

Lutech Mobility4Future

Solutions for smart and sustainable mobility

Smart City & Mobility Solutions CoE

04/11/2025





+5.500
PROFESSIONALS

Lutech is leader in artificial intelligence and digital services

3rd

ITALIAN
DIGITAL PLAYER

1bn

BUSINESS
VOLUME

~20%

YOY
GROWTH

70m

R&D
INVESTMENTS

**BEST
WORKPLACE
2025**

1st PLACE IN DIGITAL
SERVICES



Driving Digital Transformation

Industry Specific Digital Services

Industry Specific Digital Services:

- **E&U and Transportation:** smart grids, meter-to-cash, IT/OT, digital twin, predictive maintenance, **smart mobility**
- **Telco & Media:** BSS/OSS, IT/OT, digital twin, predictive maintenance, NOC, broadcasting & media management
- **Manufacturing and Fashion & Retail:** CAD/CAM, PLM, MES, and digital twin, eCommerce and Loyalty
- **Public Sector:** welfare & pension management, intelligence solutions, citizen experience, defence, **smart city & mobility**
- **Financial Services:** regulatory compliance, digital insurance, e-payment

Cross-industry Digital Services

Cross-Industry Digital Services:

- Artificial Intelligence, data management & Hyper Automation, AI learning
- High Performance Computing (HPC): design and consulting
- Consulting, R&D and customer-user experience
- Salesforce, customer experience, sales & marketing automation
- Cloud solutions and services (Microsoft, AWS, Google) and ServiceNow implementation
- Applications modernization, development and maintenance
- Cyber: governance, integration and operations, threat detection and analysis, NG-SOC (next-generation security operations center)
- ERP: SAP, Infor and MS Dynamics design, implementation and maintenance
- Managed services and digital workplace solutions

Technology Solutions

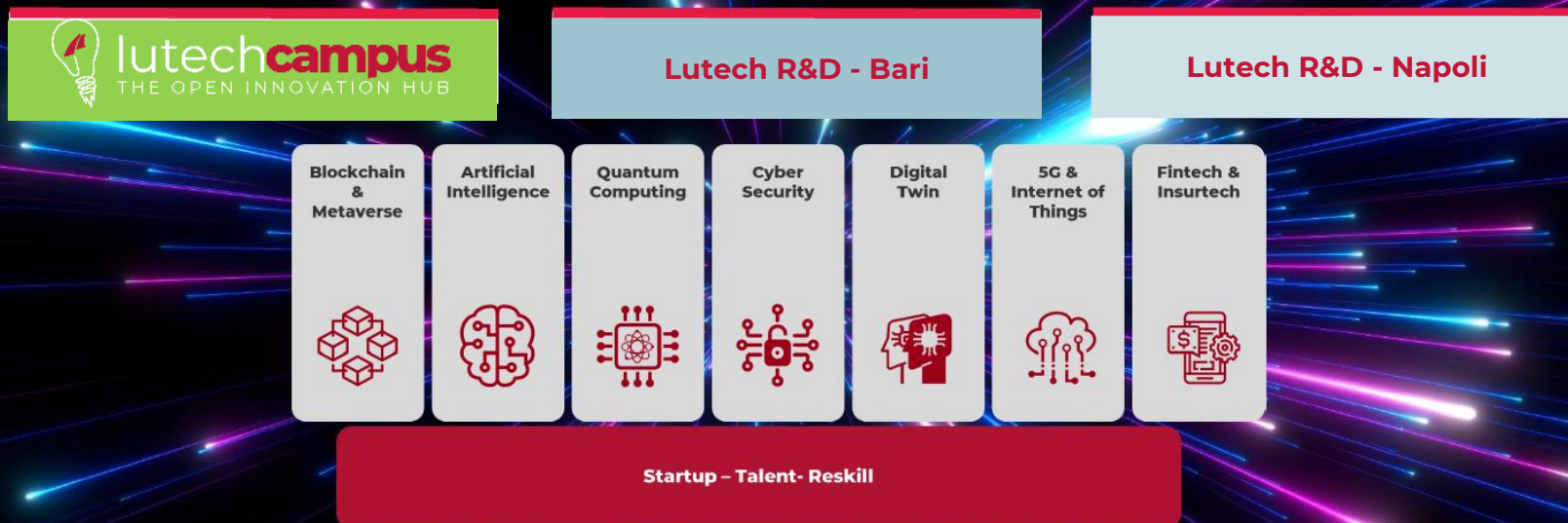
Technology Solutions:

- Procurement, design and installation of data centers and networks

Lutech R&D ecosystem

Lutech R&D

An ecosystem in which companies, start-ups, universities and all subjects who can bring ideas and skills are now crucial for creating and fueling innovation.



