

[ui!]

the urban institute®

[ui!]

*..making cities  
even smarter*





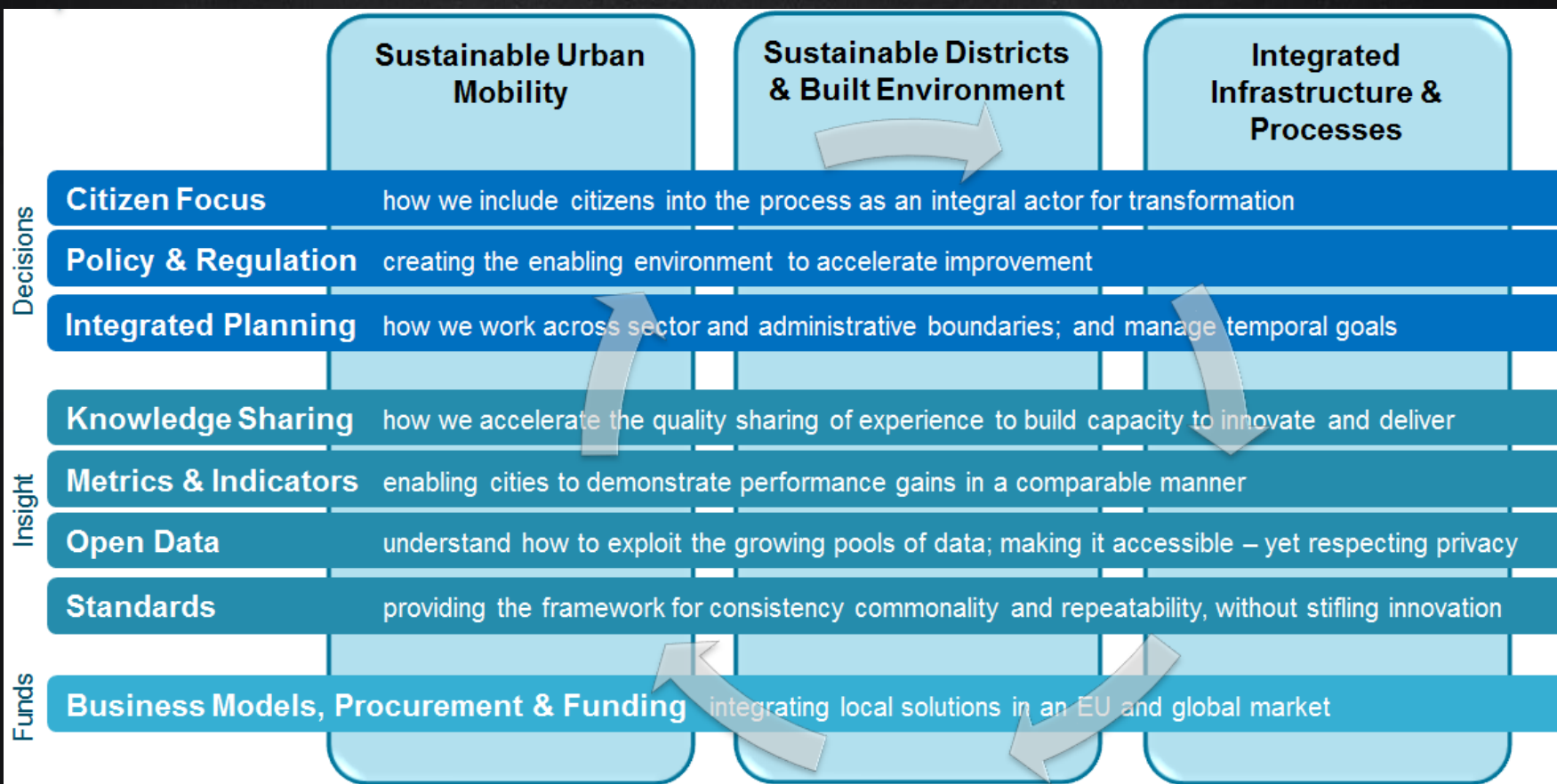
# European Innovation Partnership

## Smart Cities and Communities





# Engagement Model of the European Innovation Partnership Smart Cities and Communities





# Engagement Model of the European Innovation Partnership Smart Cities and Communities

## Sustainable Mobility in the Smart City







# Engagement Model of the European Innovation Partnership Smart Cities and Communities

## Sustainable Mobility in the Smart City



# EV4SCC – Scaling-up electro mobility solutions in Europe

## Lead Initiative of the Action Cluster “Sustainable Urban Mobility”



European Innovation Partnership  
on Smart Cities and Communities



### Scaling-up smart electromobility solutions in Europe

EV4SCC partner's commitment to action

#### Our Ambition

As representatives of cities and regions, we understand the benefits of electromobility: less noise, greenhouse gas emissions and air pollution reduction, but also exciting new opportunities for mobility services and infrastructure integration, when combined with innovative ICT solutions.

EV4SCC was created as part of the European Innovation Platform for Smart Cities and Communities launched in 2014. Today, the EV4SCC platform represents 59 partners from 17 countries, including 15 cities and regions. It brings together start-ups, SMEs, research organisations, large companies and public authorities. It spans the sectors of transport, energy and ICT, because we know that smart electromobility builds on integrated solutions.

**We want to continue to work together and support EV4SCC to create a dynamic European marketplace for smart electromobility solutions.**

#### Our Commitment to Action

To achieve this, we have to overcome fragmentation of markets and better utilise our joint wealth of experience and expertise.

By coming together, we declare our willingness to accelerate the deployment of electromobility solutions by supporting cities and regions to adopt them at scale in key market segments such as:

- Intelligent management of public and private fleets of electric vehicles
- Smart urban logistics with light electric vehicles
- Smart electrification of public transport
- Innovative integrated infrastructure solutions
- Smart electromobility solutions that serve multi-modal mobility services

We support the ambition that the **EV4SCC platform** will provide dedicated expertise, animation and support to:

- **Champion** the needs of cities and regions, the capabilities of practitioners and the benefits of smart electromobility solutions
- **Connect** practitioners, problem-solvers and procurers in an engaged community
- **Accelerate** the deployment, replication and adaptation of solutions across Europe

The outcomes of this will be:

- **50** cities from across Europe to join the platform
- **50%** SME participation in the EV4SCC platform, supporting SME growth and competitiveness
- **50%** increase in the number of active collaborations between EV4SCC partners
- **50** new projects by the end of 2017 which will focus on one of the key market segments

We recognise the active role we need to play in order to make this a success and we are committing today our support to EV4SCC.

We encourage public and private sector organisations from across Europe to join EV4SCC to create the **world's largest marketplace for smart electromobility solutions.**

[www.ev4sc.eu](http://www.ev4sc.eu)

Core initiative since 2014

Coordinated by Urban Foresight

Endorsed by DG MOVE and Commissioner Bulc as one of the two lead initiatives of SUM in EIP SCC

For details:

<http://urbanforesight.org/projects/projectsites/ev4sc/>

[ui!] Our contribution:

- [ui!] CROSSFLEET – optimizing the utilization of eCars in public and commercial fleets by sharing
- New mobility service, i.e. fleets purchase time shares of fleet cars
- Sharing with other enterprises to achieve same TCO than traditional cars
- Intense testing since mid 2014
- Operational since March 2016
- Roll-out in Germany and selected countries in EU

## New Mobility Services

### Market Place of the European Innovation Partnership on Smart Cities and Communities



### Scaling-up new mobility services in Europe

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Partner's commitment to action

create an open and collaborative marketplace for new mobility services in Europe

**Collaborate** with at least 50 cities to [...] link public and private transport ultimately to a single real-time multi-modal transport platform

**Develop** new services connecting cars to the urban mobility system through a standardized link between in-car systems and smartphones

**Creating** leadership and awareness for New Mobility Services, involving specifically smaller and medium sized cities

**Building** a common ground for New Mobility Services, supporting service replication and cooperation between cities and private sector

