

Porto Case: Heterogeneous Sensing Platform for Efficient Mobility

Porto.



Porto

In Numbers

250.000 inhabitants

1,8

Million citizens in
the metropolitan
area

Intermodal
transportation
system

17

Municipalities in
the Metropolitan
area

300

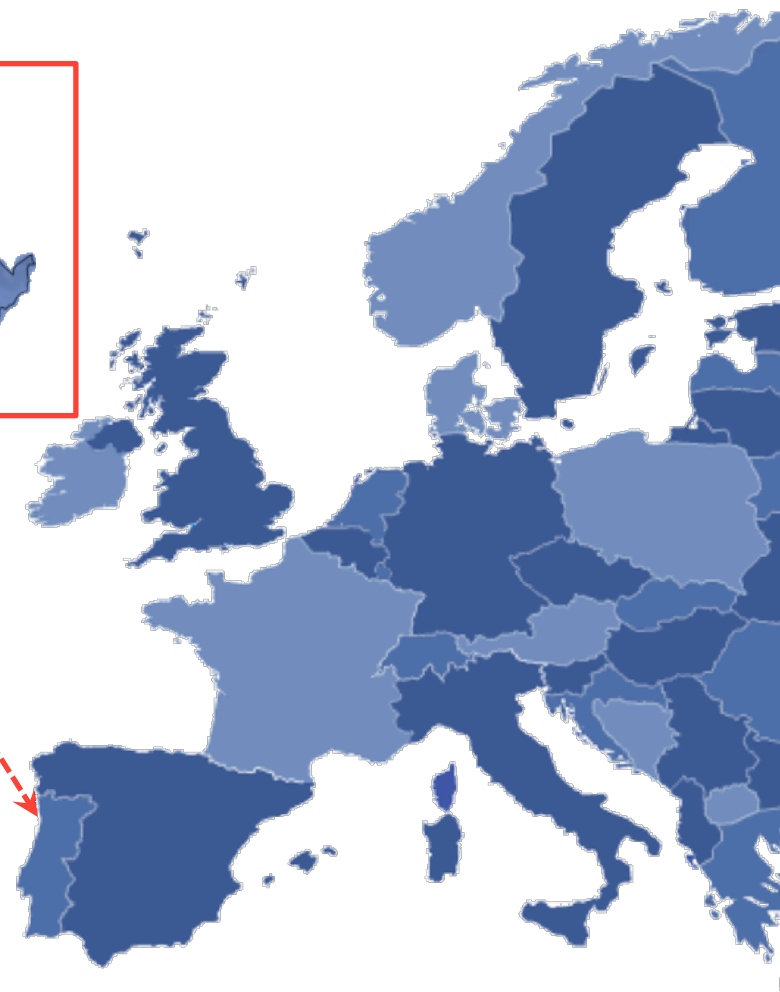
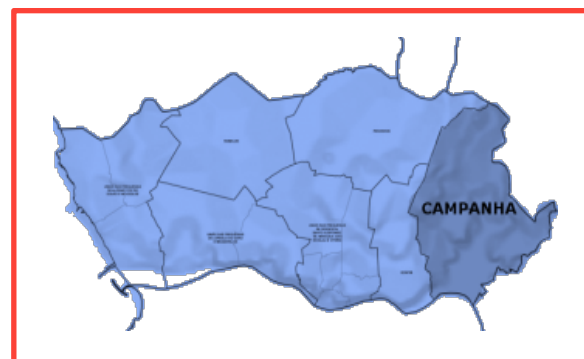
Startups

1500

Qualified jobs

31.000

University students



Porto's Vision

- “Smart City” projects developed at a Urban Scale, corresponding to a step further regarding the district level strategy followed by the majority of European cities.
- The citizen is at the centre of smart decision making, promoting data driven decision making.
- Integrated vision of the management and operability of the city.
- Economic development and Job creation.