70 M€ R&D investments

+400 people currently working in R&D activities

Open Innovation model: hub for partners, institutions, startups

€28M additional R&D **planned** by end of 2026

Milan (Lutech Campus)
Bari (R&D, Smart City & Mobility CoE)
Naples (R&D)
Cosenza (R&D)

100

- | Aziende | | | 25 Atenei e Centri di Ricerca |
|---|-------------------------------------|-----------------------------------|-------------------------------|
| <p>Fondatori Promotori</p> <p>16</p> | <p>Partecipanti</p> <p>8</p> | <p>Supporters</p> <p>1</p> | |

HUB: **Politecnico of Milano**

Total participants : **50**

Participating universities : **24**

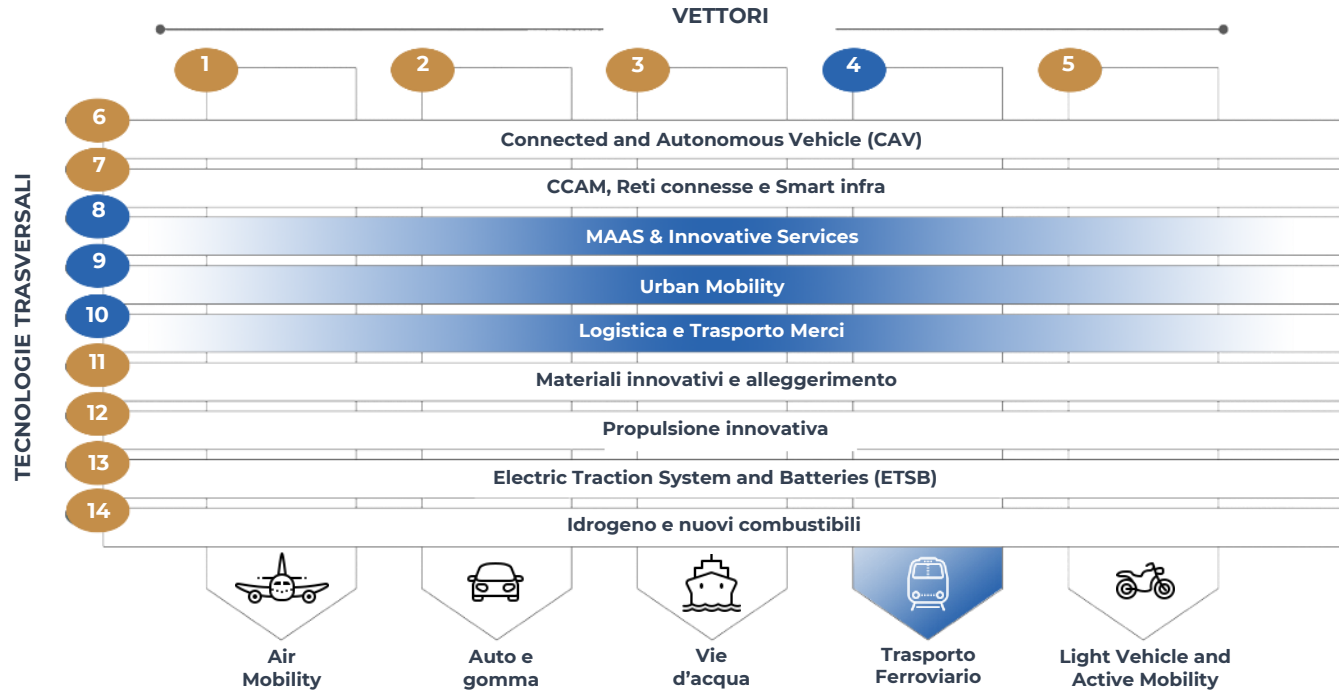
Public research entities : **1**

Participating companies : **24**

Funding : **378M€** (**41%** to Southern Italy)

Duration : **36 months** (01/09/2022-31/08/2025),
extended until 31/12/2025

MOST goals & Lutech objectives



CONTRIBUTING, TOGETHER WITH PARTNERS (UNIVERSITIES, RESEARCH CENTERS, AND COMPANIES), TO THE CREATION OF A NEW WAY OF **COLLABORATING BETWEEN RESEARCH AND INDUSTRY**, WITH A SUPPLY CHAIN PERSPECTIVE THROUGH HIGH-TECH PROJECTS FOCUSED ON URBAN MOBILITY, MAAS, LOGISTICS, AND THE DIGITALIZATION OF RAILWAY TRANSPORT. ALSO, **INITIATING NEW PROJECT AND BUSINESS LINES** OUTSIDE THE MOST FRAMEWORK RELATED TO MOBILITY, LEVERAGING THE COLLABORATIONS DEVELOPED WITH PARTNERS.

