PORTO, PORTUGAL

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Porto Digital

12 am
FUTURE
CITIES
PROJECT
EU
daniel c. moura

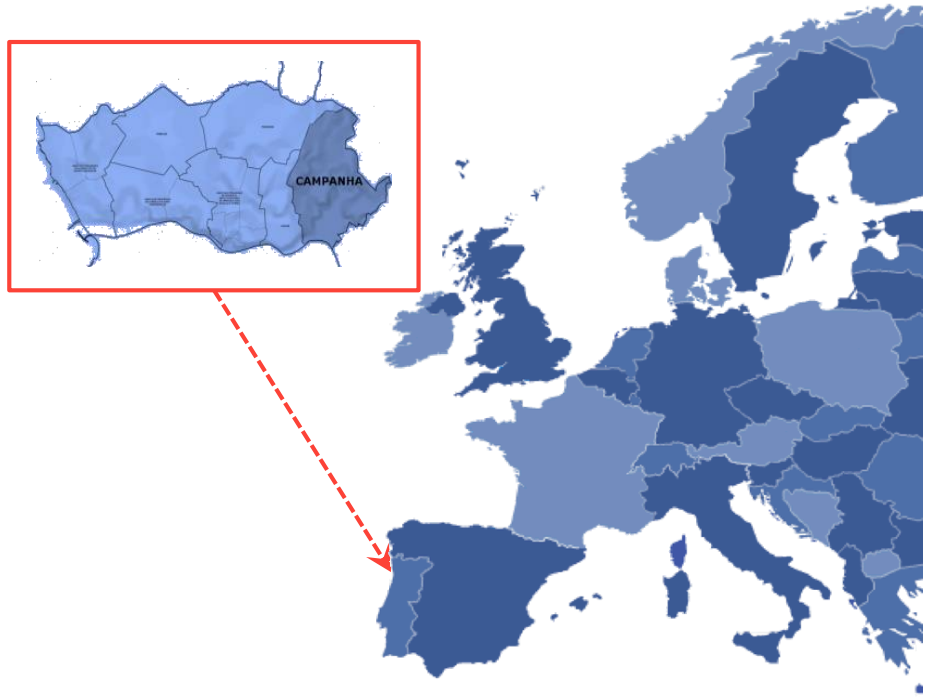
Porto Case: Heterogeneous Sensing Platform for Efficient Mobility

Porto

In Numbers

250.000 inhabitants

1,8 Million citizens in the metropolitan area	Intermodal transportation system
17 Muniipalities in the Metropolitan area	300 Startups
1500 Qualified jobs	31.000 University students



Porto.

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.

