

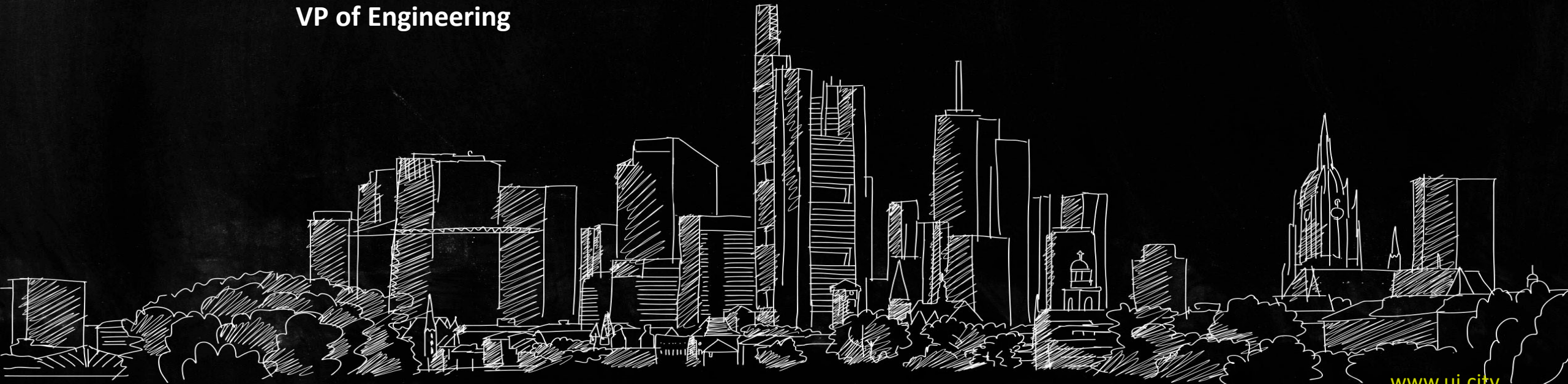


making cities even smarter

the urban institute®

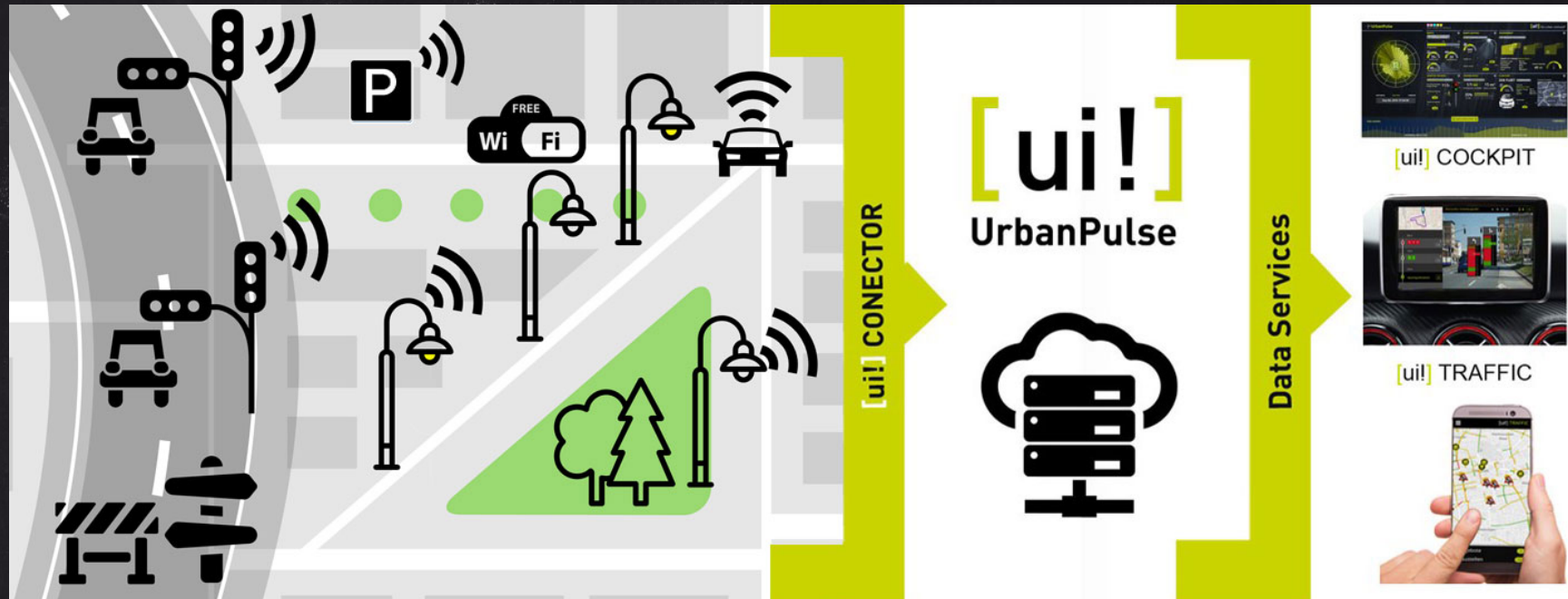
Open Urban Platforms: A Keystone for Long Term Smart City Plans

