

# Sustainable IT for Cities



**Nicola Farronato**

Head of Innovation  
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# Sustainable IT for Cities

Sustainable cities will be determined by the optimum equilibrium between enabling technologies and entrepreneurial ecosystems.

Urban innovation can be fostered by emerging technologies also embracing a circular economy paradigm: outputs of urban experimentations in mobility can become inputs for a new innovation challenge in agrifood, for instance, thus extending the life of the innovation process and maximising the experimentation data obtained with a city lab approach.



17th September 2021

# Sustainable IT for (Sustainable) Cities

*NICOLA FARRONATO*  
*Head of innovation team, City of Turin*  
*University of Turin, PhD student*



**“Sustainable cities  
will be determined by the  
optimum equilibrium between  
enabling technologies and  
entrepreneurial ecosystems”**

# TURIN'S SMART CITY MAP

- 900K citizens
- 120K students
- 2 public Universities
- 350 startups
- 75.000 companies



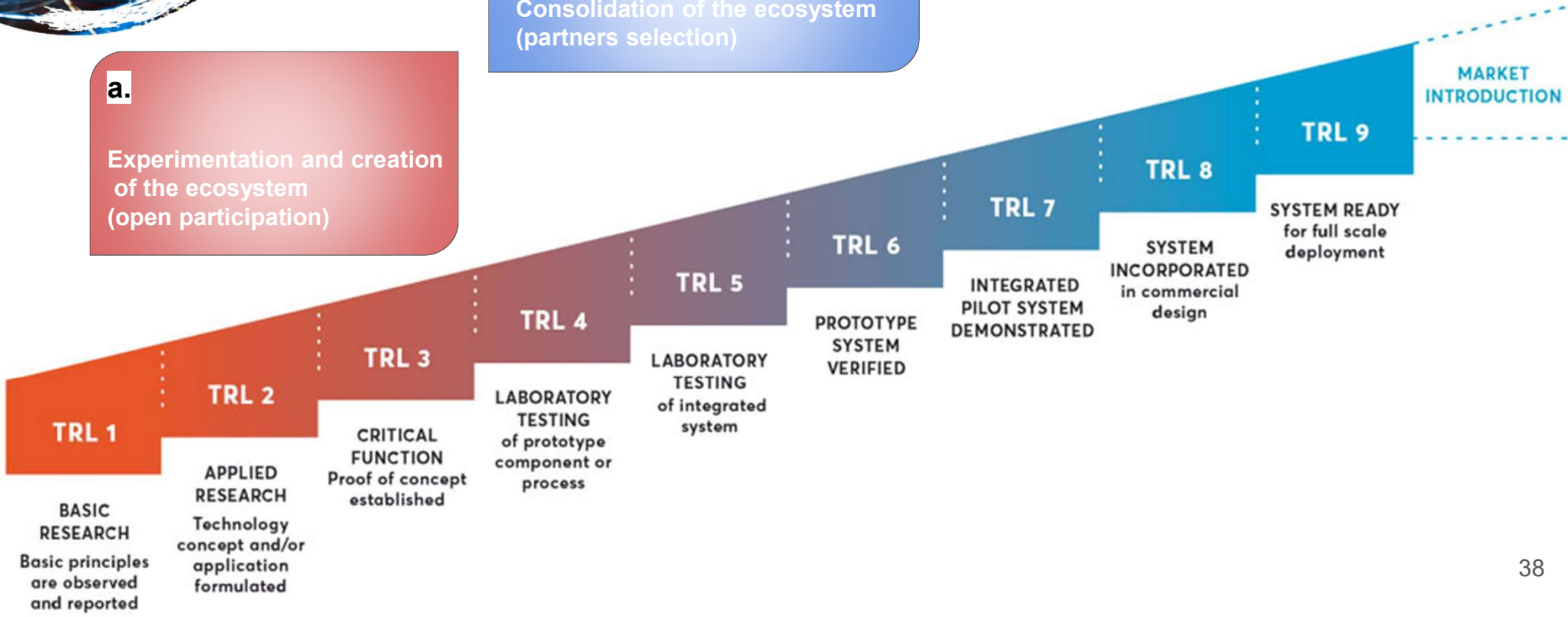


# PUBLIC PRIVATE PARTNERSHIP

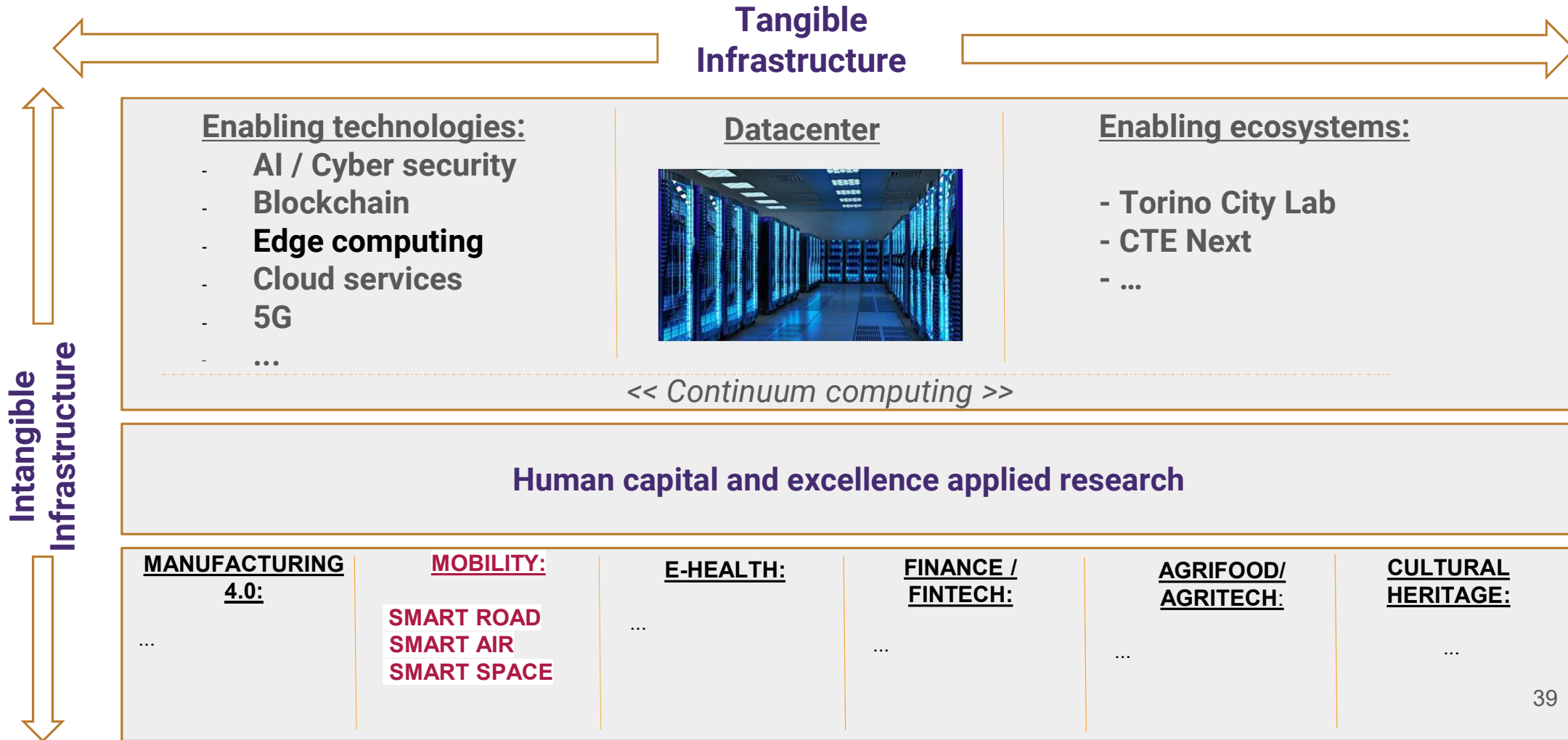
**a.**  
Experimentation and creation of the ecosystem (open participation)