Desafios Porto

313 Challenges submitted

- 130 on mobility and environment
- 96 on Digital City
- 16 on Energy
- 71 on Health and wellbeing



130



96



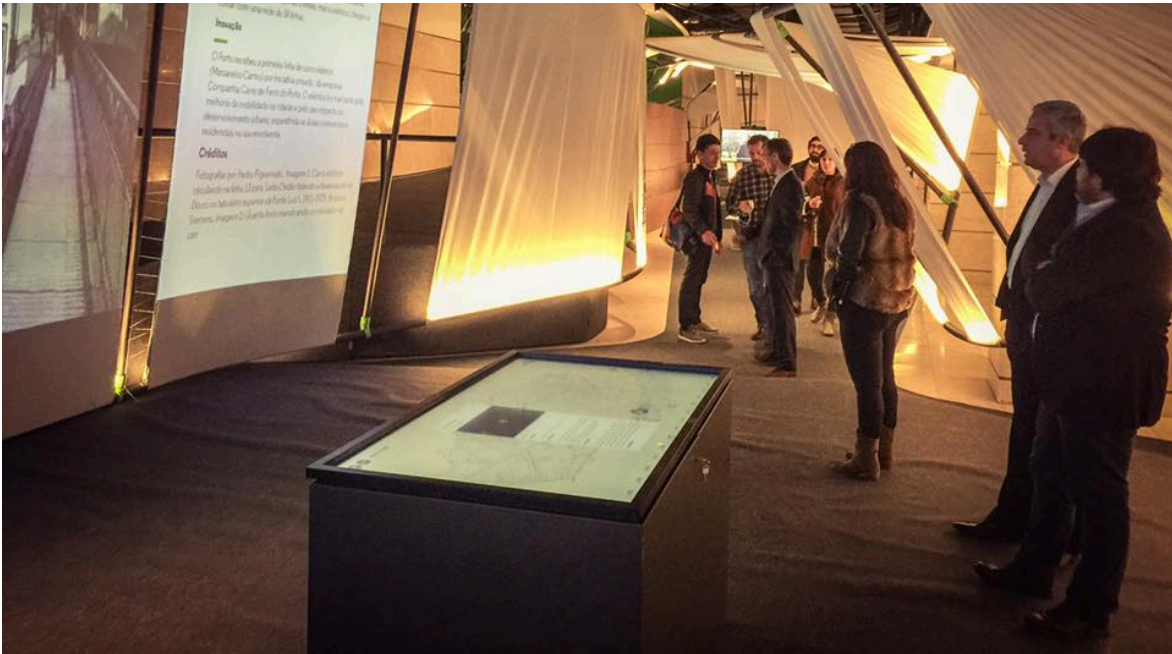
