METHODOLOGIES FOR ADDRESSING RISKS AND OPPORTUNITIES ENGENDERED BY BIG DATA:
THE BYTE PROJECT

Rachel L. Finn, Hayley Watson, Kush Wadhwa, Arild Waaler, Ahmet Soylu, Guillermo Vega-Gorgojo, Hans Lammerant, Stephane Grumbach and Scott Cunningham

Big data in Europe

- A Google search for "big data" generates more than 1.5 billion hits.

- Neelie Kroes, VP for Digital Agenda-

  "Data is the new gold"

- European governments could save more than €100 billion in efficiency improvements using big data.

- Europe has been relatively slow to adapt to the changes and opportunities posed by big data.

- All the big players are US-based

- Policy push to "maximise the social and economic potential of ICT" (Digital Agenda for Europe)

European big data research

- Horizon 2020
  - Security
    - Forensics – prosecuting cyber-crime and identifying trends
    - Privacy – big data, cloud services, internet of things, etc.
  - ICT
    - Big data and open data innovation
    - Advancing big data analytical tools
  - Excellent Science
    - E-infrastructures for big data
- Focus on innovation, capacities and competitiveness

BYTE project

- Big data roadmap and cross-disciplinarY community for addressing socieTal Externalities (BYTE) project

- Define research efforts and policy measures necessary for responsible participation in the big data economy

  1. Consider positive and negative societal externalities associated with big data
  2. Generate a big data vision for 2020
  3. Design a research and policy roadmap
  4. Build the big data community to monitor progress

Project details

- Jan 2014 – Dec 2016; 36 months

- €2.25 million

- 11 Partners
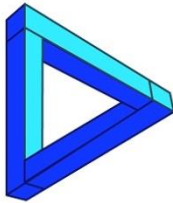
What are externalities?

- [ ] The effects of a decision by stakeholders (e.g., governments, industry, scientists, policy-makers) that have an impact on a third party (especially members of the public).

- [ ] May be positive or negative

Economic	Legal	Social & Ethical	Political
• Boost to the economy • Innovation • Smaller actors left behind • Shrink economies	• Privacy • Data protection • Data ownership • Copyright	• Transparency • Discrimination • Methodological difficulties • Spurious relationships	• Reliance on US services • Services have become utilities • Legal issues become trade issues

- [ ] Public opinion surveys reveal that citizens are concerned about many of these issues, especially privacy and data protection.

Case studies
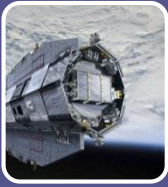
Environmental data
- European Space Agency
- Global Monitoring for Environment and Security

Commercial data
- Google

Utilities / Smart Cities
- Siemens

Cultural Data
- The European Library

Energy
- Statoil

Health
- GOSgene Initiative, University College London

Transport
- SNCF

BYTE Vision

- Foresighting exercises to create a broadly based vision of big data and its impacts
- Involve key stakeholders
    - Representatives from government, industry, academia, political advocacy groups and the media
- Eye towards the short term (5 years) and the 2020 goals of the Digital Agenda for Europe
- Current externalities as well as potential externalities

BYTE Roadmap & community

- ☐ Research and policy roadmap
- ☐ Involve the same key stakeholders
- ☐ Series of incremental steps to
achieve the vision

- ☐ Steered, monitored
and updated by the big data community (Please join!)
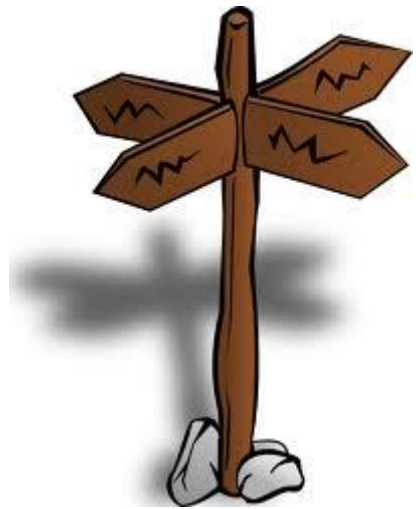
Responsible big data?

☐ Big data is here to stay!

☐ Industry, government and education cannot ignore these new capabilities if they wish to remain competitive in the global market.

☐ BYTE focus on commercial activities

  ☐ Precedent setting for government surveillance

☐ Externalities already in evidence can harm the inter-relationships between industry, the government and citizen-consumers.

Thank you

rachel.finn@trilateralresesarch.com

www.trilateralresearch.com

Trilateral Research & Consulting