THROUGH OUR ASSETS (HPC), EXPERTISE (SOFTWARE **DEVELOPMENT ON HPC, AI/ML, DIGITAL TWINS, AND HIGH-PERFORMANCE SIMULATION MODELS**), AND DATA **FRAMEWORK** (MOBILITY4FUTURE/SNAP4CITY), WE COLLABORATE IN THE **DEVELOPMENT OF INNOVATIVE SUSTAINABLE MOBILITY SOLUTIONS**. WE AIM TO **TRANSFORM THE ASSETS, SKILLS, AND EXPERIENCE** GAINED WITHIN MOST INTO MOBILITY SOLUTIONS FOR PUBLIC AND PRIVATE CLIENTS.



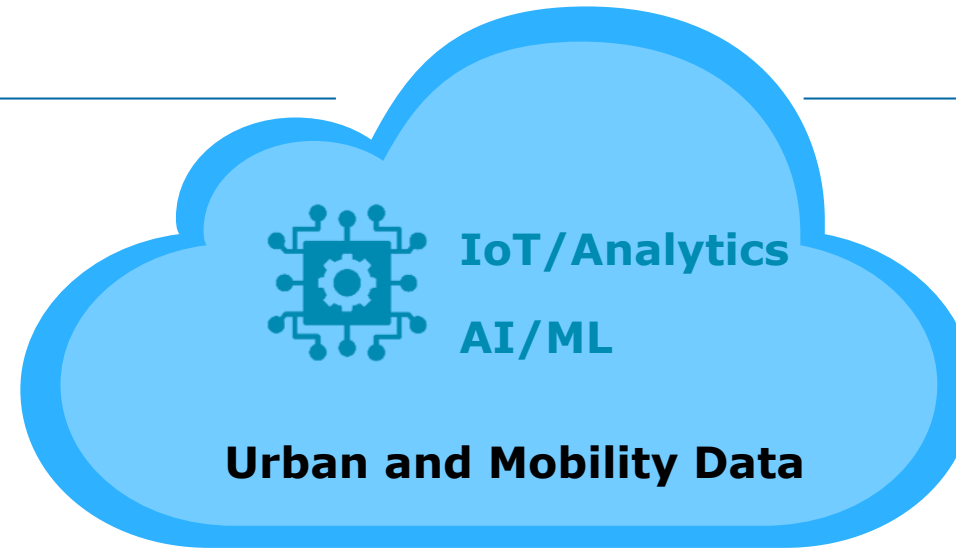
Citizen-centric Smart City

IoT, Digital Twin, AI/ML and Data Analytics as technological drivers

Connectivity

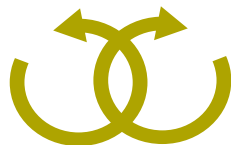


Services & Security



Efficiency

Optimized use of available resources



Operational continuity

Integrated Services



Security

Anticipating the risks and protecting people and relevant information.



Augmented urban experiences

For citizens, tourists and local businesses.



Our strategy for future mobility

An integrated vision that uses digital skills to create intelligent, efficient, and sustainable mobility solutions.

- Strong integration and technological innovation
- Advanced data analysis tools
- Close collaboration with local ecosystems
- Use of AI, High Performance Computing (HPC), Digital Twin and Big Data
- Collaboration with universities and research centers

A scalable, secure, and sustainable solution offering that improves transport efficiency and supports greener, more inclusive mobility



Smart City & Mobility: From R&D to market offering



**Digital Enterprise
Smart Mobility Platform
WP 1.3**



MOBILITY4FUTURE

Vertical Functions:

- Traffic Monitoring
- Local Public Transport
- Smart Parking
- 15 minuti index
- Event management
- Cycle tourism 2.0
- Student mobility
- Railway Predictive Maintenance

Technical Features:

- Modular and scalable architecture
- Flexibility for customization
- Security and data privacy
- Interoperability
- Centralized management
- AI/ML for predictive and what-if analysis
- Process automation and optimization
- Open Source



Mobility Challenges & Opportunities

- Cities and mobility operators need **innovative tech solutions**.
- Municipalities require economically and **operationally sustainable solutions**.
- Companies and researchers need platforms to test, **promote, and commercialize** solutions while **maintaining IP control**.