Fernando Lyardet
VP of Engineering

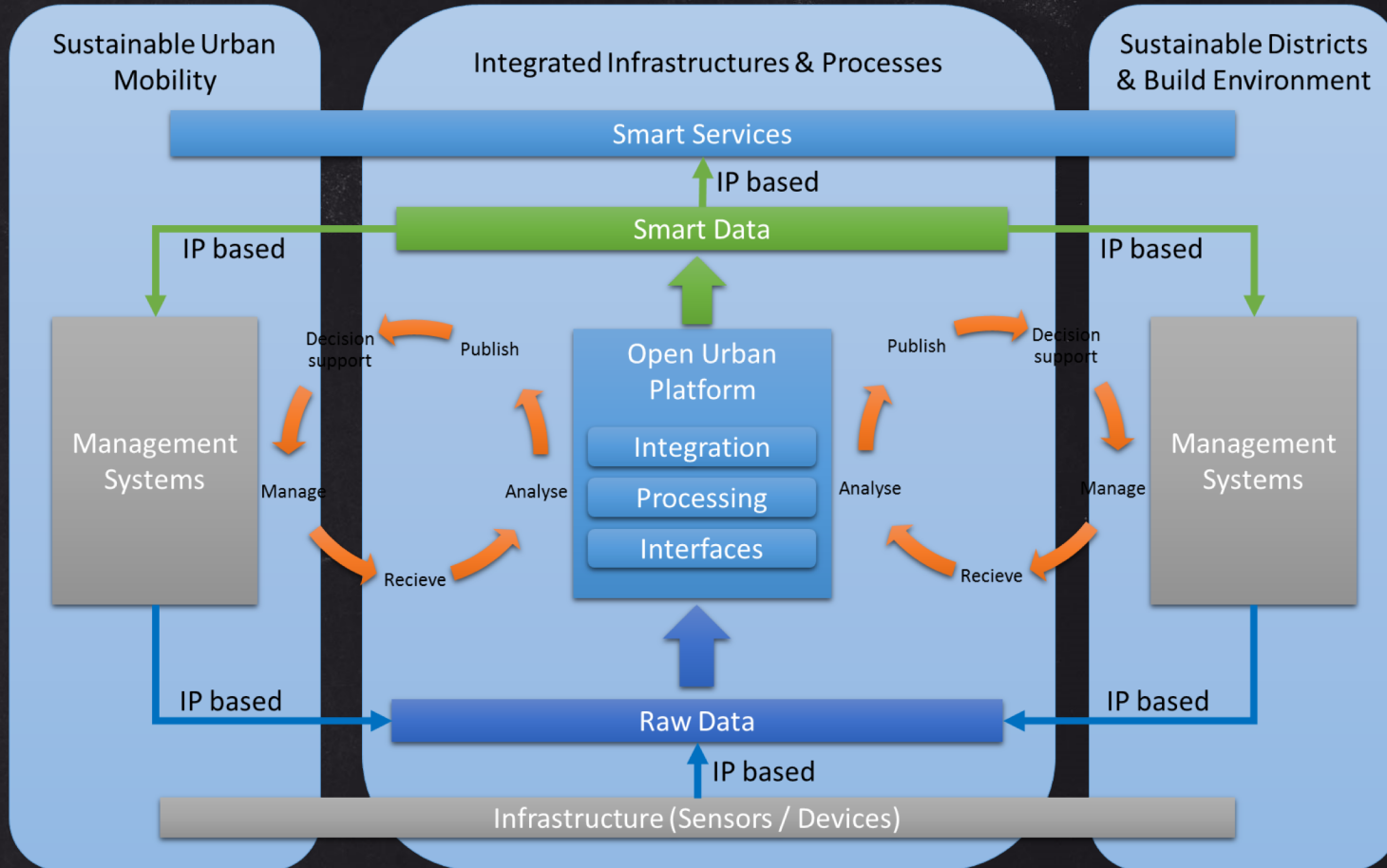


Context in Europe





- **Real-time data feeds** using open connectors to large variety of types of urban sensor
- **Pre-processing** of incoming data feeds for real-time event management (sub-second)
- **Visualization** of the data to provide insight to decision makers
- **Operational worldwide** leveraging best in class cloud infrastructures (Azure®)



- Open Interfaces
- Integration of IoT devices
- (Near) Real-time
- Cross sectoral
- Adheres to recommendations of EIP SCC
- Adopted by Australian Smart Communities