Porto

Infrastructure

22.000 connected things

183Km
Optic fiber infrastructure

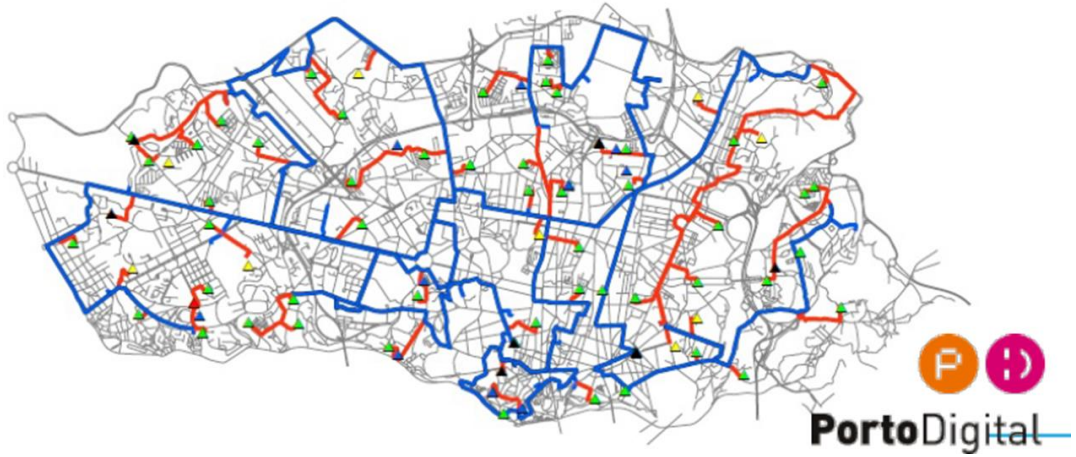
+4000
Km linear optic fiber

300
connected vehicles

1500
Ibeacons, NFCs and Qrcodes foreseen

FIWARE NODE

151.770
Water consumption sensors

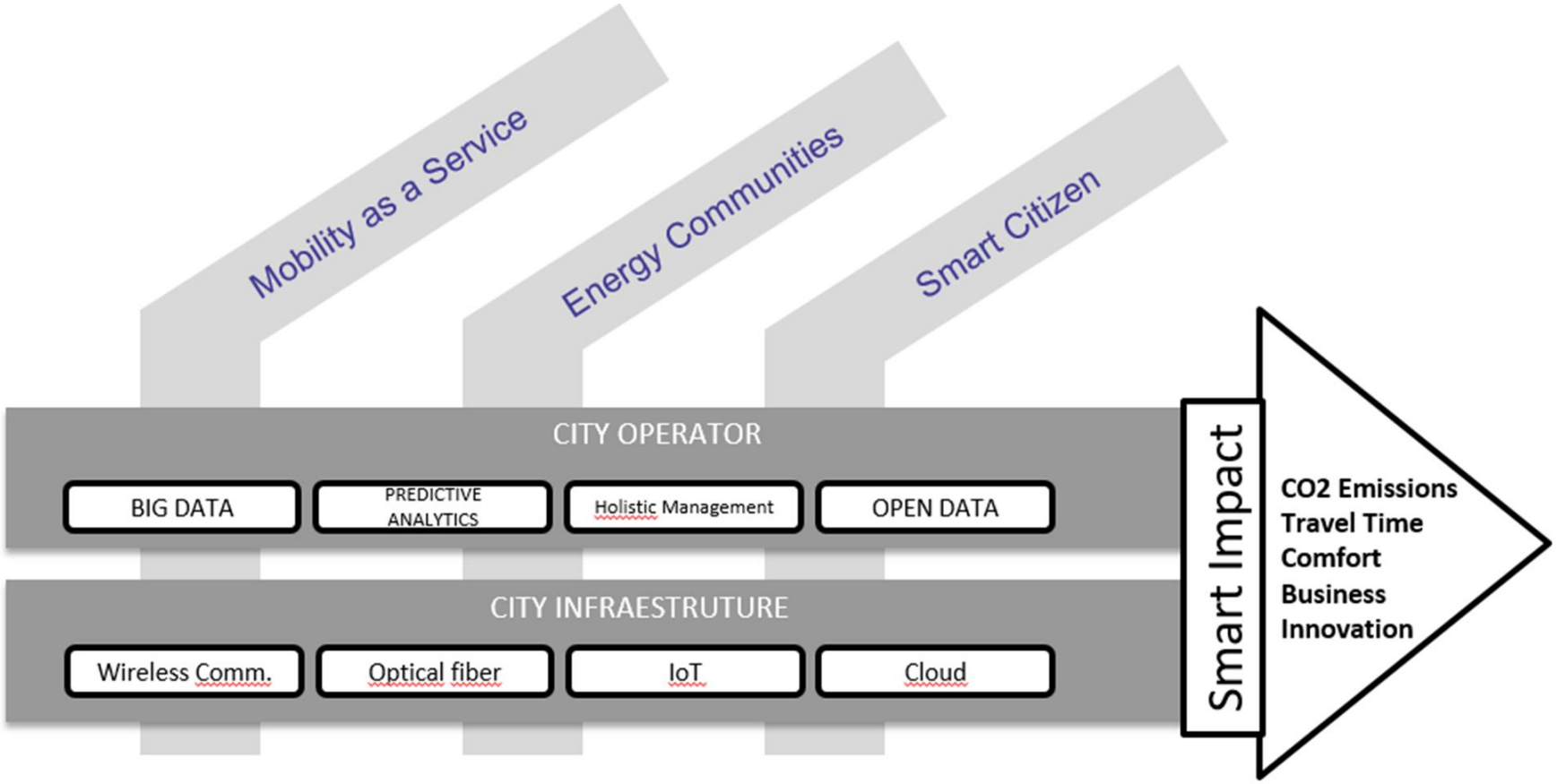


Porto.

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


Mobility as a Service