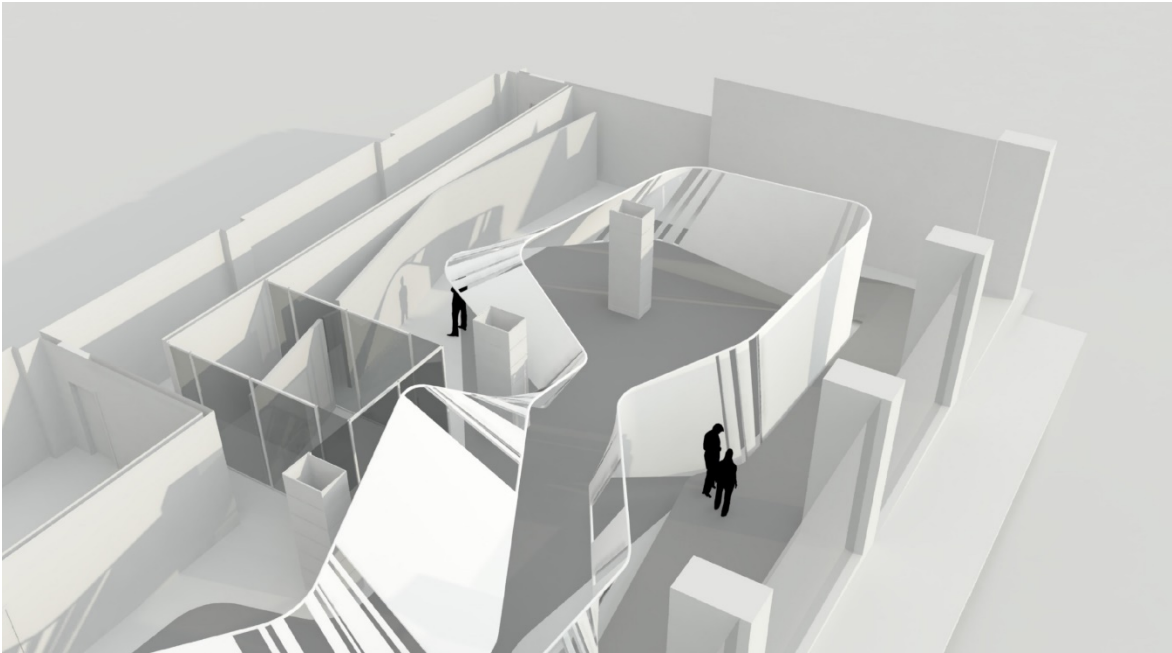
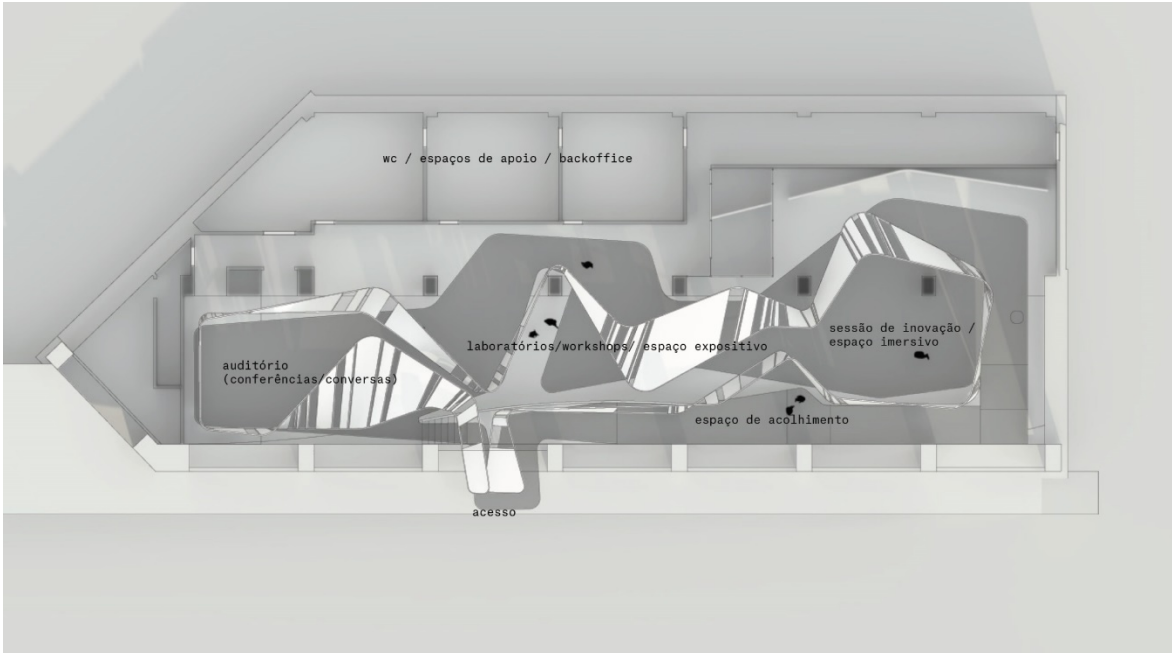
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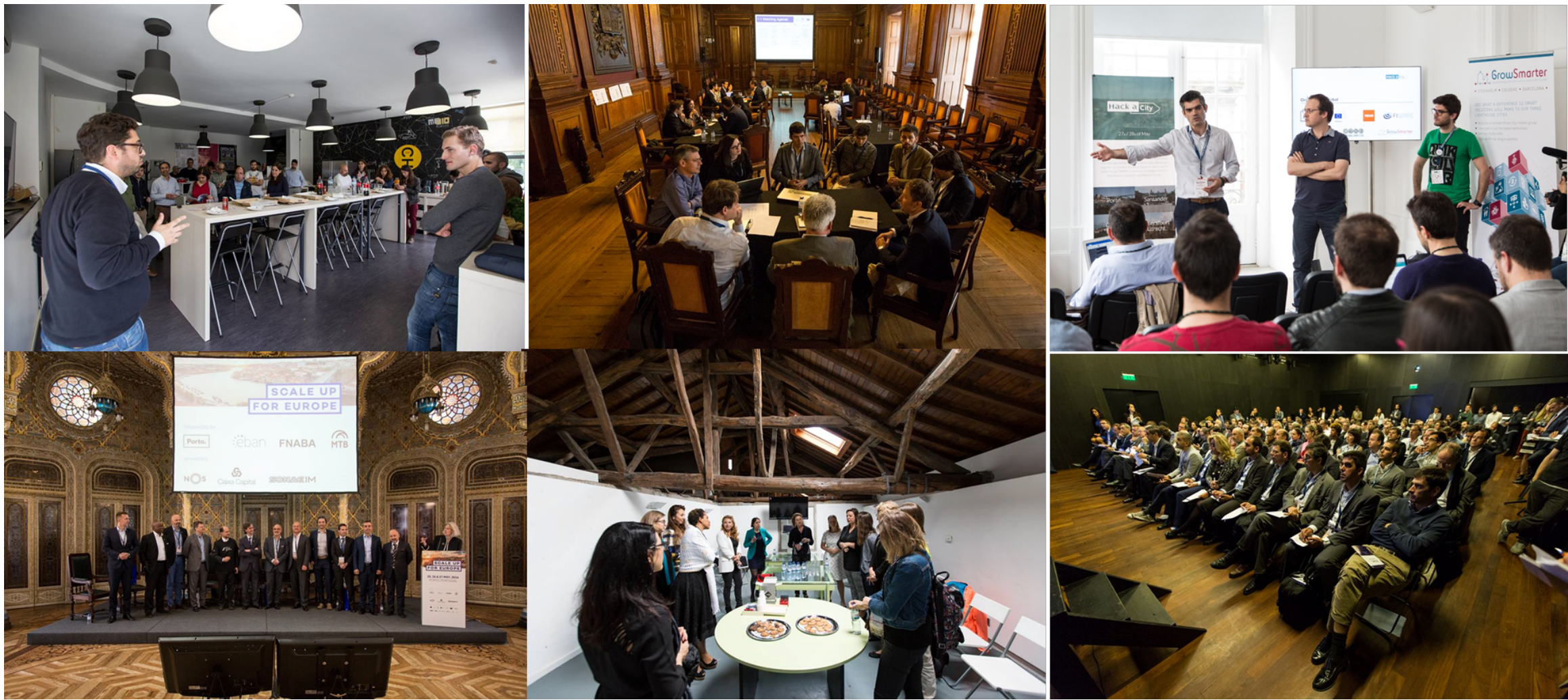
71