Download: <https://www.beuth.de/en/technical-rule/din-spec-91357/281077528>

An Simplified View of an IoT Solution



Close Aspiration to Execution Gap

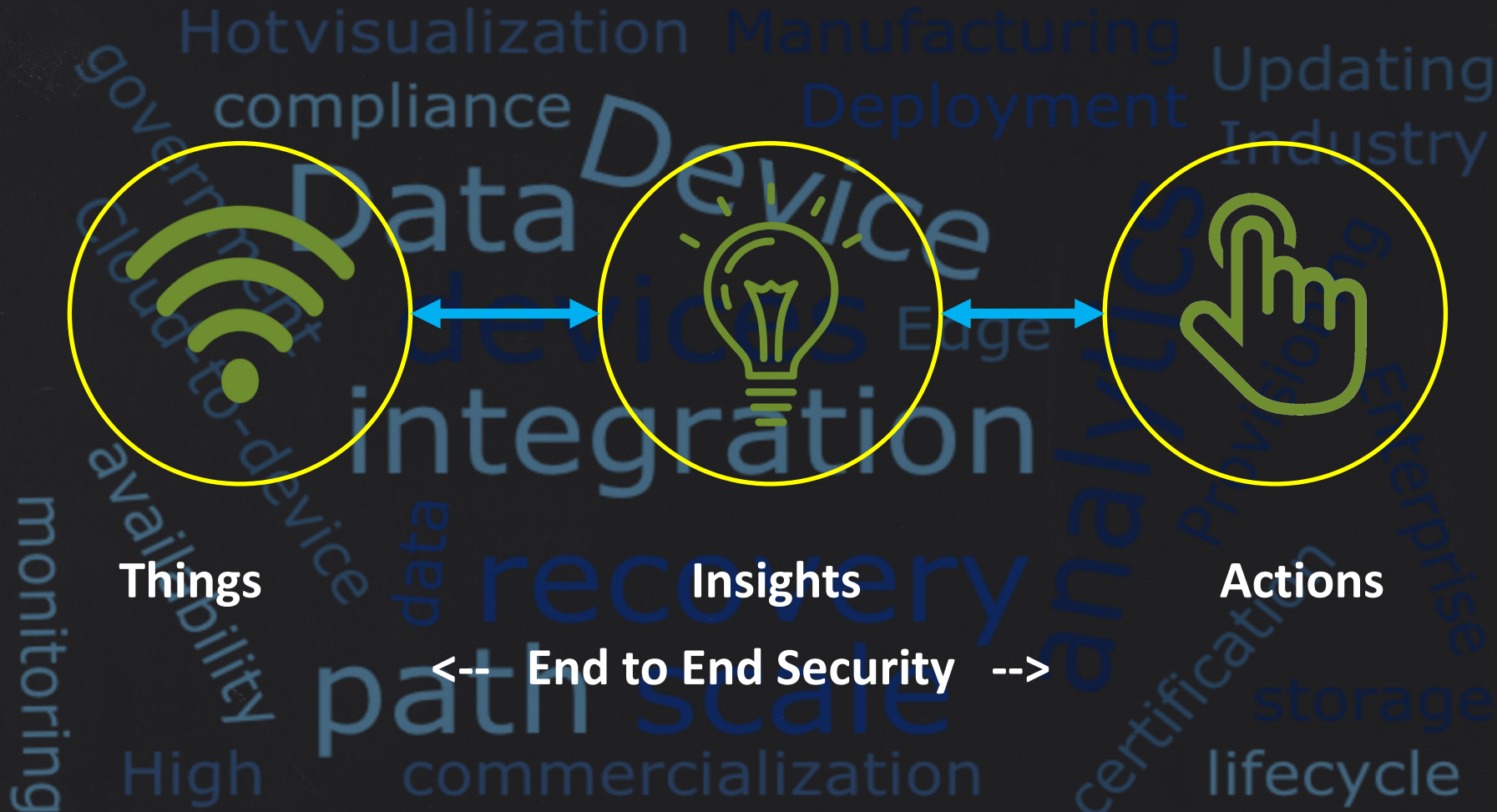
Aspiration

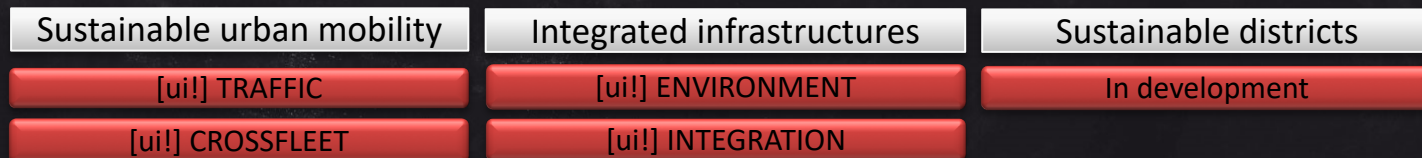


I can do this...



