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Leveraging Big Data to Manage Transport Operations (LeMO project)

Arnaud Burgess
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Project & partners



- Coordinator: Stiftinga Vestlandsforskning (Prof. Dr. Rajendra Akerkar)
- Duration 3 years (2017 – 2020), ~1.5mio €
- Funded under H2020

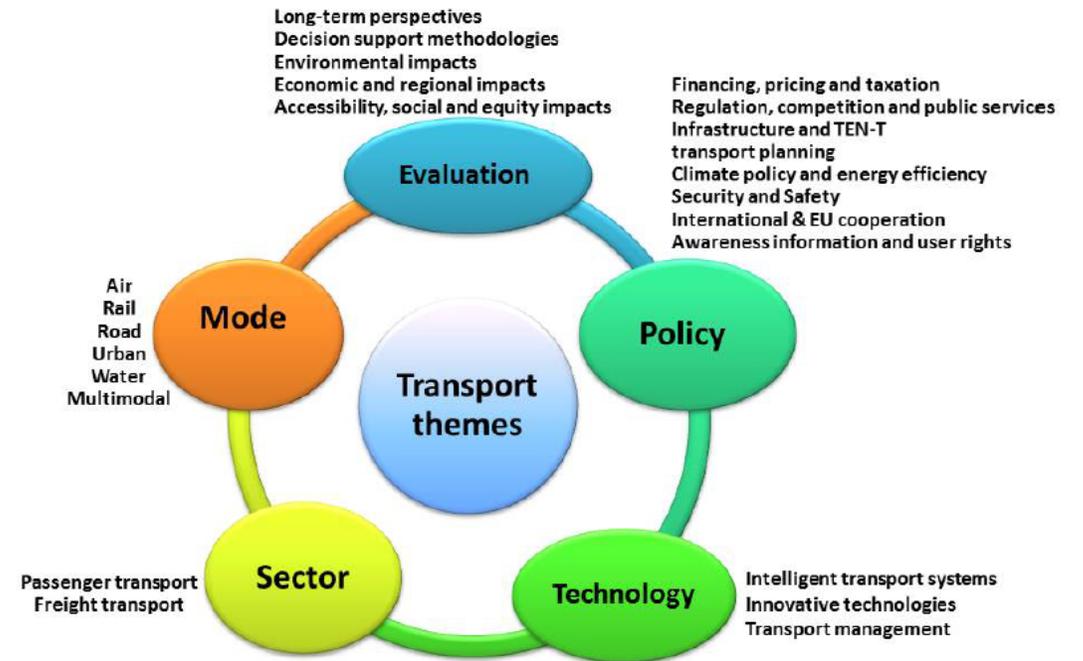
Participant organisation name	Organisation Acronym	Country
Stiftinga Vestlandsforskning	WNRI	Norway
Johann Wolfgang Goethe-University Frankfurt	GUF	Germany
Confederation of Organisations in Road Transport Enforcement	CORTE	Belgium
Bird & Bird	B&B	UK
Panteia	Panteia	The Netherlands

Objectives of LeMO

- 1) Produce a **research and policy roadmap towards data openness, collection, exploitation and data sharing** to support EU transport stakeholders in capturing and addressing issues (from technical to institutional, including legitimacy, data privacy and security);
- 2) **Involve European transport sector actors** in order to identify and analyse concrete opportunities, barriers and limitations of the transportation systems to exploit big data opportunities;
- 3) To disseminate the LeMO **findings, recommendations** and the contribution of the LeMO to evidence-based decision making by improving knowledge on methodological and exploitation issues taking also into account economic, legal, social, institutional and technical aspects.

What will LeMO do?

- Explore the implications of the utilisation of big data to enhance the economic sustainability and competitiveness of the European transport sector
- Study and analyse big data in EU domain on five transport dimensions:
 - Mode
 - Sector
 - Technology
 - Policy
 - Evaluation
- Conducting a series of case studies