PORTO INNOVATION HUB



SCALEUP PORTO START&SCALE WEEK



Porto

Infrastructure

22.000 connected things

183Km

Optic fiber
infrastructure

+40000

Km linear optic
fiber

300

connected
vehicles

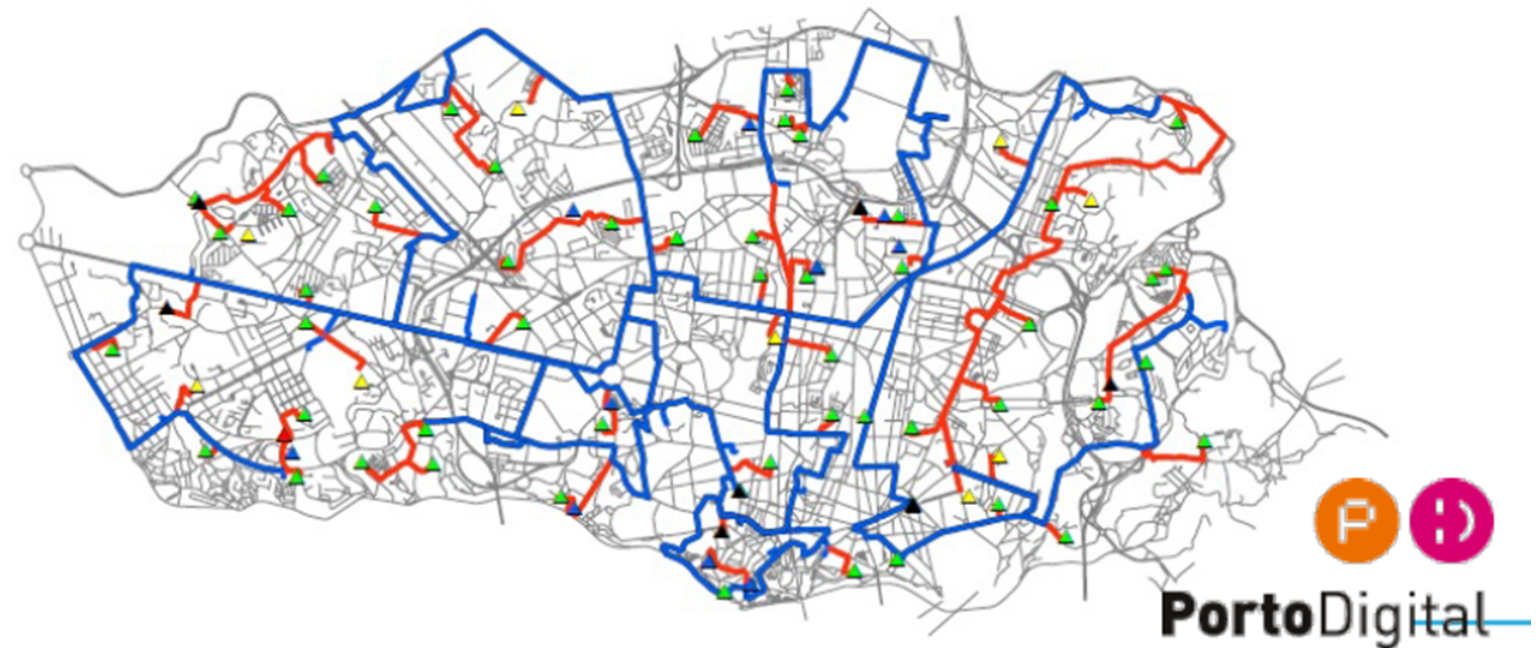
1500

Ibeacons, NFCs
and Qrcodes
foreseen

**FIWARE
NODE**

151.770

Water consumption
sensors

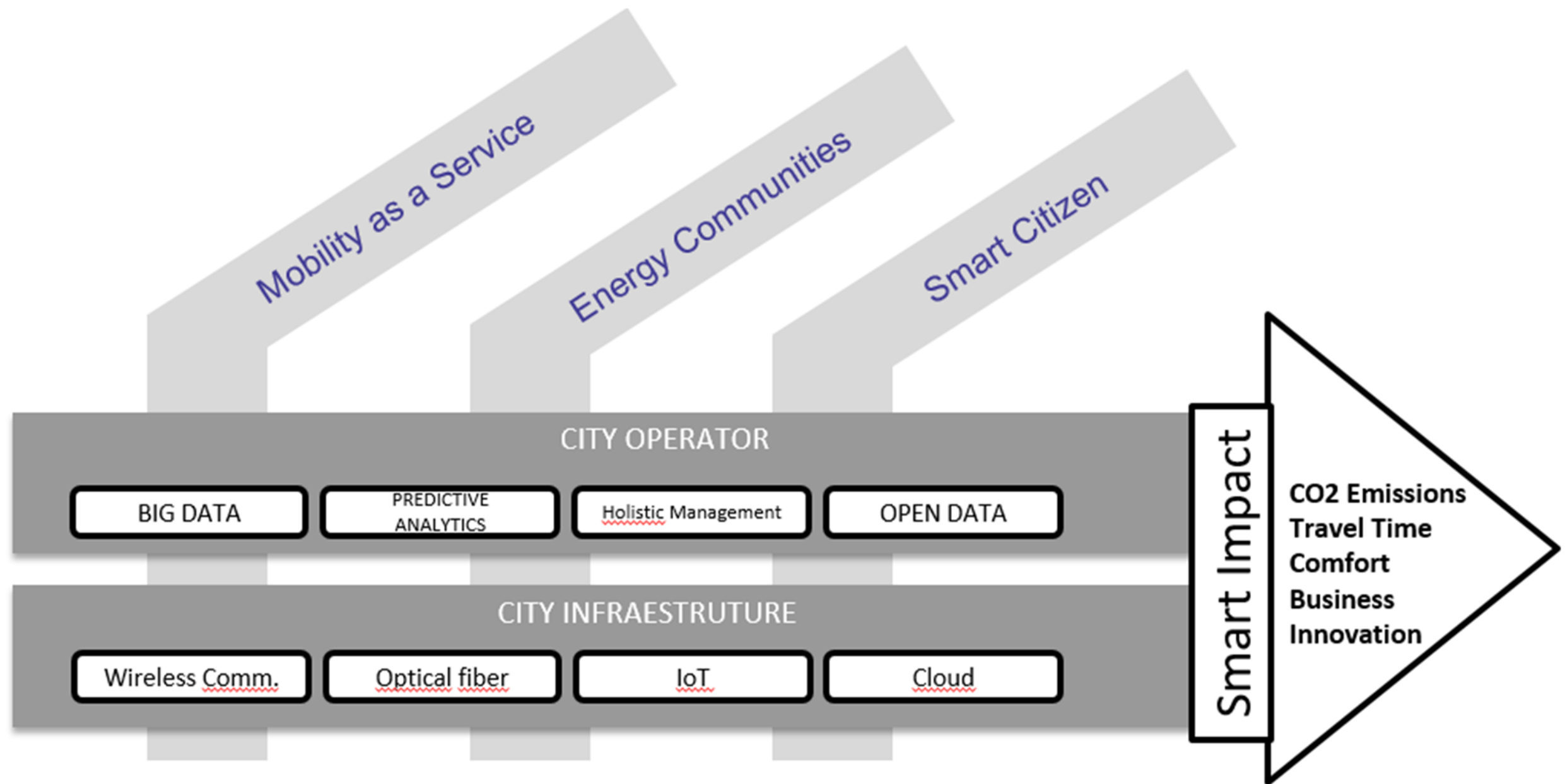


City Operator and Infrastructure

