Workshop 8

Big spatial data and data analytics in the digital age and how it can benefit public transport users

Presented by:
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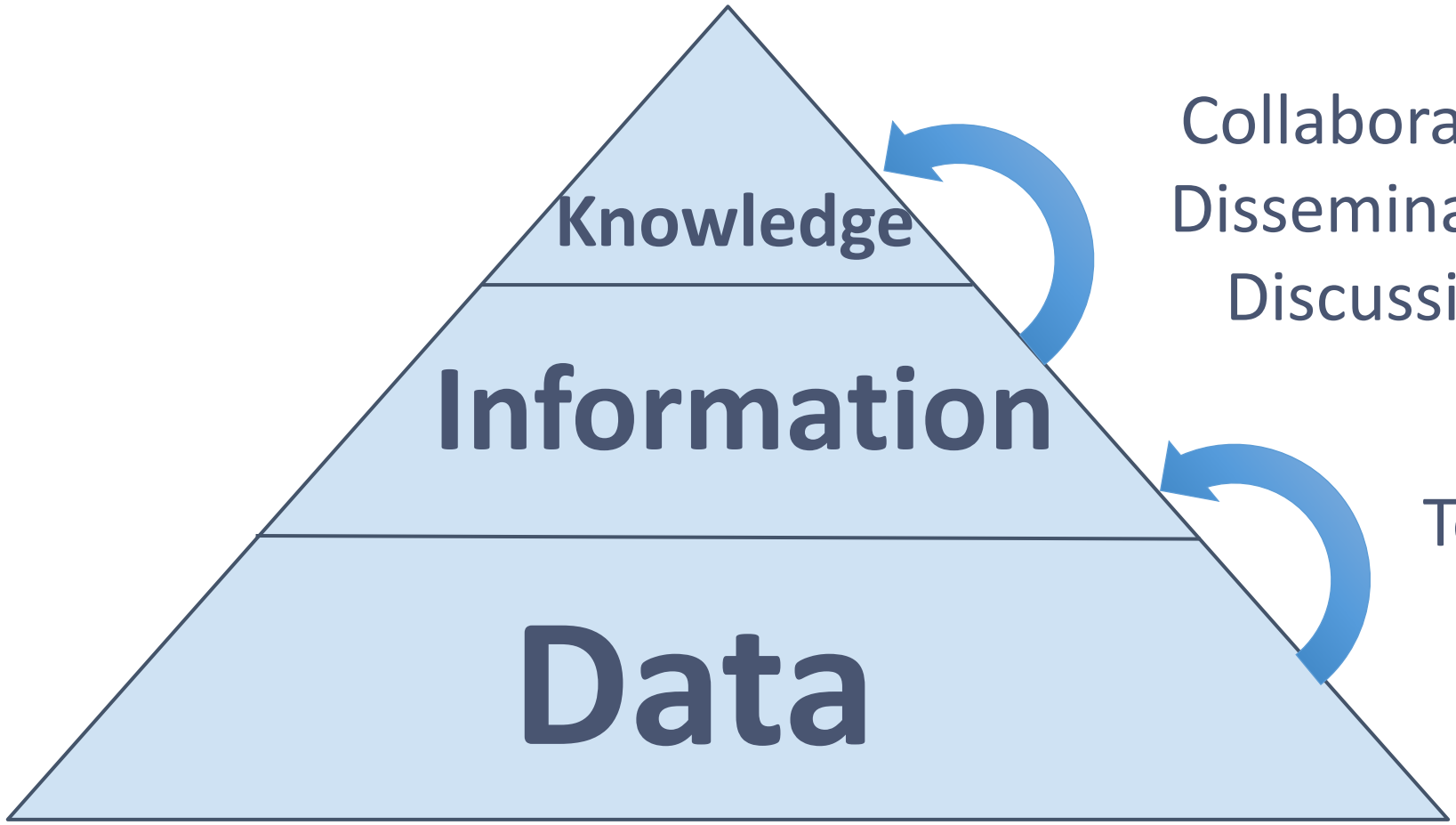
Participants