**b.**  
Pre-industrialization and Consolidation of the ecosystem (partners selection)

**c.**  
Industrialization and growth of the ecosystem (by internal <> external lines)



# Turin's smart city matrix



# TURIN: A SMART CITY WITH A START-UP AGENDA

scaling

adoption

testing





# TORINO CITY LAB : Torino innovation ecosystem

**+70**

PARTNERS

**+50**

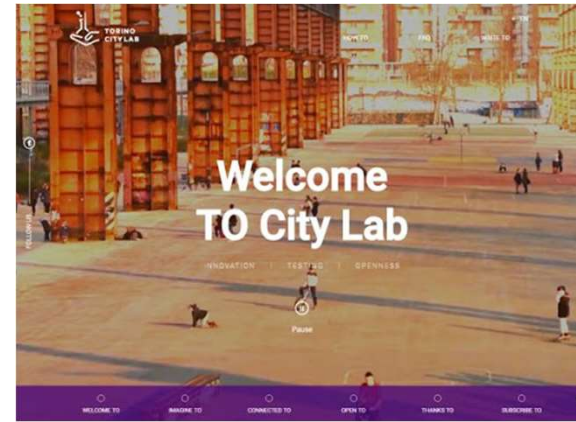
PROJECTS

**+5**

CHALLENGES

**<24**

MONTHS



TORINO CITY ❤️





Torino City  
Lab:

Ecosystem

# Torino City Lab Partners

## Corporates



## Research & Innovation



## Utilities



## Automotive & Mobility provider



## Telco & ICT



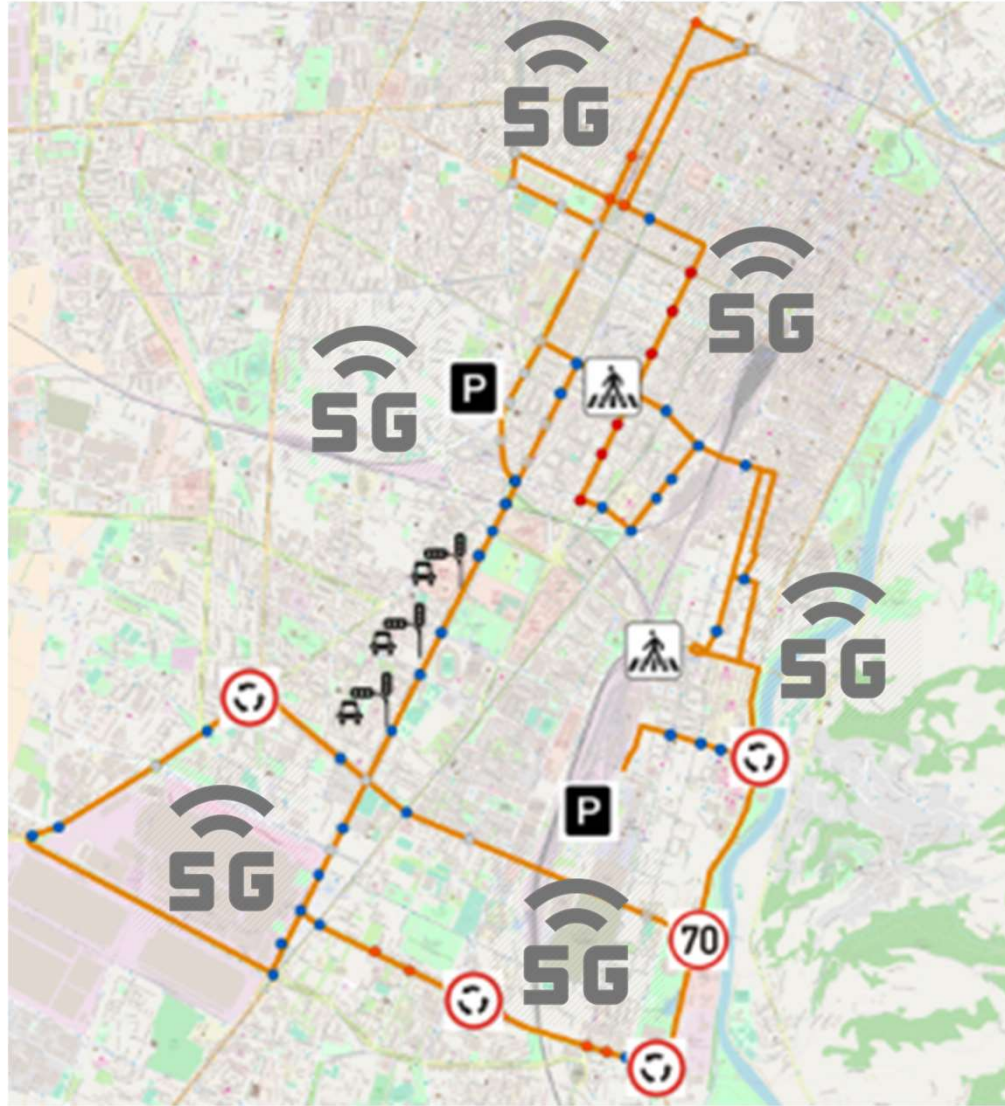
## Associations, Insurances, Universities



