



BIG DATA VALUE

BILAT
USA 4.0

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)

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



Big Data in Transportation: Large-scale Pilot



TransformingTransport

- 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

Thank You!



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