Collaboration
Dissemination
Discussion

Tools & Modelling

Conclusions from Thredbo 14

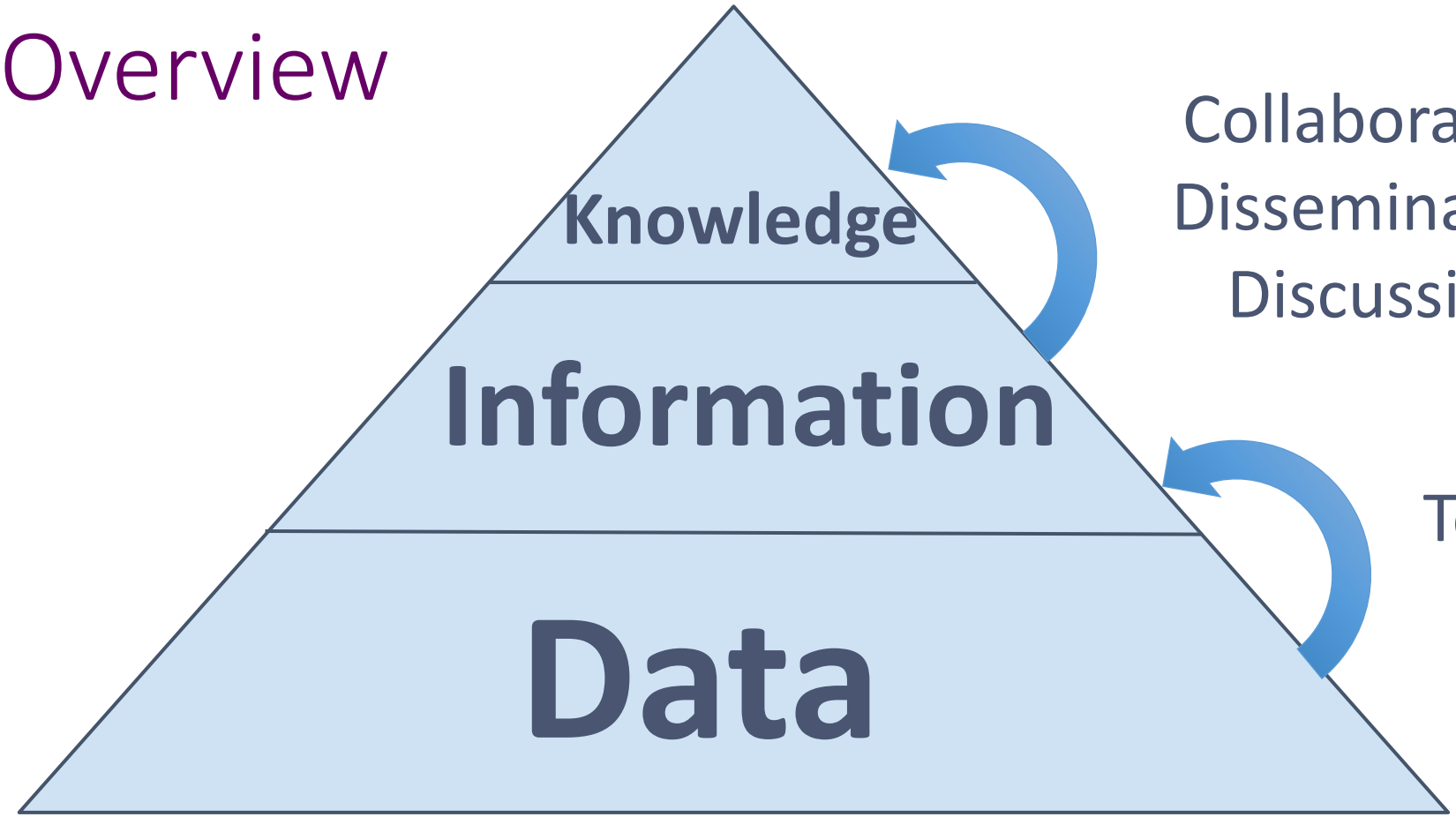
- More thinking, workshops, including practitioners and operators
- Use big data not just for planning and control → many other uses, across stakeholders
- More research, more applications, more sharing → more fun!