[ui!] Our contribution:

Provide infrastructure-to-car data from urban infrastructures and public transport



# MoU on “Open Urban Platforms”

initiated by



meanwhile supported by

- ✓ 30+ vendors
- ✓ 30+ cities
- ✓ EU
- ✓ Standards bodies

Goal:

Open APIs based on city-lead needs



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: MDU 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



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





# “1,000,000 Humble Lampposts” a pan-European Effort

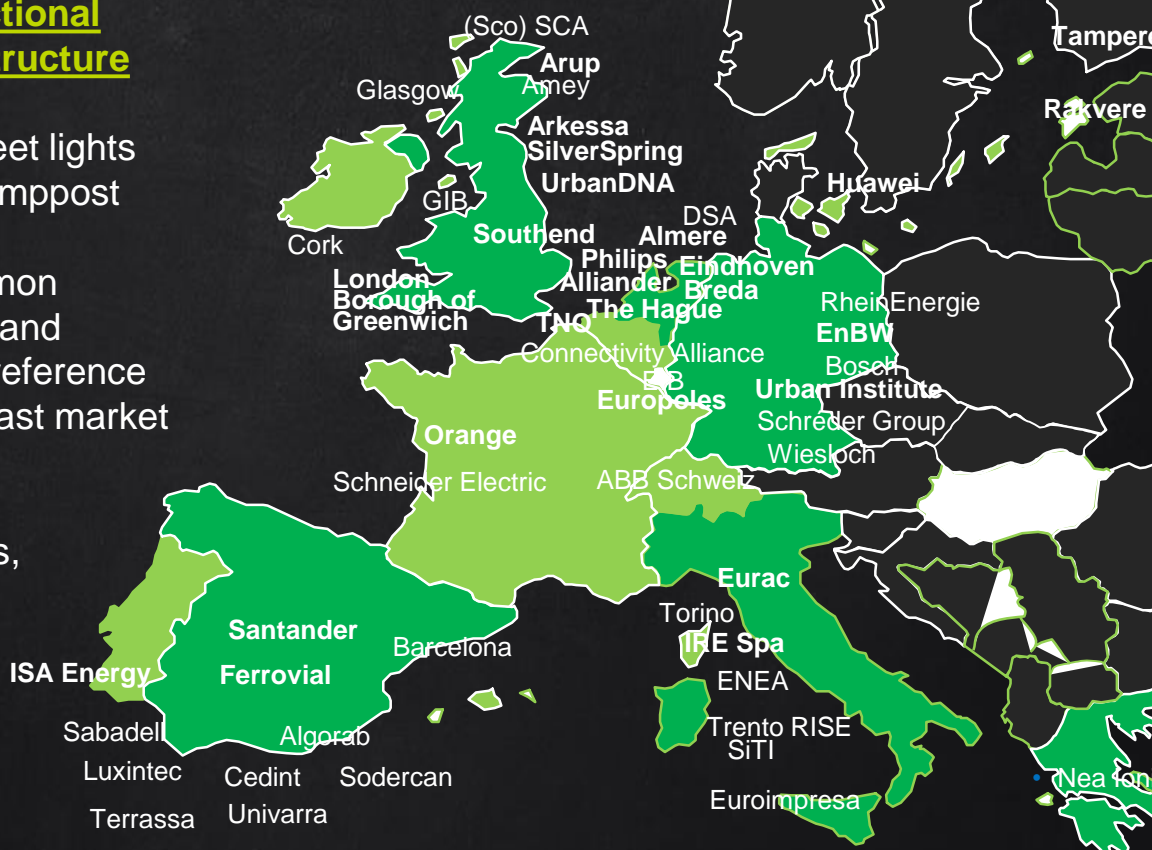
40+ Partners in Europe to work on **integrated multi-functional street lighting infrastructure**

**Goal:** 1,000,000 public street lights turned into Humble Lamppost

**Approach:** Agree on common standard components and features to develop a reference tender framework for fast market take-up

