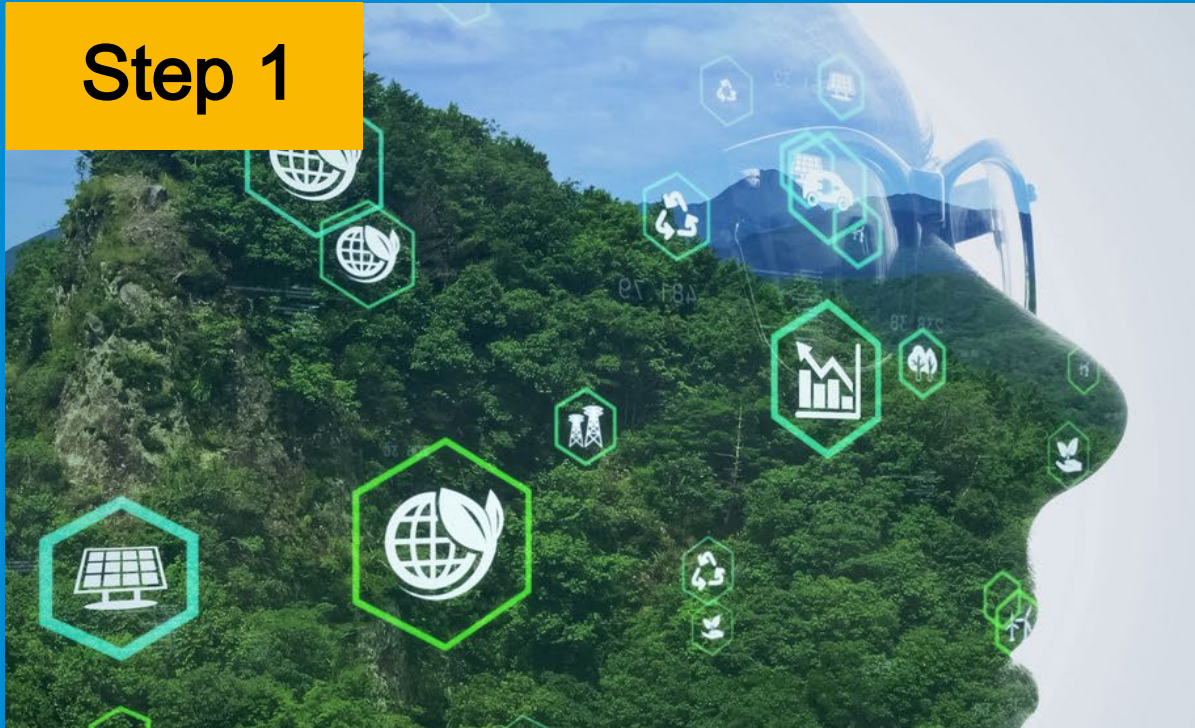
 Complete the assessment online, compare yourself to other cities, consult good practices and recommendations

 Summarise and discuss digital maturity assessment results jointly with the stakeholders, share learnings on strengths and weaknesses



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Journey for Participating Cities

KICK OFF ACTIVITIES



1:1 sessions between cities and the *CGAs, or to a common Info Session

*LORDIMAS



Get to know your overall digital maturity

STRATEGY ASSESSMENT



Assess in more detail your overall digital vision and strategy

IT INFRASTRUCTURE ASSESSMENT



Evaluate the technical maturity of the IT infrastructure

DIGITALISATION ROADMAP



Get your digital transformation roadmap tailored to your city/community needs

PROCUREMENT SUPPORT



Receive support to identify procurement needs and templates



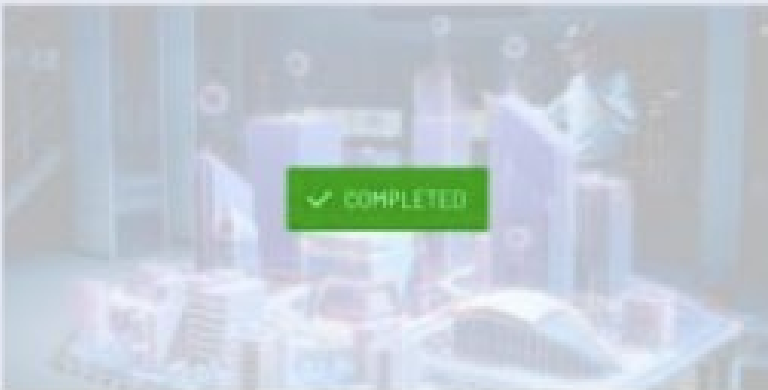





The helpdesk is live and you can [express your interest](#) in participating starting today!

