



Guidelines for Governance of Data Sharing in Agri-Food networks

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Background and problem definition

- Big data is becoming a new resource, a new asset, also in the agri-food sector
- It includes enterprise data from operational systems, farm field sensor data, farm equipment sensor data, data from wearable animal sensors, harvested goods and livestock delivery vehicles sensor data (from farms to processing facilities), etc.
- Governance of data in data-rich environments with multiple partners is a bottleneck for successful applications of big data in the agri-food sector (Fig. 1)

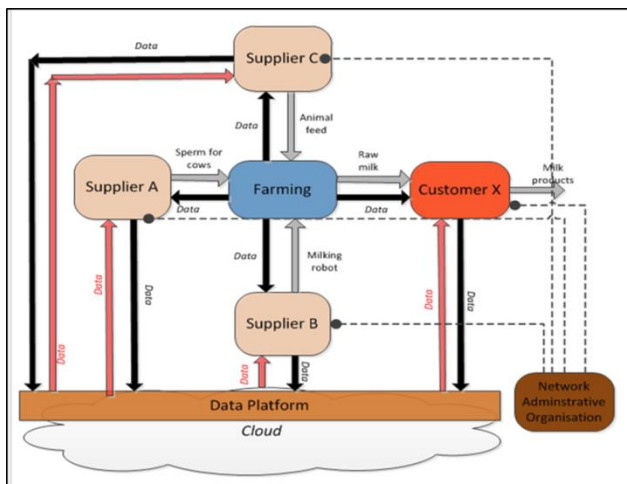


Figure 1. Example of a big data network in the dairy sector

Objective

- Prepare a set of governance guidelines for big data applications in the agri-food sector.

Approach

- Develop a framework for analysis of big data governance aspects in agri-food networks
- Scan general and agri-food specific literature on network governance aspects
- Scan past and current projects on network governance aspects
- Prepare draft set of guidelines and evaluate in stakeholder workshop
- Prepare final set of guidelines in interactive format

Results

Framework for analysis (Fig. 2)

- Internal factors were identified based on literature
- External factors are on the PESTLE governance framework

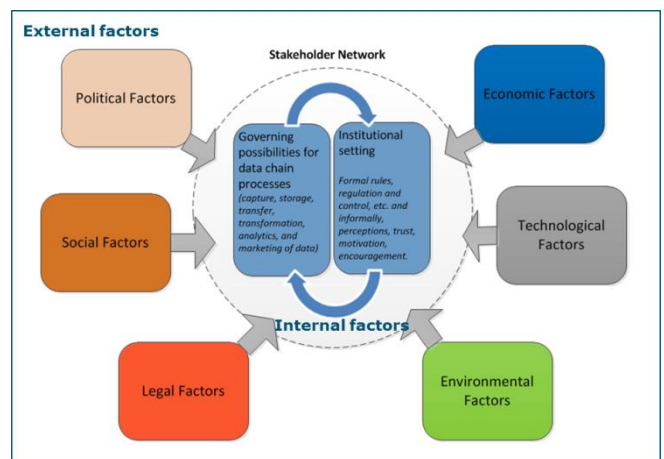


Figure 2. The Big data governance framework, with political, social, legal, environmental, technological and economic factors setting the stage for governance of Big data driven inter-organizational applications, with influence on governing and institutional settings.

Guideline template

- Issues that should be addressed
- Best practices with pro's and con's
 - If relevant, references to examples, templates, etc. will be made
- Lessons learned from other projects and initiatives

Examples of some guidelines

Efficiency (internal factor)

- Think about arrangements for costs for taking part/entering the network, and needs for investors.
- Find costs that are related with capture, storage, transfer, transformation, analytics of big data, and data/ IT management costs.
- Think long term

Legal (external factor)

- Formal contracts are needed at data level, personal level and product level.
- Be aware of impacts of intellectual property rights.
- Do not make the legal contracts too complicated
- Needs can be obligations, but also culture/country-dependent.
- Prepare for data hacking