Lutech Mobility4Future & OptiFaaS

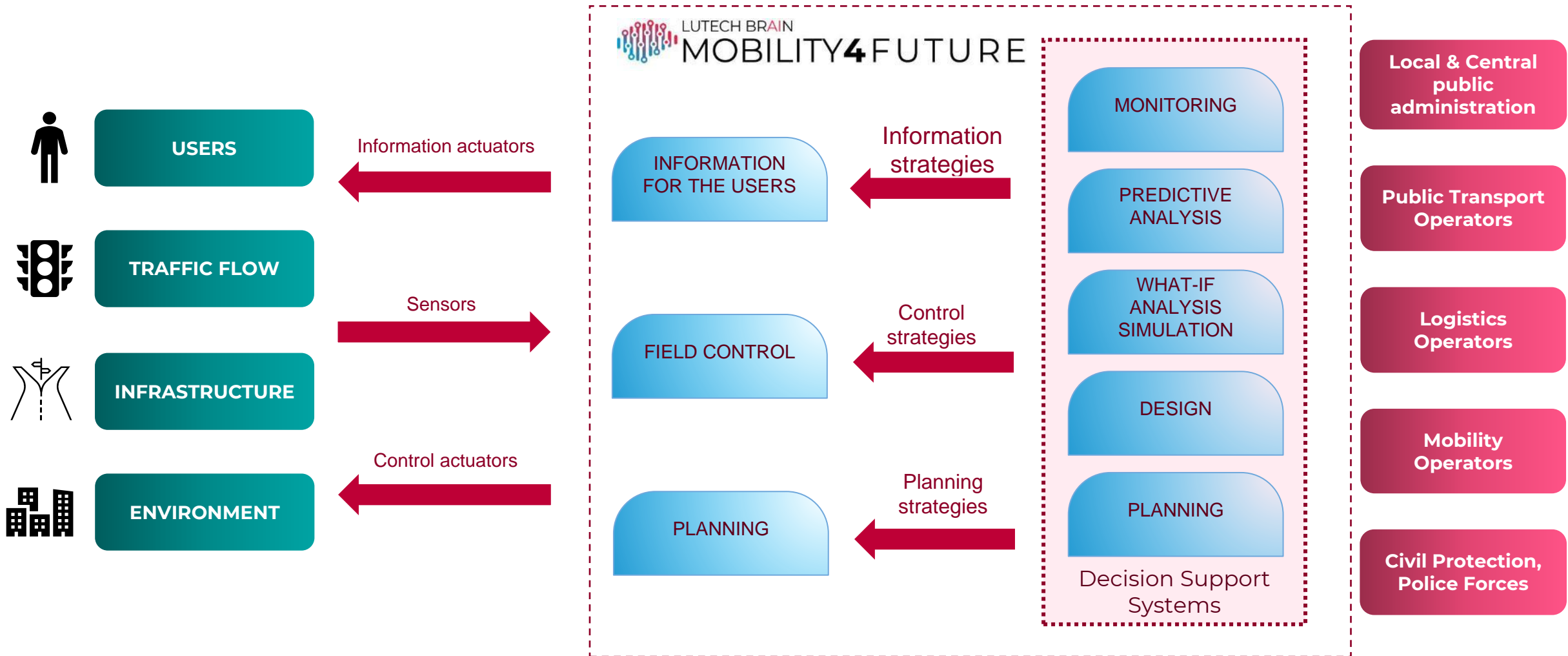
Mobility4Future and its component OptiFaaS respond to these requirements.

