Local Digital Twins for Smart Sustainable Communities

12.02.2026

LDT4SSC Info Session: Call 2

Driving Innovation for Local Digital Twins

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Laura Galante, Santiago Donat & Adriana Badau (TGB)
Sara Sebastiano (ENoLL)

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Cerema

OPEN & AGILE SMART CITIES & COMMUNITIES

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Agenda of the Webinar

Part A – Introduction to LDT4SSC

- Introduction to LDT4SSC project
- Introduction to Call 2
- Introduction to Work Strand 1 & 2 Objectives and Targets
- Presentation: The case of Leipzig
- Introduction to Work Strand 3 Objectives and Targets
- Presentation: The case of Bologna
- Funding Structure and Financial Support Mechanisms

Part B – Application Requirements and Criteria

- Technical and Non-Technical Requirements
- Eligibility Criteria

Part C - Support to Applicants

- Helpdesk, Matchmaking Platform, Newsletter, Support Material

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LDT4SSC

Local Digital Twins for Smart Sustainable Communities

Introduction to LDT4SSC

From the coordination team

Karl-Filip Coenegrachts
Open & Agile Smart Cities & Communities

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LDT4SSC Partners

LUXEMBOURG INSTITUTE OF SCIENCE AND TECHNOLOGY

LIST

TAL TECH

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GHENT UNIVERSITY

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CLIMAT & TERRITOIRES DE DEMAIN

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General information

Local Digital Twins for Smart and Sustainable Communities

Call: DIGITAL-2024-CLOUD-DATA-AI-07-DIGITALTWIN: Towards networked Local Digital Twins in the EU

Type: DIGITAL-GFS DIGITAL Grants for Financial Support

Objective: “to consolidate existing results and move towards an ecosystem of mature LDT-based infrastructures and services across the EU to help cities and communities achieve economies of scale to access and deploy data platform and LDT-based services.”

Budget: 20M€ * 3M€ /17M€ (funding for pilots, 50% co-funding required = 34M€)

General objectives:

- Connecting data platforms and LDTs from cities and communities that already have a LDT in place, to create an EU “federation” of LDTs.
- Developing open-source pilots of LDT services based on shared needs of cities and communities that already have a local data platform and/or an LDT and want to expand them with new real-life use case services.
- Complementing the EU LDT Toolbox launched under WP2021-22 with additional complex AI-based and innovative services

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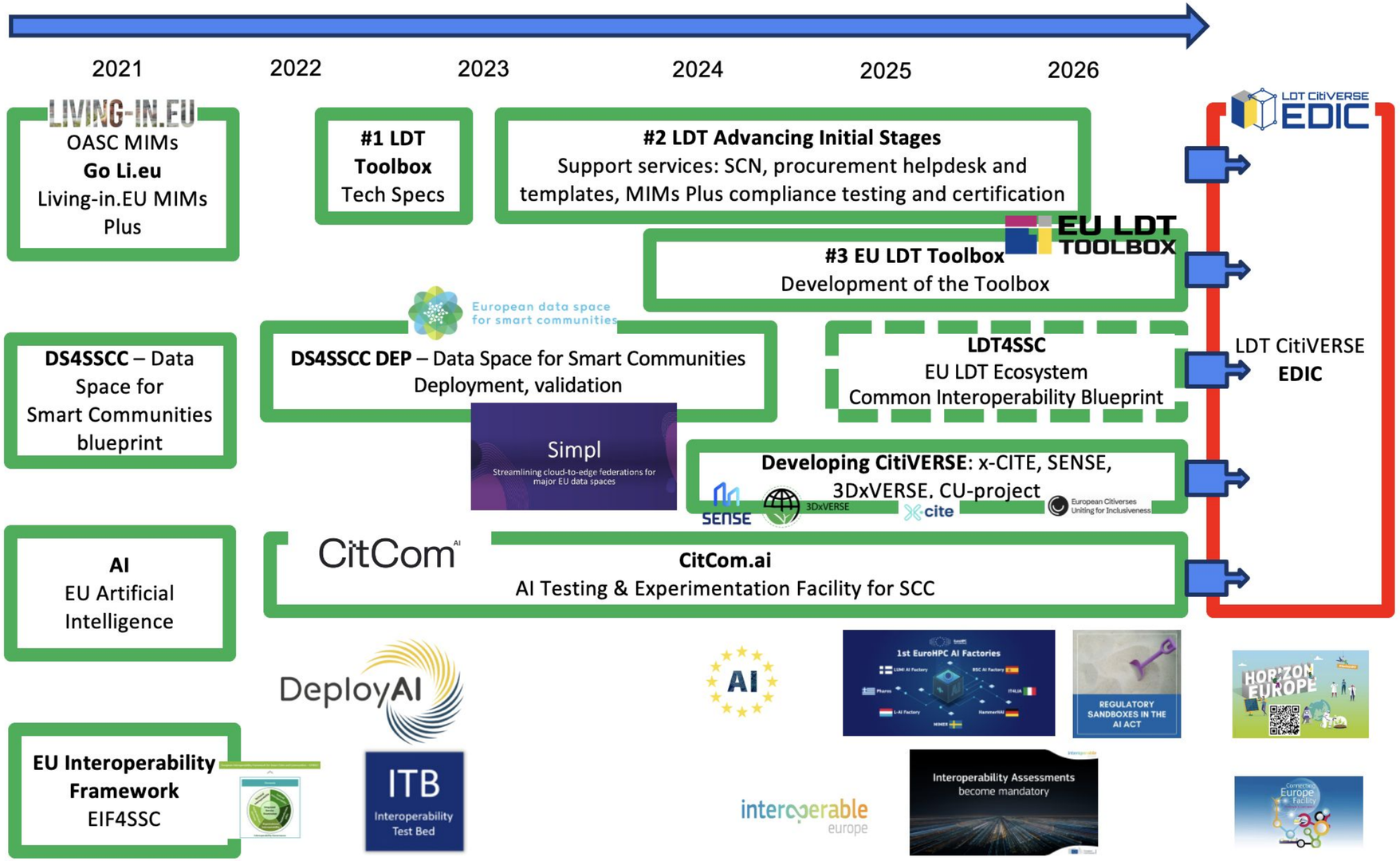
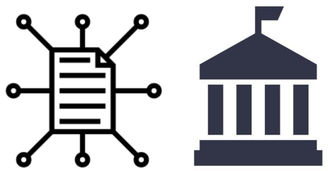
The EU Smart Communities Ecosystem



LDT4SSC

3 work strands

WS1: Technical Interconnection of Existing LDTs
Linking and scaling digital twins or data platforms that are already in place.

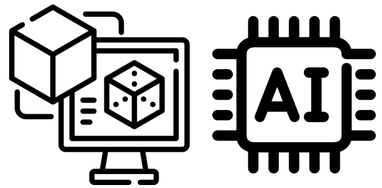


2 Open Calls
(Nov/25)
(Feb/26)

WS2: Creation of LDTs Based on Common Needs
Addressing shared urban or regional challenges (e.g., cross-border traffic, air pollution).

2 Open Calls
(Feb/26)
(Jun/26)

WS3: Adding New Advanced AI-Based Capabilities to the LDTs Toolbox
Integrating AI-driven, value-added services to enhance existing LDTs.



2 Open Calls
(Feb/26)
(Jun/26)

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Local Digital Twins for Smart Sustainable Communities

Introducing Open Call 2

Laura Galante
Technopolis Group Belgium

technopolis group

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Introducing Call 2

Call 2 is open for pilot applications in **all three Work Strands** and for the following type of stakeholders (but not limited to):

LOCAL, REGIONAL AND NATIONAL PUBLIC ADMINISTRATIONS, EUROPEAN DIGITAL INFRASTRUCTURE CONSORTIA (EDICs)

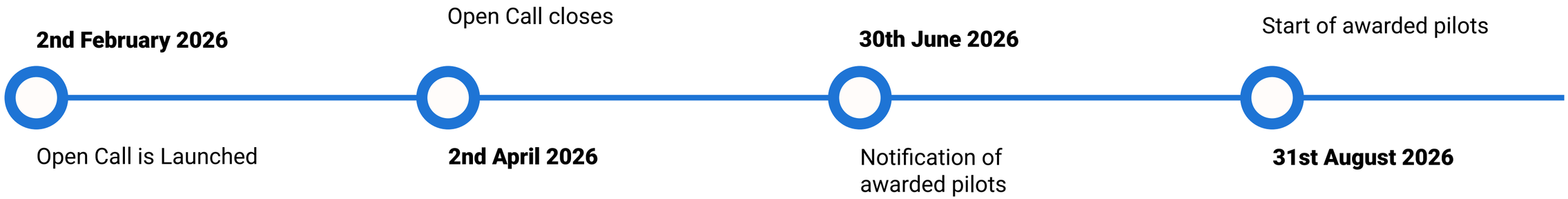
NGOS, NON-PROFITS, AND CIVIL SOCIETY ORGANISATIONS

RESEARCH INSTITUTIONS AND ACADEMIA

BUSINESSES, TECH DEVELOPERS, AND SUPPLIERS

LDT4SSC

Open Call Timeline



LDT4SSC

Scope and Targets of Work Strand 1

Interconnecting existing Local Digital Twins

Connecting LDTs from cities and communities that **already have an LDT in place;**

To create an **interoperable EU federation** of LDTs

To foster a **unified data ecosystem** that enhances decision-making particularly for key EU policies and reduces redundancies;

To **connect public authorities** that are **willing to share data**, models and services with other data platforms;

To support **seamless data exchange and integration**, both within individual communities and across regional networks;

To foster the **development of skills among all pilot members** including companies offering technical solutions for a better interconnection, a better maturity of components and documentations.

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Why apply to Work Strand 1

Interconnecting existing Local Digital Twins

1. **Interconnect with the Digital Blueprint:** Uplift your Local Digital Twin with more data and services, by harmonising your solution with other LDTs in the EU communities.

1. **Unlock Dedicated Scaling Finance:** Gain direct access to targeted funding designed to bridge the gap between local pilots and large-scale, cross-border European integration.

1. **Multiply Capabilities through Federation:** By joining the federation, your city can consume data and services from across the EU, gaining institutional capabilities that would be impossible to develop alone.

1. **Harden Digital Security:** Leverage the collective intelligence of European partners. Share threat intelligence and adopt unified security protocols to protect your city's digital infrastructure against evolving cyber risks.

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Scope and Targets of Work Strand 2

Deploying new Local Digital Twin services

To create new Local Digital Twins (LDTs) based on shared needs across cities and communities

To demonstrate federation with existing LDT networks developed under WS1

To populate the LDT4SSC Service and Assets Repository with the produced services and tools, ensuring alignment with the LDT Toolbox Marketplace

To develop operational LDT services and packaged assets that demonstrate the effective use of shared data, common data models and reusable software components.

To design outputs for replicability and transferability, documenting assets so they can be reused by other cities and regions across the EU

To co design LDT based services that address shared challenges and deliver measurable community benefits

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Why apply to Work Strand 2

Deploying new Local Digital Twin services

1. **Direct Capital for Deployment:** Secure the necessary funding to move your Digital Twin from a concept on a whiteboard and face urban challenges through smart technologies.

1. **Borrow the Brilliance of Peers:** Learn from the documented successes (and failures) of partner cities, ensuring you adopt only the most efficient deployment strategies.

1. **Tap into the EU Toolbox:** Get immediate access to a curated suite of open-source components, technical specifications and support from the LDT4SSC Consortium. This "LDT-in-a-box" approach reduces vendor lock-in and cuts development time.

1. **Forge Long-Term Strategic Alliances:** Build lasting ecosystems by forming formal links with leading private-sector innovators and public authorities that will sustain your digital growth for years to come.

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Local Digital Twins for Smart Sustainable Communities

Presentation: City of Leipzig

Interconnecting LDTs in the CUT Programme

Dr. Christoph Schubert, Connected Urban Twins

Connected Urban Twins: Digital twins for urban development of the future

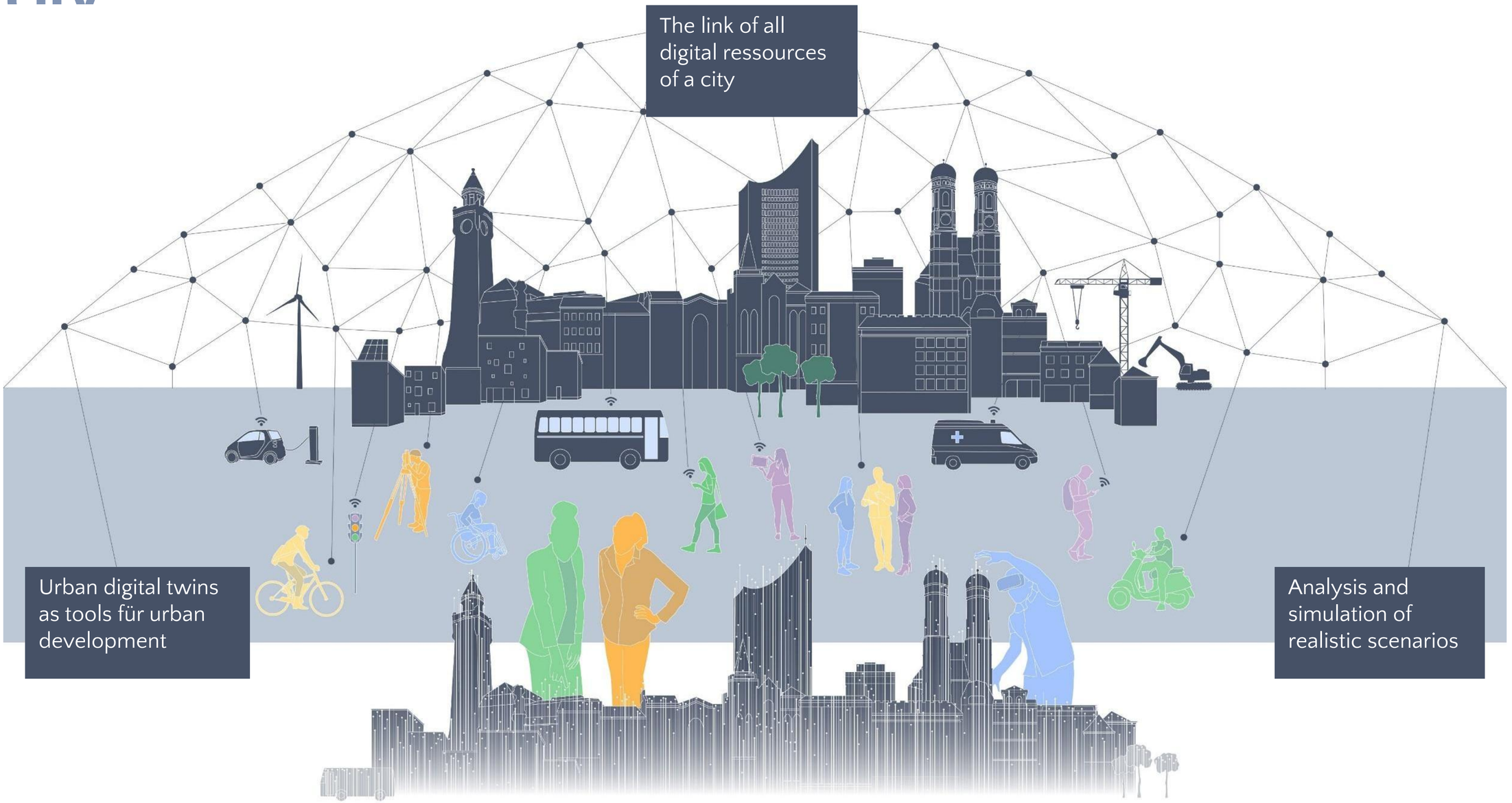
Brief introduction

Dr. Christoph Schubert

- Project Manager
- Digital City Department, City of Leipzig
- Digital Twin & AI Projects
- Digital Rights & Ethics