A More Realistic View of an IoT Solution





Integration



Processing



Interfaces



Connectors



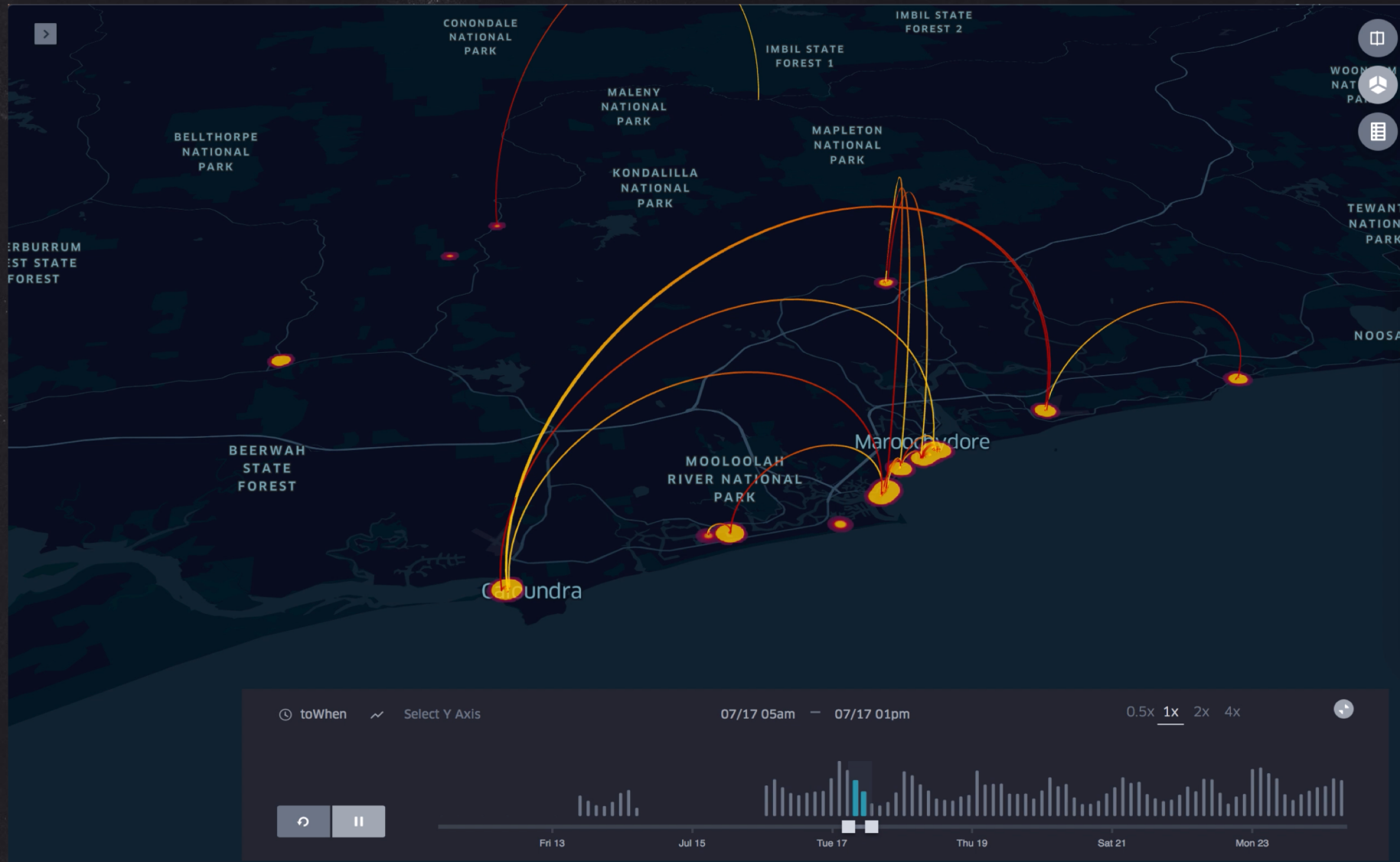
Data Sources



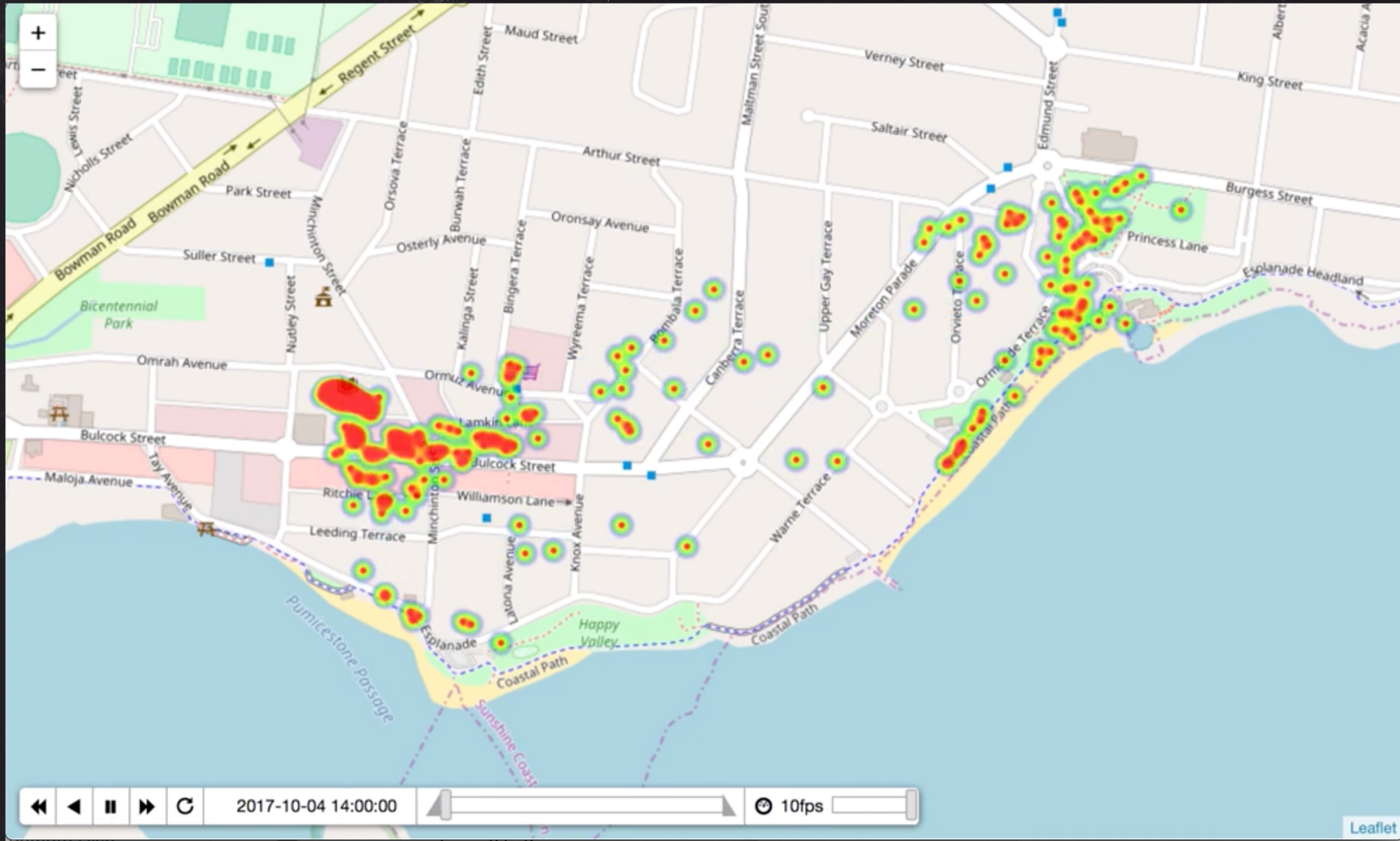
Understanding Movement in the City



Understanding Regional Movement



Understanding Movement in the City





DIGITALSTADT
DARMSTADT



Traffic-App

(<https://darmstadt.ui-traffic.de>).

Most accurate traffic information based on TMS data

Includes information on road constructions

Integrated in the overall City App Architecture



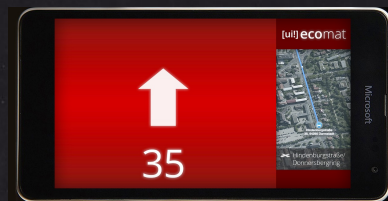
[ui!] ECOMAT

Prediction of signal turn based on TMS data and machine learning models

Individual speed recommendation


Compatible with SPAT / MAP information for automotive backends

Large test field will be made available in late 2018




Car drives at 42 km/h
Ecomat recommends 35 km/h to pass through intersection

Other, Unconventional "Cities"



POWERED BY
UrbanPulse

[ui!] the urban institute®



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ITEMS

SEARCH: +

POS.	ID.	STATUS
1	CMSLU 1031776	●●●●●
2	CMSLU 2032825	●●●●●
3	CMSLU 2189970	●●●●●
4	CMSLU 3172649	●●●●●
5	CMSLU 4196943	●●●●●
6	CMSLU 4196943	●●●●●
7	CMSLU 4197309	●●●●●
8	CMSLU 4714154	●●●●●
9	CMSLU 4054311	●●●●●
10	CMSLU 4714154	●●●●●