Engage suppliers / vendors, operators, cities, and financial institutions in a common approach

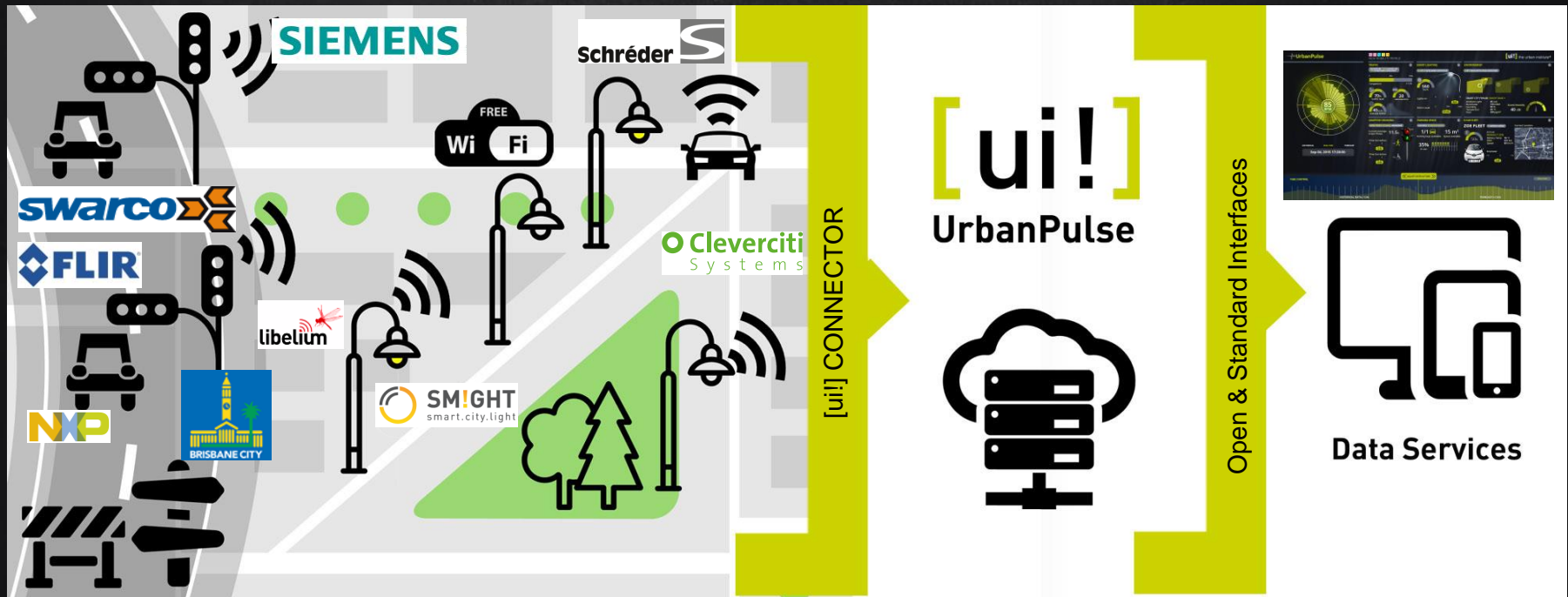
Standards: The German Standards organisation DIN started a DIN SPEC project.



**SM!GHT**  
smart.city.light

**Schröder**

# Open Urban IoT Platform



- 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®)