- Develop a Urban Platform that integrates data flows within and across city systems;
- Enable the city to shift from fragmented operations to include predictive effective operations, and novel ways of engaging and serving city stakeholders;
- Promote an efficient data compilation and analysis with an impact on the living conditions and wellbeing of the city;
- Improve initiatives outcomes at local level and create a new level of integrated management services.



Main Areas



Integrated Management Centre



TRAFFIC MANAGEMENT SYSTEM

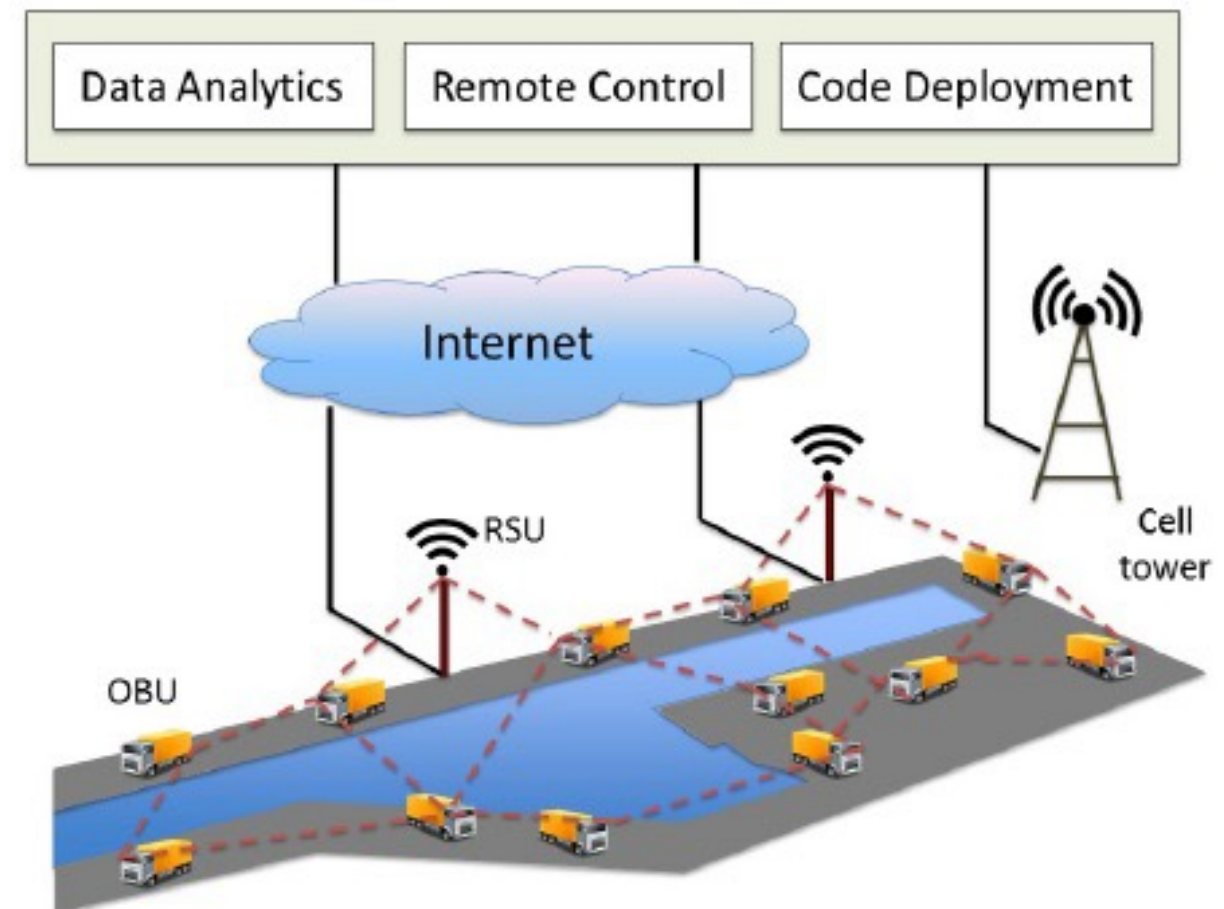
- 294 traffic lights
- 128 have a remote control system with GERTRUDE software
- A total of 979 traffic sensors
- The system is implemented in 10 subareas, interlinked to a central server through a dedicated communication network.
- Porto has full actuated traffic lights, with traffic sensors in all the roads of intersection and semi-actuated traffic lights.