Opportunities for urban digital twins

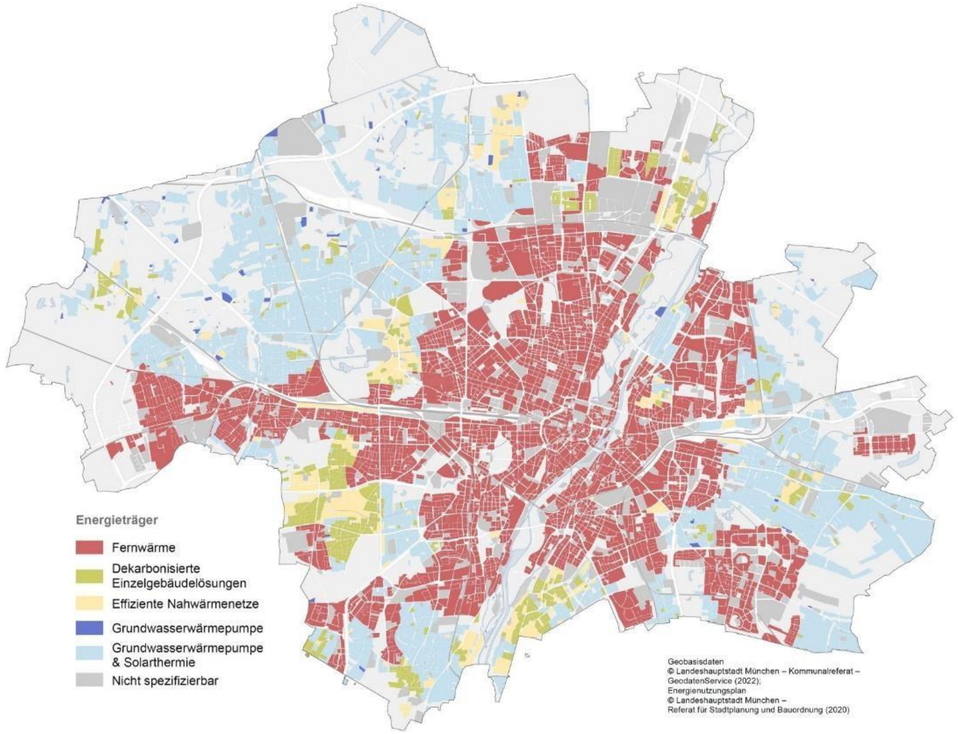
Urban Digital Twins: virtual copies of the city



Opportunities for urban digital twins

Organising urban data and making it usable

© City of Leipzig



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Opportunities for urban digital twins

Tools for integrated urban development and transparent citizen participation

© Angela Pfeiffer

© Heike Gebhardt

Opportunities for urban digital twins

What-if scenarios for the city of the future

© Angela Pfeiffer

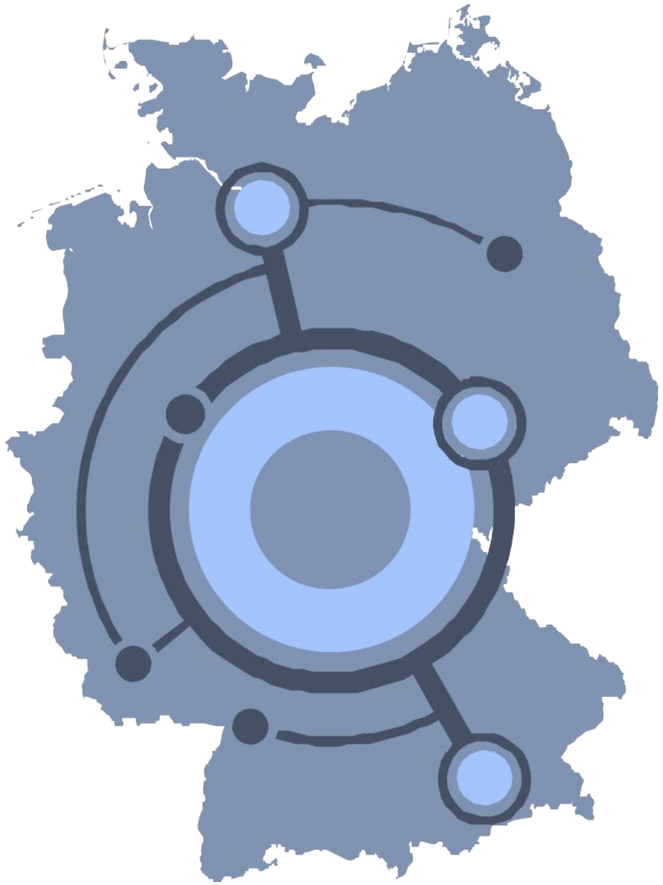
© CUT/CSL

Connected Urban Twins at a glance

Our vision

Together we are developing Urban Digital Twins for use in integrated urban development.

Urban Digital Twins digitally represent our cities and can be used to play out 'what-if' scenarios for cities that are sustainable and improve the quality of life.



Hamburg

Stadt Leipzig

Landeshauptstadt München

CUT partners

Hamburg

Stadt Leipzig

Landeshauptstadt München

Senate Chancellery, Office for IT and Digitalization

Digital City Department

Municipal Department

Agency for Geoinformation and Land Use Planning

IT Department

Department for Urban Development and Housing, Stadtwerkstatt

Agency for Statistics and Elections

Department for Urban Planning and Building Regulations

Agency for Geoinformation and Surveying

Technical University of Munich

Lecos GmbH

CityScienceLab at the HafenCity University Hamburg

L-Group

Center for Scalable Data Analytics and Artificial Intelligence (ScaDS.AI)

HPA - Hamburg Port Authority

Dataport

Five specialist areas

Urban Data Platforms and Digital Twins

Further development and operational use of replicable Urban Data Platforms and Digital Twins

Innovative use cases in urban development

Evaluation of Urban Data Platforms and Digital Twins in current urban development use cases

Participation by the urban community

Co-creative development and use of innovative digital participation formats, tools and processes

Transformative experimental urban research

Linking technology research with social science research relating to Urban Digital Twins

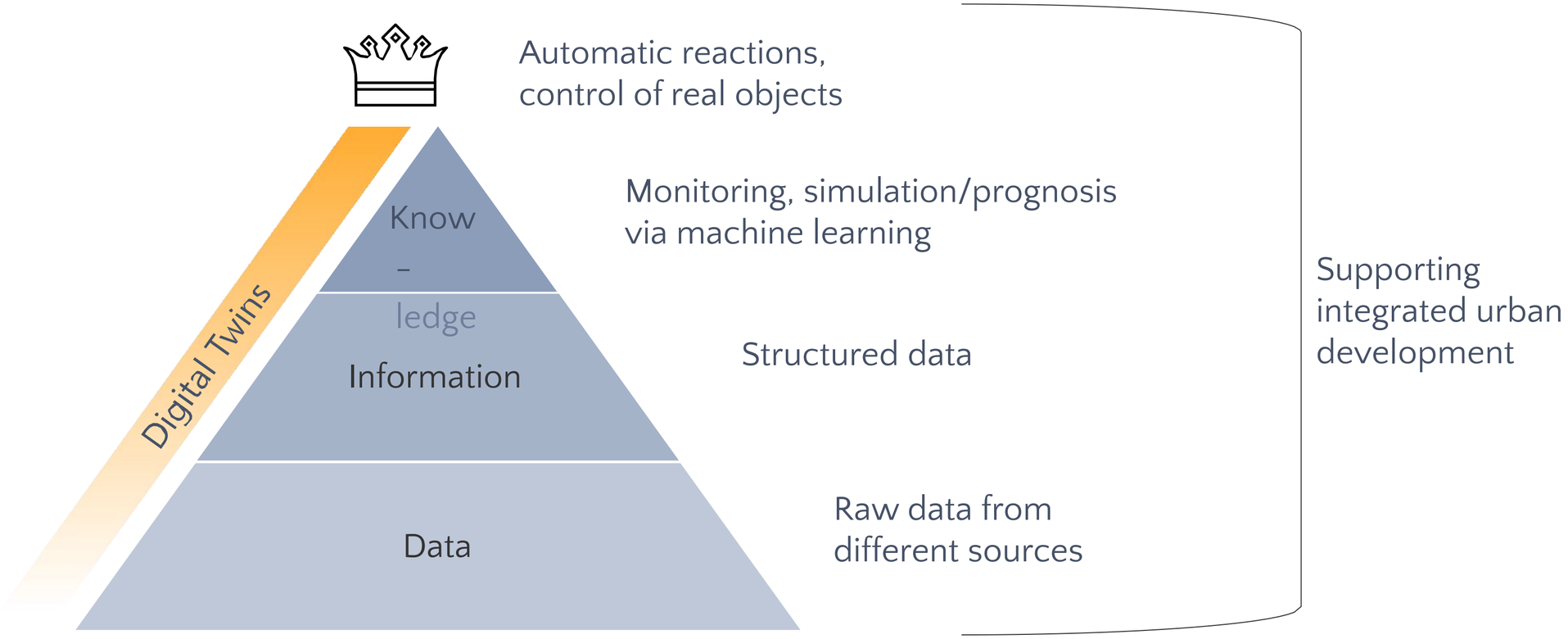
Replication and knowledge transfer

Internal project knowledge management, supraregional knowledge transfer and exemplary replication of project outcomes

Urban Digital Twins: definition and conception

What are Urban Digital Twins?

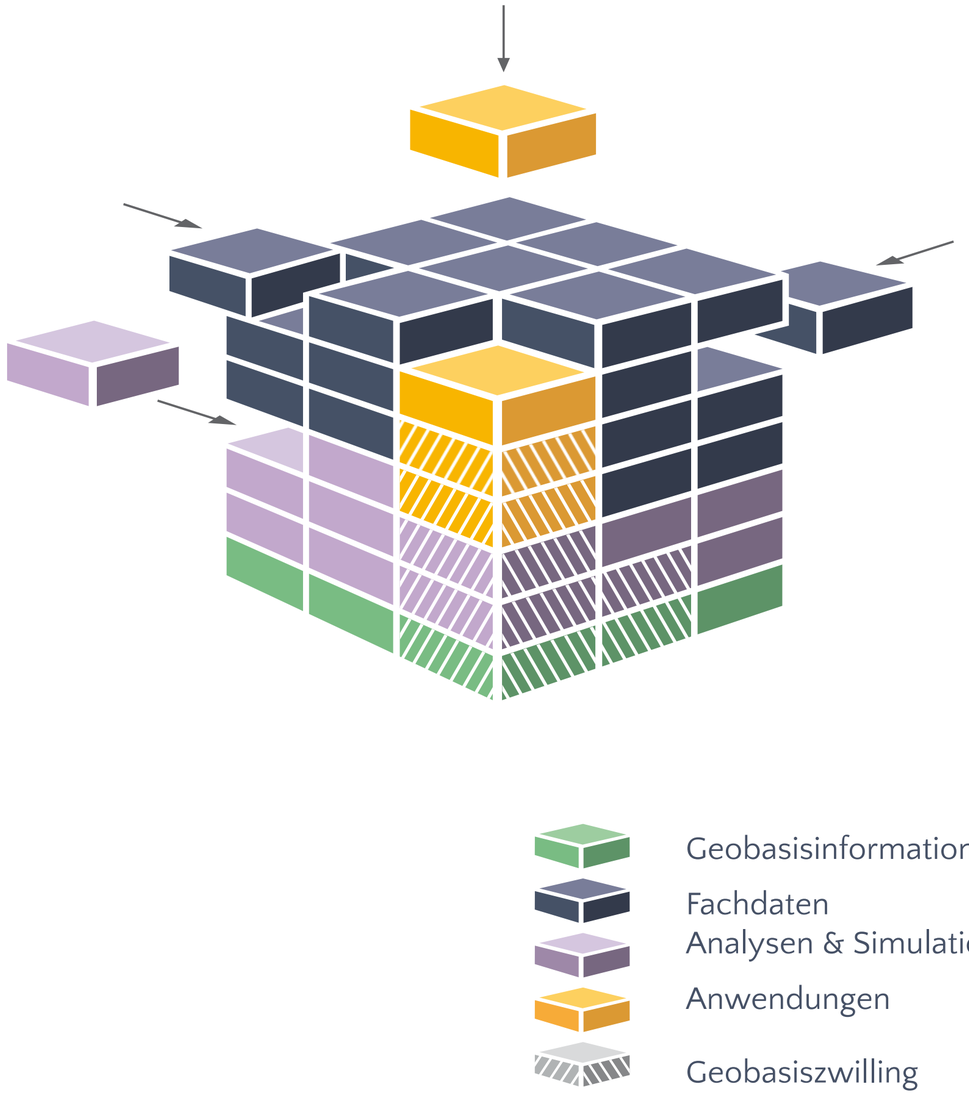
From data through information and knowledge to the ultimate discipline of control



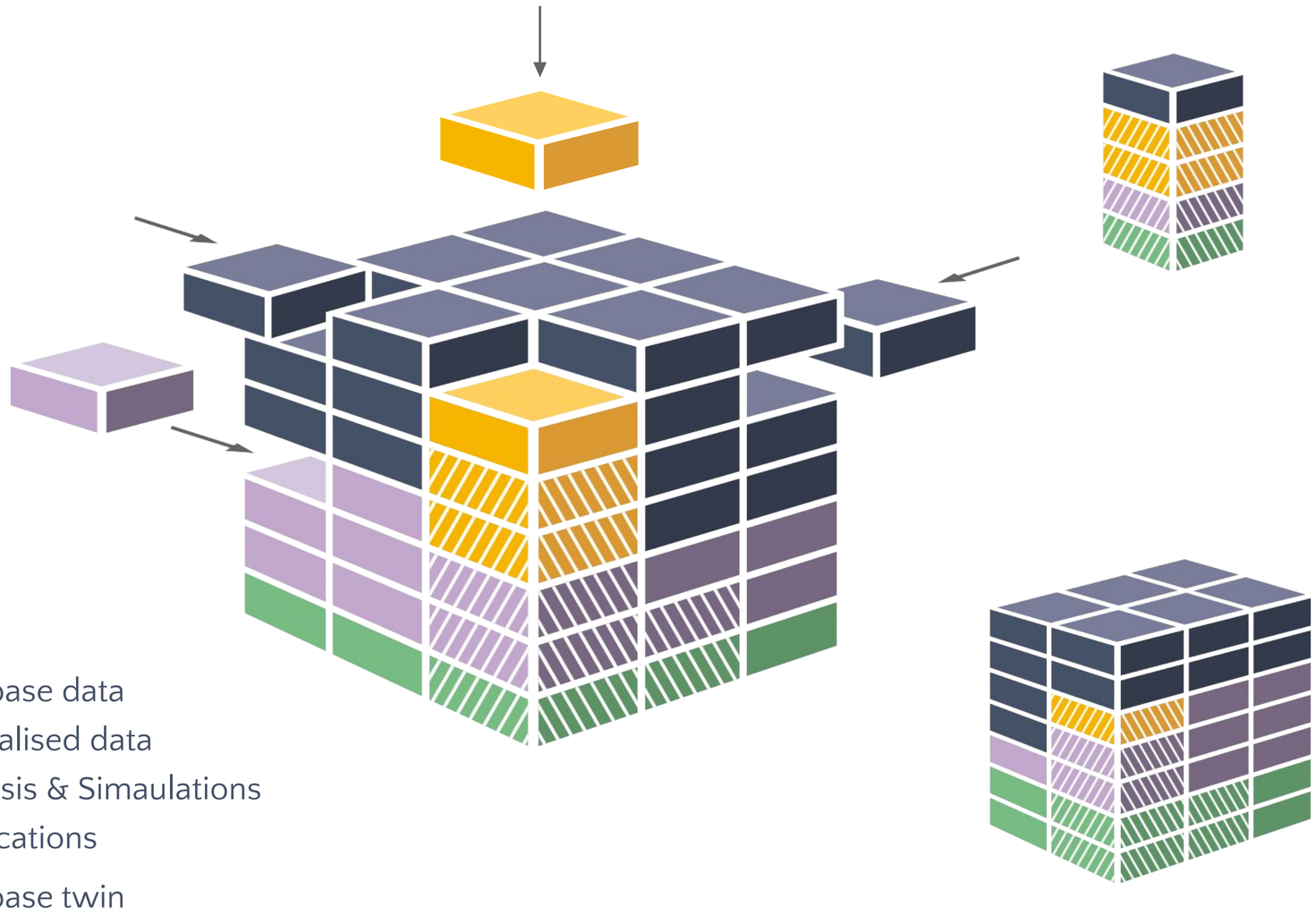
How are urban digital twins created?