TERMINAL DATA
last update: today / 13:30

STATUS: ✔ ARRIVED
DOCUMENTS: ✔ AVAILABLE

SHIPPING LINE DATA
last update: today / 07:30


DESTINATION: HELSINKI
TERMINAL: LOCAL

SHIP NAME: ABC Oulu

DATE	DESTINATION	SHIPNAME
10.05.2016	HELSINKI	ABC Oulu
27.04.2016	JEDDAH	POLLUX

VESSEL LOCATION DATA
last update: today / 07:45


IMO: IMO 9674567
LOCATION: 51° 56' N, 4° 29' O
ETA: 10.05.2016
TARGET HARBOUR: HELSINKI





PORT DATA
last update: today / 06:30


IMO: IMO 1234567
BERTH: LOCAL
ACTUAL TIME OF ARRIVAL: 10.05.2016
ESTIMATED TIME OF DEPARTURE: 13.05.2016


STATUS
last update: today / 08:02


LOADED ON SHIP


SHIP MIDWAY


SHIP CLOSE TO HARBOUR


CONTAINER IN TERMINAL


READY FOR PICK UP

» TODAY «

LOADED ON SHIP
25.04.2016

SHIP MIDWAY
02.05.2016

SHIP CLOSE TO HARBOUR
09.05.2016

CONTAINER IN TERMINAL
10.05.2016

READY FOR PICK UP
13.05.2016

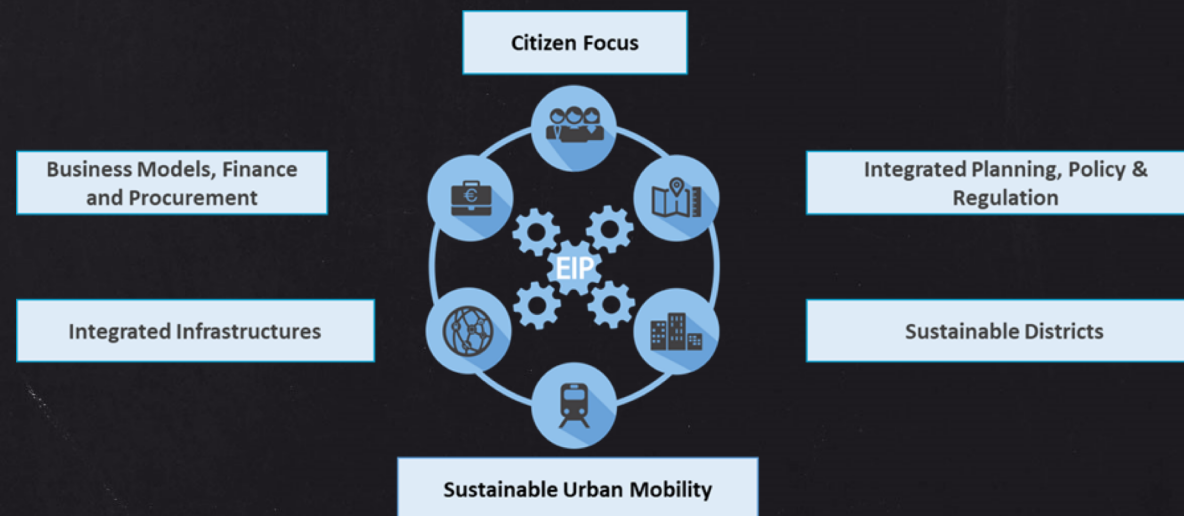


EIP-SCC European Innovation Partnership on Smart Cities and Communities


The EIP-SCC is an initiative supported by the **European Commission**.

Aiming at overcoming market fragmentation, the EIP-SCC brings together **cities, industry, financiers, citizens** to improve urban life through more sustainable integrated solutions.

