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How to implement Precision livestock Farming into Practice ?

Jean-Louis Peyraud

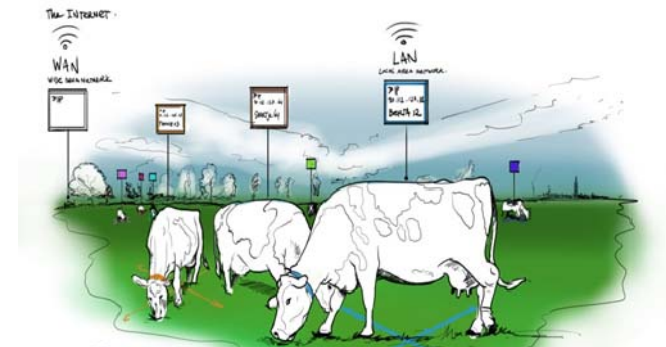
President of Animal Task Force





Precision Livestock Farming... promises ?

- More efficient use of resources
- Reduction of harmful emissions per unit of product
- Reduction of drugs use through early detection of pathology
- Reduction of workload and work painful through automation
- Management of animal welfare
- Automatic control of product quality (sanitary, nutritive, technology)
- Complete traceability of livestock through the food chain



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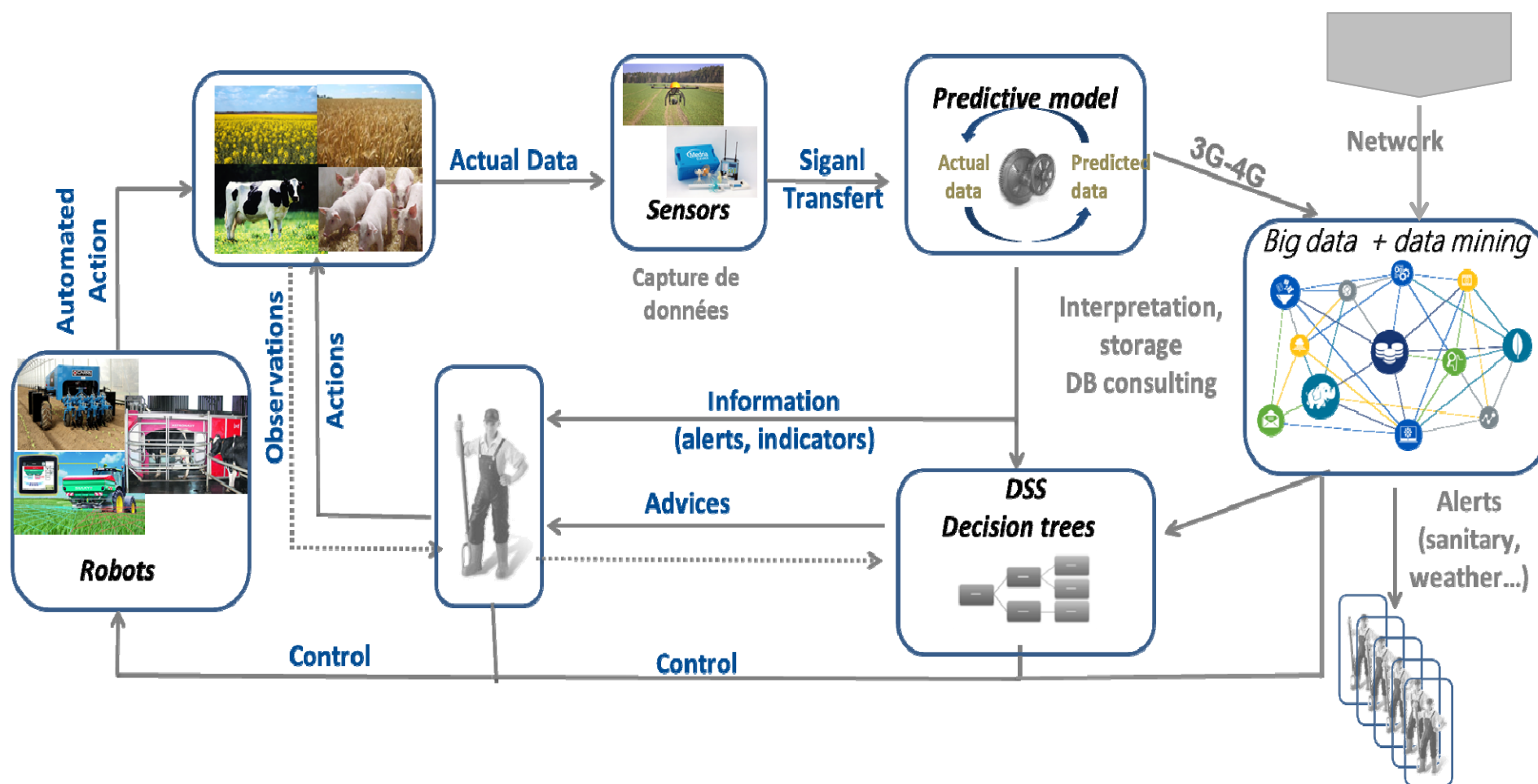
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What is PLF ?