There is no such thing as THE urban digital twin of a city

We see the concept of Urban Digital Twins as a construction kit whose building blocks can be combined in new ways for every issue and urban challenge (use case).



Urban digital twins: use cases



Use cases

- Urban planning
- Climate
- Participation
- Mobility
- ...

DIN SPEC 91607

Digital Twins for cities and municipalities

- DIN SPEC 91607 ‘Digital Twins for Cities and Municipalities’ is part of the ‘DIN SPEC series’ of the DIN Smart City Standards Forum.
- Together with over 40 other experts from local authorities, associations, politics, science and business, the CUT team has spent two years developing a standard for urban digital twins.
- The DIN SPEC was published in October 2024 as a comprehensive guideline for cities and municipalities and represents an important milestone for the standardisation of digital twins in Germany.

DIN SPEC 91607

Digital Twins for cities and municipalities

- The specification (SPEC) provides cities and local authorities with a comprehensive basis for effectively implementing digital twins and utilising existing standards and best practices.
- In particular, this promotes a standardised understanding of the topic and cooperation between different cities and municipalities.
- A central element of the specification is the defined use cases, which are based on over 100 identified usage scenarios, including in the areas of mobility, energy, environment, safety and urban planning.

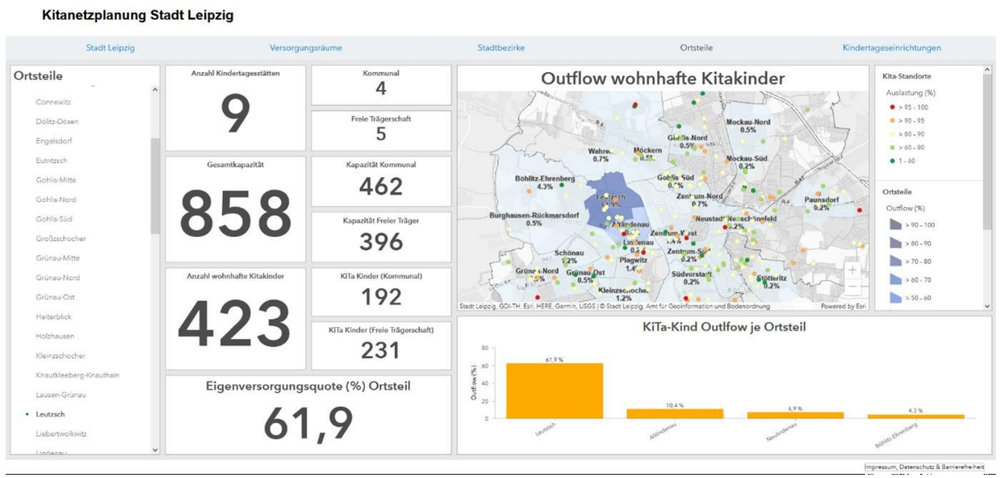
CUT

Project insigts from Leipzig

Childcare network planning

Interactions in urban planning

The childcare network planning use case as part of the CUT project establishes a **tool for integrated urban planning** and combines the data and requirements of **two specialised departments**. This creates transparency for the fulfilment of the legally prescribed availability of childcare places and enables the simulation of interactions in the area of urban planning.



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Digital participation system DIPAS

Rethinking the participation of urban society

DIPAS offers citizens the opportunity to comment on and discuss digital maps, aerial images, designs, 3D models or geodata and **provide precisely localised feedback** on planning projects **from home, on the move or at events**.

The entire city, individual districts, neighbourhoods or even individual plots of land can be displayed and **citizens' opinions** can be obtained **on a wide range of topics**, for example on construction projects, infrastructure projects, green space planning or development concepts.

DIPAS
Digitales Partizipationssystem

Logo: BSW Hamburg, Graphic: LGV

DIPAS in practice: online venue

Public participation process Matthäikirchhof in Leipzig

© Heike Gebhardt

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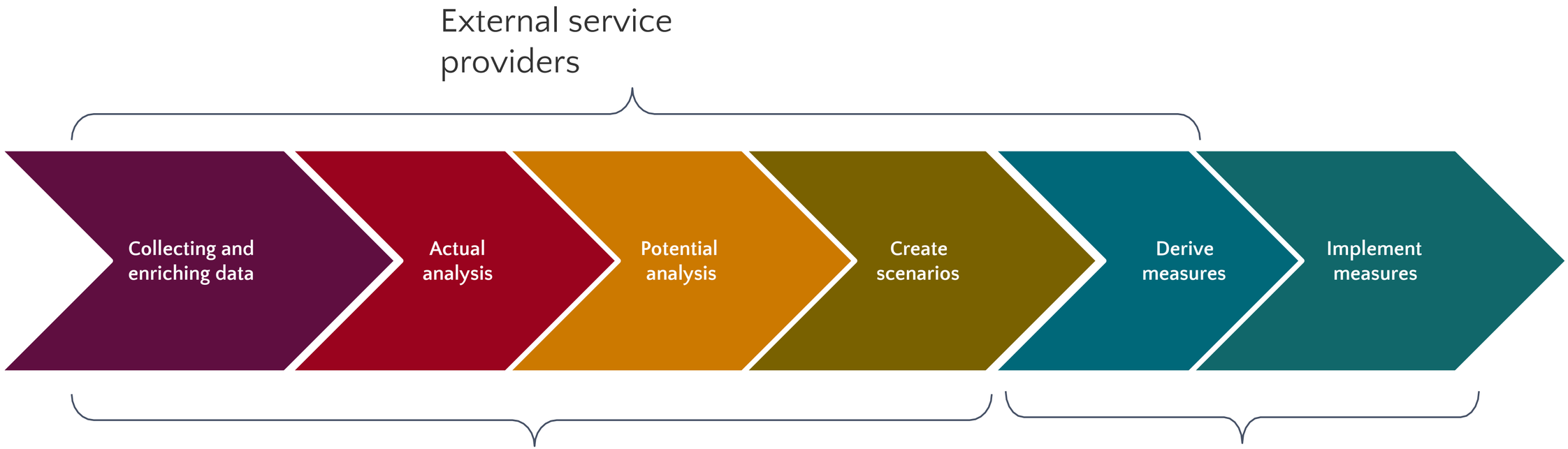
https://unsplash.com/de/fotos/gruppe-von-menschen-in-der-nahe-von-lagerfeuern-in-der-nahe-von-baumen-wahrend-der-nacht-fDostElVhN8

The energy twin as a shared virtual meeting and work place centre.

"How does municipal climate protection work?"

Status quo



Objective

As a city, we must own and analyse
the data ourselves.

This enables us to develop and implement measures more quickly.

The campfire: Energy Atlas

Vision

The Energy Atlas is intended to provide **transparent** information about how far Leipzig has progressed with the energy transition and what measures are planned in the city.
All information is to be presented **in a single view**.

Target

- Leipzig city authorities

Challenge/requirement

- Clear presentation of areas with renewable energy potential and their current status
- Option for simple data analysis, visualisation and export

Product

- Internal city digital platform with map visualisation for renewable energies
- Analysis and planning tool for identifying and utilising renewable energy potential

Objectives

- Tapping into potential areas for promoting renewable energy
- Strengthening dynamic and cross-departmental cooperation

Energy Atlas: Implementation in LeipziGIS

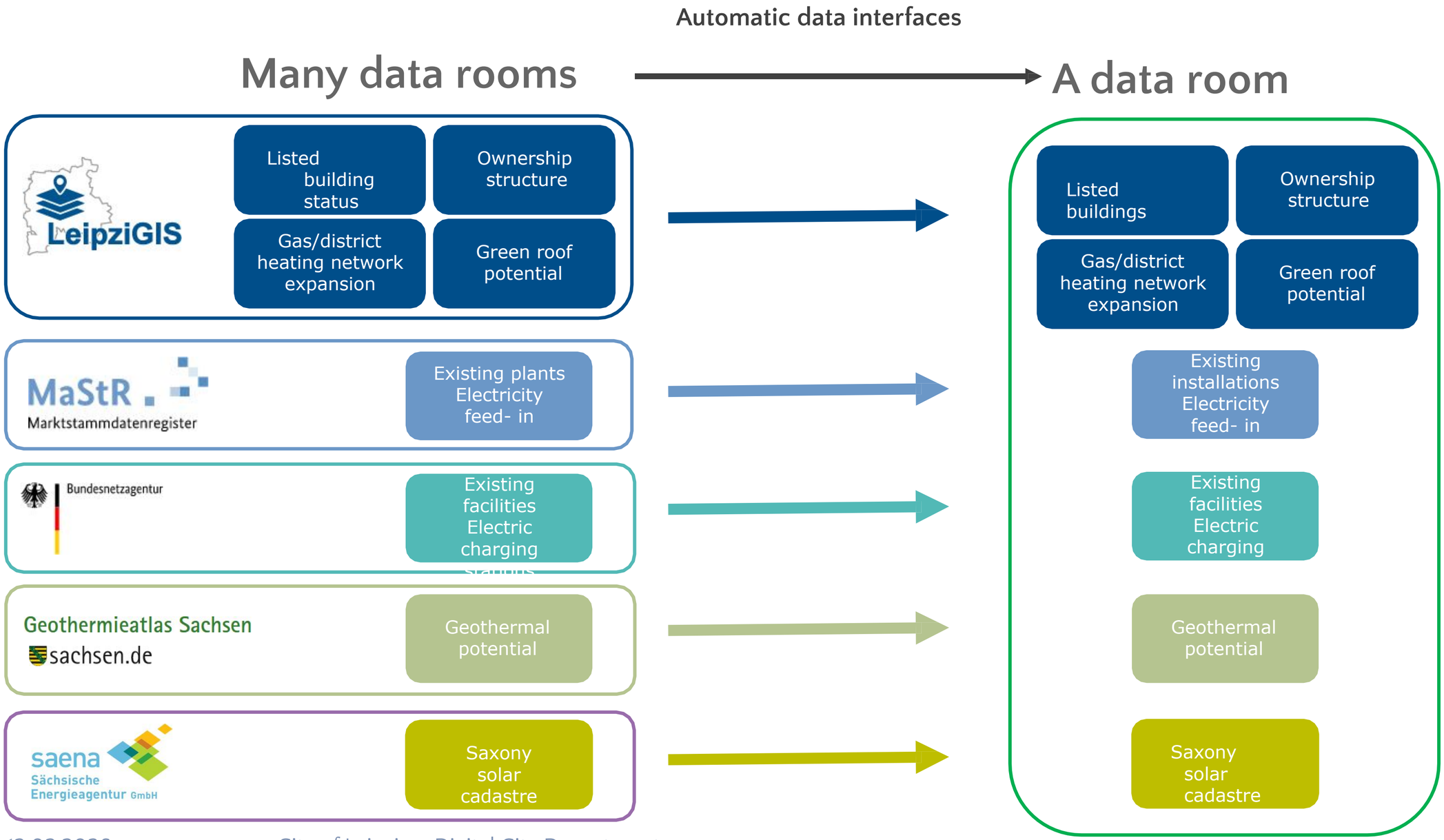
Selection of renewable energy producers in existing and planned facilities (photovoltaics, wind, CHP, etc.)

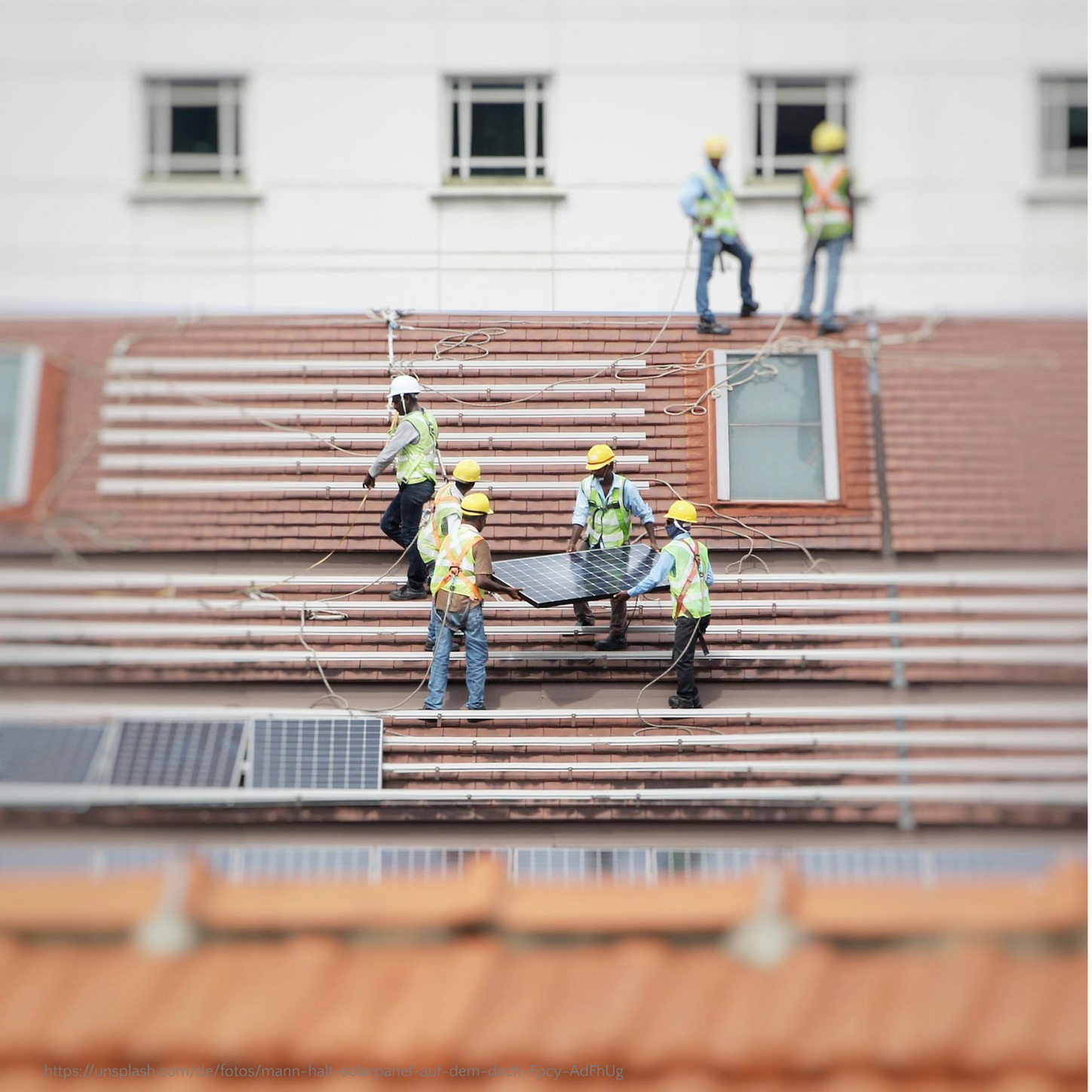
Information on site suitability (photovoltaics, solar thermal, geothermal)

