



*making cities even smarter*

the urban institute®

# Smart City szolgáltatások működtetéséhez fejlesztett adatplatform



[www.ui.city](http://www.ui.city)

# Urban data is the key for urban value added services





# 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. Allander N.V.	Mr Peter Molengraaf Chief Executive Officer Allander 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

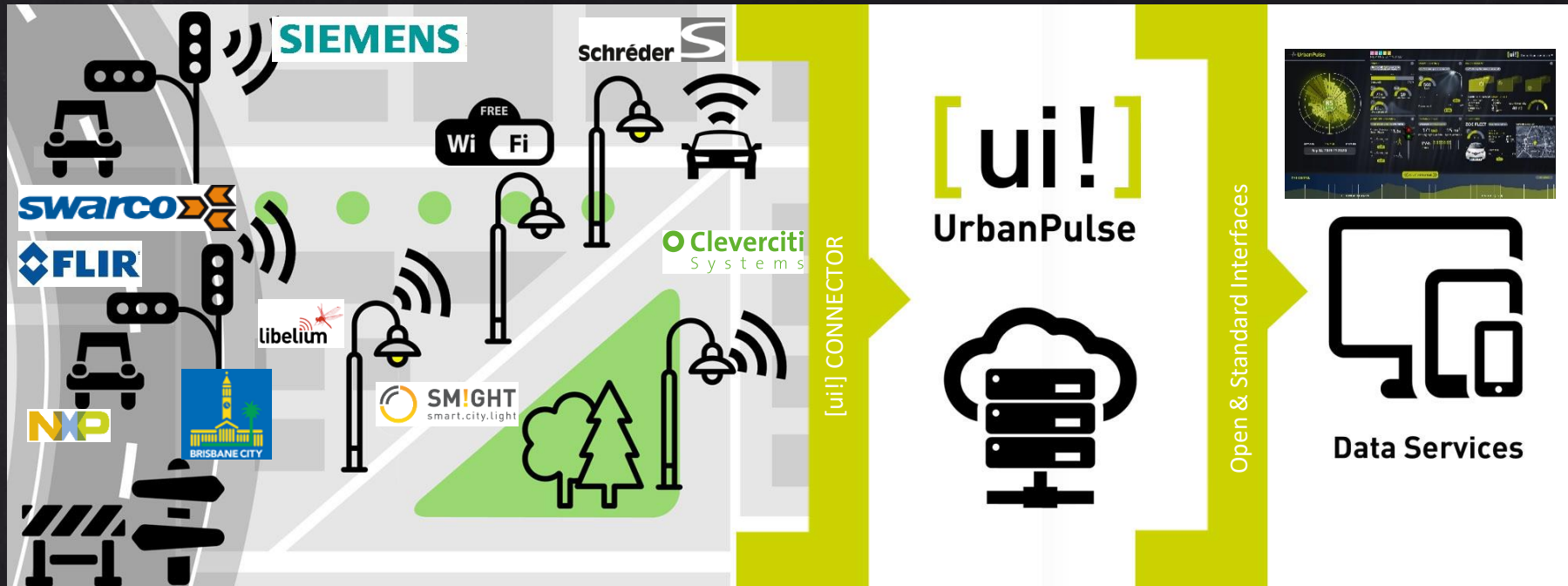


- ✓ 30+ manufacturers
- ✓ 70+ cities
- ✓ EU
- ✓ Standards bodies (DIN)

Objective:

Open interfaces  
&  
Reference architecture

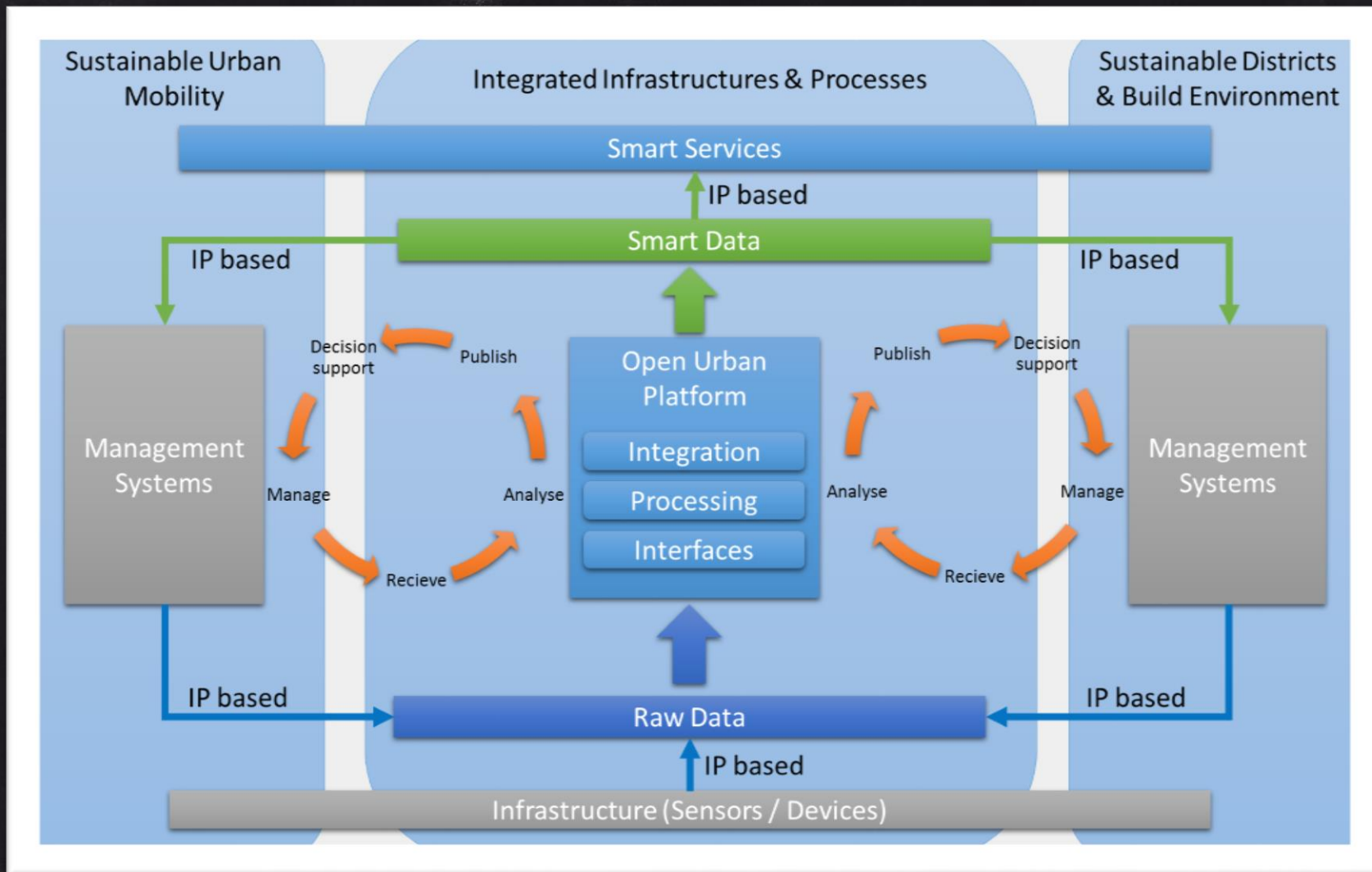
## Urbane Daten = Resource for new services