Energy Communities
Smart Citizen
CITY OPERATOR
BIG DATA
PREDICTIVE ANALYTICS
Holistic Management
OPEN DATA
CITY INFRAESTRUTURE
Wireless Comm.
Optical fiber
IoT
Cloud
Smart Impact
CO2 Emissions
Travel Time
Comfort
Business
Innovation

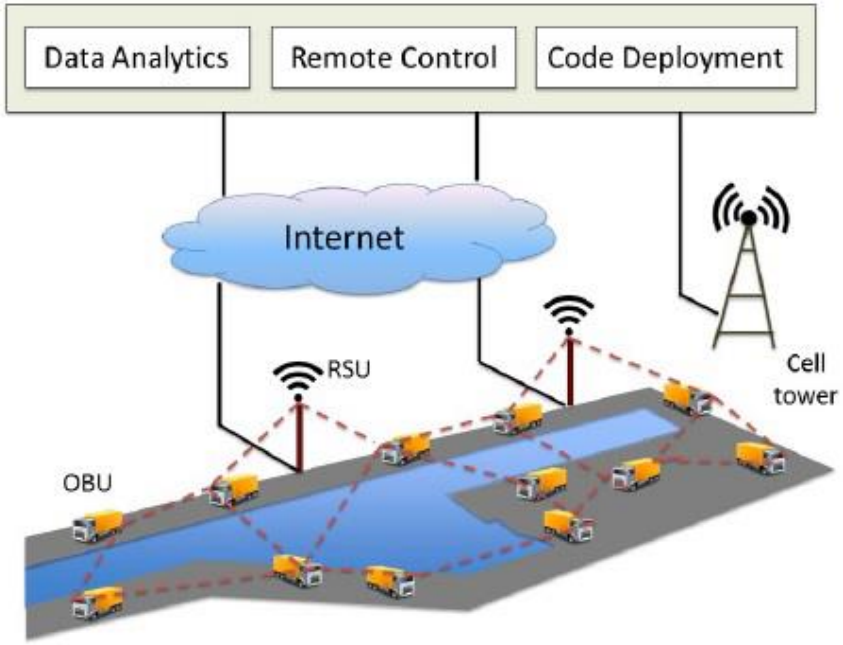
TRAFFIC MANAGEMENT SYSTEM

- 294 illumination equipment
- 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.