Torino  
Smart  
Road

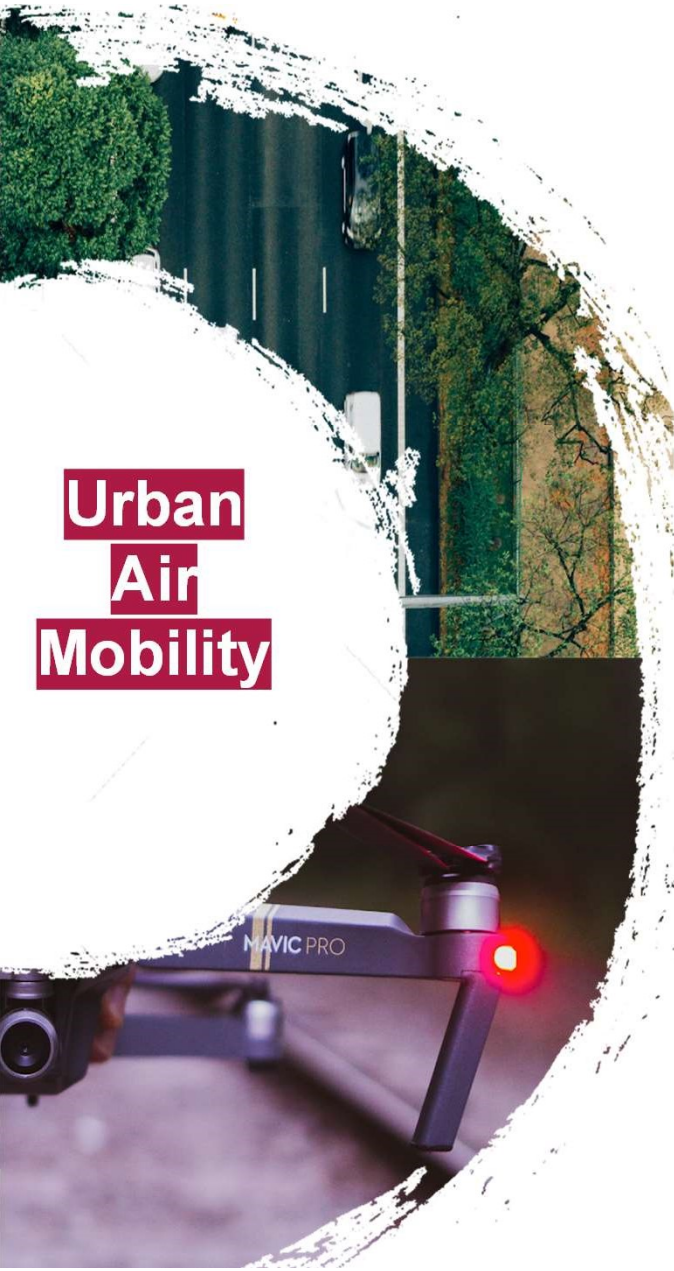


**35KM OF URBAN CIRCUIT FOR TESTING  
AUTONOMOUS & CONNECTED CARS**



# OUTDOOR & INDOOR DRONES TESTING AREAS

Urban  
Air  
Mobility



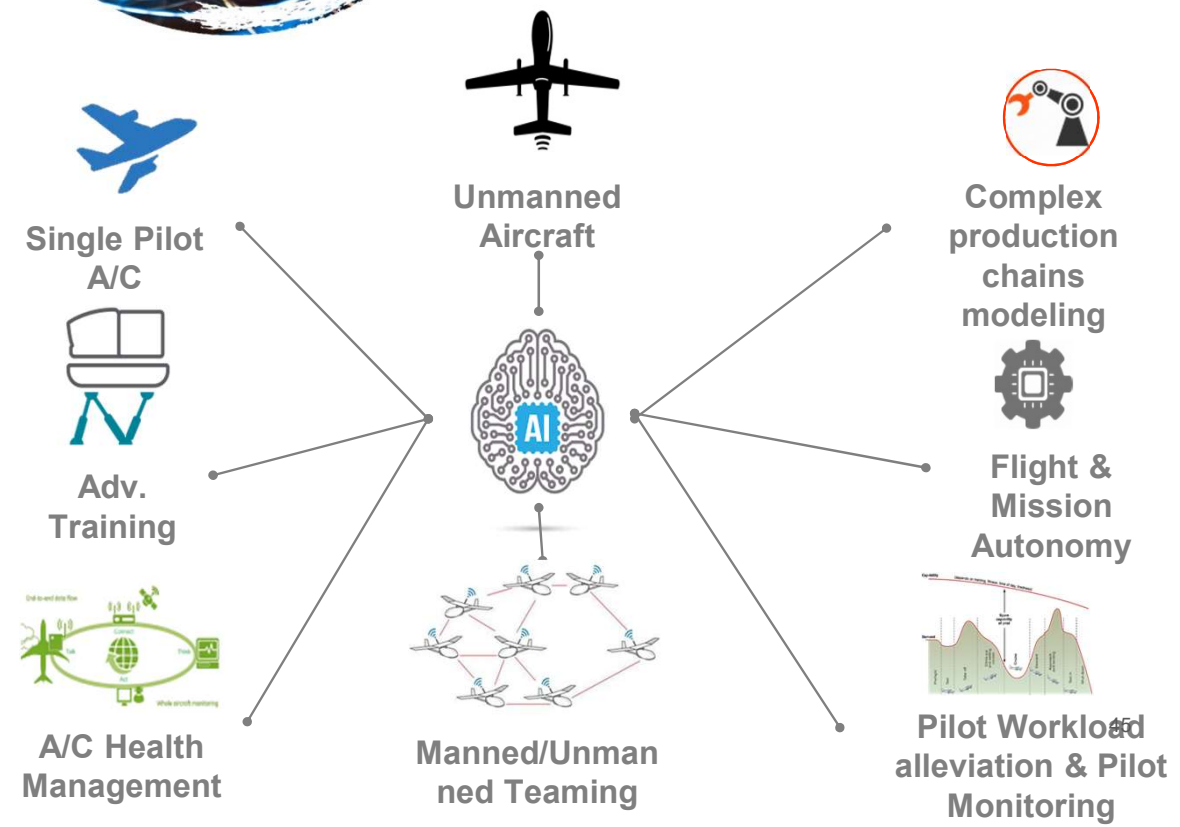


# SPACE MOBILITY

## TURIN: THE CITY OF AEROSPACE



European Space Agency



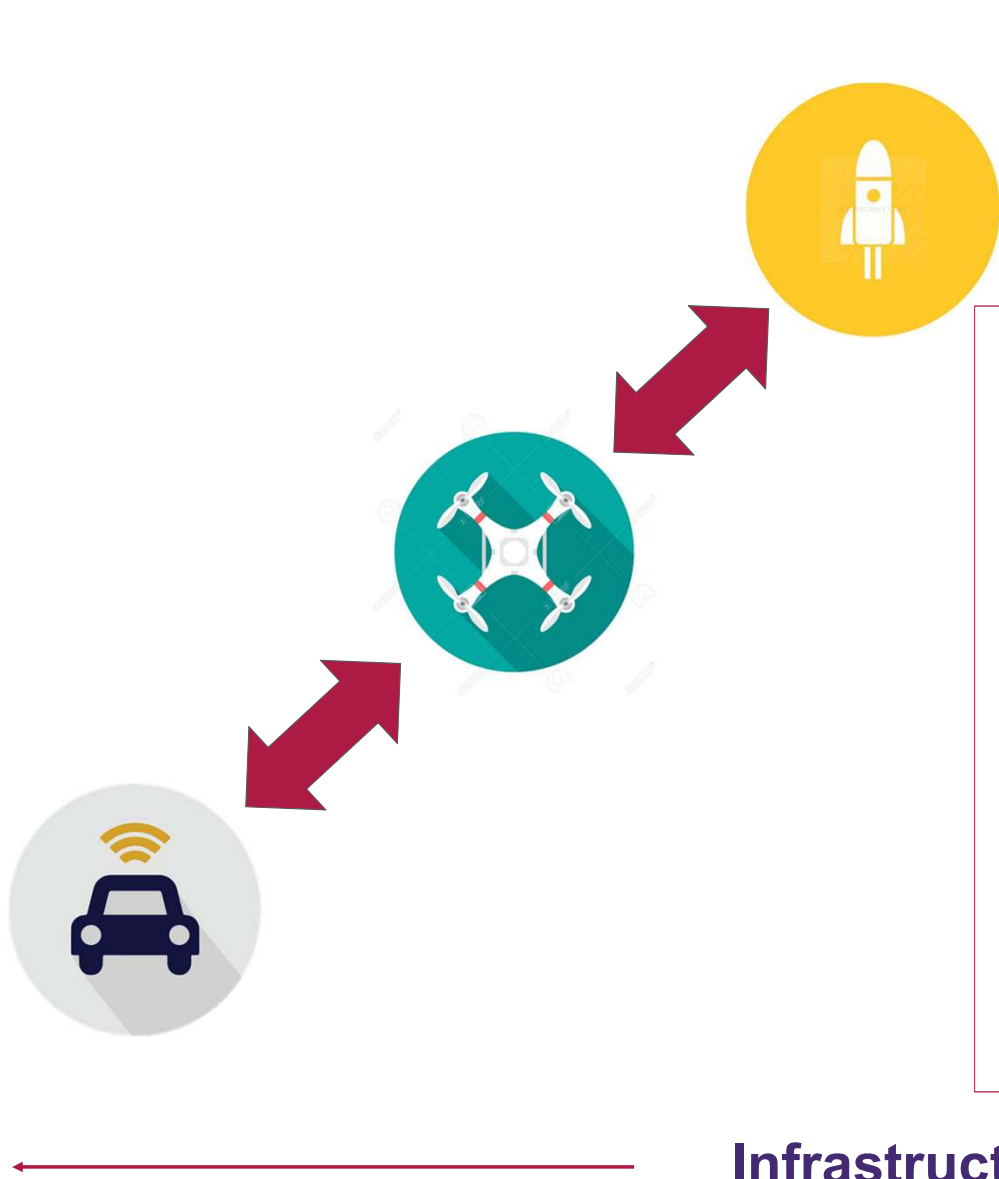


**Smart Road +  
Urban Air Mobility +  
Space Mobility**

**=**

**Open integrated  
#SmartMobility**

Smart Road UAM Space Mobility



Emerging technologies enable an open shared infrastructure for integrated smart mobility.



Infrastructure

# CTE NEXT

Casa delle Tecnologie emergenti

*Home for emerging technologies*



**WELCOME**

TORINO CITYLAB

CITTA' DI TORINO

TORINO

**CTE NEXT**

Casa delle Tecnologie Emergenti di Torino

UNIVERSITA' DELLA SAUTUR DI TORINO POLITECNICO DI TORINO I3P

+CIM 40 CSI DIGITAL MAGICS LINKS TIM



# CTE NEXT

## Strategic sectors



### Smart Road

connected vehicles, autonomous driving, transport systems and infrastructures, ...



### Urban Air Mobility

smart logistic, monitoring, land/air integrated smart mobility solutions, ...



### Industry4.0

connected machines, extended supply chain, smart manufacturing, ...