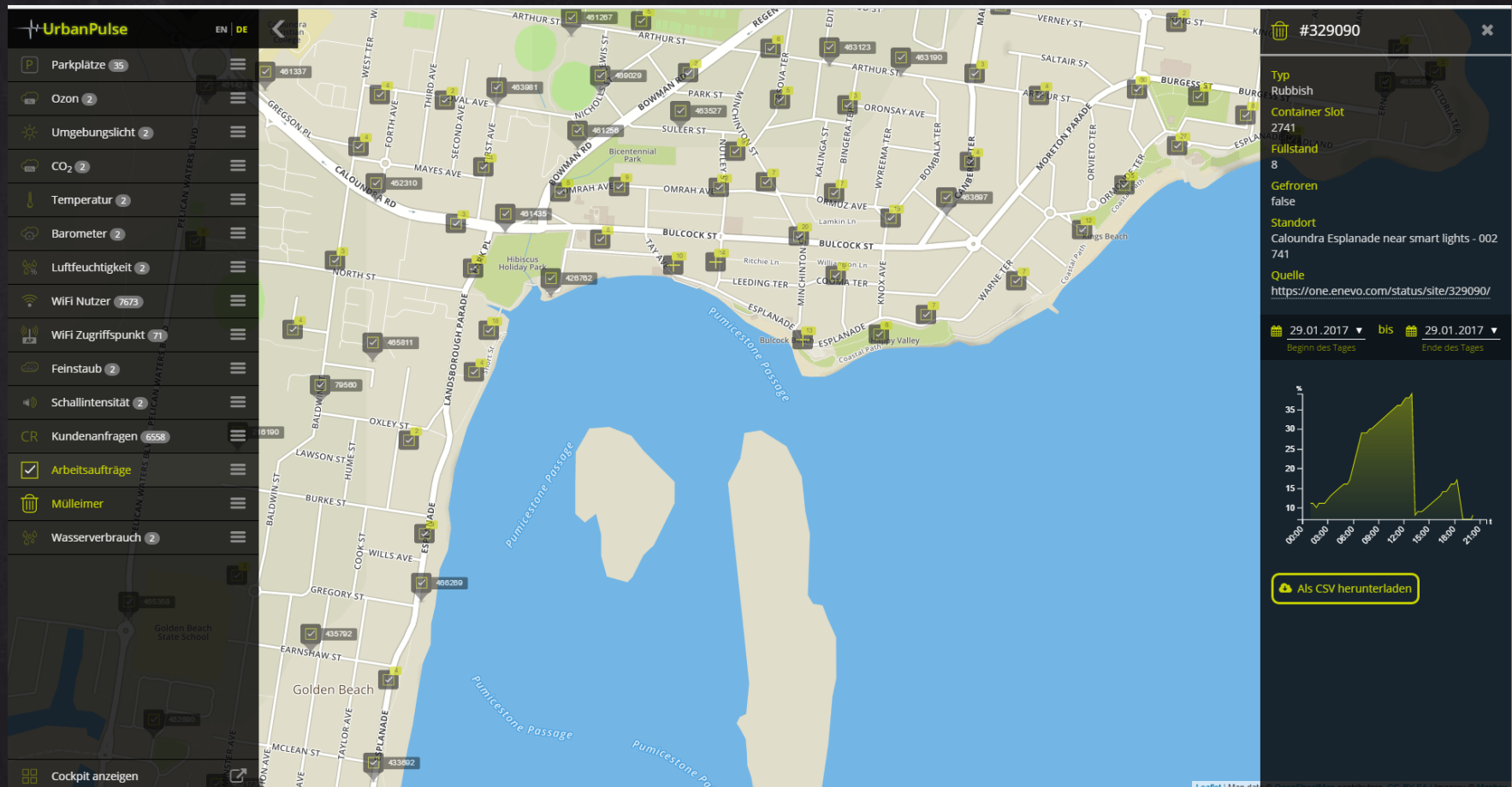
- Real-time data feeds using open connectors to large variety of types of urban sensor
- Pre-processing of incoming data feeds for real-time event management (sub-second)
- Visualization of the data to provide insight to decision makers
- Operational worldwide leveraging best in class cloud infrastructures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



[ui!] UrbanPulse is open and integrates sensores and systems



## Information is the basis for added value



Cockpit of the City of Caloundra (Asutralia) showing their data sources installed so far

