ITF Working Group on Big Data & Open Data

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International Transport Forum

ITF Transport Statistics Meeting, April 2018

Background and Motivation

- National Statistical Offices and other public data providers are currently facing a number of challenges, including:
    - Rising budgetary pressure to meet information needs
    - A need to minimise reporting burdens
    - Declining response rates from traditional approaches (e.g. surveys)
    - Strong demand from data users for more timely information
- Digitalisation has led to mass amount of data from vehicles, infrastructure, and mobile devices
- There is potential for a paradigm shift in how, and for what purpose, these new data sources could be used

Introduction and Objectives

- Big and open data have come to be seen as a solution to fill data gaps and to provide more detailed information more efficiently and more timely

- This working group is intended to assist member countries in leveraging and curating big data and open data by:

  - Developing a framework to facilitate data sharing between the private and the public sectors

  - Summarising quality standards that could be used to communicate the quality and statistical validity of big and open data

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Member Countries

- USA (Chair: Pat Hu, US DOT)

- Canada
- UK
- France
- Austria
- Netherlands
- Norway
- Finland
- Italy
- Greece

+ *International Organisations*

- UNECE
- SEETO

Analysis Approach

- Key activities of the working group to gain the necessary knowledge and expertise to develop the data-sharing framework include the following, with contributions from all partners:

  - *Literature review:* literature on data sharing partnerships (in transport and other sectors) and data quality/ validity issues of big data, including guideline documents and research papers

  - *Case studies:* examples of existing data sharing partnerships and the lessons learnt from working group member countries, using a structured analysis framework developed by the working group

  - *Stakeholder interviews:* examples of existing partnerships and general attitude towards public-private data-sharing, based on structured interview guideline and explanation of value proposition

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Topics for Data-Sharing Value Proposition

- *Efficiency:* network reliability and resilience
    - Better knowledge of network performance (public sector)
    - Accessibility to more data and data sources
    - Improved algorithms
- *Safety:* near misses
    - Improve safety and identify black spots
    - Historical data for planning
    - Real time data for warning to vehicles
    - Evaluation of drivers/ companies
    - Accessibility to more data and data sources
- *Environment:* emissions
    - Reduce emissions
    - Evaluation of emission efficiency for fleets
    - Better emission estimates
    - More informed and transparent regulations and policies
    - Accessibility to more data and data sources

Key Recommendations

- Pilot test the recommended data-sharing framework

- Address specific statistical quality and validity issues

- Focus on the human aspect of data sharing partnerships

- Provide the optimal value proposition to potential partners

- Consider a third-party interface between public sector partners and private sector partners

- Consider active and continuous engagement of private sector partners

- Adopt data-sharing framework when partnering with public sector

- Build staff capacities and enhance the IT infrastructure

Contact Information

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