Its Market Place has already **5.300 members from 31 countries**.



MoU on “Open Urban Platforms”



EUROPEAN INNOVATION PARTNERSHIP ON SMART CITIES AND COMMUNITIES

Towards Open Urban Platforms for Smart Cities and Communities

Memorandum of Understanding

1. Outline of this Memorandum


- 1.1. The market for current Urban Platform(s) is fragmented and uncertain on the demand-side and lacking interoperability and common standards in the supply-side.
- 1.2. Big, small and diverse industry organisations have come together recognising that the Urban Platform market is a critical enabler for the Smart Cities market.
- 1.3. The signatories to this MoU have agreed to take a city and community needs led approach to address the fragmented market. The key challenges facing this market include:
 - Interoperability and common open standards – so that cities can mix and match offerings from a range of different vendors;
 - To date the market has been supply-led – with the norm being proprietary and custom-built offerings;
 - Many cities have reservations about Urban Platform(s) – including limited understanding of their costs & benefits.
- 1.4. The ambition of the signatories to this MoU is to enrol cities, infra-structure and service companies, tele-communications and utilities to:
 - Work with the partners of this Memorandum of Understanding
 - by 2018, create a strong EU city market for Urban Platforms
 - by 2025, ensure that the market of 300m residents of EU cities use Urban Platform(s) to manage their business with a city and that the city in turn drives efficiencies, insight and local innovation through the platform(s)

To meet the above challenges and to deliver on these ambitions the Memorandum of Understanding Group (in the following: MOU Group), whose names and signatures appear at Annex two of this document, have agreed on the following:

2. Background

- 2.1. The European Innovation Partnership on Smart Cities and Communities (EIP SCC) is a stakeholder driven initiative stimulated and supported by the European Commission. The EIP SCC has defined key priority areas which will be addressed through six Action Clusters including “Integrated Infrastructures & Open Data”. A general observation has been that

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EUROPEAN INNOVATION PARTNERSHIP ON SMART CITIES AND COMMUNITIES

Annex Two: The Memorandum signatories

Organisation	Name, Role
1. HERE	Mr Michael Bültmann Managing Director HERE Deutschland GmbH
2. Alliander N.V.	Mr Peter Molengraaf Chief Executive Officer Alliander N.V. and High Level Group Member
3. SAP SE	Mr Luka Mucic Board Member SAP AG
4. Microsoft Corporation	Dr Marianne Janik Senior Director Public Sector Microsoft Deutschland GmbH
5. Continental AG	Mr Helmut Matschi Member of the Executive Board Continental AG Division Interior
6. Fraunhofer FOKUS	Prof. Dr-Ing. Ina Schieferdecker Director Fraunhofer Institute for Open Communication Systems FOKUS
7. Urban Software Institute GmbH & Co. KG	Dr Lutz Heuser Chief Technology Officer Urban Software Institute GmbH & Co. KG
8. UrbanDNA LLP	Mr Graham Colclough Partner UrbanDNA LLP
9. HyperCat Consortium	Lord Erroll Chairman HyperCat Consortium
10. Software AG	Dr Harald Schöning Vice President Research Software AG
11. EnBW Energie Baden-Württemberg AG	Mr Michael Gutjahr Regional-Director EnBW AG
12. Flexeye Ltd	Mr Justin Anderson Chairman & CEO Flexeye Ltd
13. Greater London Authority	Mr Matthew Pencharz The Mayor’s Smart Cities and Environment Adviser Greater London Authority
14. Deutsche Telekom AG	Mr Heinrich Arnold Senior Vice President Innovation & Laboratories, Deutsche Telekom AG

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initiated by



- ✓ 50+ Industry
- ✓ 80+ Cities
- ✓ EU Commission
- ✓ Standards bodies (DIN)

Goal:

Reference Architecture

**“Smart City is not hype or a phenomenon,
it is a transformation into a resilient city
of the Future”**



Thank you



*..making cities
even smarter*

