Big Data Value in Transportation

Panel: “Smart Transportation and ICT: Topics for Collaboration”

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Big Data in Transportation: Innovation Opportunity

• Big Data expected to lead to 500 billion USD in value worldwide in the form of time and fuel savings, and savings of 380 megatons CO₂ in transport and logistics (source: OECD)

• Only 19% of EU transport and logistics companies employ Big Data solutions as part of value creation and business processes; 70% do not plan to do so in the future (source: PWC)
Big Data in Transportation: Innovation Opportunity

Key value dimensions for Big Data in transport

**Improved Operational Efficiency**
- Delivery mileage reduction of 5%-15%
- Rail maintenance cost reductions by up to 12%
- ...

**New Business Models**
- Oriented retailing (knowing expected preferences of passengers before arrival)
- Trip patterns for advertising, tourism
- Shared logistics
- ...

**Better Customer Experience**
- Less missed connections
- Decreased passenger waiting times
- Delivery cost and time reductions
- ...

(Source: TransformingTransport; Icon Source: DHL/DETECON)
Big Data in Transportation:
EU-US RDI Cooperation

Opportunity: Open Data

- Data sharing via joint “EU-US Data Portal”
  such as https://www.europeandataportal.eu/data/en/group/transport
- Cross-domain data sharing (electric mobility ↔ energy distribution)

Emerging Standards: Data Sharing and Integration

- DCAT standard for EU open data for transport
- NETEX / SIRI for data sharing in public transport
- OASC work towards open data platforms

Barriers: Data Protection Concerns

- Commercial Data / IPR – e.g., 68% of TT data sources
- Personal Data Protection (EU GDPR) – e.g., TT: 1% of TT data
- Ethical Concerns: stringent data management in EU projects
- Missing information about why data was collected (purpose limitation)

BILAT USA 2017, Minneapolis
Big Data in Transportation: Large-scale Pilot

TransformingTransport

- EU Horizon 2020 Big Data Value PPP - ICT-15 Large Scale Pilot Action
- Goal: demonstrate transformations big data has on mobility and logistics
- 46 members - 18.7 MEUR budget - 30 months duration

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Big Data in Transportation: Large-scale Pilot

Transforming Transport

- 13 pilots in 7 domains

Smart Highways
Smart Airport Turnaround
Ports as Intelligent Logistics Hubs
Proactive Rail Infrastructures
Sustainable Connected Vehicles
Integrated Urban Mobility
Dynamic Supply Networks

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Thank You!

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