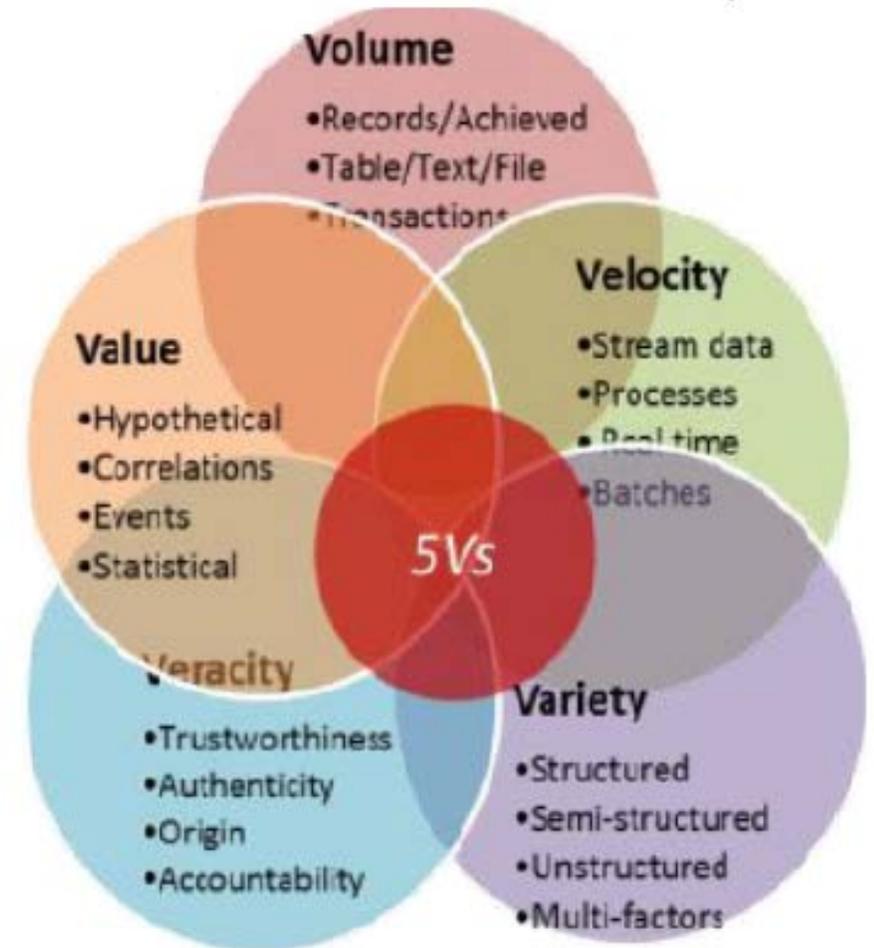


How LeMO defines BIG DATA?

A classic definition of big data identifies three to five key characteristics (the 5Vs)

LeMO project is uniquely positioned to help stakeholders capitalize on the power of big data to:

- Significantly improve the customer experience
- Enhance services to increase revenue and manage capacity
- Maximize the availability of assets and infrastructure
- Improve operational efficiency



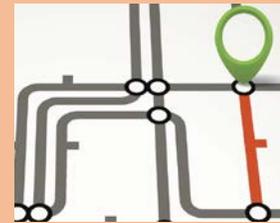
Case studies (#7)

Case studies will involve organisations actively using big data for specific purposes and enable LeMO to understand strategies, actions and changes in behaviour associated with big data and identify their resultant merits and demerits.



Rail transport data

Issues addressed: innovation in infrastructure, efficiency in transport routes, resource management and supply chain, environmental impacts, vulnerability in potential crisis and data protection.



Open data
and transport sector

Issues addressed: enabling 'mass mobilisers' (training journalists and civic groups) to disseminate and make data understandable by the general public, not just data scientists.

Case studies



Real-time traffic management

Issues addressed: discuss a methodology to estimate passenger demand for public transport services using social media and mobile phone data.



Logistics and consumer preferences

Issues addressed: innovative big data acquisition procedures; test the capability to reach an alternative, less expensive and faster administrative procedure of acquiring stakeholder-specific big data.

Case studies



Smart inland shipping

Issues addressed: Use Inland AIS to track vessel movements in and around locks



Optimized transport and improved customer service

Issues addressed: explore various network models for efficient transportation planning that eliminates service delays.



Big data and intelligent transport systems

Issues addressed: Multimodal, multiagency approach to provide useful suggestions on the prerequisites of successful big data implementation in ITS

Outcomes from LeMO: A European approach rather than a national or local approach

- LeMO provides the framework for the European approach needed to address a **consistent big data strategy** in the sector.
- Overall strategy involves **continuous engagement** with a range of **stakeholders** to integrate LeMO into the growing array of research work being conducted in Europe and internationally, to disseminate our findings as widely as possible.
- A **roadmap** will be produced outlining a plan of action to enable European policy makers and decision makers to capture an appropriate exploitation of the big data.
- The LeMO roadmap will outline a series of incremental steps needed to support decision makers in addressing current barriers and challenges in **evidence-based decision making**.
- Addressing critical issues linked to **privacy, data security, legal and institutional aspects** will help to explore opportunities like generating more business for European transport sector with growing number of consumers as well as growing concern related to privacy, data protection consequently resulting in a development of a **suitable legal framework**.

Thank you for your attention!

VESTLANDSFORSKING

Project Coordinator

Prof. Rajendra Akerkar
Email: rak@vestforsk.no



Arnaud Burgess
Email: a.burgess@panteia.nl