Overview

- Many big data developments
  - →many opportunities
  - →but...
    - not enough is happening
- Big data challenges:
  - ❑Technical
  - ❑**Organizational (coordination, cooperation)**

→ How to stimulate further / faster big data applications

Overview



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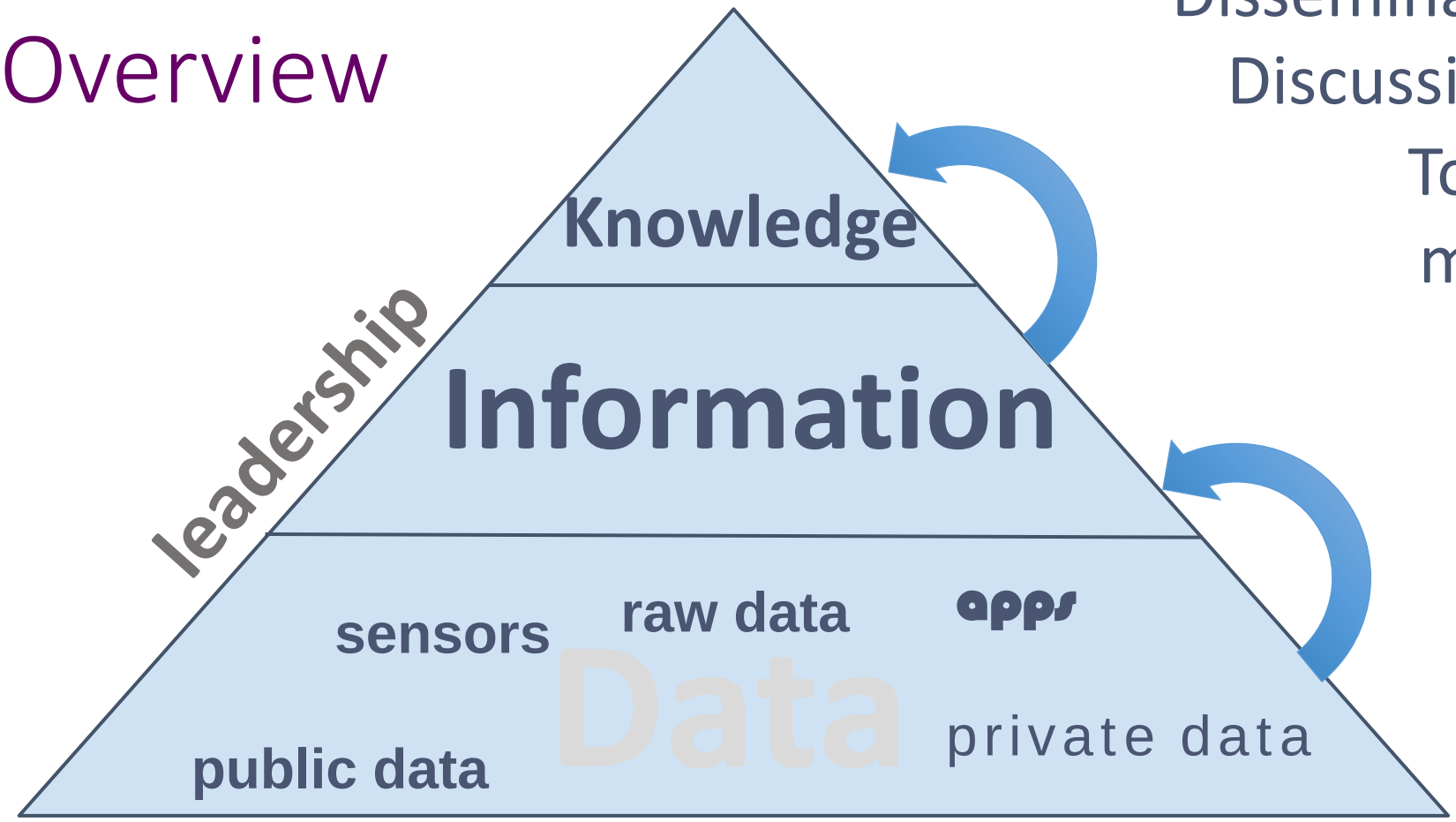

Collaboration
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Tools & Modelling: machine learning, artificial intelligence, econometrics