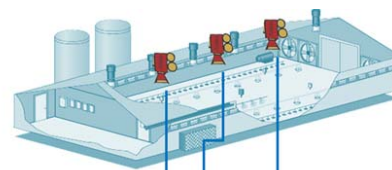


What is Precision Livestock Farming?

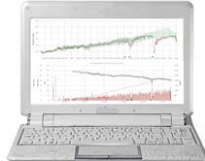




Some examples from EU-PLF projects



Farm manager dashboard



Camera network

Autograssmilk



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ATF vision



ATF Seminars: How to implement PLF in practice

ATF-EAAP special session, Aug.
31th 2015, Warsaw



- How could supply and demand influence the development of PLF, how could research contribute?

ATF Seminar,
Nov. 17th 2015, Brussels



- Where are the gaps of innovation (High tech, big data, Farm and food chain management)?

highlighted most important topics on which ATF can work further

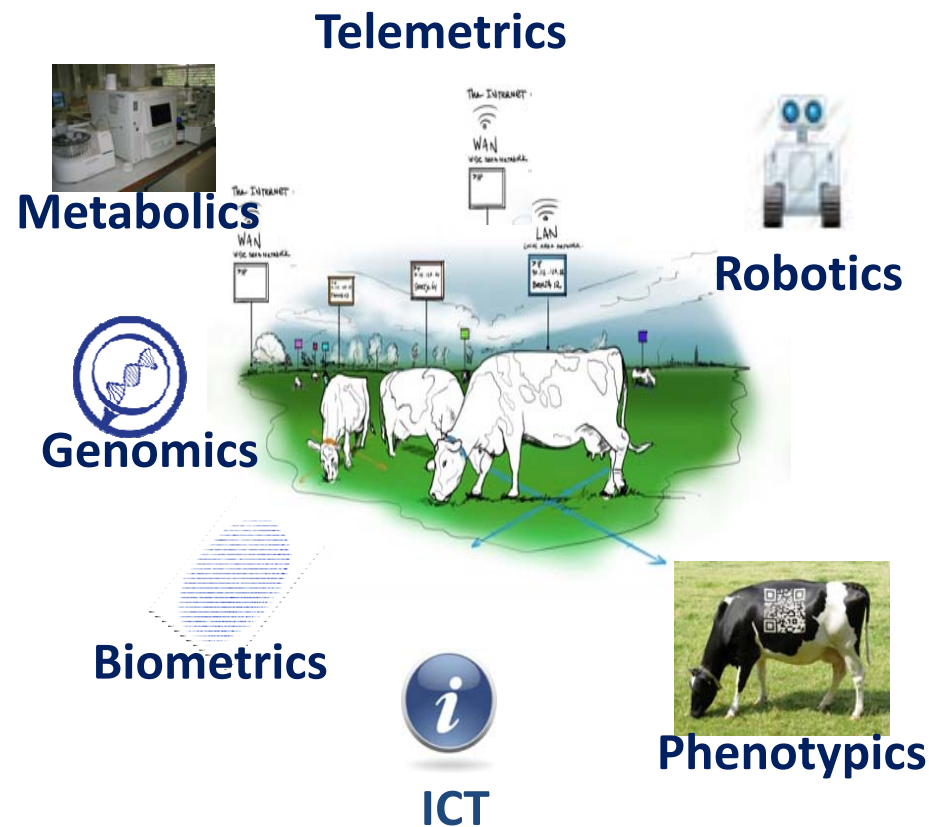
EIP Focus group: Mainstreaming precision farming



- How to organise the data capture and processing to mainstream the application of precision farming for an optimisation of inputs and yield?
- Identify the main reasons behind the current lack of adoption, and identify the key barriers to the implementation of Precision Farming on European farms



PLF: a key element for smarter farming, competitive breeding and value chain



- **Numerous domains**
 - Feeding
 - Health & welfare
 - Housing systems
 - Breeding
 - Agri technology
 - Traceability