Create an **ecosystem** supporting **planning, design, and management of urban and extra-urban mobility.**

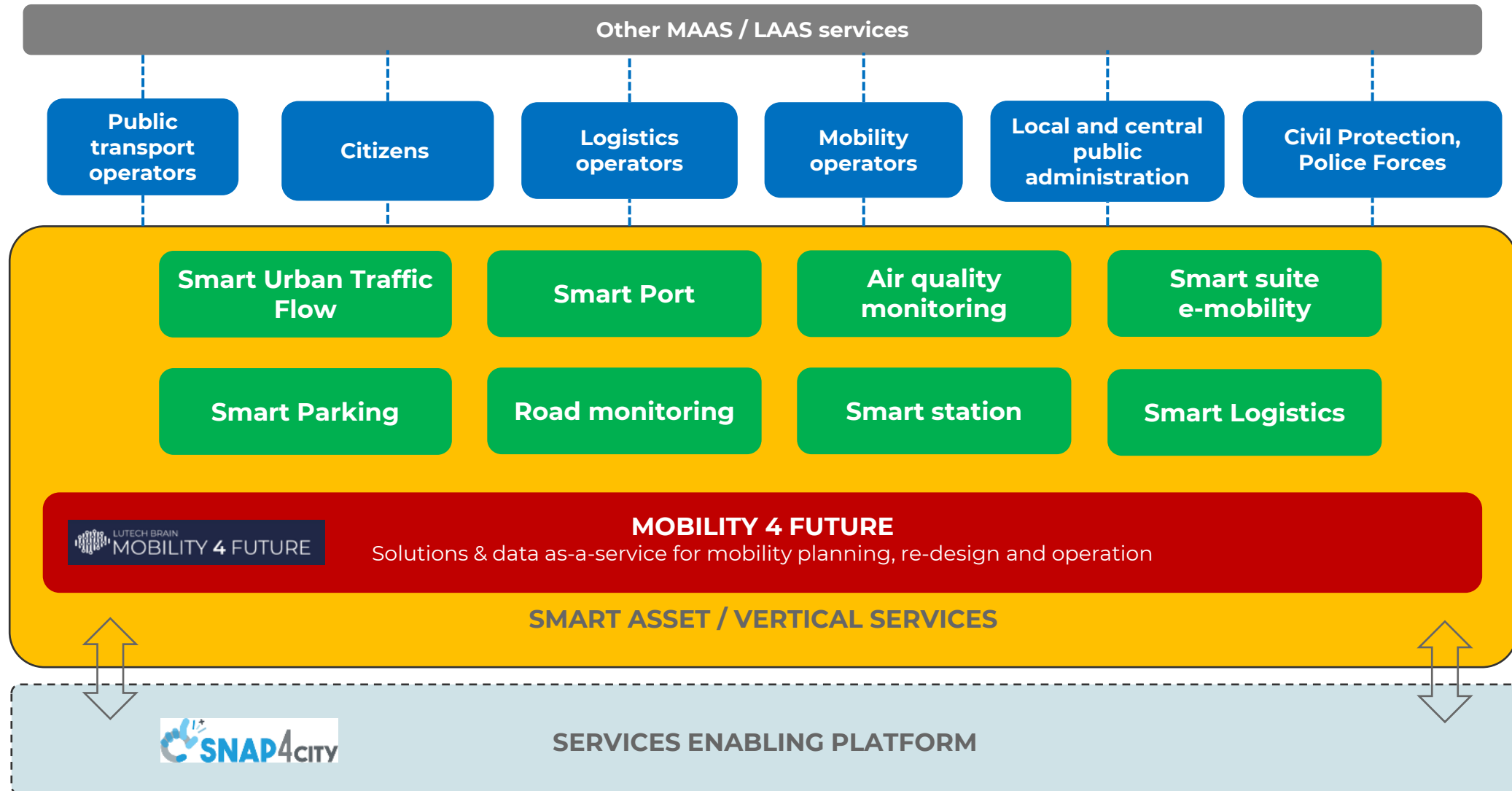
Enable **rapid sharing of solutions** among local administrations, transport operators, tech companies and researchers.



Lutech Mobility4Future - functional architecture



Lutech Mobility4Future - solutions





Digital Twin Solutions for Sustainability

OPERATION AND PLAN - CONTROL ROOMS - DECISION SUPPORT SYSTEMS - WHAT-IF ANALYSIS - OPTIMIZATION - APPLICATIONS

HORIZONTAL AI PLATFORM



MOBILITY AND TRANSPORT



SMART ENERGY AND SMART BUILDING



ENVIRONMENT AND WASTE MANAGEMENT



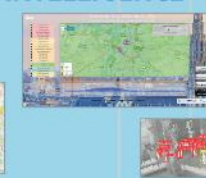
CITY USER'S SERVICES AND TOURISM MANAGEMENT



- DEVELOPMENT ENVIRONMENT AND METHODOLOGY
- VISUAL PROGRAMMING, ML, AI, HPC
- TRAINING COURSES
- LIVING LABS
- GUI CUSTOM STYLES
- FULL APPLICATIONS, DASHBOARDS AND VIEWS
- MOBILE APPS



