NEXT LEVEL MOBILITY
The leading interconnection between Automotive, Public Transport and Connected Services
Gerhard Hagenauer, NTT DATA Austria
Our big MISSION

We enable cities to manage their mobility and energy transition with a dynamic urban mobility marketplace.
Enable cities to steer their mobility flow towards a sustainable environment
CHALLENGES

Madrid, January 2017
Beijing, Autumn 2016
New Delhi, 2016

HOW TO COMPLY?

Urban mobility is the big challenge … before our cities break down!

SMART CITY

UN Climate Goals (Paris 2015)
EU Regulation and Directives
Urban Europe 2020
National Guidelines and Laws
Regional Masterplans and Initiatives
How rapidly things can change.

Easter morning 1900: 5th Ave, New York City. Spot the automobile.

Easter morning 1913: 5th Ave, New York City. Spot the horse.

Source: US National Archives.
Source: George Grantham Bain Collection.

http://www.businessinsider.com/5th-ave-1900-vs-1913-2011-3?IR=T

Single Car

Thirteen years later all horse-drawn carriage gone
Where does the journey go?
Mobility from customer experience today
Width and depth of the integration of the mobility

- Payment
- Ticketing reservation
- Information

established Services

Emoral
Smile
NTT DATA UMM

Sillouetten Verkehr: @JiSign/Fotolia
eMobility Experience since 2008

Comprehensive Automotive & Energy Experience

State prize for user-friendly charging

Expertise Mobility & IT
Mobility of the future: Mobility as a Service
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Enterprise Market – Goals & Key Facts

- Cost reduction
- Incentives for employees
- Ensuring mobility of employees
- External car pool management
- In-house accounting
- Improvement of capacity management
- Reduction of company car sharing pool size

- Enhancement of usage of car sharing offers
- Reduction of CO2 emissions
- Improvement of modal split
- Providing broad public transport data information in one App
- Reduction of overall traffic

- Usage of existing SMILE App (Quick Win)
- Additional opportunities for car sharing in urban city areas
- Additional usage of several member cards for commuters
- Increasing the mobility rates for households
- Use of cost / utilization synergies for companies
Mobility Rural

Enterprise

Rural

Urban City
Integrated Mobility Service

- eMORAIL was a project with Austrian railway
- **An integrated mobility service is deployed:** Linking of trains and e-vehicles. Everything from one source
- **E-cars and e-bikes** in a sharing-system for the first/last mile

**From the town...**

**...to urban**

- **Mobility** from Home to the workplace and back
- **Smartphone** = integrated mobility medium
- **Mobility package for commuters** (e-car + ticket for train + smartphone) for an attractive price on daily mobility

- **App/Plattform** Info and booking
- **Train** Long distance
eMORAIL Basic Service

To towns

- Electric mobility in their innovative form
- Mobility solution for towns - environmentally friendly and tailored
- A working model for the sharing in rural and small urban areas

To commuters

- Mobility all inclusive: E-car + public transport ticket
- A reserved parking space at the station
- Service and Maintenance for the car
- eMORAIL smartphone app
- Always mobile - the eMORAIL worry-free package

To business

- An electric car for your individual requirements
- Predictable costs
- Easy administration
- Ecologically sustainable
- The eMORAIL worry-free package
Project eMORAIL-advanced – new eMORAIL Services

**POOLING - MODUL**
- Collaborative use by employees or by guests of tourism enterprises
- Use by business customers
- Support Extension Mobility of staff between the company and the stop

**SHUTTLE SERVICE**
- For commuters without a license, driving without need
- For part-time employees and professionals with flexible working hours
- And for communities or companies without adequate public transport service
- Clocked pick-up times from home or from the station
- Tools for the reservation of the required shuttles and Classification of drivers

**LAGERBOX**
- Testing of a shopping service
- Required consumer goods (mainly food) can ordered and purchased from an eMORAIL storage box
- The train station and the bus stop is characterized as an indispensable service point

**Sharing service**
- Self-organized sharing service for persons without driving license
- eMORAIL - community is built, so that the commuters to get to know
- Supporting social activities, virtual or real to lower the threshold
- Introduction of a bonus system
Mobility Urban City