Location and type of electric charging stations

City-specific characteristics (listed buildings)

Energy Atlas: Data

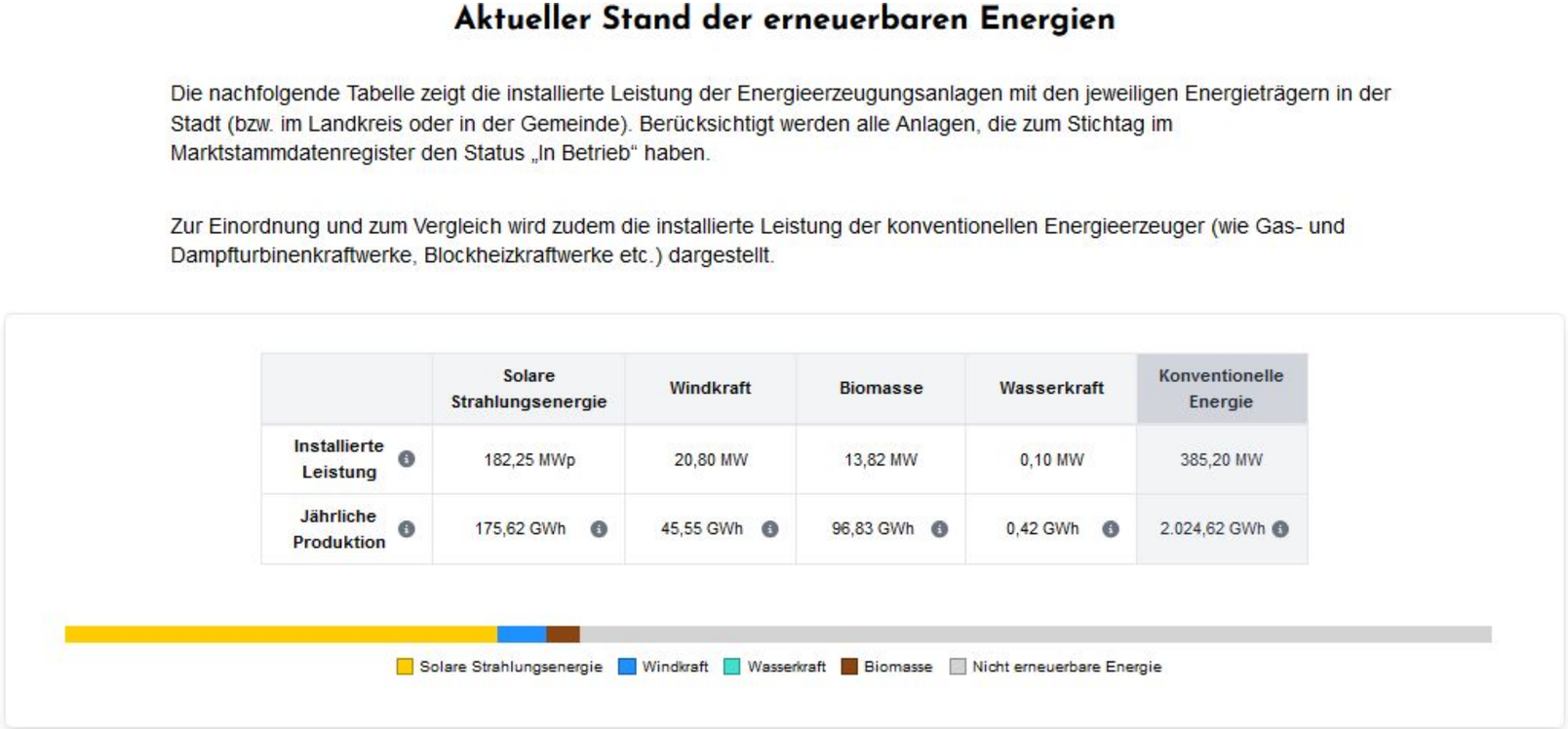




https://unsplash.com/de/fotos/mann-halt-solarpanel-auf-dem-dach-Fpcy-AdFhUg

An energy transition A dashboard is needed.

The Energy Transition Dashboard



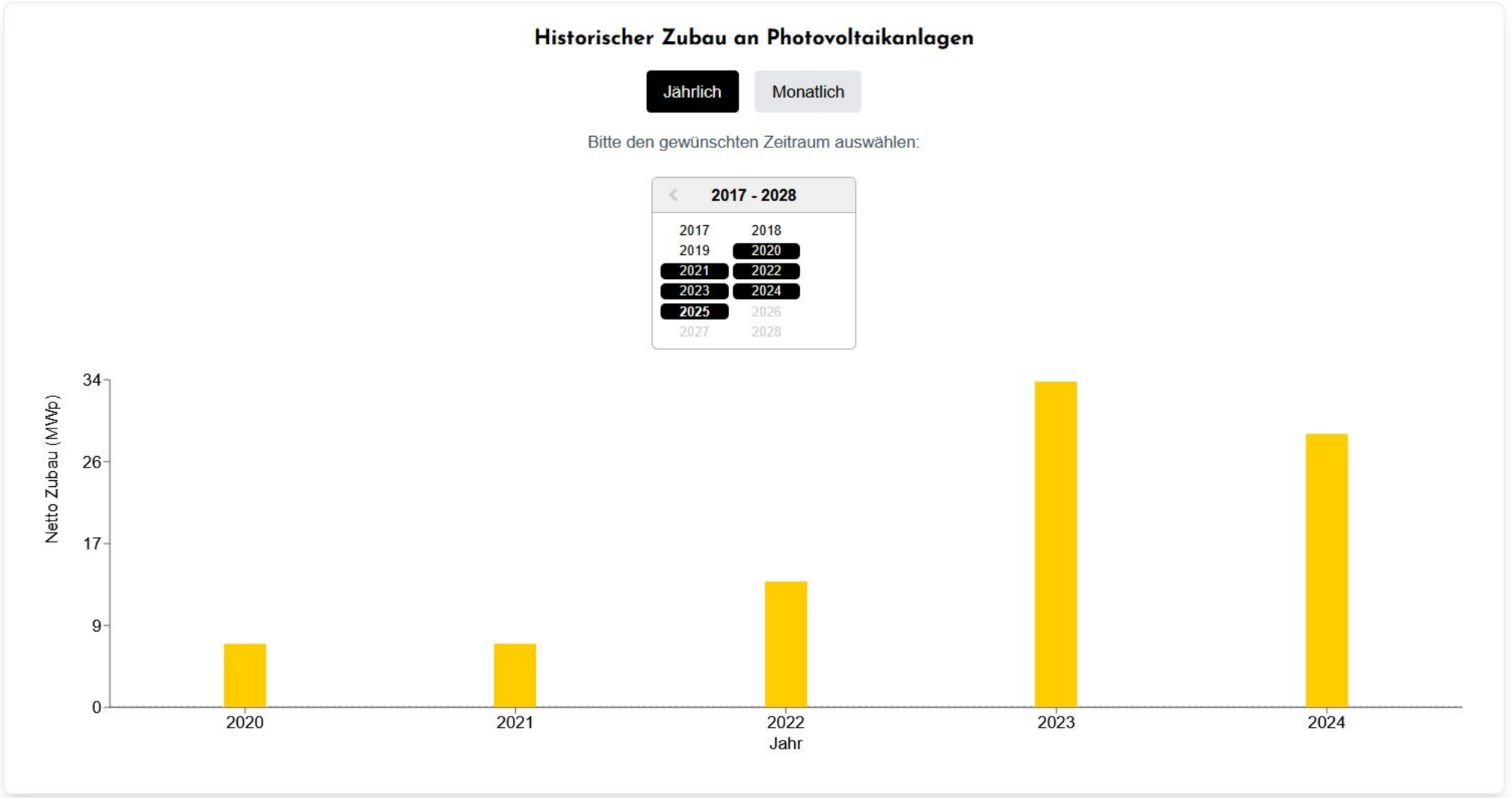
Target group

- Climate protection manager
- Urban planner

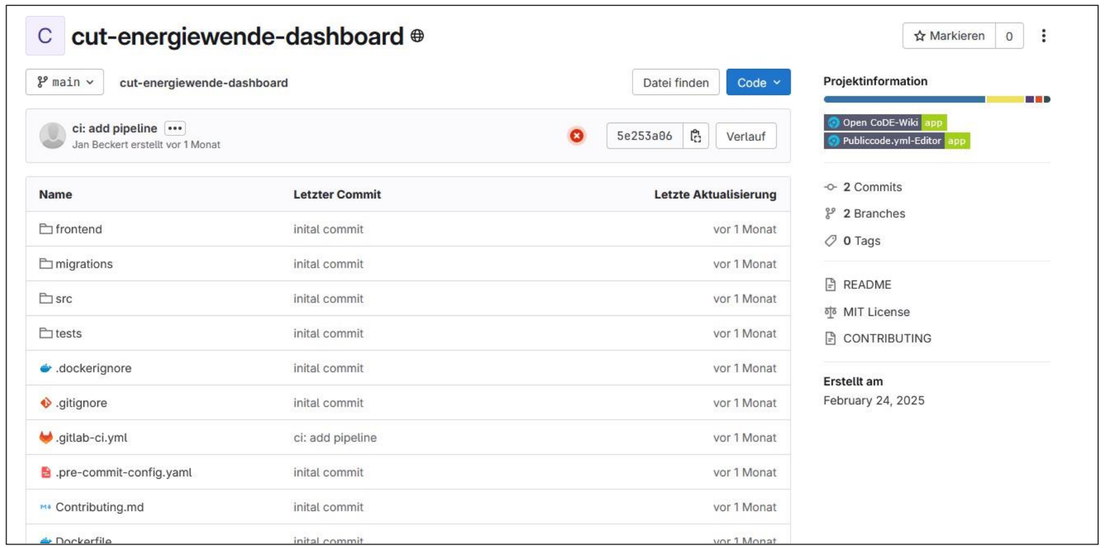
Data source

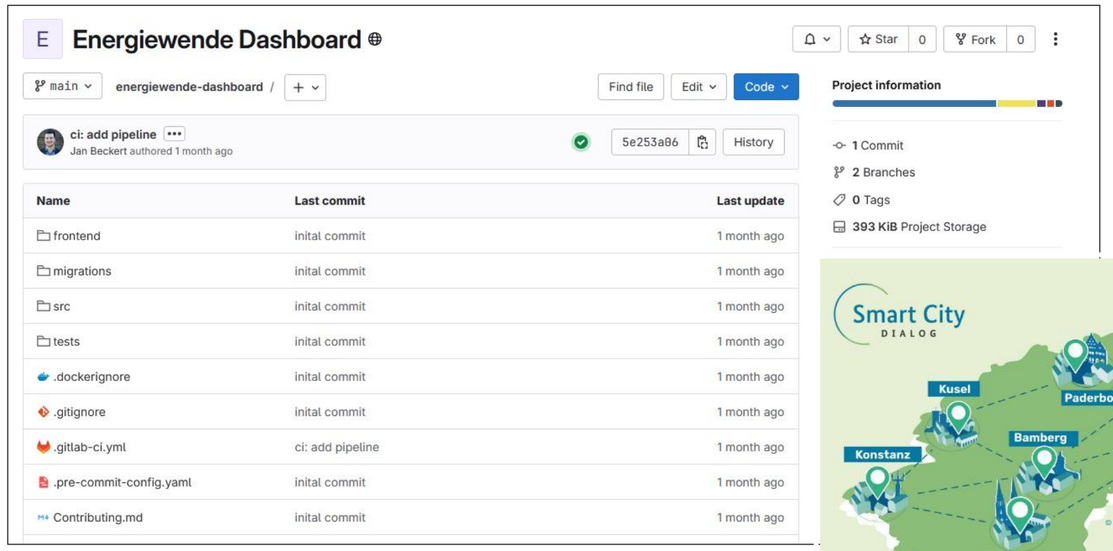
Market master data register of the Federal Network Agency

The Energy Transition Dashboard



Sharing is Caring – Available on Gitlab and Open Code





CUT Open Code:
https://gitlab.opencode.de/connected-urban-twins/cut-energiewende-dashboard

Development community:
https://gitlab.com/entwicklungscommunity-energiedaten/energiewende-dashboard/

Energy twin for municipal heat planning

Digital twin Municipal heat planning

Municipal obligation

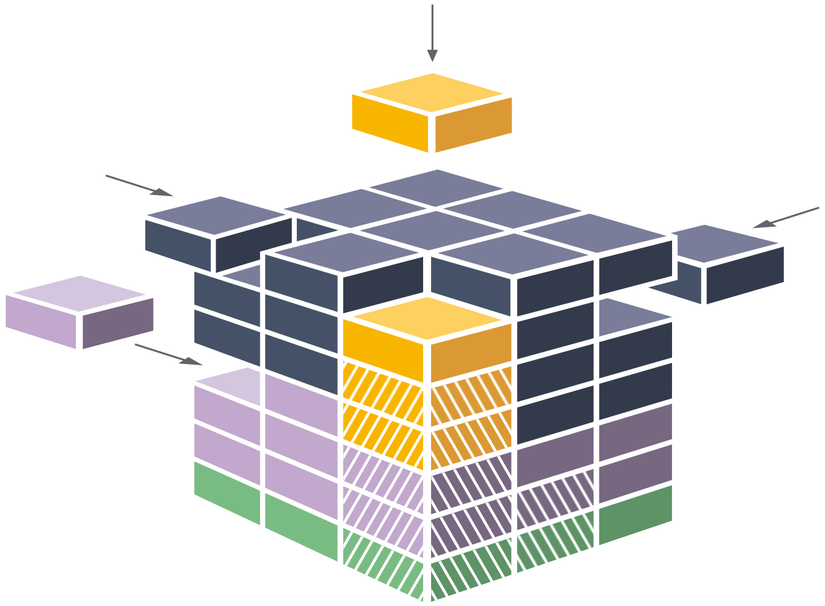
- **Updated** every 5 years
- **Monitoring** of measure implementation

Central data storage for faster updating

- **Data export of** all necessary data possible **at the touch of a button**
- **Automated** data updates
- Creation of **data interfaces** ("No more exchanging data via email")
- **Freeing up data** for future updating and data improvement

Digital twin Municipal heat planning

The digital specialist twin for municipal heat planning **brings together all** the **digital resources** needed to **implement and maintain** a **municipal heat plan**.



Geobasisinformationen

Gebäude, Adresse, Block, Ortsteil

Fachdaten

Wärmebedarfe, Denkmalschutz,...

Analysen

Sanierungspotential, Wärmedichte,...

Anwendungen

Dashboard, Monitoring, Simulation

Geobasiszwilling

Knowledge transfer and dialogue

CUT-Academy

- Webinars by CUT experts
- free of charge and freely accessible
- Topics: Urban data platforms and digital twins, use cases, urban research, citizen participation

https://www.connectedurbantwins.de/ wissenstransfer/akademie-extern/

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CUT

Connected Urban Twins

Partner Cities:

Hamburg

Stadt Leipzig

Landeshauptstadt München

Gefördert durch:

Bundesministerium für Wohnen, Stadtentwicklung und Bauwesen

KFW

Thank you for your attention!

Scope and Targets of Work Strand 3

Develop advanced AI-driven services built on Local Digital Twins

- Participate in the federation of LDTs across WS1, WS2 and WS3, exchanging services and underlying data using SIMPL.
- Enable technical alignment with European Citiverse developments, ensuring AI services can support interactive simulations and stakeholder engagement processes.
- Integrate advanced analytical capabilities into LDTs, including predictive, prospective, prescriptive and diagnostic functions.
- Contribute reusable AI services, algorithms and data models to the LDT4SSC Assets and Services Repository, strengthening the shared EU wide LDT ecosystem
- Develop advanced AI driven services built on Local Digital Twins (LDTs) that address concrete community needs focusing on predictive, modelling and immersive capabilities.