VEHICULAR NETWORKING

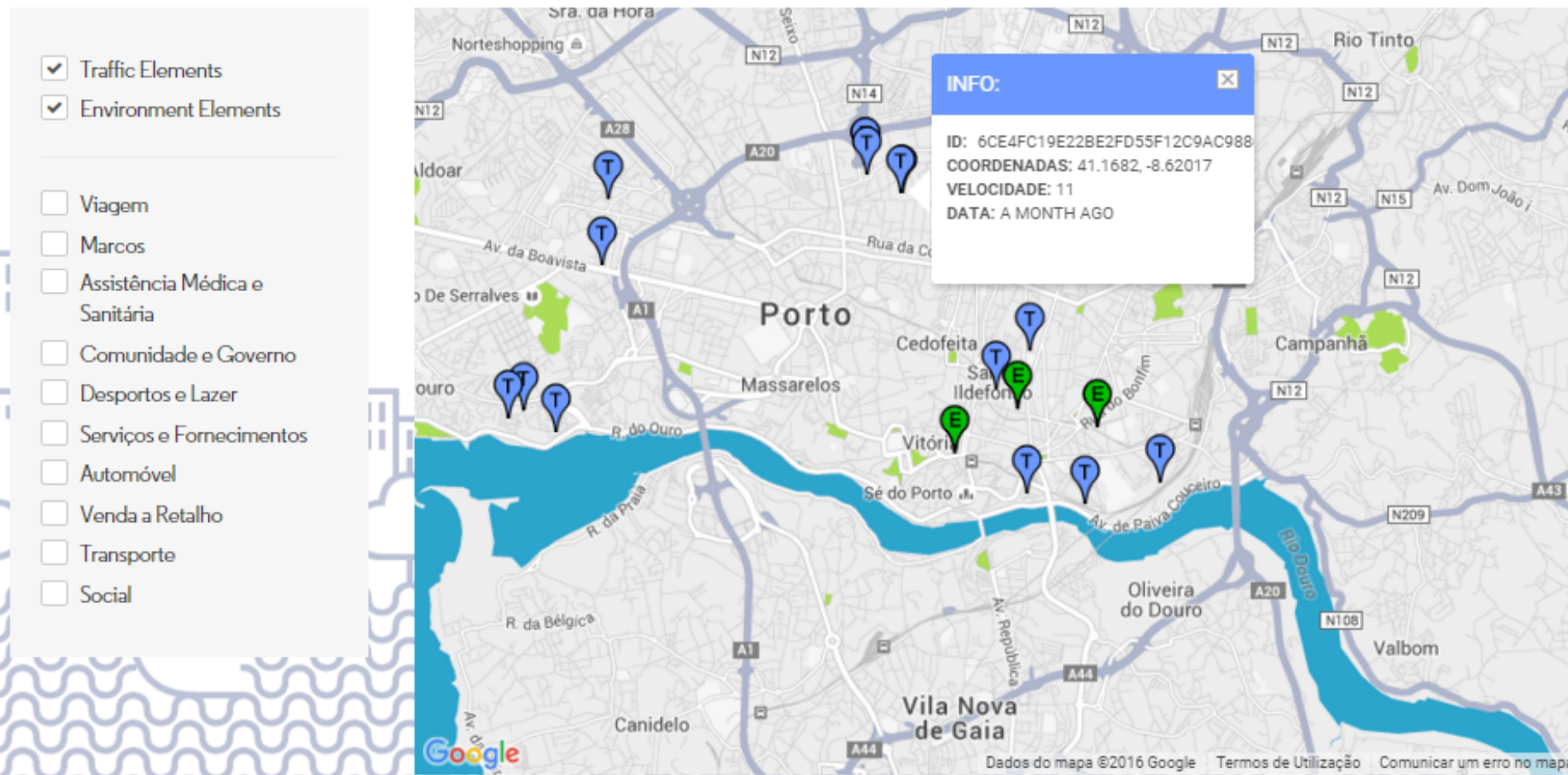
MAIN GOALS

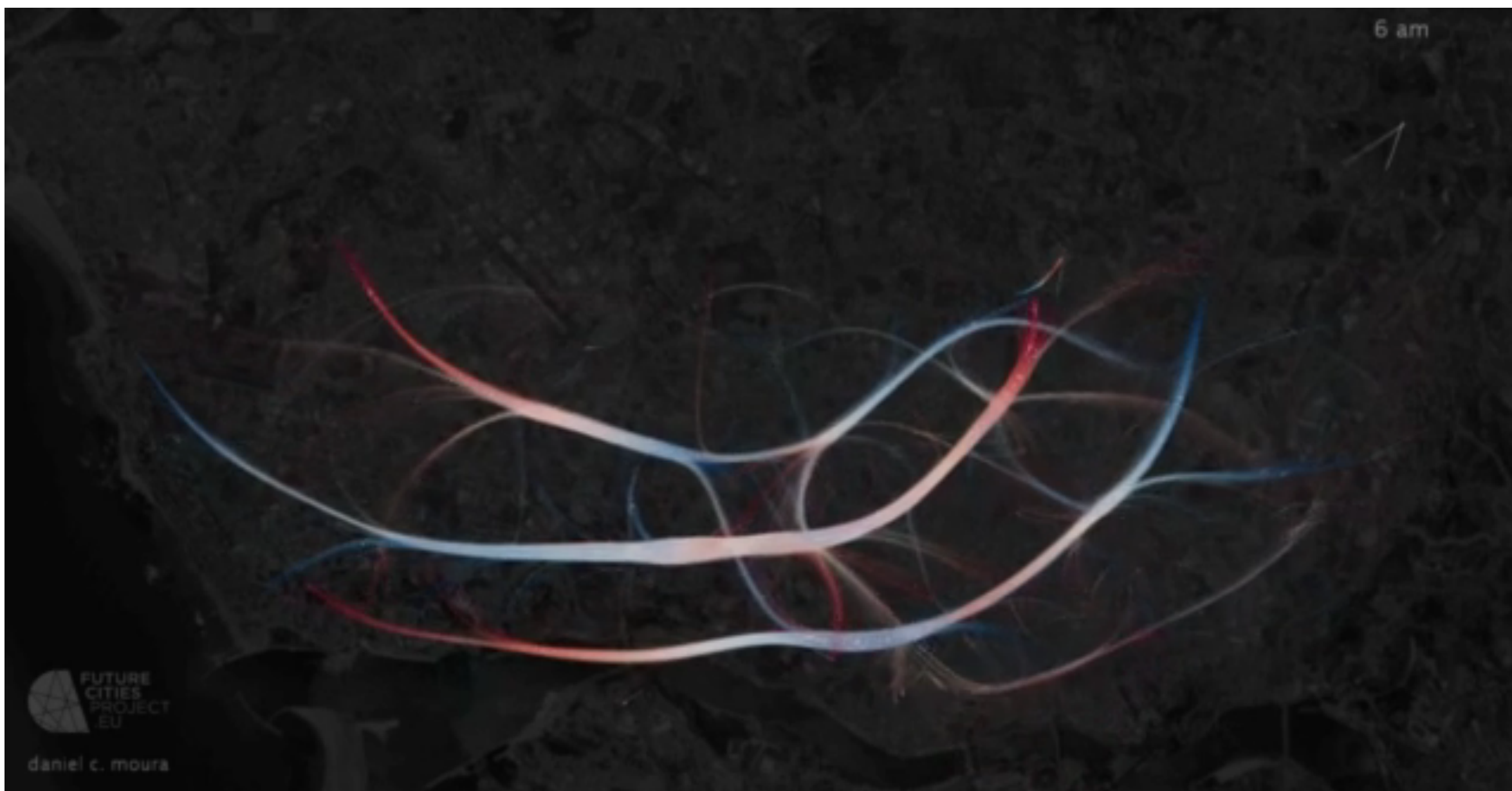
- vehicle-to-vehicle and vehicle-to-infrastructure connectivity
- provide Wi-Fi access to taxi and bus passengers
- get data from the vehicle's OBD unit
- Mobility Scanner



PORTO OASC/FIWARE NODE

FutureCities sensors data in NGSI: Environment and Traffic events





NEXT STEPS

New infrastructures and projects:

- 1000 Ibeacons in bus stops
- 250/500 Ibeacons in the city centre
- Cameras and images analytics for parking management
- Sensors for parking and traffic management



HealthyRoad

citibrain:
EMBERS

Image: Partners in the new solutions



Porto.

THANK YOU!

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