Enterprise

Rural

Urban City
Target of the project „SMILE“ is to develop and test a prototype for a **multimodal, integrated information, booking and billing system** („integrated mobility platform“) which intelligently links the private and public available means of transport.
SMILE – the new Mobility
Smart Mobility Info & Ticketing System Leading the Way for Effective E-Mobility Services

- Project goal: Platform for E-Mobility services in Austria within the scope of strategically cooperation between numerous mobility, logistic and other partners – including many SMEs – like ÖBB and Wiener Stadtwerke

- Contribution from NTT DATA: Development of an integrated system architecture (E-Mobility Service Interface) for an intermodal information and ticketing system („Smart E-Mobility Plattform“) as basis for a „Smart Mobility Card“

- Test phase: with selected users in the Vienna area

- http://smile-einfachmobil.at/
smile technic
architecture

Mobility platform

- POI
- Routing
- Price information
- Booking
- Distruption & Real time
- Push
- Mobility profile
- Invoices

Management of mobility partners

Interface adapters

User management
- Price information
- Booking
- Billing & Clearing

Interface adapters

Payment, Identity
- Booking
- Billing, Clearing
Rural
Urban
Enterprise
City

Mobility Urban City
Company Vehicles are a major Cost Factor within Companies

~ 4.5 Mio Vehicles in Germany are Company Vehicles

~ 80% are finance or full-service-leases and financed vehicles – with upward tendency

The Car Pool represents a major Cost Factor that is indispensable

Corporate Car Sharing Approaches are not aligned with companies individual needs
EXPANDING THE URBAN MOBILITY MARKETPLACE

Creating a multimodal smart grid of fleets, sharing of vehicles as well as public transportation in order to increase efficient mobility while decreasing operational cost and CO$_2$ emissions.
Die Mobilität der Zukunft: Mobility as a Service
Wir sind Ihr Partner für die Mobilitätskonzepte der Zukunft.

Gerhard Hagenauer
Vice President, i-Mobility

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Enterprise Mobility

**Smart Grid of**
- Own fleet
- Existing Car-sharing Providers
- Integrated Public Traffic booking
- Additional Taxi Offerings

**Increase of Efficiency and Mobility**

**Decrease of Operating Costs and CO2**

1. Employee chooses Best Mobility Offering
2. Integration of Reservation Function into Calendar

**Increase of Efficiency and Mobility**

**Decrease of Operating Costs and CO2**

**NTT DATA SHARING**

- Public Transport
- Internal Car Pool
- Taxi
- Car-sharing
- Direct Interface to Car Sharing Providers

Employee chooses Best Mobility Offering
Integration of Reservation Function into Calendar
Accounting directly within your Company/ optimal Efficiency
Benefits for Fleet Manager

**BENEFITS**

**FLEET MANAGER**

- **SIZE**: in terms of number of cars in the pool is reduced
- **UTILIZATION**: of the whole fleet is increased
- **ACCOUNTING**: process is usage-based and paper-free
- **RETURNS**: are generated from private car usage
- **TIME SAVINGS**: due to a simplified administration process
- **COSTS**: are lowered as the number of cars are reduced
Benefits for Employees

**PRIVATE USAGE** is enabled

**TIME SAVINGS** due to a simplified administration

**AVAILABILITY** is increased

**SIMPLICITY** of the billing process is achieved

**COSTS** for private car usage are lowered

**BENEFITS EMPLOYEES**
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The Car Pool represents a major Cost Factor that is indispensable

Corporate Car Sharing Approaches are not aligned with companies individual needs
The car pool size of one of our customers was reduced from originally 500 to 350 cars which lead to cost savings of 0.9 Mio €.
OCC – Private Hub
Open Charging Station Controller

**Basis-Modul Charge-Management**
- Charging Stations/Chargepoint Overview and Monitoring
- Charging Stations/Chargepoint data
- Chargepoint Communication/ OCPP1.5 Steuerung / Audit-Log
- Transactionen
- Location, CSO-, EMP-Administration
- Inter-OCC-Roaming
- Administration & Configuration

**Basis-Modul Customer-Management**
- Customer and Cardadministration
- Product alignment

**Add On**
- Billing/Rating
- Pay&Charge
- Easy Charge
- Prepaid
- Reporting
- Interoperabilität (e-clearing.net, Hubject)
- LLEM

**Mobile Apps**
- Android und iOS
- Web based