Online Procurement Helpdesk



LIVING-IN.EU DIGITAL TOOLBOX

Welcome Arthur Kenjora Click here to [Start →](#) your next LDT assessment

Your City Journey 1/3 completed

 <p>✓ COMPLETED</p> <p> LORDIMAS Assessment View →</p>	 <p>50%</p> <p> Strategy Assessment Continue →</p>	 <p>0%</p> <p> IT Infrastructure Assessment Launch</p>
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Procurement Helpdesk Support Service

 <p>Get support →</p>	 <p>Knowledge Centre →</p>
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Digitalisation Roadmap

Reference Roadmap



The reference roadmap outlines key milestones and best practices for a project, providing a standardized framework for development and implementation, applicable to various scenarios as it remains use-case agnostic



The time presented in the reference roadmap is an estimation, but can vary depending on the general administration of each city

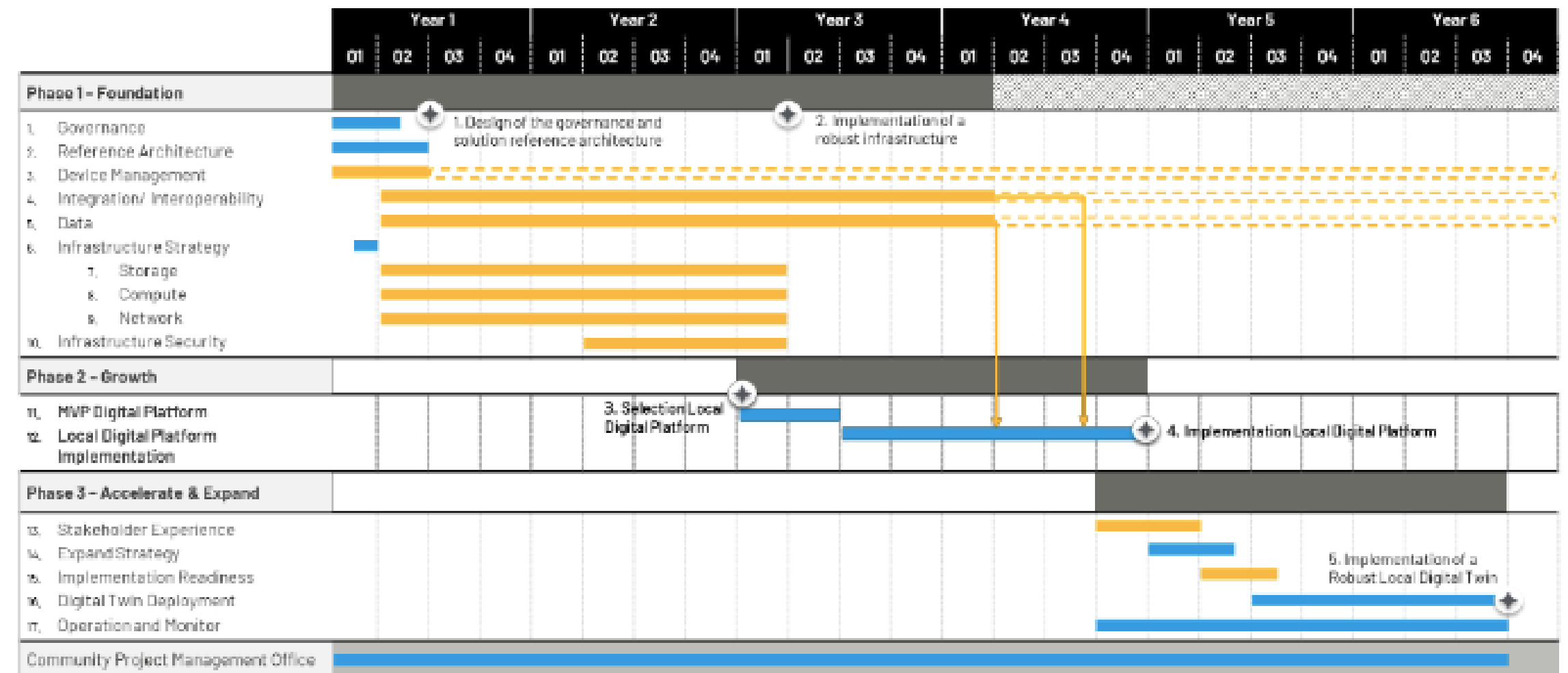


The roadmap does not consider the time needed for contract negotiations and RFP discussions



In the reference roadmap overlaps occur, because certain capabilities and enablers, while having interdependencies, don't strictly rely on each other's conclusion since they allow for simultaneous development

Overview of capabilities and enablers and correspondent reference timeline



Note: The arrows represented in the reference roadmap illustrate that during the implementation of the local digital platform, both integration and data capabilities should be addressed. It is essential to ensure the seamless coordination of integration and data collection with the local digital platform during its implementation.

Digitalisation Roadmap

3 Device Management

The Device Management capability entails efficient deployment, maintenance, and integration of IoT devices to enhance overall operational efficiency within the smart community ecosystem.



Main Initiatives

Device Management Strategy

- 1| Review the device management strategy, including lifecycle management framework, protocols and APIs, and the KPIs
- 2| Review your current IoT devices, and see if they are a good fit based on the strategic priorities and identified requirements

Device Installation

- 1| Review current IoT devices and check their integration the current network and compliance with the policies based on your device management strategy and IT Infrastructure strategy

