Data Challenge Goethe University Frankfurt
Mobility options in smart cities
Who speaks to you

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Agenda

1. Understanding the basic ideas
2. Possible approaches to solve the actual challenges
3. Initiatives of DB AG
4. Possible Use cases of our Data Challenge
5. Proceedings in our Data Challenge and our support
6. Prices and rewards for all the efforts
Why Smart Cities?

Objectives:

- Decarbonisation
- Quality of life for residents in focus
- Pursuit of vivid variety, social cohesion and encompassing resilience

Possible solution frameworks

- Suitable infrastructure
- Interoperable techniques
- Interconnected systems
- Digitalization without dependency on technological innovation

Steady development and continuous improvement according the defined objectives

* Source: Prof. h.c. Dr. Chirine Etezadzadeh, SmartCity.institute
What is smart mobility?

Smart Economy

Smart Mobility

Smart Governance

Smart Environment

Smart Living

Smart People
What is smart mobility?

- It’s not only *moving people people around* by motorized vehicles

- **Generating motorized traffic** particularly by private vehicles doesn’t improve the availability of mobile services

- The really need is the *accessibility* to various urban services
What we actually observe are competing approaches to solve the mobility requirements

- Dominant vision: individual mobility
  - Usage of the vehicle requires ownership
  - Infrastructure normally provided by public authorities

- Dominant vision: mass mobility
  - Usage of vehicles centrally organized
  - Infrastructure normally provided by public authorities

- Dominant vision: shared and networked mobility
  - Accessibility and Usage of the vehicle is the dominant rule
  - Infrastructure normally provided by public authorities
  - Vehicles can be offered legally also by private institutions
Our Smart cities initiative helps cities meet the major challenges of ongoing urbanization

Challenges of urbanization

- High growth of cities
- High traffic load
- Increase in traffic jams
- Increase in air pollution
- Rising environment and noise pollution

Growing mobility and logistics are cause of the problem so far.

DB targets:

To increase the quality of life of city dwellers with convenient, affordable and environmentally friendly solutions.

In addition, significant business potential is to be realized through this.
Smart Cities need Smart Products – DB program Smart Cities helps cities with the upcoming challenges

- Habitat city & active citizens
- Sustainable consumption
- Mobility, logistics & infrastructure in cities
- Environmental & noise pollution
- Demographic change
- Digital life & consumption as an experience
- Autonomous driving & linked up transport
- Receding car ownership
- Rising employment
- Climate Protection Plan of the Federal Government
- Bicycle boom
- Willingness to pay
- Sharing Economy
- Rising employment
DB Smart Cities offers intelligent mobility and logistics concepts for central challenges of cities

**Integrated mobility: Bicycle & On Demand-Services**

In the area of mobility, we want to strengthen integrated mobility with an *attractive offer for the first and last mile*. Therefore, *on-demand offers*, such as *shuttles* (currently driver-based systems) or *bicycle rental systems*, have to be redesigned and expanded.

**Railway stations: Third Places Building Kit & Coworking Spaces**

Railway stations act as *physical hubs* for mobility and logistics. We also want to *develop stations into attractions*. As a neighborhood center and hub of city interaction and recreation, stations enhance the quality of life and create new business opportunities (e.g. coworking spaces).

**City Logistics: Smart Locker & Cargo Bikes**

In logistics open, multi-vendor infrastructures are needed to *bundle traffic more strongly*. *Smart lockers and transport solutions*, such as cargo bike delivery, offer the greatest potential here.
What are the current approaches of Deutsche Bahn

For first insights on actual solutions look at the following reference implementations from Deutsche Bahn AG:

DB Cargo Bike in Planung

DB Smart Locker
What could be interesting approaches for smart mobility in our Data Challenge?

Think along a „customer journey“
The primary target of this Data Challenge is to evaluate the possibilities to combine different services into new solutions. Availability, Accessability, Usability, Feasibility, Compatibility.
What could be limiting factors of the actual market

Possible opportunities?

The actual offer of third party members?

What works well - already?

What does not work?

What must be available in the common future?

What are the actual obstacles?

What could be future cooperative solutions?
The underlying process model for a minimal viable product we can deliver
The jury consists of a team of experts

Dr. Christian Weidemüller (Smart Cities)
- Expert for DB Smart Cities Initiatives

Susan-Doreen Raschig (DB Regio GmbH)

Dr. Michael Barillère-Scholz (Smart Cities)
- Head Smart Cities Initiatives

Norbert Schaffitzel
DB Systel GmbH
University attendant
Goethe-University Frankfurt

Johannes Jüngst
DB Systel GmbH
Technical Expert
What is the procedure?

Development of future-orientated use cases and the scope of a thrilling prototype

Presentation of the use case and the planning of the prototype to convince our expert team

Presentation of the prototype and evaluation by our expert team
## Time Schedule and Milestones

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<tr>
<th>Overview</th>
<th>TOP</th>
<th>Milestone</th>
<th>Date</th>
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<tbody>
<tr>
<td><strong>Start of the DB-Award</strong></td>
<td>Kick-Off Meeting</td>
<td>19.04.2018</td>
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<td>Discussion of technical issues</td>
<td>26.04.2018</td>
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<td><strong>Presentation Uses Case and decision to enter the next phase 2</strong></td>
<td>Evaluation and Scoring of the presented Use Cases</td>
<td>17.05. and 18.05.2018</td>
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<td>Installation Real-Time data stream</td>
<td>Tbd.</td>
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<tr>
<td><strong>Presentation of the prototype and Scoring</strong></td>
<td>Evaluation and Scoring of the presented prototypes</td>
<td>12.07.2018</td>
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<td><strong>Award ceremony for all participants</strong></td>
<td>Final ceremony of the DB Award</td>
<td>Tbd.</td>
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The prices to win

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<th>Prices of the Data Challenge*</th>
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* All participants will get a certificate from DB Systel GmbH

** The winners can participate at the Smart City Hackathon in Hamburg in October 2018

*** The winners could also be promoted by the start-up accelerator program of DB Systel GmbH
Thank you for your attention!