# UrbanPulse

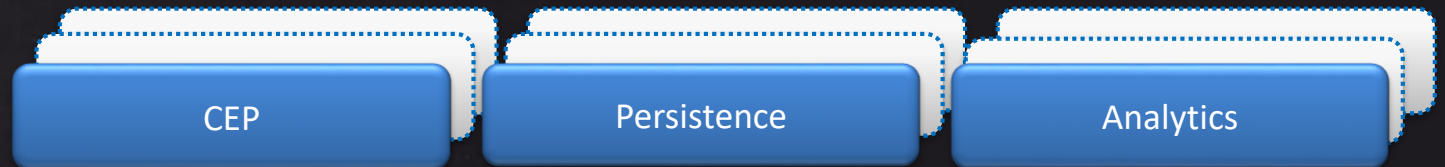




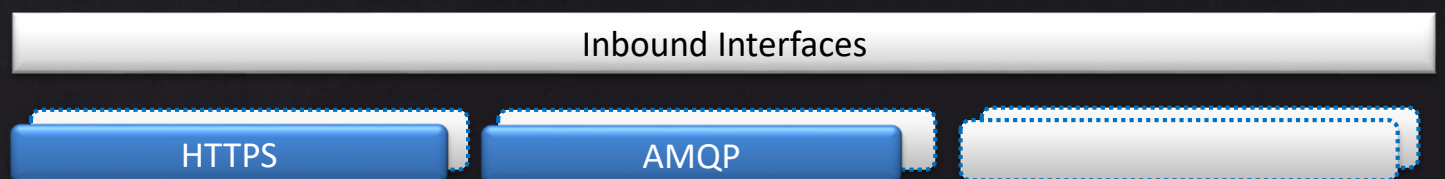
Integration



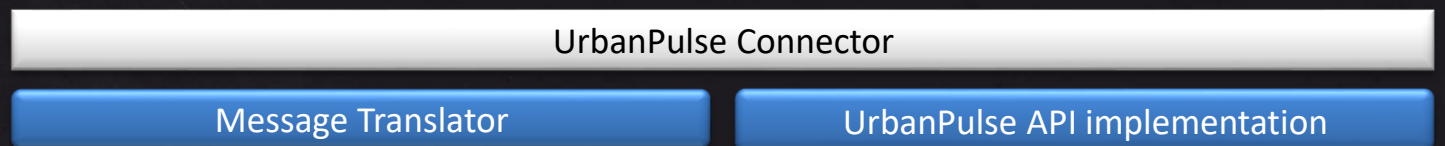
Processing



Interfaces



Connectors



Data sources



Data Flow



# Caloundra - Australia

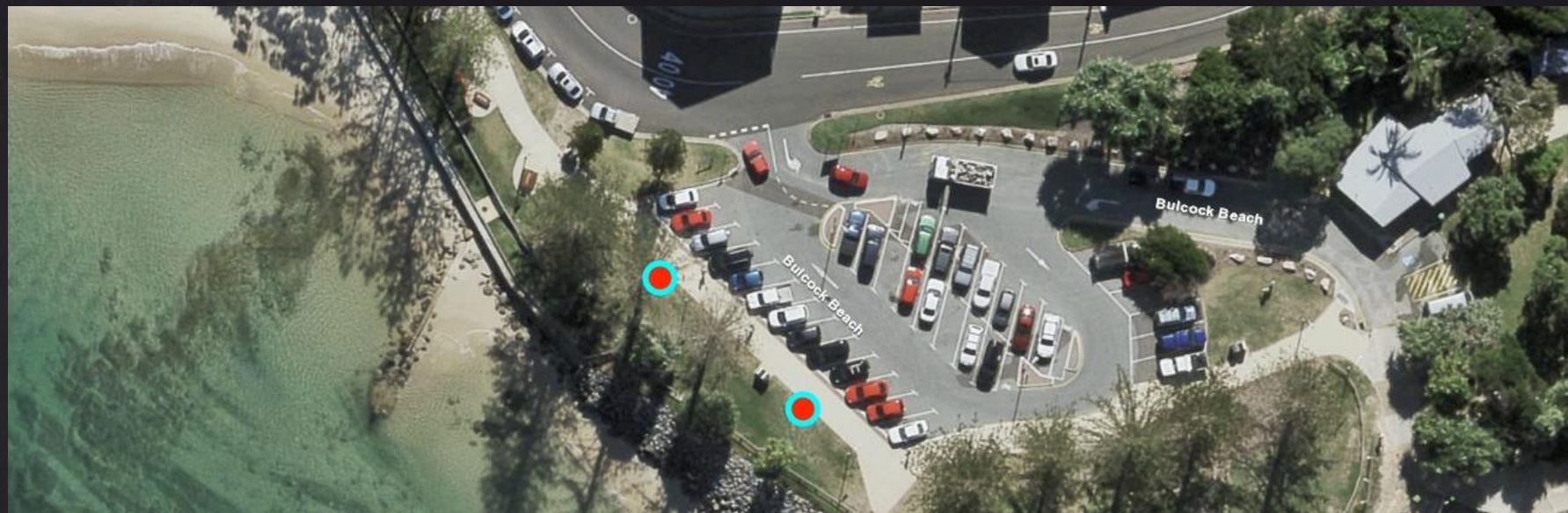


# Caloundra - Australia

- Sunshine Coast in Queensland
- Area: 1.100 km<sup>2</sup>
- Population: 87.600







Parking bays: 38

imHLas: 2

Parking sensors: 2







The parking sensors are integrated in the head of the lamp.