Device Platform

- 1| Acquire and implement the chosen IoT Platform based on the IoT strategy, strategic priorities and IT Infrastructure strategy

Foundation

Growth

Accelerate & Expand

Calendar Estimate



Procurement Objects*

- IoT devices
- IoT platform

*The procurement objects provided are preliminary versions and subject to further refinement

Interdependencies

Not applicable

European initiative to support this step



Financial Commitment

Fully funded by the European Commission, this initiative covers all expenses related to support activities and assessments. It's important to note that while the costs for these preparatory stages are fully covered, **there isn't direct funding available for the actual implementation of the solutions**. Cities and communities looking to fund the implementation phase are **advised to explore the DEP (Digital Europe Programme) grants and funding opportunities**.



Benefits

- Online support services to guide your community in developing and realising its **digital strategy**.
- Expert guidance and validation of digital projects, progress and alignment with **EU standards and best practices**.
- Identification of procurement needs to advance the digitalisation roadmap implementation, and access to tailored procurement guidelines and templates.
- Tailored **advisory** services to assist your city in assessing technological readiness for implementing MIM-compliant local data platforms.
- A customised **digitalisation roadmap**, detailing the necessary steps and procurement strategies to enhance your technical capabilities.



Recommended expertise

Strategy & decision-making

- Innovation Manager (Chief Innovation, Chief Digital or Chief Technology Officer, Smart City Manager or similar)
- Relevant city departments with strategic and decision-making capacity
- Project management office (PMO)
- Thematic experts

IT/Data/Architecture

- Data Manager (Chief Data Manager, IT manager, Data Steward, or similar)
- ICT Manager and Systems Specialist
- IT Architect

IT Procurement

- Infrastructure Provider

Citiverse EDIQ (European Digital Infrastructure Consortium)

WHO

Signatory Member States Spain, Slovenia, Estonia, Latvia, Croatia, Portugal, France, Czech Republic , Luxembourg, Belgium, Slovakia, Italy.

