

Data position of the farmer: example of a Dutch exploration

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Program Precision Agriculture 4.0

■ Public Private Partnership:

- Private: AEF, Agrimaco, AgroConnect, Join Data, KPN, Kubota/Kverneland, Rovecom
- Farmers: Branche-organisatie Akkerbouw, Cumela, LTO Noord, The Potato Valley, ZLTO
- Government: Min. LNV, NOM,
- Execution: Wageningen University & Research, ICTU & Van Hall Lahrenstein

Task and questions

- Feasibility study for larger program on data-driven agriculture in open-field arable farming
- Questions:
 - What is the current status of data sharing and role of farmers in arable farming, dairy farming and farm contractors?
 - What are technical, governance and legal/ethical blockers and opportunities for data driven agriculture?
 - What is the position of the farm and farmer in data sharing?

Why is data sharing in agriculture important? (1)

- **Observing the status** of the farm (soils, climate, etc)
- **benchmarking** for comparison of farms across a sample
- **Monitoring of the farms performance** with government, supply chain partners or certifying body
- **Farm Optimization:** improving the operational decision making on the farm

Why is data sharing in agriculture important? (2)

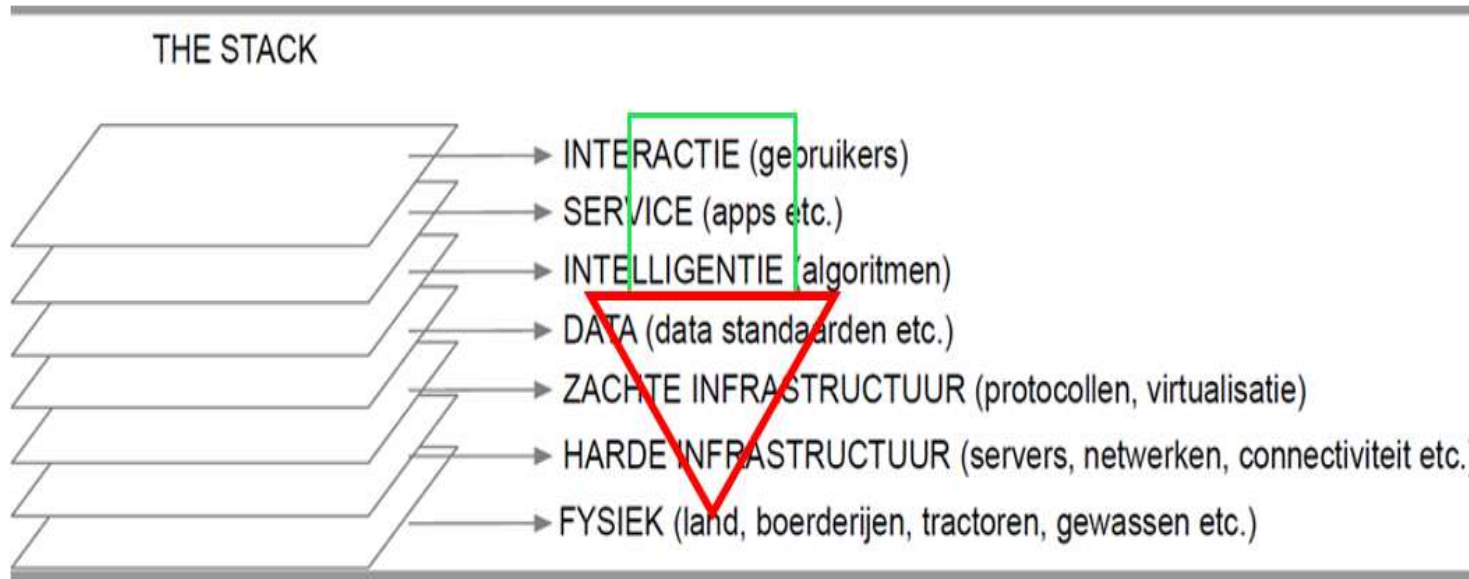
- Arable farming: better tracking of sustainability performance, lack of insights in own farm
- Dairy farming: lot of focus on dairy cows and their individual performance, lack of link with feed & fodder production
- Farm contractors: development towards an advisory function is hindered by lack of insights

Current situation/bottleneck

- Farmers & farm contractors experience a lack of control and sovereignty to work with 'their' data
 - Multitude of platforms → 25 different field management in the Netherlands
 - Vendor lock-ins: lack of interoperability and sharing across platforms
 - Difficult to access 'own' data



From a technical (ICT/data) perspective



- Based on Bratton's Stack: <https://mitpress.mit.edu/books/stack>

From a legal/ethical perspective:

- Code-of-conducts are of voluntary nature, hence often not implemented;
- Lack of clarity on the data originator: farm, farmer or the manufacturer of the sensor? Or all? Also data originator can become data user, and vice-versa;
- Contracts give the data-originator rights of access, however this can become very cumbersome & expensive with many contracts;
- Code's of conducts assume that it is always feasible to make a rational and well-reasoned decision on a contract, however, time consuming and complicated.

From a governance/organization perspective

- Different partners in the ecosystem are not always in a well defined role;
- Lack of collaboration in an open-innovation setting;
- Lack of financial means/investments to overcome barriers.

Proposed future direction....

■ Towards a **farm data space**

- Ensure farm & contractor can access and control data on own enterprise;
- A private data-passport/cube for the farm;

■ Collaboration in the sector:

- Role for government to set potential common agreements, but also motivate partners for agreeing
- Role for private sector to collaborate in an open manner with other parties (incl. farmers)
- Role for farm organizations to advocate and elaborate the farmers position

Thank you