# Digital City Darmstadt



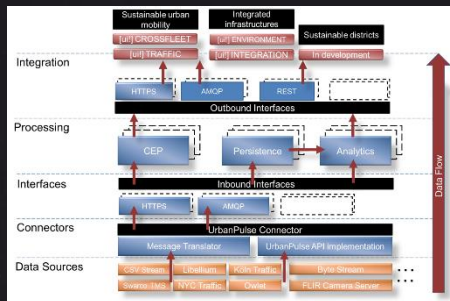


## Traffic Management System



Source: Swarco-Broschüre 06/2015

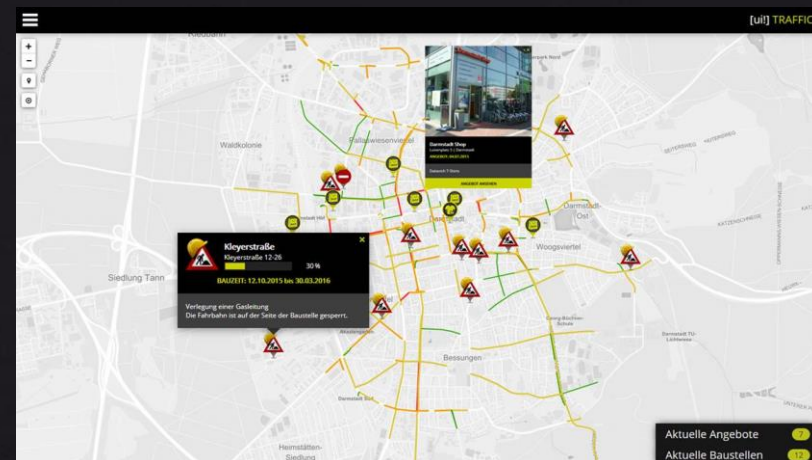
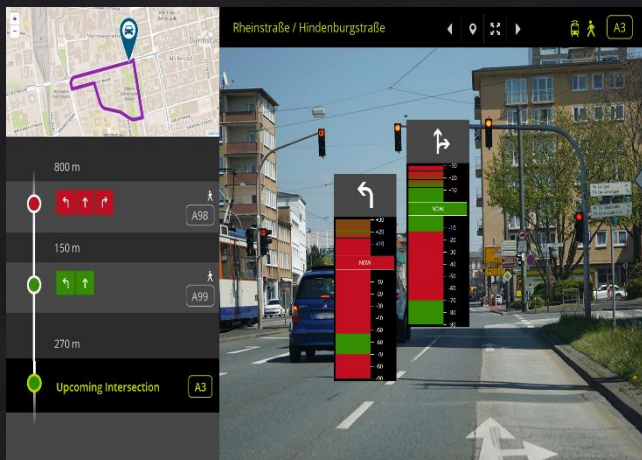
## UrbanPulse



## Vehicles & Road Users



# Signal phase Prediction and Traffic Awareness with [ui!] Solutions





## Cooperative test bed in Darmstadt



### Project

- Platform for the processing of real-time data of the traffic computer system
- Prediction algorithmen for the signal times
- Interfaces for OEM-backend
- Tablet- application for development support

### Results

- Extreme short latency times (0.6s ... 1.1s)
- Dilemma of inaccurate prediction in case of traffic based signal systems solved
- Created attention in German Ministry of Economics

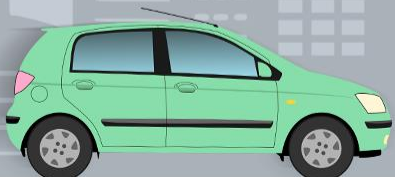
### Outlook

- Darmstadt (170 LSA) as an open test bed



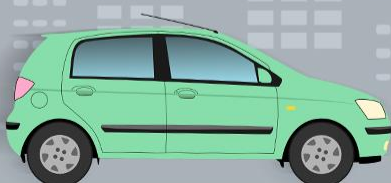


Vehicle drives 50 km/h  
Ecomat recommends 35 km/h





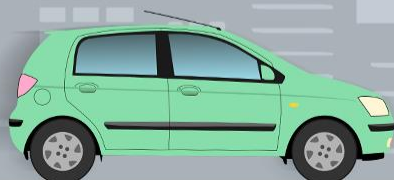
Vehicle reduces speed  
Ecomat recommends 35 km/h







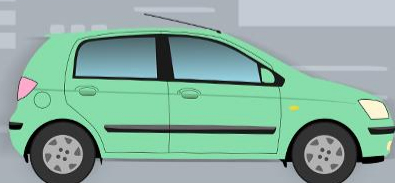
Vehicle drives with 35 km/h  
Ecomat indicates ecological driving







Vehicle does not need to brake  
Ecomat indicates ecological driving





Vehicle crosses intersection  
Ecomat indicates ecological driving



## Partners



## Customers

Wissenschaftsstadt  
Darmstadt



Landeshauptstadt  
München  
Referat für Stadtplanung  
und Bauordnung



Stadt Köln



## Research Partners



# Köszönöm a figyelmet.



*..making cities  
even smarter*