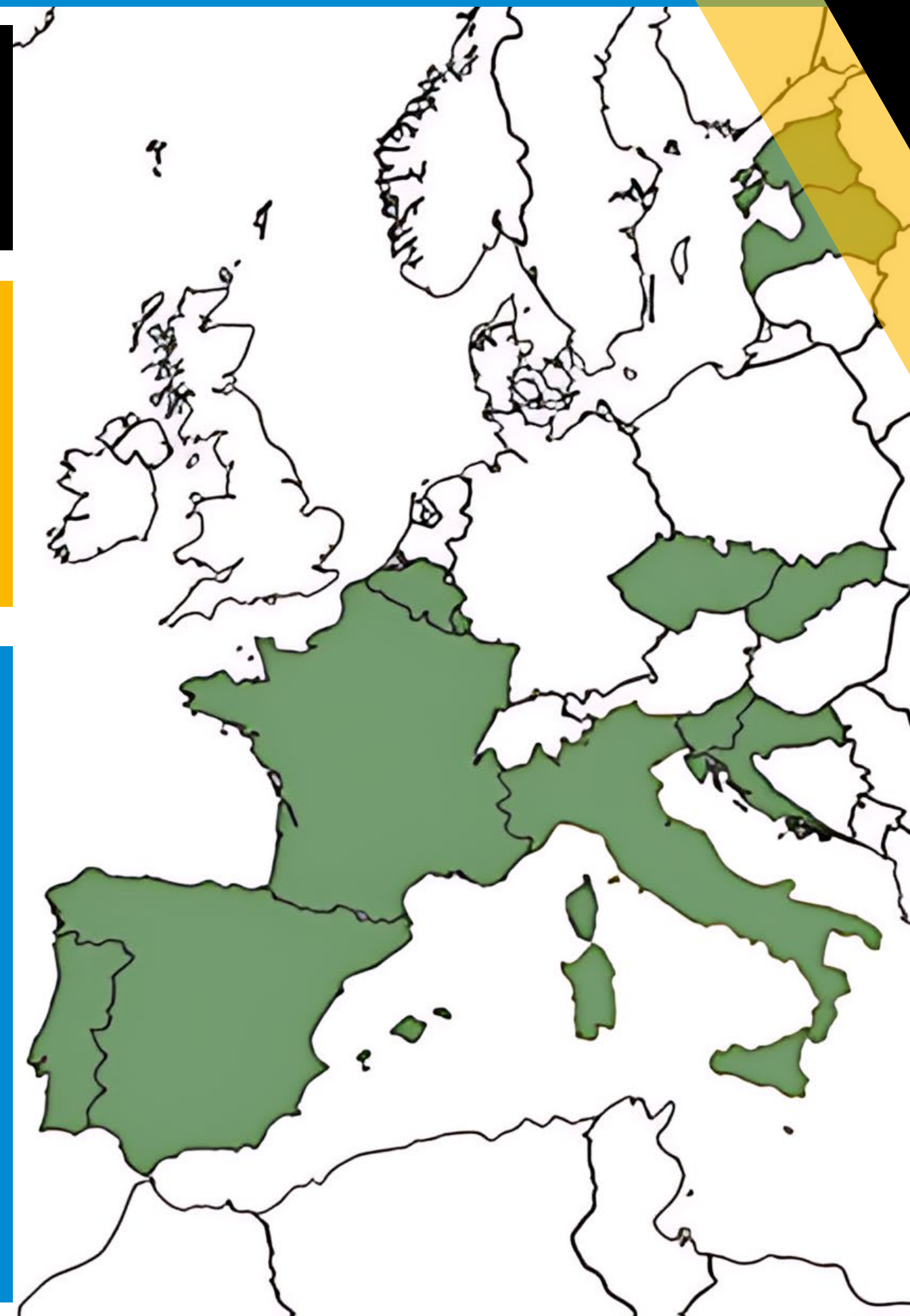
WHAT

Common tools. EU LDT toolbox, Data and services interoperability, Reuse of components & best practices.

Joint tenders: Economies of scale, Open standards, Certification.

WHY

- To create a common & sustainable European infrastructure.
- To go beyond research.
- To avoid repetitions.
- To deploy large-scale innovative projects and technologies.
- To provide recommendations for future R&D&I in SCC.
- To create a solid EU ecosystem on SCC.





EU LDT Toolbox: An advanced set of tools to enable digital twins benefits on EU cities.

3 simple steps to enable the benefits of a Digital Twin to support your decision-making and planning processes effectively.

Being implemented and will start the Pilot Program with 6 European cities in January 2026



We value your feedback!