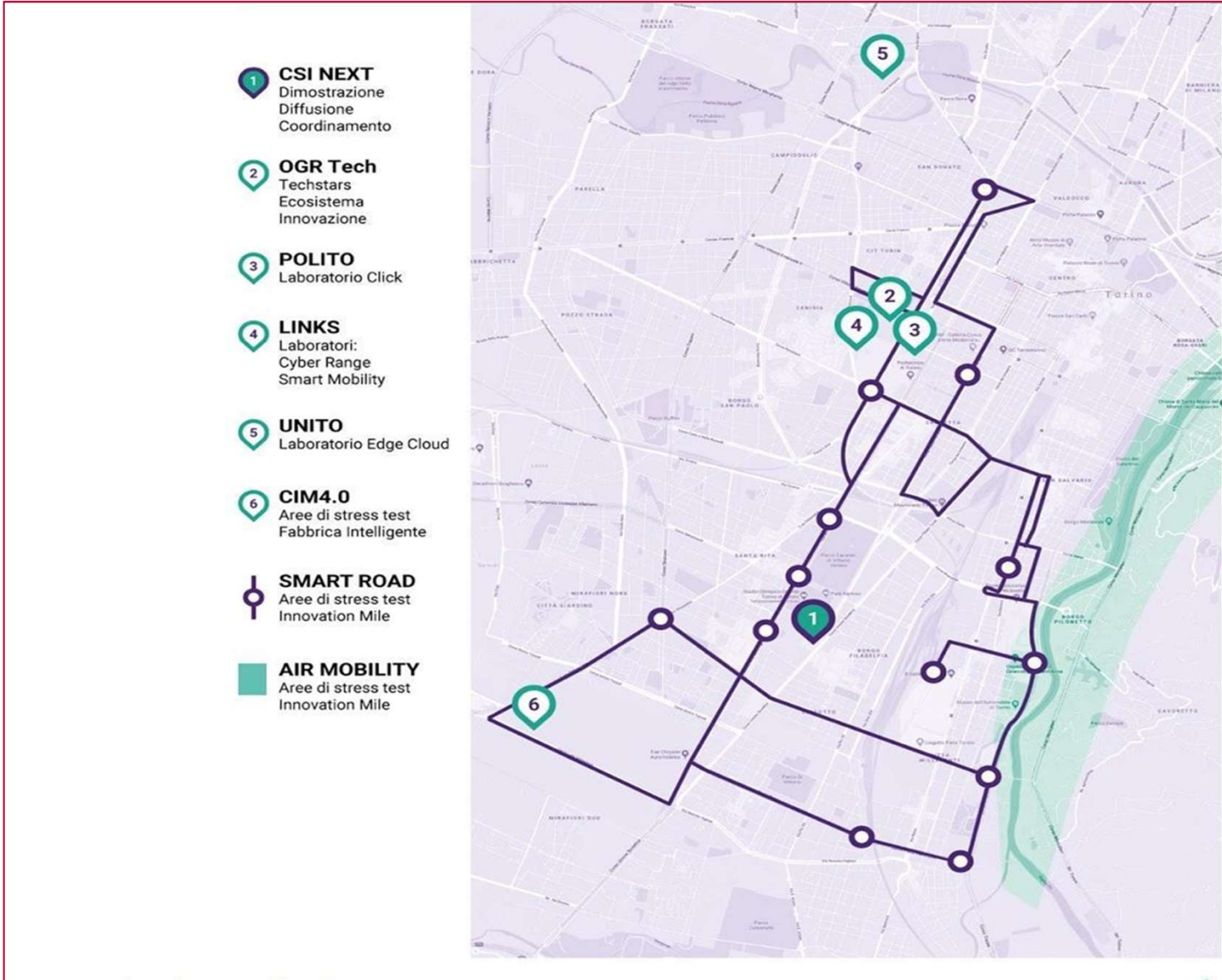


### Innovative Urban Services

new services for citizens, urban spaces optimization, ...