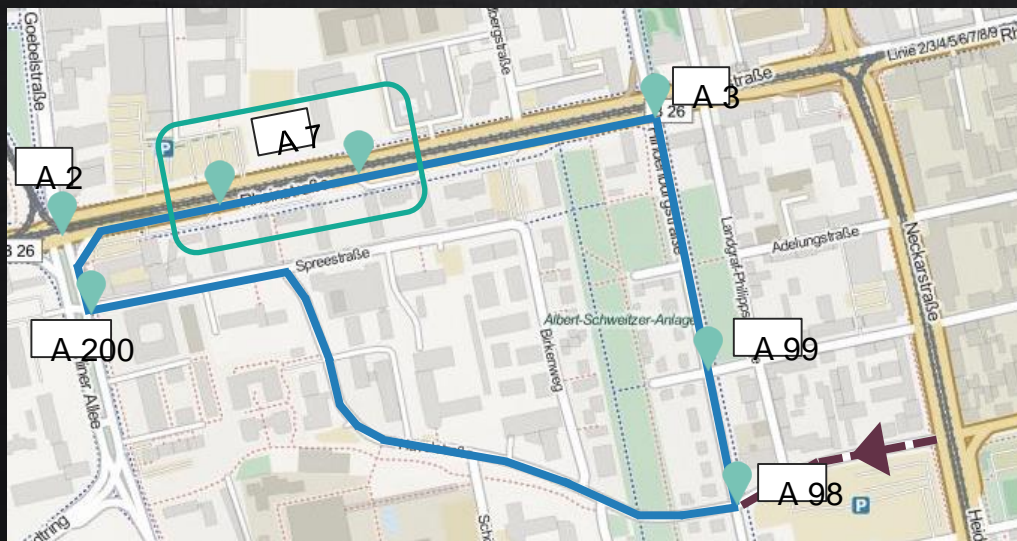
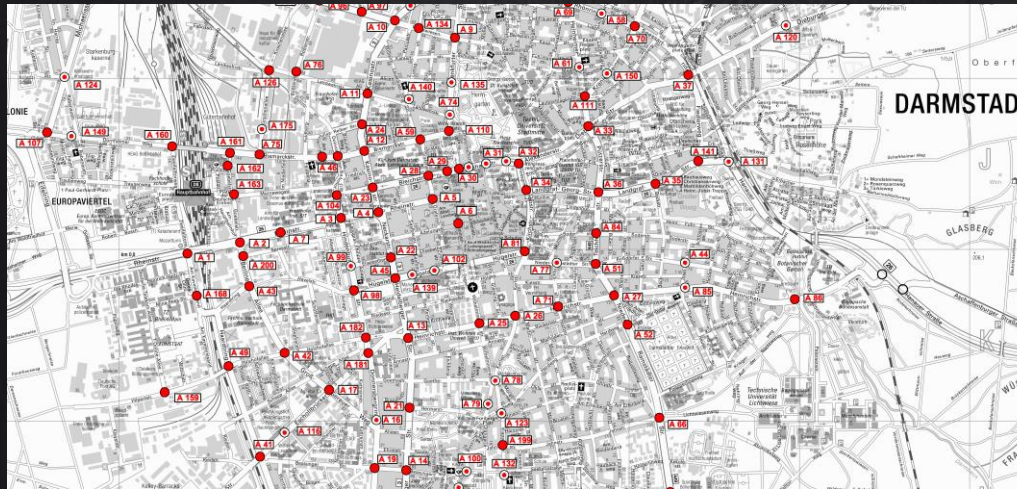
## Test Bed City of Darmstadt



- Darmstadt is a mid-size city of 150,000 citizens
- 400,000 trips per day
- 80,000 commuters per day
- Traffic congestions is among the top three priorities
- No additional space for new roads
- Increasing travel time
- Increasing air pollution
- Require more cooperative intelligent traffic management...