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Why apply to Work Strand 3

Develop advanced AI-driven services built on Local Digital Twins

1. **Lead the Frontier of AI Integration:** Position your community at the cutting edge. Implement advanced Predictive, Prescriptive, and Diagnostic AI that transforms raw data into actionable insights for climate, mobility, and energy.

1. **Humanise Your Data with Citiverse:** Make your LDT more than just a dashboard. Use XR/VR visualizations and immersive participatory tools to make complex data accessible to citizens and decision-makers alike.

1. **Monetize and Fund Innovation:** Access specialized funding to develop high-value AI services. Successful tools can be shared via the LDT Toolbox Marketplace, positioning your city as a provider of EU-wide solutions.

1. **Collaborative Capability Exchange:** Engage in a high-level exchange of algorithms and data models. Share your successes and integrate peer-developed AI tools to create a more well-rounded, resilient urban digital ecosystem.

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Contribute reusable AI services, algorithms and data models to the LDT4SSC Assets and Services Repository, strengthening the shared EU wide LDT ecosystem

Local Digital Twins for Smart Sustainable Communities

Presentation: City of Bologna

Creating AI capabilities in LDTs

Marco Pistore, Kessler Foundation

FONDAZIONE BRUNO KESSLER

Bologna Digital Twin

Marco Pistore - Fondazione Bruno Kessler
pistore@fbk.eu

COESIONE ITALIA 21-27
METRO PLUS E CITTÀ MEDIE SUD

Cofinanziato dall'Unione europea

Presidenza del Consiglio dei Ministri
Dipartimento per le politiche di coesione e per il sud

Agenda

- **Bologna Digital Twin: Project Presentation**
- **Data and AI Platform**
- **Data Governance**
- **Concluding Remarks**

Bologna Digital Twin:

Project presentation

A Civic Digital Twin

The Bologna Digital Twin is a **new technological infrastructure serving the city**.

It will help us **enhance the value of data** held by the Administration and urban stakeholders to support **more effective decision-making and policy development.**

Bologna Digital Twin enables us to:

- **Analyse, correlate, and visualise data** to facilitate understanding of urban phenomena.
- **Monitor** the evolution of **public policies** and the **effects of external events** on government decisions.
- Anticipate and test urban developments and assess their potential impacts by **building scenarios and simulating how decisions evolve** over time.
- **Involve citizens in urban planning** processes and in reshaping their behaviours.

A Civic Digital Twin

Urban Digital Twins are often inspired by industrial twins:

- this is important for capturing the physical aspects of the city.

However, caution is needed:

- **cities are** not machines to be regulated or processes to be optimized, but **ecosystems in constant evolution;**
- **citizens are not passive users**: they are co-authors of urban space policy impacts;
- every urban choice shapes citizens' lives just as much as **citizens' daily decisions shape the city**.

Civic Urban Digital Twins focus on these aspects and

- **represent people's behaviors and social dynamics**;
- their analyses and simulations are designed to be **understandable also to non-experts**;
- **allow citizens and urban stakeholders engagement** in co-design and collaborative processes.

Partnerships

Comune di Bologna

FONDAZIONE BRUNO KESSLER

ALMA MATER STUDIORUM UNIVERSITÀ DI BOLOGNA

CINECA

Fondazione IU Rusconi Ghigi

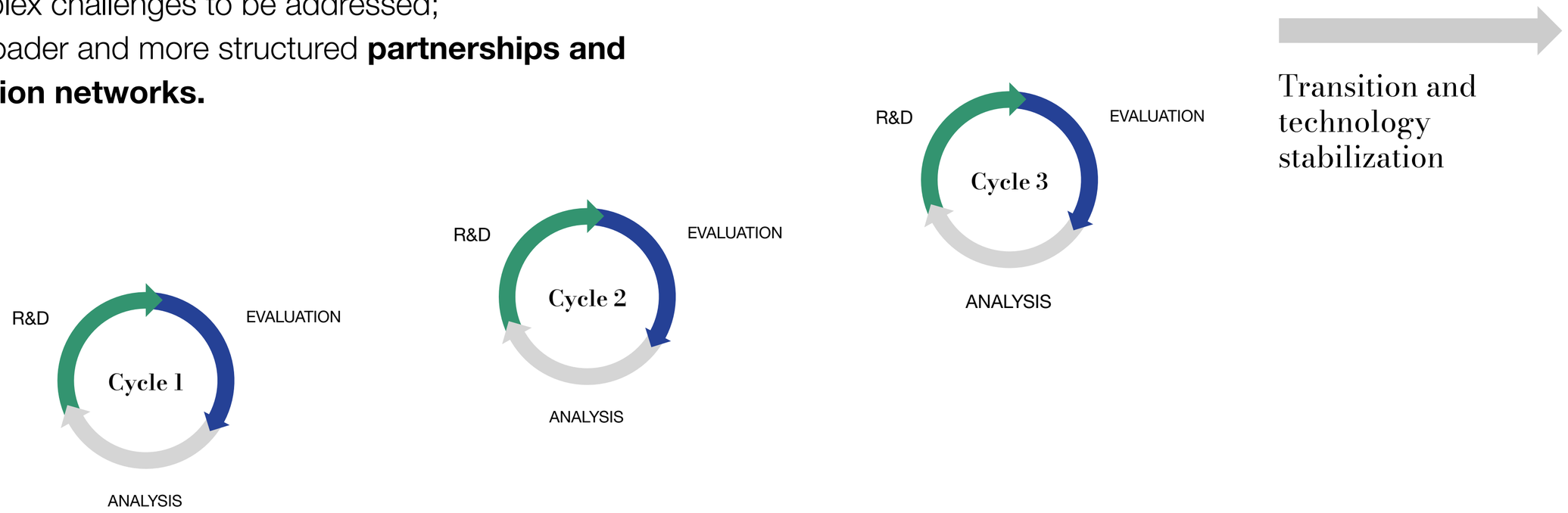
ICSC
Centro Nazionale di Ricerca in HPC, Big Data and Quantum Computing

Broader collaboration network (incl. European cities, EU projects and initiatives)

How we work - An incremental approach to innovation

We design and test innovation using an incremental approach:

- beginning with established solutions and **investigating open questions;**
- addressing well-defined and codified problems to allow more complex challenges to be addressed;
- building broader and more structured **partnerships and collaboration networks.**



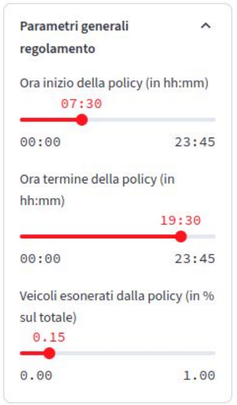
Use cases - Mobility

Objective: to assess in advance the potential direct and indirect impacts of actions and policies related to sustainable mobility in the city of Bologna.

Key aspect: the need to model

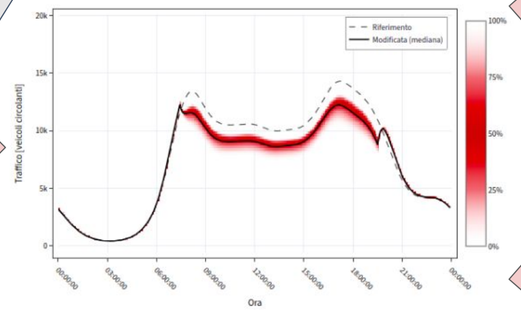
- traffic and mobility dynamics
- trends (e.g. electric vehicles)
- people's behaviour
- social vulnerabilities
- …

Parameters

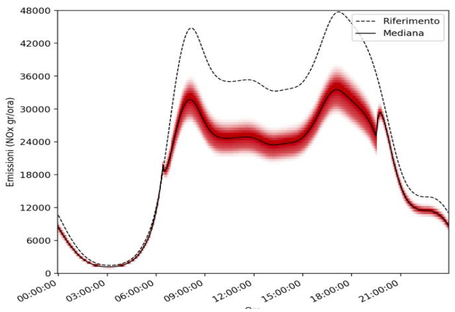


Behavioural rigidity

Traffic

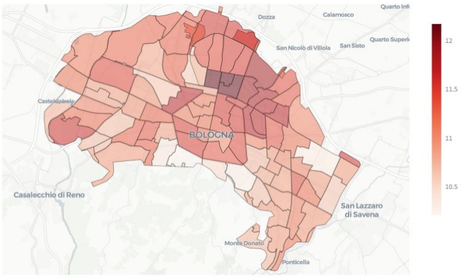


Emissions



Analysis of social vulnerability

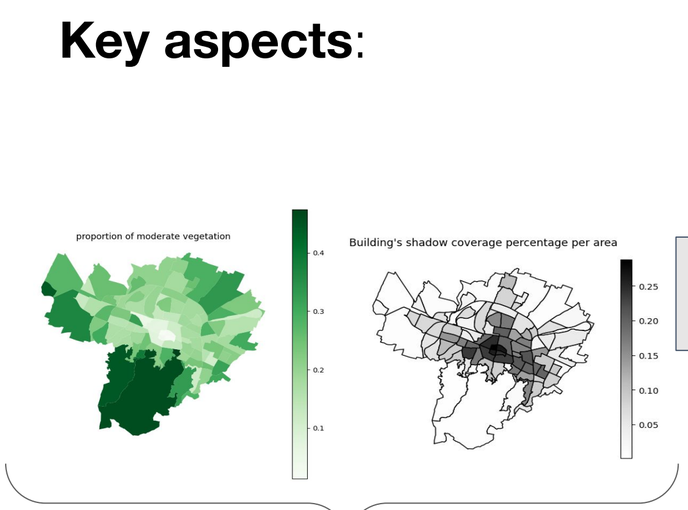
Social Impacts



Use cases - Heat waves

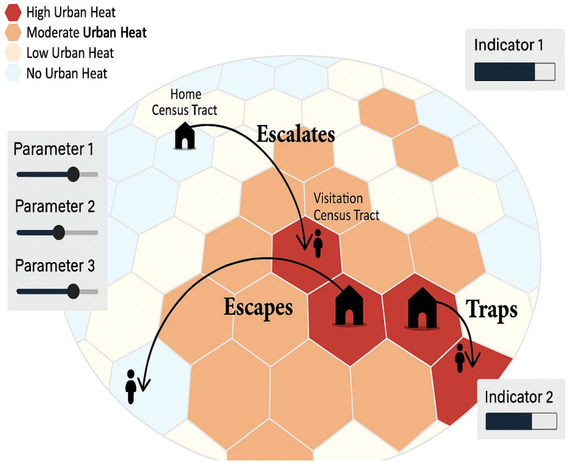
Objective: to study the impacts of heatwaves on the city and its residents, and to assess the effects of potential mitigation and adaptation measures and actions.

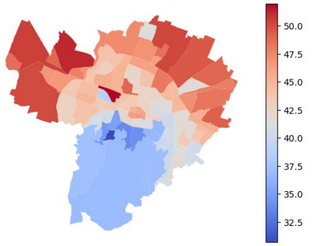
Key aspects:

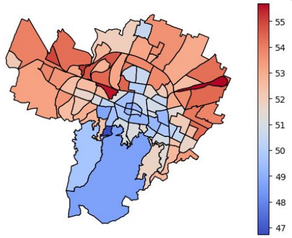


Measured city

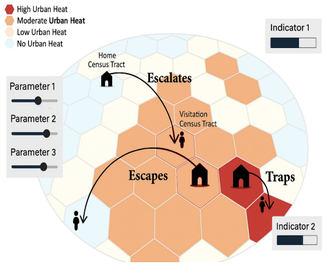
Lived city







Potential future city



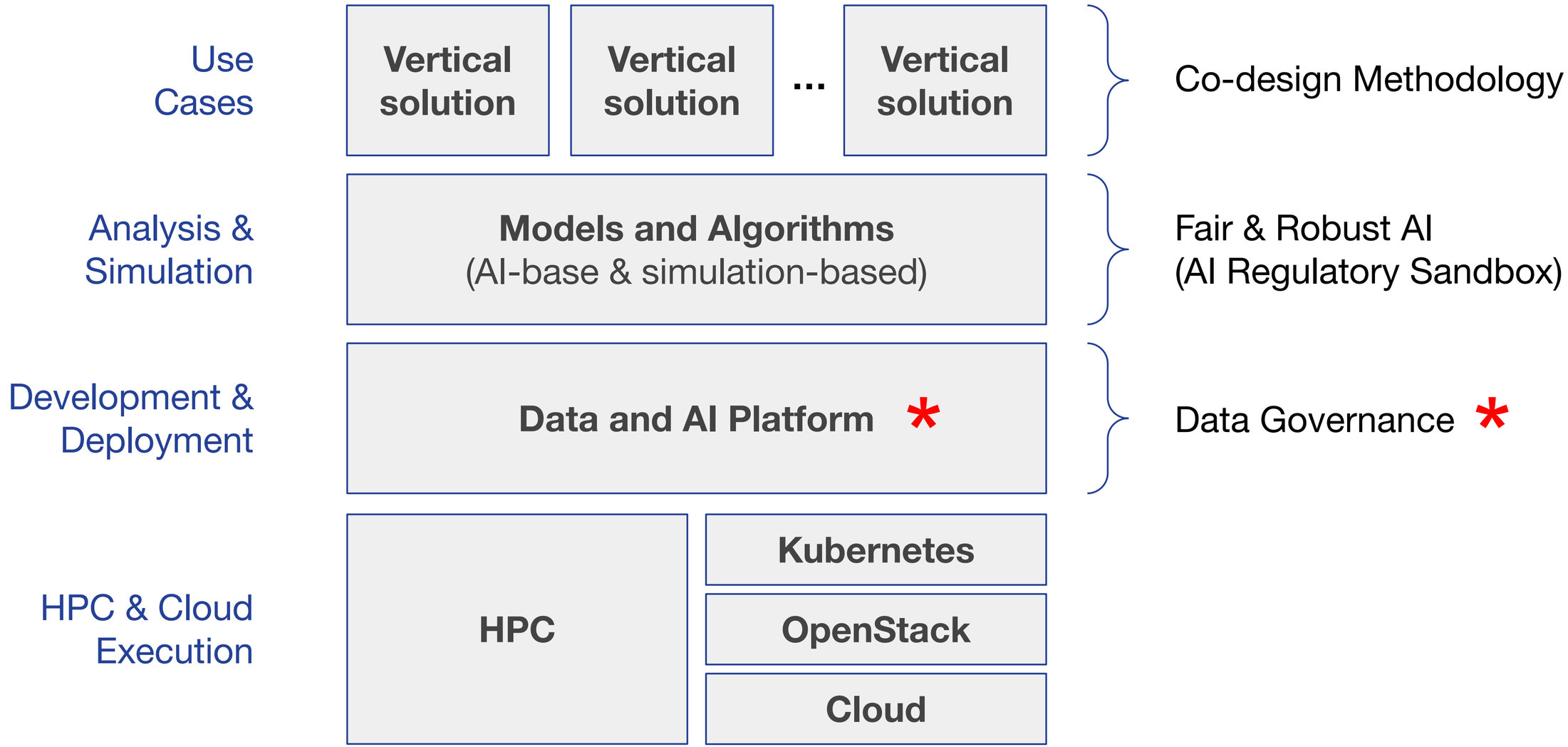
Use cases - Historical city centre

Objective: to co-design actions to improve the **liveability** of the historic city centre of Bologna, involving citizens directly in defining the actions themselves.