Storing and processing capabilities

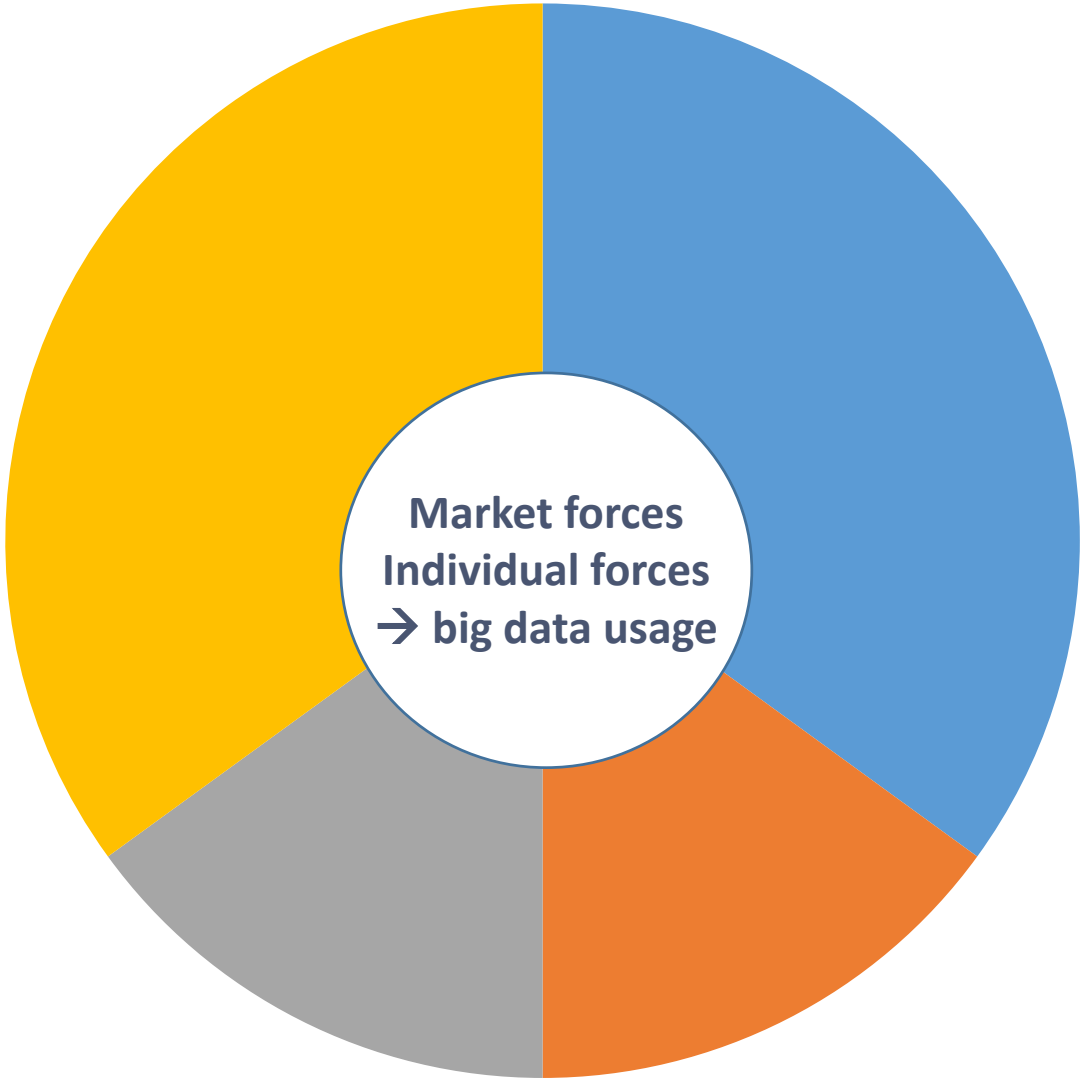
Data ownership

Data access

Contracts

Regulations

big data for the social interest

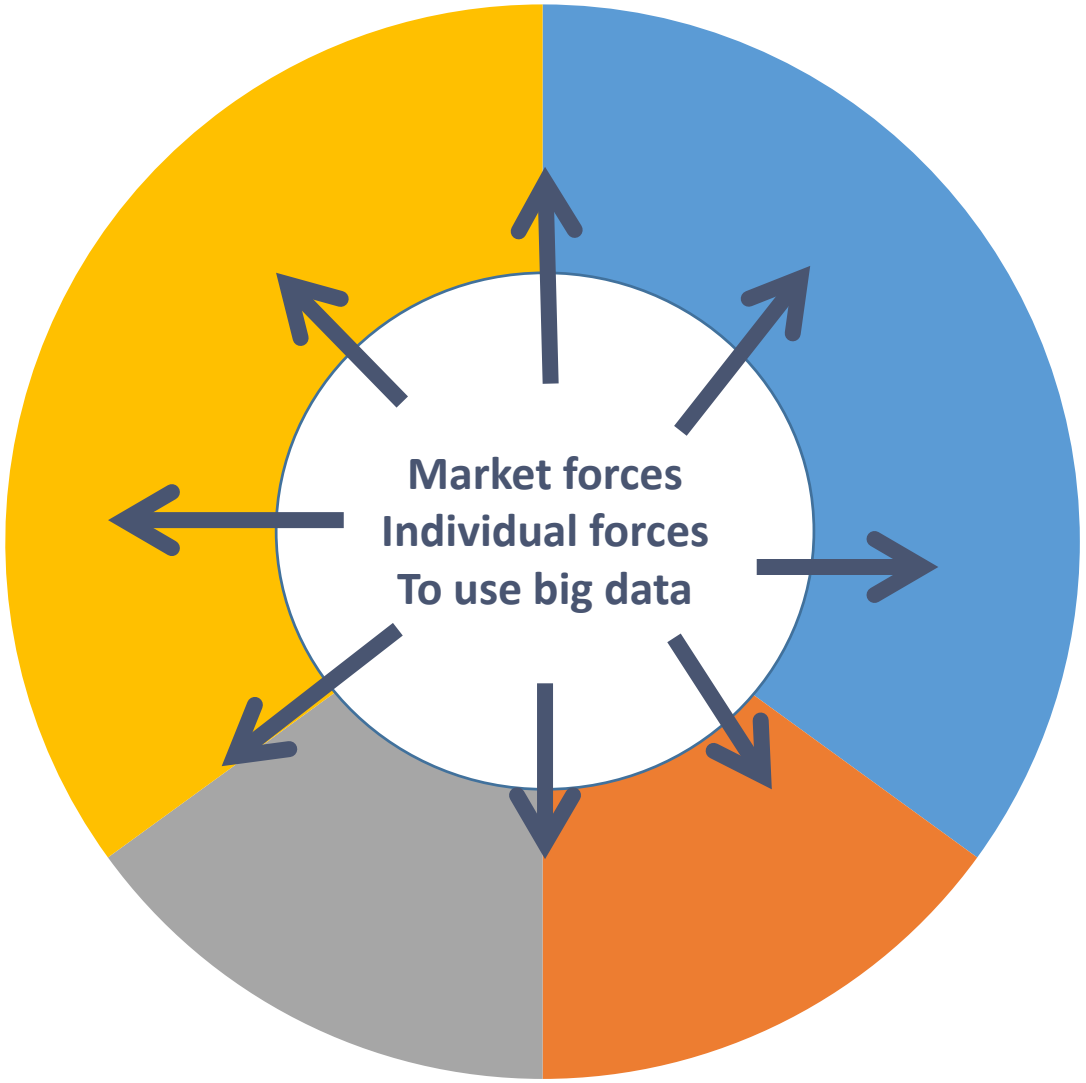


- Improve user experience
- Improve cost effectiveness
- Lower externalities
- Great built environment

big data for the social interest

Providing big data
→ enlarges the area where the social interest can be improved

Forces to trigger this:
- Data quality
- Data integration
- Economies of scale
- Planning tools
- De?regulation