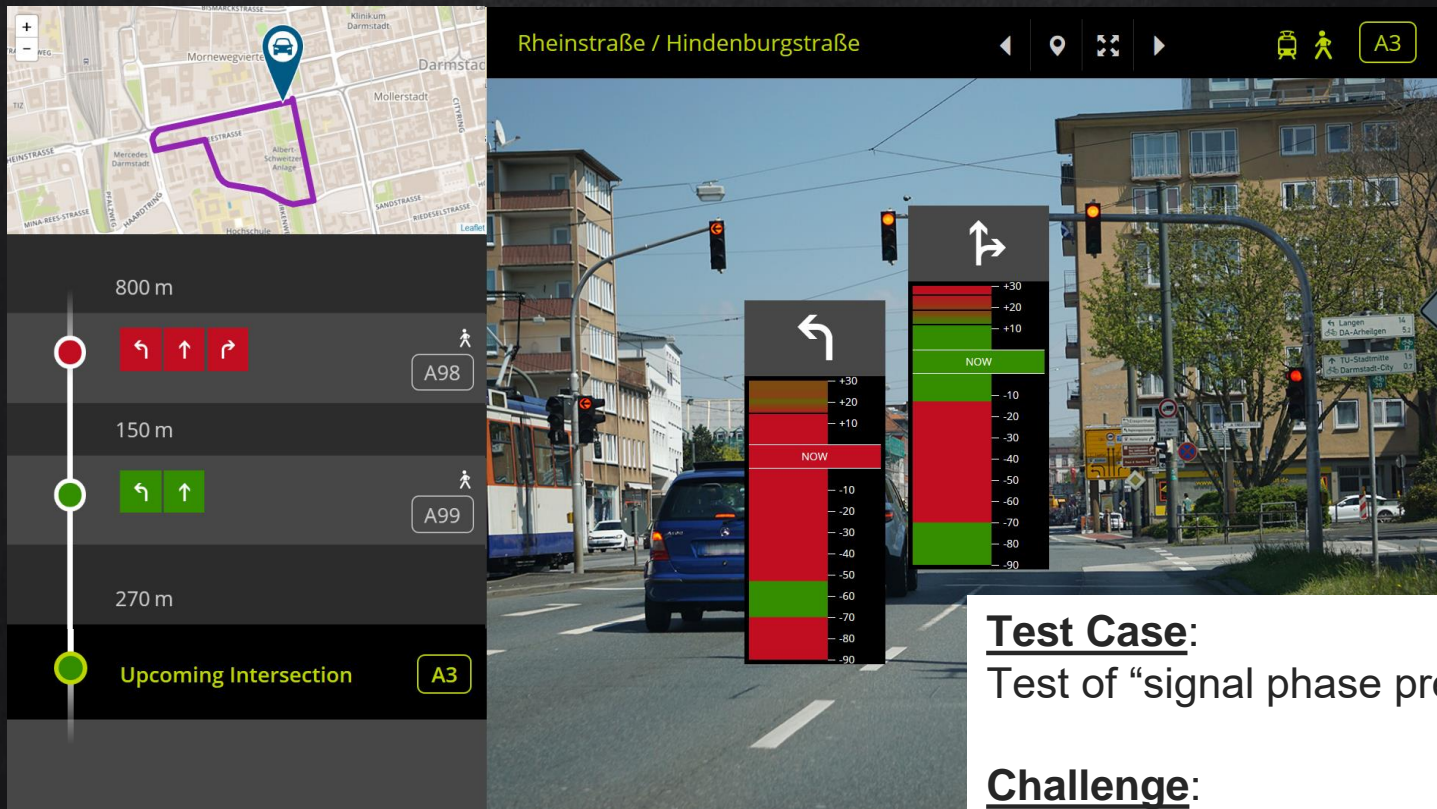
## Real-time Test bed for Traffic Light Assistant: City of Darmstadt



- 118 intersections
- 2,800 sensors
- Update every 350 – 500 msec
- Elapse time 0.6 – 1.1 sec
- 20m - 50m / update at 50km/h
- Test bed operational as open platform solution



## Solution: [ui!] TRAFFIC – provide real-time traffic data to cars



### Test Case:

Test of “signal phase prediction”

### Challenge:

Variable traffic signals

### Solution:

Smart Data & Machine Learning

## SMARTPOLIS: Teaming Project on Smart City



- Transfer Lead initiatives of the EIP SCC to Central and South Eastern Europe
- Establish Hungary as a test bed for open urban platforms and autonomous driving
- Leverage integrated multi-functional street lighting and traffic light infrastructures to provide best-in-class data
- Market take-up of Smart Cities and Communities in the region
  - Lots of partners in seven countries within the region
  - Alignment with Smart City Forum and FhG Morgenstadt in Germany

# Thank you !



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even smarter*