Key elements:

- Architectural rigidity
- Regulatory rigidity
- Cultural rigidity

Technical and Methodological Solution: Architecture



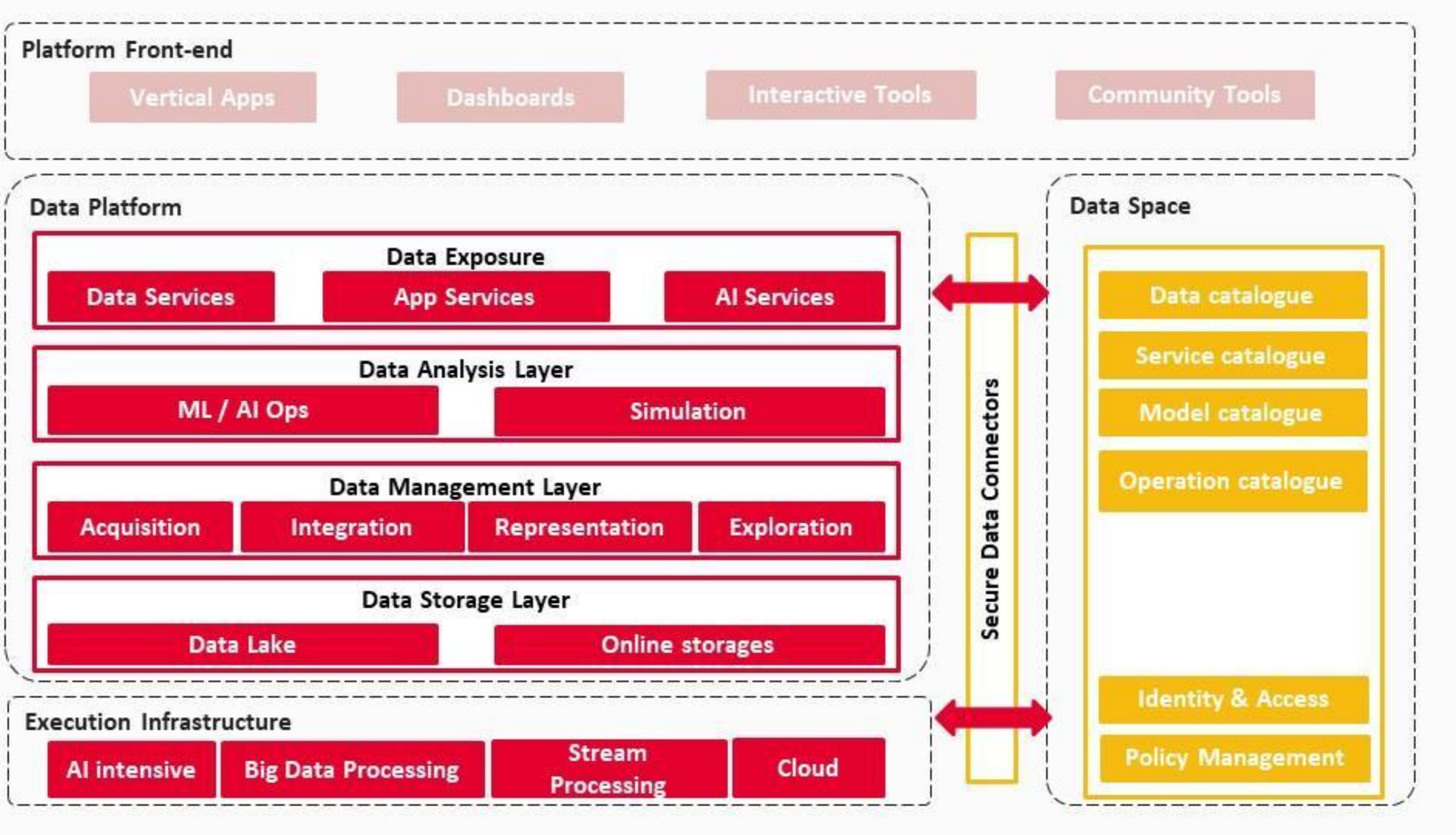
Data and AI Platform

Data and AI Platform

Technological foundation of the Bologna Digital Twin:

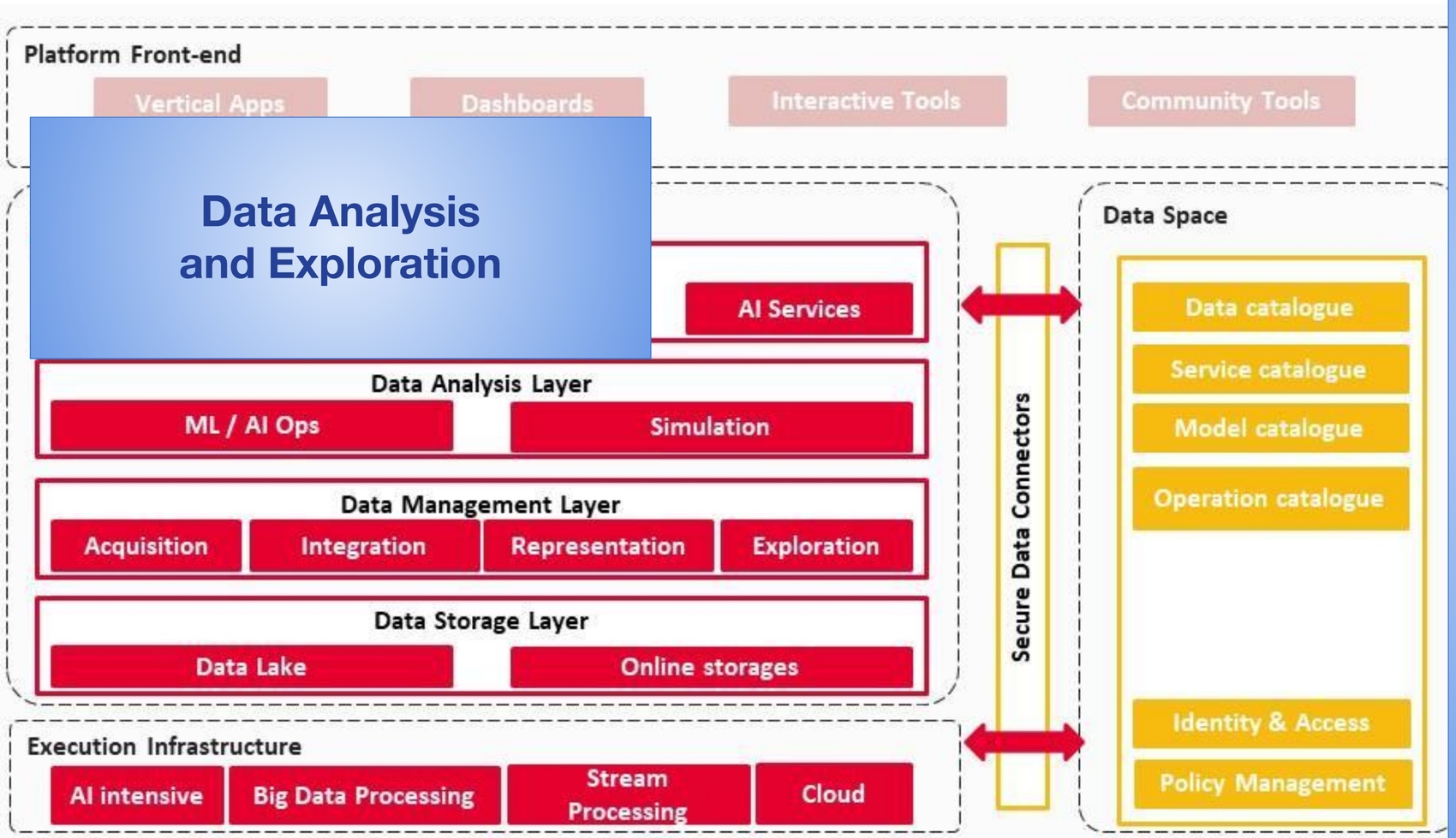
- Collection, management, sharing and exposure of **data**
- Integration and implementation of **analysis** tools (not only AI)
- Support for **decision-making** scenarios
- Support for **visualisations**
- Authentication, **authorization** and access control
- Data and service **interoperability**
- Support **traceability**, **accountability**, quality assessment, …

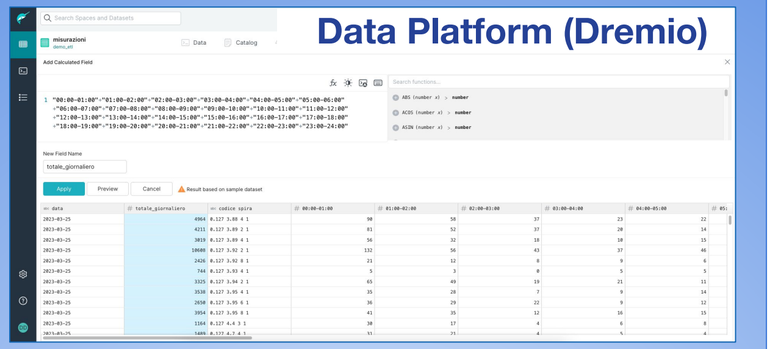
Data and AI Platform

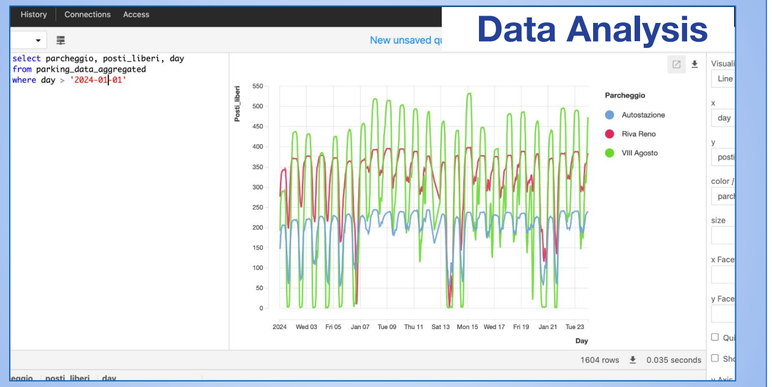


- **Open source**
- **Cloud**-native
- Access control and **security** mechanisms
- **Multitenancy**
- Support for **extensions**