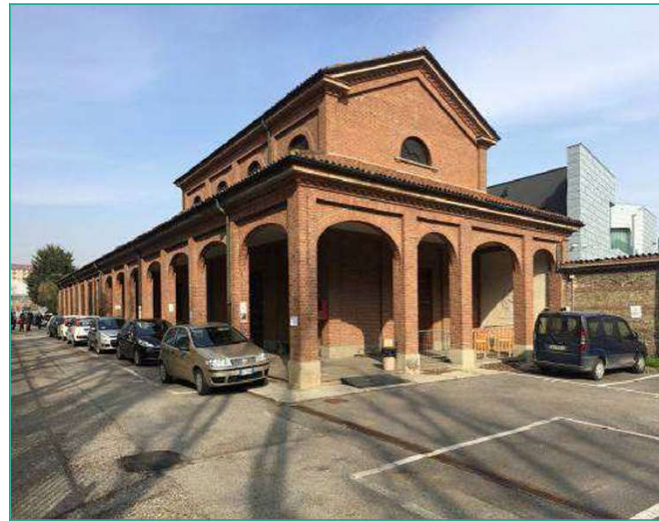
# CTE NEXT

The innovation hotspots of Turin

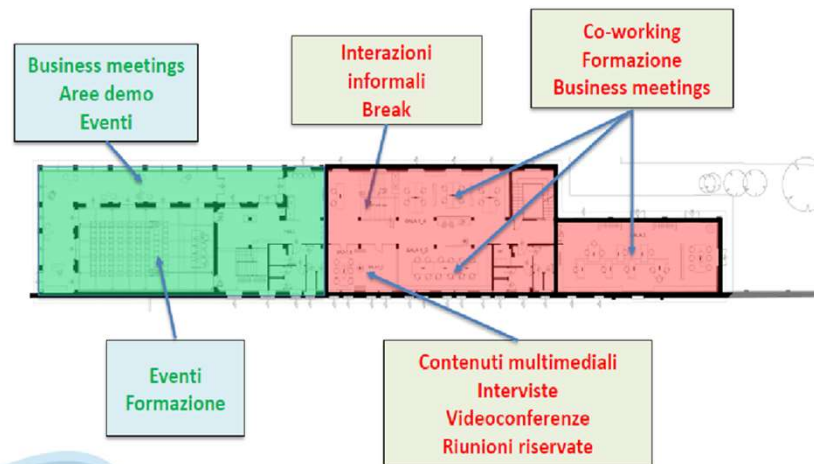


# CTE NEXT

## The central Hub



### Spazi multifunzionali



CTE NEXT

The central  
Hub

## CSI NEXT: OUTDOOR



Anche nelle aree a prato possono essere disposte nuovi "pergolati" da attrezzare e arredare



# Torino's decision making model: [reactive + proactive]



- ★ Top international innovation brands choosing Torino to build impact

- ★ Open innovation strategy
- ★ Lab for experimentation
- ★ 70+ partners ecosystem



ICT e Innovazione per Società e Territorio



- ★ 3rd City in Italy
- ★ industrial economy
- ★ Innovation DNA

Our circular innovation model

Research  
| Master | PhD | Labs



**INRiM**  
ISTITUTO NAZIONALE  
DI RICERCA METROLOGICA

**LINKS**  
S M B IRII

**HPC4AI**

UNIVERSITÀ  
DEGLI STUDI  
DI TORINO

**POLITECNICO  
DI TORINO**

**e l l i s**  
European Laboratory for Learning and Intelligent Systems

**erc**

European Research Council  
Established by the European Commission

Innovation

| Start-up | Accelerators |  
Services

**INCUBATORE  
IMPRESSE  
2i3T  
UNIVERSITÀ DI TORINO**

**i3P**  
INCUBATORE  
POLITECNICO DI TORINO

**LIFT** GIVING  
IDEAS  
THE  
HIGHEST  
VALUE

**techstars**

Smart City

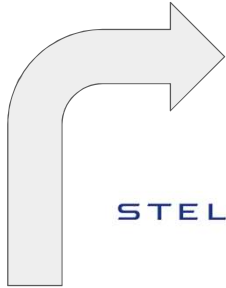
| Torino City Lab | CTE nex

**TORINO  
CITYLAB**

**WELCOME  
CTE  
NEXT**

**ST**  
life.augmented

**CISCO**



**LEONARDO**

**STELLANTIS**

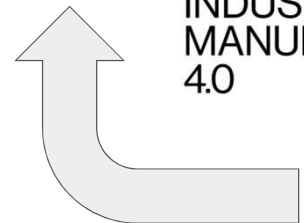
Impact

| Industry |

**TIM**

**INTESA SANPAOLO  
INNOVATION CENTER**

+ COMPETENCE  
INDUSTRY  
MANUFACTURING  
4.0



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**THANK  
YOU**



**CITTA' DI TORINO**



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