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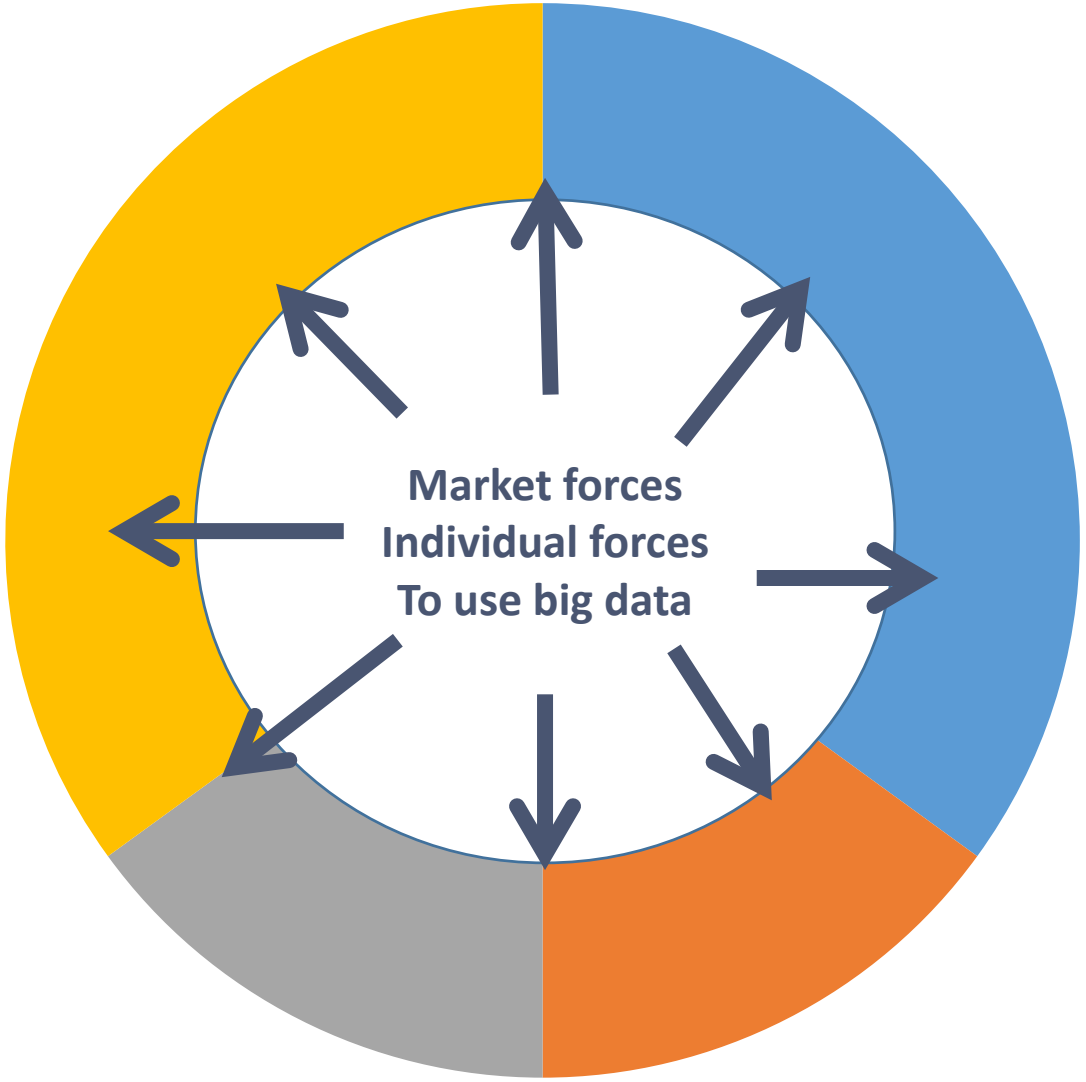

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Key Themes

- Social interest
- Private vs. public
- Open access to different data sources
- Cost-efficiency & cost-effectiveness
- Contracts
- Knowledge / competence of private companies

Research Priorities

Technical priorities:

- Quantify and visualize customer satisfaction & experience
- Data fusion, consolidation: integrate different data sources

Governance / organizational priorities:

- Contract design: stimulate use big data, develop right KPI’s
- Governance structure: responsibility

Successful cases

Operational

- Passive capture of images from buses → penalty for cars
- Opportunities of real-time route optimization
- Acceleration rates to evaluate driver's behaviour

Governance

- Transport for London
- Singapore

Barriers

- Not enough qualified people to transform information on knowledge
- Different sources of data
- Access to data
- Who is responsible?

Policy Recommendations

- Public agencies should actively identify priorities and opportunities
- Develop: standards, common definitions and data formats (integration platform?)
- Consolidate: integrate different data sources (one data provider?)
- Enforce: cooperation and coordination → trustiness
- Report: look at successful cases & learn from unsuccessful cases
- Step-by-step: incremental approach
- Quantify & visualize:
  - Business value of big data
  - Social impact
  - Look at other sectors

Contracting Recommendations

- Guarantee access to (integrated) data sources
- Incorporate use of big data in the definition of KPIs
- Design contracts that give incentives to innovate during execution of the service

Recommendations for Thredbo 16

- Largest challenges in big data are not technical, but process related
- Different format
  - More to the government side
  - Hackaton for technical people

Questions? Comments?