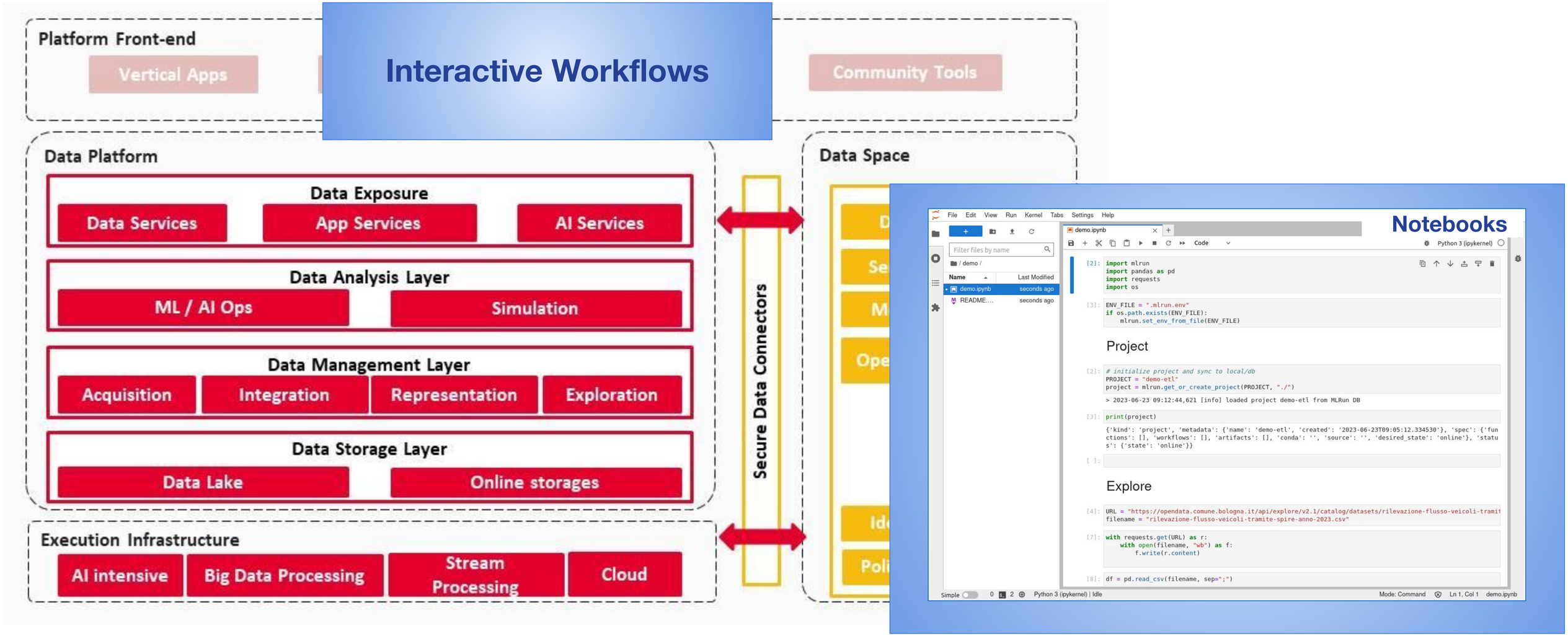
Data and AI Platform



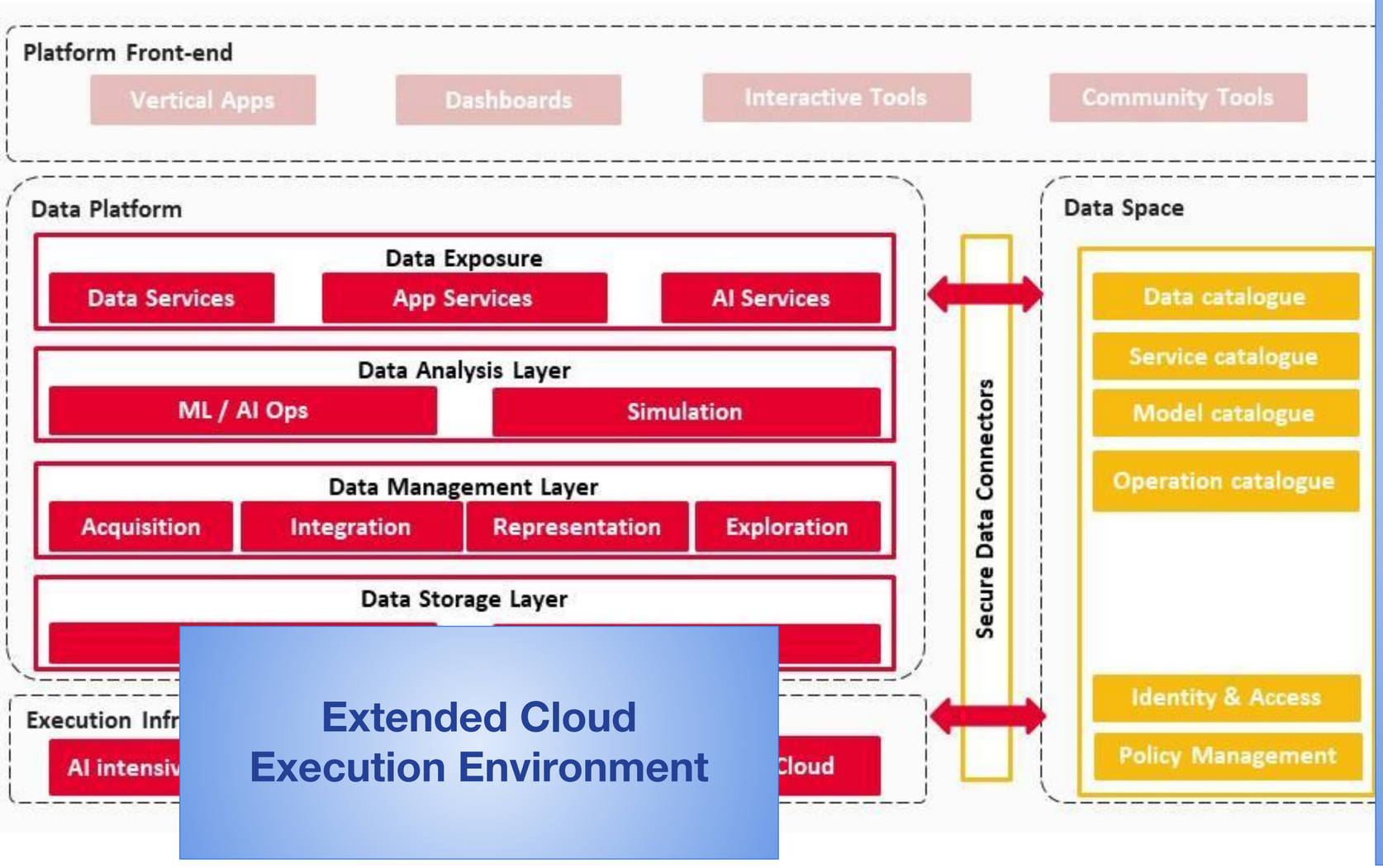




Data and AI Platform

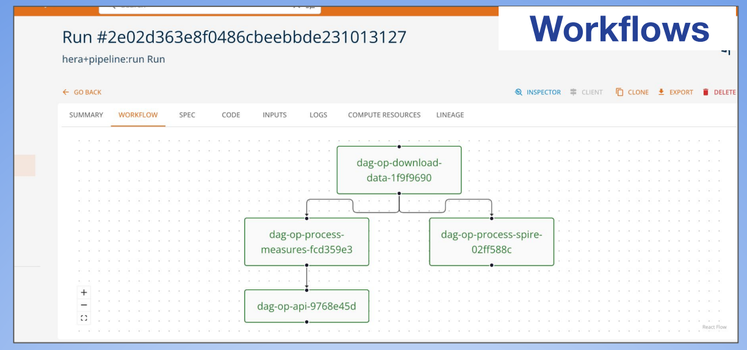


Data and AI Platform

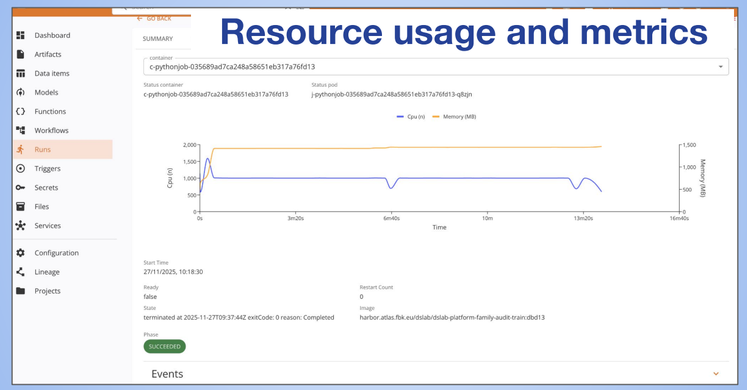


Extended Cloud Execution Environment

Workflows

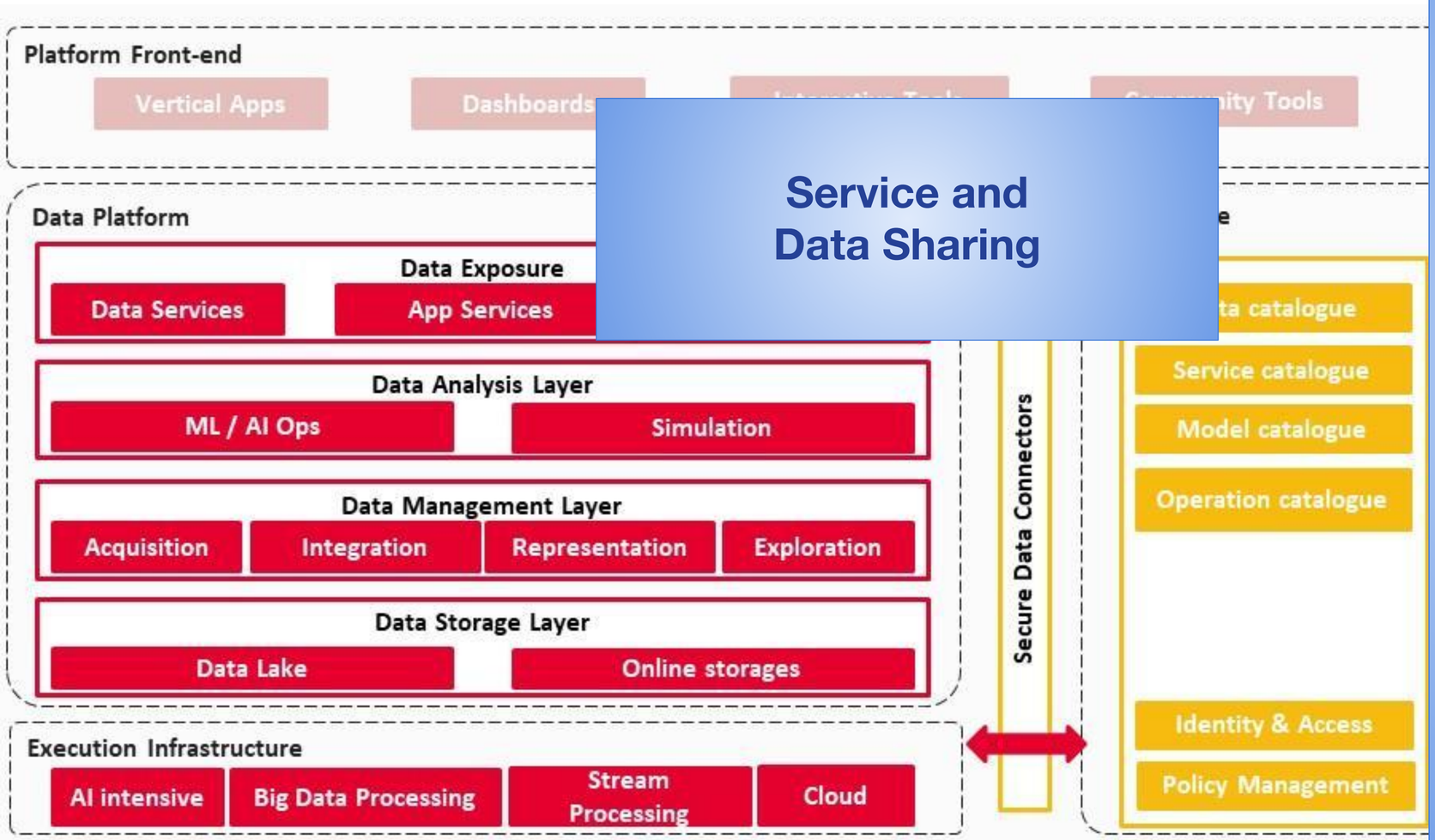


Resource usage and metrics



Lineage

Data and AI Platform

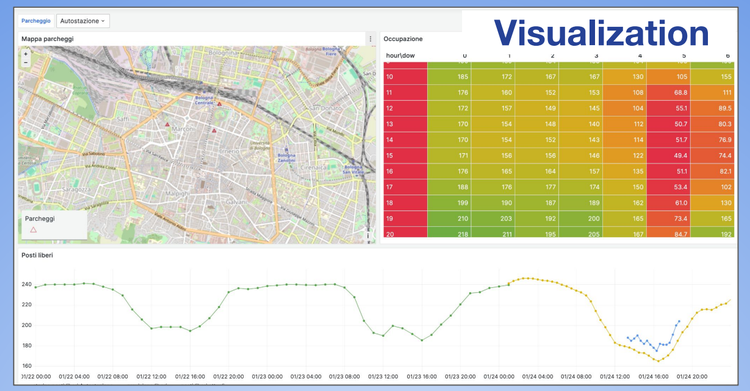


Service and Data Sharing

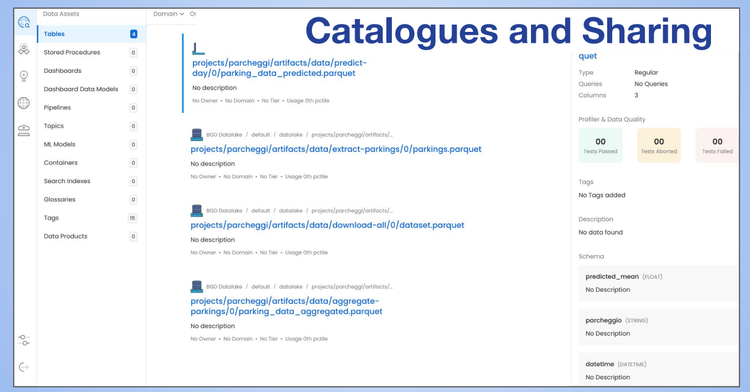
Secure Data Connectors

- Service catalogue
- Model catalogue
- Operation catalogue
- Identity & Access
- Policy Management

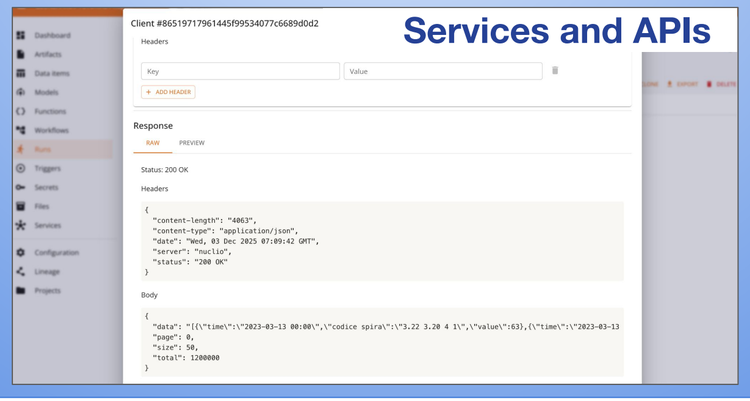
Visualization



Catalogues and Sharing



Services and APIs



Data Governance

Data Governance

- New data management **needs** (Digital Twins, AI, …)
  - ➢ Disruptive technologies require continuous, cross-domain data use → the Municipality needs flexible data **governance processes and tools**
- From open data to a **data ecosystem**
  - ➢ Urban Digital Twins rely on **data sharing** among public, private, and research actors → beyond open data, profiled and purpose-bound data sharing is required
- Clear **rules** for the Digital Twin
  - ➢ The Digital Twin is a shared operational environment → data governance is the **rulebook** defining access, usage, responsibilities, and accountability.

Data Governance

Tools and Technologies

- Data Space
- Data Catalogue
- Data Marketplace
- Data Quality
- Data Fairness

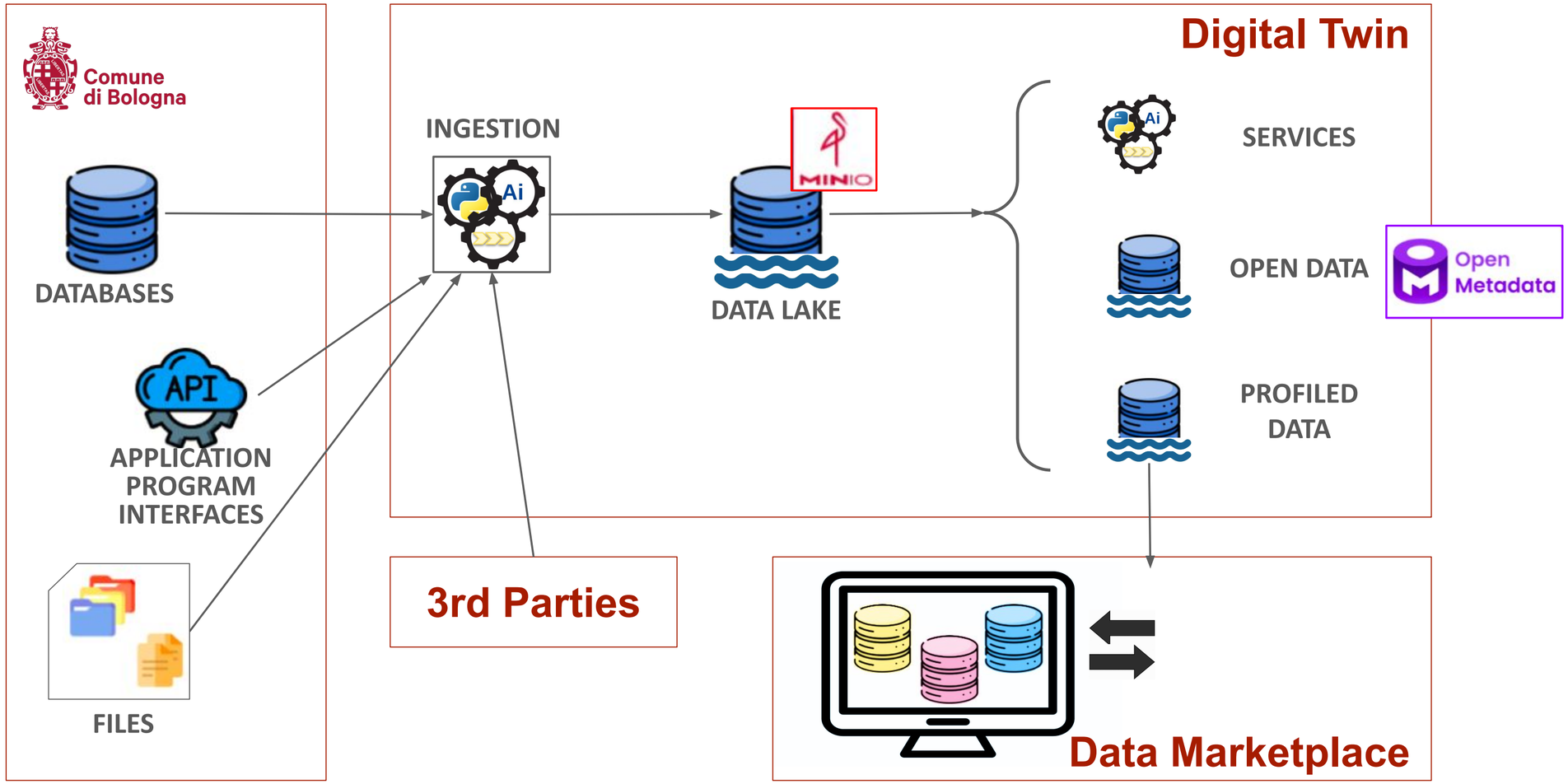
Processes

- Data Management
- Metadata Management
- Master Data
- Data Lineage
- Data Quality
- Data Sharing
- Data Democratization

Roles

- Data Owner
- Data Steward
- Technical Steward
- Data Analyst / Scientist

Data Governance



Concluding Remarks

Concluding remarks

- **Inside-out innovation**
- **Focus on the key driving concepts**
  - Centrality of civic aspects (driving innovation)
  - Open solution (“no lock-in”)
  - Strong cooperation between project partners and Bologna stakeholders
- **Robust foundation for reuse and collaborations**
  - Interoperability & standards (at all levels)
  - Open source software communities
  - Partnerships and collaborations

FONDAZIONE BRUNO KESSLER

Thank you!