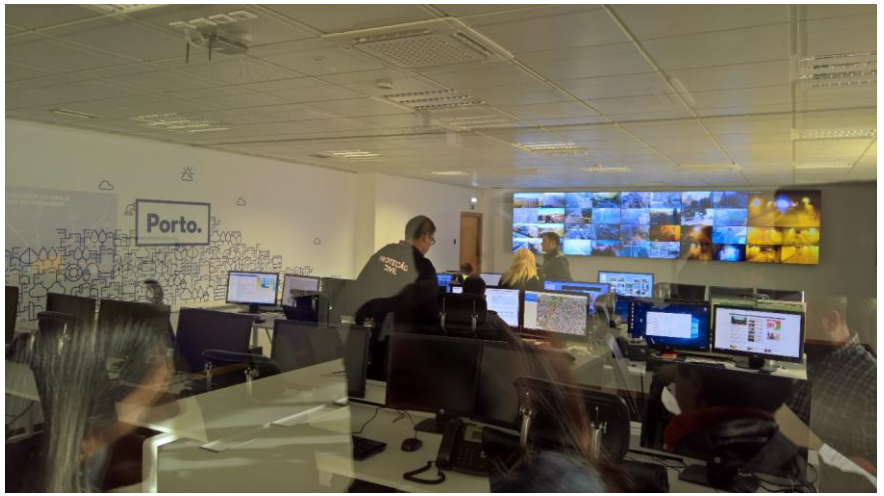
VEHICULAR NETWORKING

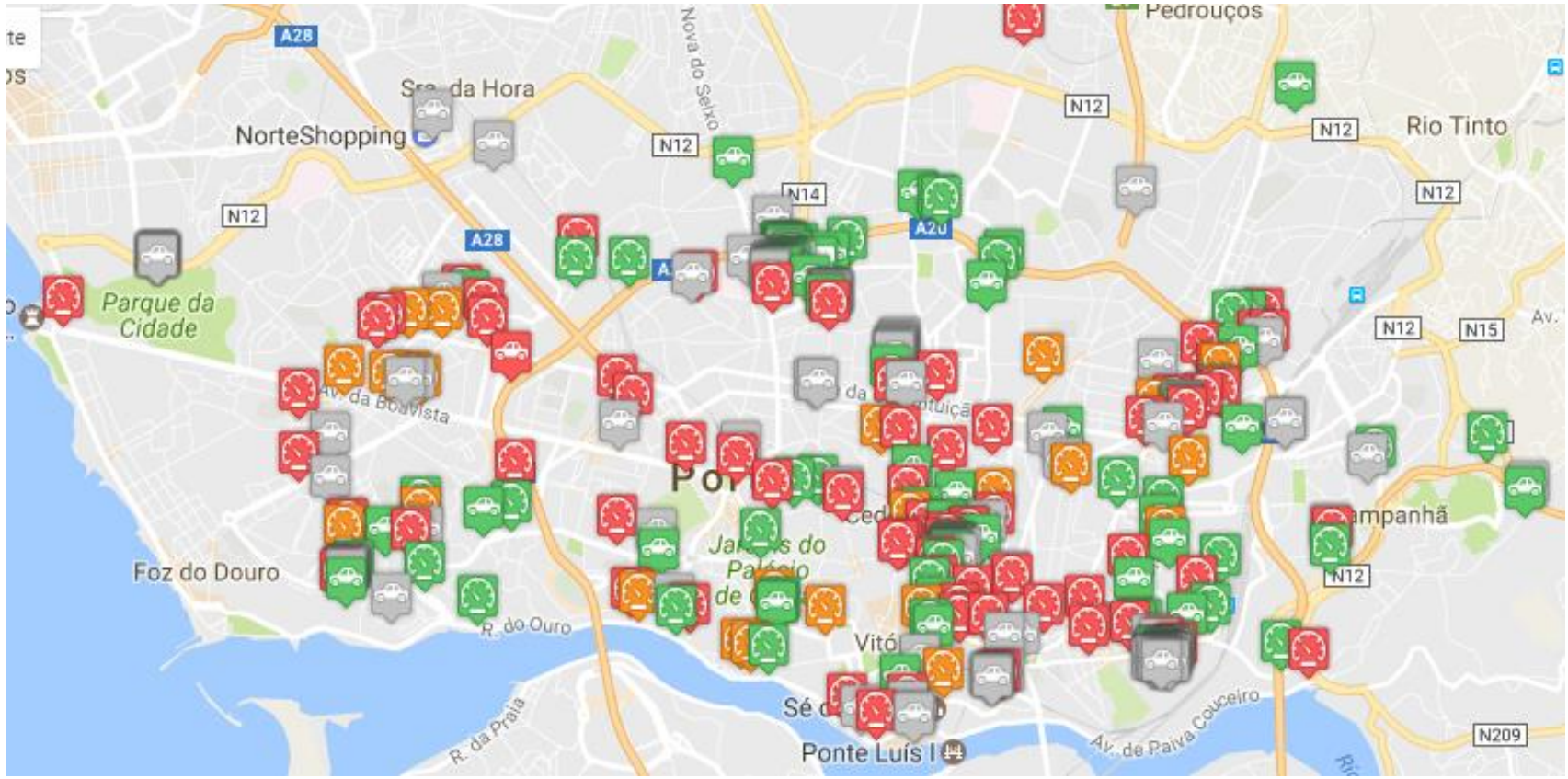
MAIN GOALS

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



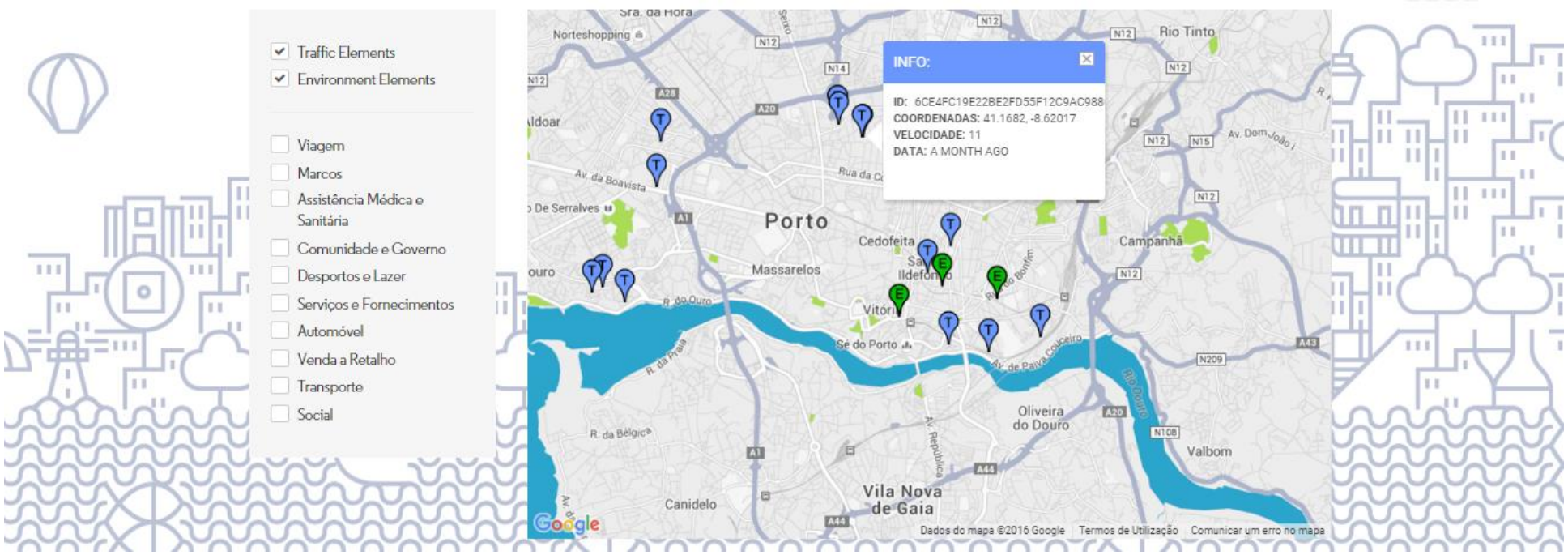
Integrated Management Centre

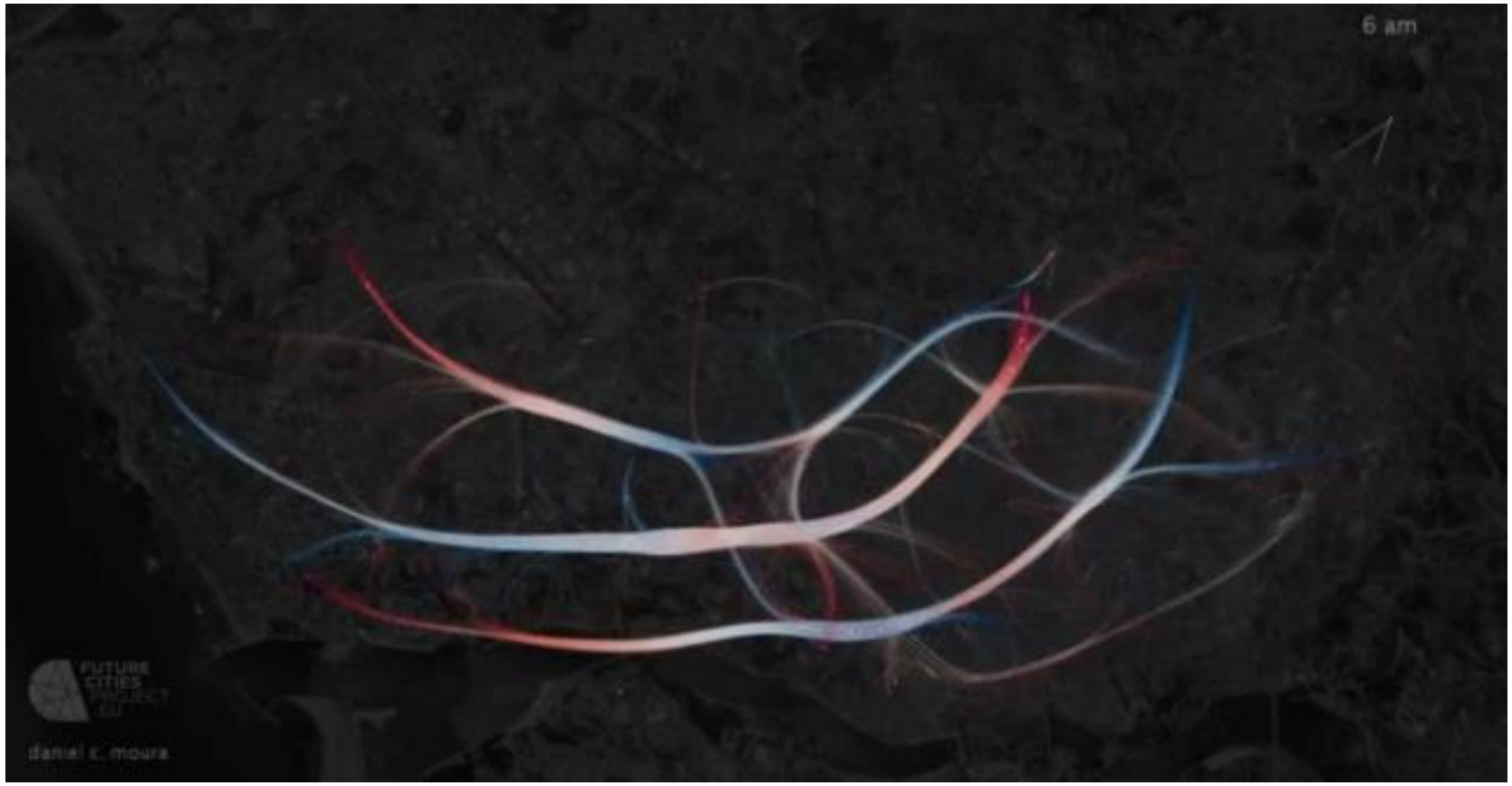



Pedrouços
A28
Sra da Hora
NorteShopping
N12
N14
A2
Rio Tinto
N15
Parque da Cidade
Av. da Boavista
Foz do Douro
R. do Ouro
R. da Praia
Ponte Luís I
Av. de Paiva Couceiro
N209

PORTO OASC/FIWARE NODE

FutureCities sensors data in NGSI: Environment and Traffic events

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NEXT STEPS

New infrestructures 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

Connecthings

HealthyRoad

citibrain:

EMBERS

Image: Partners in the new solutions

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THANK YOU!

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