BERLIN AS AN URBAN TEST-BED FOR SUSTAINABLE CITY LOGISTICS

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AGENDA

- Berlin approach and general strategy
- Status quo in city logistics
- City logistics of tomorrow: digital, decentralized, automated
  - Role of automation and upcoming project landscape in Berlin
  - Two potential use-case
CASES APPROACH

CONNECTED

SUSTAINABLE

AUTOMATED

ELECTRIFIED

SHARED
AREAS OF ACTION

NEW MOBILITY
Innovative mobility solutions (MaaS), micro-mobility, mobility and city development, digital test area for urban mobility, automation of urban mobility

SMART INFRASTRUCTURE
innovative charging technologies, electrification of vehicles, expansion of business electromobility, hydrogen and fuel cell technology, sector coupling

CITY LOGISTICS
Sustainable city logistics, micro-hubs, efficiency on the last mile, electrification, digitization and platforms
Increasing dynamic in e-commerce leads to more parcel delivery

30% growth over the next 5 years expected

66% of the citizens already buy online
STATUS QUO IN CITY LOGISTICS

▪ Several competitors using proprietary delivery hubs and own vehicles results in **often redundant and inefficient city traffic**

▪ A clear shortage of capable drivers forces the market to look out for new solutions (**human factor**)

▪ **Small margins** for parcel companies in B2C sector

▪ Still few market offers for **competitive electric vans**

▪ Cities are getting more and more into a predicament having to decide between **intervening in the commercial transport** (e.g. Congestion Charge or Zero Emission Zones) or doing nothing at the expense of citizens’ health
Many cities as well as the logistics companies are fully aware that **change is needed** to tackle the current problems of city logistics.

**New business models are frequently tested in projects** and give the stakeholders valuable feedback on what are the effects for traffic volume and emission.

**Sustainable last mile solutions** are becoming an important factor as part of the local smart cities strategies.
The city of tomorrow needs more **flexible and dynamic structures** for the distribution of parcel.

Warehouses should be smaller but placed **closer to the costumer**.

**Co-operative used micro hubs** might be the right solution to create consolidated traffic and open the opportunity to use electric and automated vehicles.
Berlin like other major cities, invests with partners in the development and demonstration of mobility solutions of the future.

However, the focus of such projects and test-beds is still more on passenger transport than on commercial transport or city logistics.

That creates an opportunity for Berlin to look more closely into the future role of automated driving for last mile transportation.

- First step: conducting a **study to investigate potential use-cases**
USE-CASE ONE:
DIGITIZATION OF PARCEL DELIVERY TO RETAILERS

- **Target**: just one last-mile operator supplies the project area from a local warehouse!

- The project approach is based on consolidation of shipments, the use of micro-hub and intelligent delivery planning
USE-CASE ONE:
DIGITIZATION OF PARCEL DELIVERY TO RETAILERS

- Agreement on uniform delivery address within the project area
- Including real-time information on traffic and free loading areas
- Delivery to the customer

Goods ordered to a standardized delivery address → Delivery from different parcel services arrive in one depot → Planning the optimal delivery windows and routes → Use of modular cargo bikes for delivery → Storage in public parcel boxes & notification of the customer
USE-CASE TWO: AUTOMATION OF PARCEL SUPPLY (B2C)

- Initial situation: Europe's largest contiguous settlement with one- and two-family houses with long journeys for parcel delivery

- The ideal testing ground for automated driving - due to low traffic and wide roads and sidewalks with few obstacles
USE-CASE TWO: AUTOMATION OF PARCEL SUPPLY (B2C)

- **Objective**: support and relieve parcel delivery through the intelligent use of automation technology.

- At the heart of the idea is an autonomous "*parcel shuttle*", which is largely automated in a freight distribution center and travels to the destination area.

1. **Warehouse outside the area**
2. **Autonomous "parcel shuttle"**
3. **Meeting points in project area**
4. **Delivery (with or without driver)**
5. **Way back (pick-up of stuff)**
FORECAST:
BERLIN AS TESTBED FOR SMART MOBILITY
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