Marco Pistore - Fondazione Bruno Kessler
pistore@fbk.eu

COESIONE ITALIA 21-27
METRO PLUS E CITTÀ MEDIE SUD
Cofinanziato dall'Unione europea
Presidenza del Consiglio dei Ministri
Dipartimento per le politiche di coesione e per il sud

Local Digital Twins for Smart Sustainable Communities

Open Call 2

Practical Information

Adriana Badau
Technopolis Group Belgium

technopolis group

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Funding Structure and Financial Support Mechanisms of Call 2

- The total **EU funding available for the pilots amounts to €17 million** (85% of the total budget of the LDT4SSC project), to be distributed across approximately **15 to 20** selected consortia

- The funding distributed across three work strands:
  - **Work strand 1**: At least 2.1 million
  - **Work strand 2:** At least 5.8 million
  - **Work strand 3:** At least 2.9 million

- **Co-funding model:**
  - 50% of eligible costs covered by LDT4SSC
  - 50% of total pilot costs covered by the applicants

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Funding Structure and Financial Support Mechanisms

- **Grant rules:**
  - The **maximum grant** awarded **per third-party** is **€500,000 across pilots**
  - The **maximum** cumulative **grant per consortium** is **€1,000,000**
  - Eligible direct costs comprise **Personnel, Subcontracting, and Purchase Costs**, while **indirect costs** are eligible at a flat rate of **7% of total direct costs.**
  - All eligible costs must be **actual**, **incurred during the pilot period**, and in full compliance with applicable regulations, including state aid rules and the prevention of double funding

More information are available on the Call for Pilots Manuals, which can be found on the LDT4SSC website.

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Eligibility Requirements

Consortium structure:

- 2 two local or regional authorities ← 2 different eligible countries
- + at least 1 additional partner

Geographical scope:

- EU Countries (including outermost Regions and Overseas Territories)
- Norway, Iceland, Liechtenstein
- DEP Associated countries

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Local Digital Twins for Smart Sustainable Communities

Technical and Non-Technical Requirements

Laura RIOU (Cerema)

Cerema
CLIMAT & TERRITOIRES DE DEMAIN

Requirements & recommendations

Rationale for the requirements

? **Purpose:** The requirements translate the LDT4SSC's objectives and its technical and non-technical frameworks into clear expectations for pilots. They exist so that funded pilots deliver interoperable, replicable, and sustainable results that can integrate into the wider EU LDT ecosystem.

? **They matter because:** Meeting these requirements:

- Ensures eligibility and
- Raises chances of selection.

? **Connection to evaluation:** Requirements link directly to the Applications' Evaluation Criteria (Excellence, Impact, Quality & Efficiency of Implementation) used by the Evaluation Committee.

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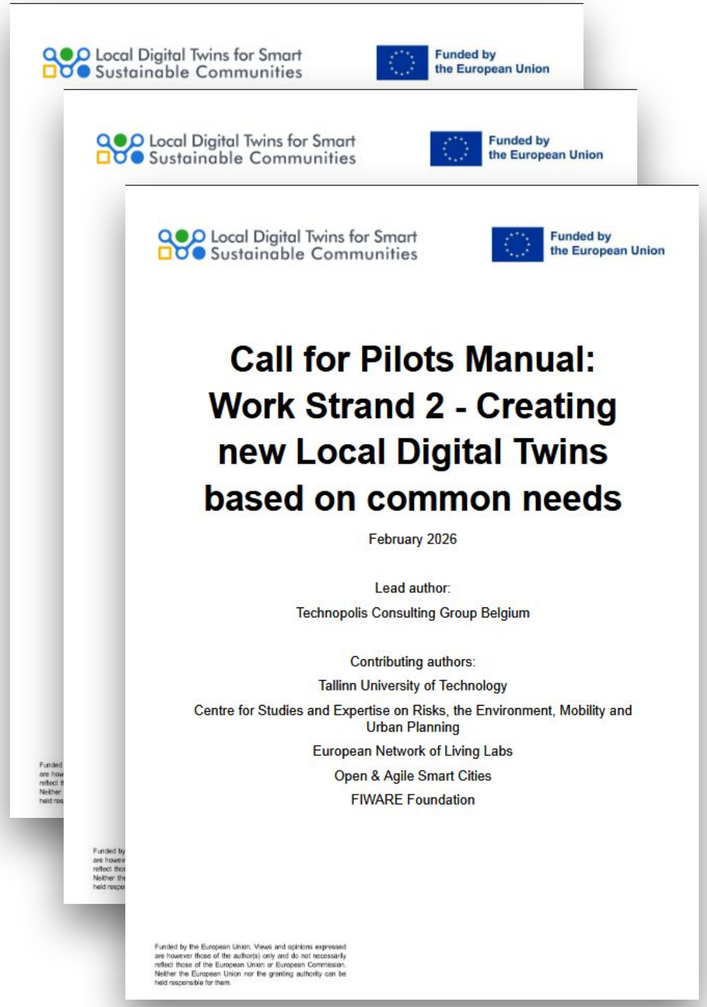
Requirements & recommendations

Where to find the Work Strand Requirements

? **Primary source:** Chapter *“Description of requirements & recommendations for pilots”* in the **Call for Pilots Manual for each Work Strand.**

? **Secondary source:** A cheatsheet will be made available on the Knowledge Hub for each Work Strand.



Requirements & recommendations

Thematic areas on the Requirements and Recommendations across 4 dimensions

Pilot Details

- **Digital maturity;**
- Cross-sectoral **use cases** with shared data and services;
- **Technical and functional architectures** description;
- Current and target **data governance;**
- **AI/XR** use.

Relevance

- Align with l**ocal and EU priorities**;
- Project **management, staffing** and Political **endorsement**;
- **End-user engagement** and stakeholders involved (**Quadruple Helix)**;
- **Transferability and replication** across EU communities;
- **EU technology** stacks and infrastructure providers used.

Implementation

- Four-phase **Methodology** and **key activities;**
- **Technical** approach and draft technical and functional target architecture;
- Common **data descriptions** and **shared** data models, data, assets and services.
- Engagement with the **MIMs Plus**.

Impact

- Project **rationale;**
- Tangible **benefits** and wider **socio-economic and environmental impacts;**
- **Contractual** framework;
- **Expected outputs** and **openness/**accessibility of results;
- **Scaling and post-pilot** continuation**.**

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Requirements & recommendations

Digital Maturity

WS1 Interconnecting LDTs	**WS2** Creation of LDTs Based on Common Needs	**WS3** New Advanced AI-Based Capabilities
Each pilot must include at least **two public authorities operating digitally mature LDTs** to be interconnected	Pilot applicants **do not need to have an LDT in place** to apply to this Open Call.	At least **one of the public authorities in the pilot consortium must be operating a digitally mature LDT**.

“Digital maturity” refers to having an existing LDT (can be supported by a Data Space) with at least descriptive-level capabilities and dynamic data integration.

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Requirements & recommendations

Use Cases

WS1 Interconnecting LDTs	**WS2** Creation of LDTs Based on Common Needs	**WS3** New Advanced AI-Based Capabilities
Pilots must include at least **two cross-sectoral use cases, each featuring one shared service**.	Pilots must include at least **one cross-sectoral innovative and citizen-focused use case with two services**.	

“Cross-sectorial”:

- The developed service(s) integrate datasets from two or more sectors (e.g. mobility, energy…); or
- The LDTs provide services that span at least two sectors within a

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Requirements & recommendations

Technical implementation

<table>
<tr><th>WS1
Interconnecting LDTs</th><th>WS2
Creation of LDTs Based on Common Needs</th><th>WS3
New Advanced AI-Based Capabilities</th></tr>
<tr><td rowspan="2">The pilot consortium must interconnect their LDTS and demonstrate integration with the SIMPL Data Space Governance Authority Agent that is required to be used.</td><td colspan="2">Pilots must develop a new common LDT based on their common need.
Each public authority participating in the pilot must implement its own instance of the commonly developed LDT. Hence, there must be at least 2 instances of the common LDT, one for each public authority, which allows executing the two services related to the identified cross-sectoral use case.</td></tr>
<tr><td colspan="2">The developed LDT must be able to simulate scenarios and have an advanced capability: Predictive, Prospective or Prescriptive.</td></tr>
</table>

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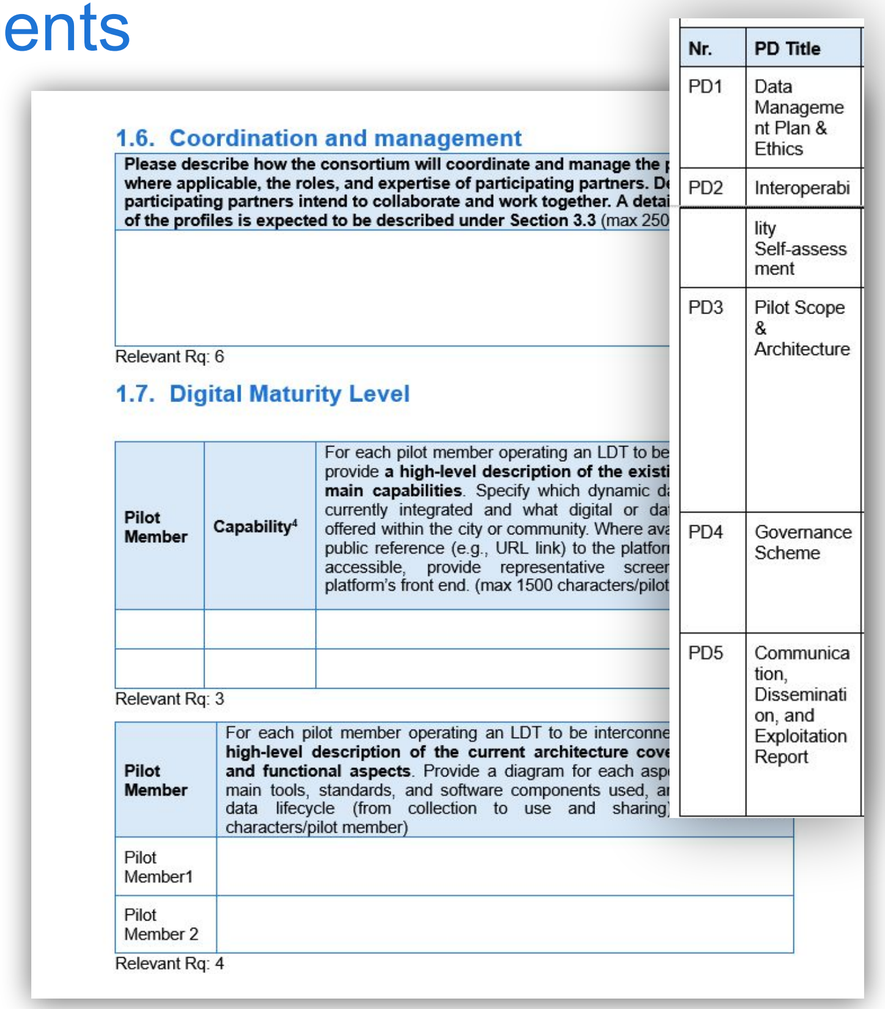
Requirements & recommendations

How to demonstrate compliance with these requirements

- **Upon application:** By filling out and submitting the Application Form.
- **During the project:** By submitting Pilot Deliverable and Reports (See chapter *"Reporting"* in the Call for Pilots Manual of the different Work Strands).

- **Compliance with requirements conditions final payment.**



1.6. Coordination and management

Please describe how the consortium will coordinate and manage the p
where applicable, the roles, and expertise of participating partners. De
participating partners intend to collaborate and work together. A detai
of the profiles is expected to be described under Section 3.3 (max 250

Relevant Rq: 6

1.7. Digital Maturity Level

Pilot Member	Capability[4]	For each pilot member operating an LDT to be provide **a high-level description of the existi main capabilities**. Specify which dynamic da currently integrated and what digital or dat offered within the city or community. Where ava public reference (e.g., URL link) to the platfor accessible, provide representative screer platform's front end. (max 1500 characters/pilot

Relevant Rq: 3

Pilot Member	For each pilot member operating an LDT to be interconne **high-level description of the current architecture cove and functional aspects**. Provide a diagram for each aspe main tools, standards, and software components used, ar data lifecycle (from collection to use and sharing) characters/pilot member)
Pilot Member1	
Pilot Member 2	

Relevant Rq: 4

Nr.	PD Title
PD1	Data Management Plan & Ethics
PD2	Interoperability Self-assessment
PD3	Pilot Scope & Architecture
PD4	Governance Scheme
PD5	Communication, Dissemination, and Exploitation Report

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Eligibility Criteria

	Eligibility criterion	How it's demonstrated
General	All required documents and ownership and control declarations have been submitted in the right format (PDF & Excel) and on time. The application files are submitted in English.	Application Form, Financial Form, Letters of Commitment, Ethics and Data Protection Self-Assessment
	The proposal has been submitted using the Open Call template. This includes respecting the page limit for the proposal template.	Application Form, Financial Form, Letters of Commitment
	All questions have been answered (within the character limits).	Application Form, Pilot Budget, Ethics and Data Protection Self-Assessment
Legal	Pilot consortium consists of at least two local or regional public administrations from two different eligible countries, together with at least one additional partner drawn from one of the following categories: ● Private entity (e.g., service provider) ● Private association (legal status) ● Trusted third party ● Private representative of a use-case sector	Application Form, Letters of Commitment
Financial	Pilot consortium covers at least 50% of the pilot budget as co-financing.	Applicants demonstrate their capacity to provide at least 50% co-financing in an added budget table and with the Letters of Commitment
	Support requested is not higher than 1.000.000 euros per consortium.	Financial Form
	Support requested is not more than 500.000 euros per third-party across pilots.	Financial Form

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Eligibility Criteria

Technical and Non-Technical	Pilots must include use cases, each featuring shared services. • The developed services integrate datasets from two or more sectors (e.g. mobility, energy…); or • The LDTs provide data services that span at least two sectors within a single use case.	Application Form
	Each pilot must include at least two public authorities, displaying a degree of “Digital maturity” respective to the requirements of their Work Strand.“Digital maturity” refers to having an existing LDT (can be supported by a Data Space) with at least descriptive-level capabilities and dynamic data integration. The extent of this varies based on the objectives and targets of each work strand.	Application Form
Ethical	Ethics and Data Protection Self-Assessment completed and submitted.	Application Form, Ethics and Data Protection Self-Assessment

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Support to Applicants

Sara Sebastiano - European Network of Living Labs

Helpdesk

Applicants and pilots can contact the LDT4SSC team via the dedicated Helpdesk mailbox: info@ldt4ssc.eu

📩All requests are routed to **topic-specific experts**, covering areas such as eligibility, funding rules, consortium building, and technical aspects of Local Digital Twins.

Each request will receive a response **within two working days**, ensuring timely and reliable support throughout the application and implementation phases.

LDT4SSC

Matchmaking Platform

Our **LDT4SSC Matchmaking Platform** helps you build strong, diverse and complementary consortia!

On the platform, you can:

🔎 Present your organisation’s expertise and assets

🏙️ Find cities, regions, SMEs, research organisations, NGOs and tech providers

🤝Create or join consortium proposals

Join the Matchmaking Platform and find your future partners:

https://www.b2match.com/e/local-digital-twins-smart-communities

LDT4SSC

Local Digital Twins for Smart Sustainable Communities

Matchmaking Event

LDT4SSC Open Call 2 - WS1, WS2 & WS3

05 March, 2026 - 10:30 - 12:30 CET

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Knowledge Hub – Resources for Pilots

To support applicants and funded pilots, LDT4SSC offers a dedicated **Knowledge Hub** with practical resources covering both technical and organisational aspects of Local Digital Twin (LDT) development.

✅ **Technical resources** include standards, tools and frameworks for interoperable LDT deployments, fully aligned with European interoperability frameworks.

✅ **Non-technical resources** provide guidance on governance, legal and ethical aspects, stakeholder alignment, and the LDT4SSC methodology.

Explore the Resources for Pilots: Resources for Pilots - Knowledge Hub

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Get in Touch!

📧 **Sign up** to the newsletter: LDT4SSC Newsletter

🌐 **Visit** our website: https://ldt4ssc.eu/

🔗 **Follow us** on LinkedIn: LDT4SSC Project: Overview

🔎 **Share your feedback on the Resources**: Quality survey on Resources UX

Questions? Email us at **info@ldt4ssc.eu**

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Thank you for your time

Q&A Session

OPEN & AGILE SMART CITIES & COMMUNITIES

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