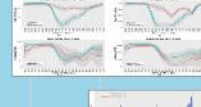
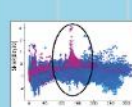
VISUAL ANALYTICS - SYNOPTICS - GRAPHICAL WIDGETS - ANALYTICS - BUSINESS INTELLIGENCE - SIMULATIONS



DASHBOARDS, WIDGETS
TEMPLATES

PREDICTION - ANOMALY DETECTION - CLUSTERING - ROUTING - SENTIMENT NLP - TRAFFIC FLOW - PEOPLE FLOWS - SDG
15 MIN CITY INDEX - KPI - HEATMAPS - ORIGIN DESTINATION - ETC...

API - MICROSERVICES - GIS - BPM
VIDEO - REPORTS - MAPS - 3D ...

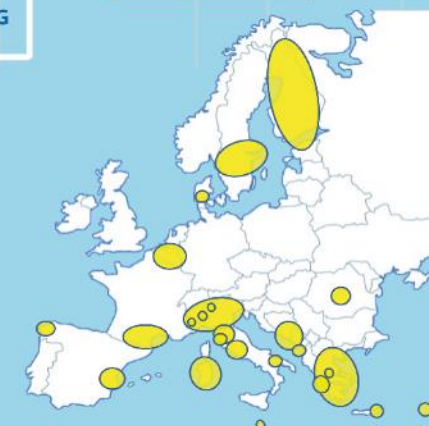


EXPERT SYSTEM, KNOWLEDGE BASE
SEMANTIC REASONING
SMART DATA MODEL
IOT DEVICE MODELS, STORAGE

BIG DATA ANALYTICS, ARTIFICIAL INTELLIGENCE
EXPLAINABLE AI, MACHINE LEARNING, GENERATIVE AI
OPERATIVE RESEARCH, STATISTICS

VISUAL PROGRAMMING, ADAPTERS
DATA FLOWS, WORKFLOWS
PARALLEL DISTRIBUTED PROCESSING
DATA DRIVEN

FULL INTEROPERABILITY, ANY: DATA, BROKERS, NETWORKS AND VERTICALS



Powered by
FIWARE

FREE
TRIAL

PEN Test
Passed

EU GDPR
COMPLIANT

SNAP4
Appliances and Dockers
Installations

EUROPEAN OPEN
SCIENCE CLOUD

Node-RED

JS Foundation

E015
digital ecosystem

L4
NVIDIA

In summary



Support integrated mobility planning and management



Enable rapid solution sharing via marketplace and data sets



Simplify adoption of advanced technologies (Digital Twin, AI, HPC)



Empower public administrations with data-driven decision-making tools



Promote inclusive and participatory mobility governance models

- Home
- Traffic monitoring
- Public Transport
- Smart Parking
- 15 minute index
- Manage events



Road Monitoring

Average Congestions ^C	No. of Congestions ^C	Peak Congestions ^C	Co2 ZTL Reduction ^C	Average CO2 Emissions ^C	Tot. CO2 Emissions ^C
28.4 Percentage	17	18:27	5.2 Percentage	282 ppm	846 ppm

Incoming Traffic



Tot. Incoming Vehicles ^C	Average Speed ^C
4746 Vehicles	27 km/h

Outgoing Traffic



Tot. Outgoing Vehicles ^C	Tot. Vehicles ^C
5651 Vehicles	7825

Weather Risk Panel

	MIN	Low	MEDIUM	High
Hydraulic Risk	MIN		Hydrogeo Risk	MIN
Storm Risk	MIN		Snow Risk	MIN
Ice Risk	MIN		Wind Risk	MIN

Road Network

ACCIDENTS	3
Traffic Closure	4
Works Closure	1
Traffic Limitations	5
Works Limitations	0
REPORTS	10

Public Transport

Average Waiting Time ^C	
10.1 min	
Bus Delay ^C	
58.7 %	

Average Stop Waiting Time

Line 09	18.3 min
Line 22	16.7 min
Line CPJ	16.7 min
Line 06	15 min
Line 12/	15 min
Line 13	13.3 min

Sensors

15	3
Traffic Lights	
22	0
Cameras	
4	1
Sensors	

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Thank you !