- **Big Data management**

...TO CREATE VALUE FOR FARMERS



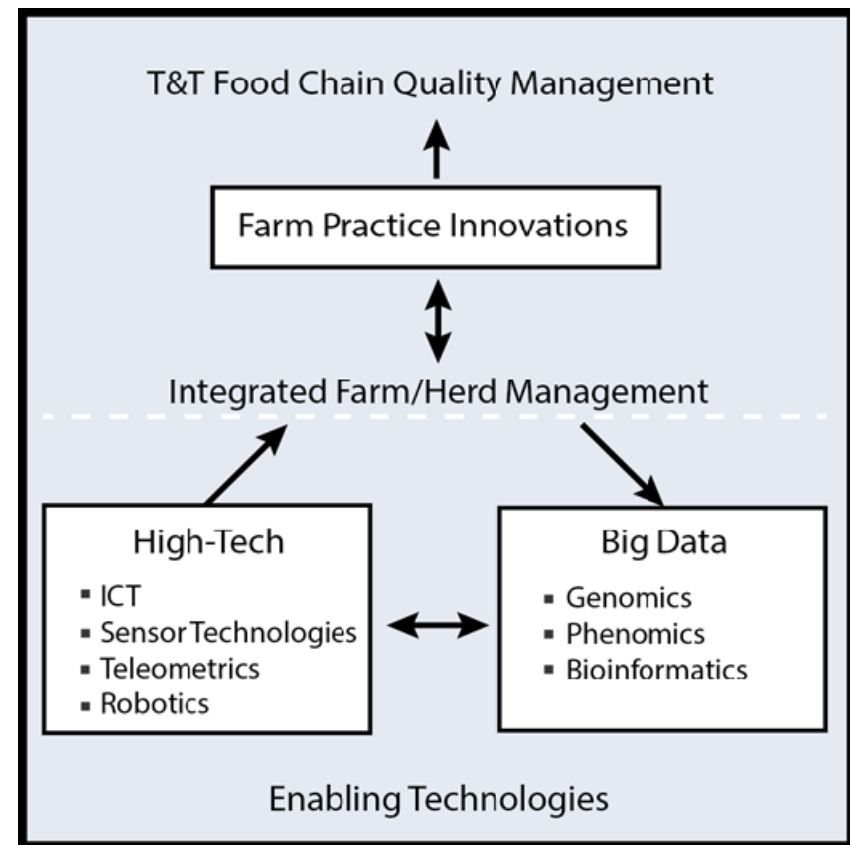
How to implement PLF

- A platform to link Big Data, High Tech, Farm practices innovations and T&T food chain quality management

**Multi-users, Multi-disciplinarity
International, Multi-sectoral**

- At the moment PLF is restricted to Engineering. The goal is to connect this part with the 2 others.

**Operational Groups, Living Labs,
H2020 Projects...**





Home messages (1)

- **Conditions of success : how to create value for farmers**
 - **The added value for farmers (advisory services, food chain) should be tested, validated and demonstrated in practice**
 - Field assessment experiments, Modelling, learn from others
 - Appropriate tools for cost-benefits analysis
 - **Solutions need to be integrated into farm management systems**
 - Multi inputs – multi outputs systems, inter operability
 - **Involvement of farmers in development of tools & training farmers are essential to ensure clear benefits**
 - **New business models for open data management and use**



Home messages (2)

- **Some technical problems to be solved**
 - **Sensors and data acquisition:**
Bio/smart sensors, IoT to facilitate machine-processor communication (context-aware approaches for sensors...), interoperability
 - **Information systems** (sensors, IoT, crowd sourcing, web):
make data retrievable, accessible, interoperable and re-usable (computer science), innovative management tools for big data
- **Consider geographic, socio-economic and farming systems variability across Europe**
 - **Increase efficiency vs collaborative digital tools**
 - **Digital inequalities** (access to internet, 3/4G networks...)



Home messages (3)

- **Questions cannot be reduced to technological developments**
 - **Digital tools must be adapted to the actors' needs (co-construction):**
 - LPF innovation renews the research process
 - Collaboration between researchers, advisory bodies, farmers & stakeholders
 - **Deep change in farmers' working conditions**
 - Managerial innovation, new relation with digital providers
 - Interaction with animals
 - **Legal issue related to intellectual ownership:** collection, analysis, sharing of data and related information
 - **Technology development will stimulate interactive innovation**
 - **Societal acceptance of new technologies**



What's next? ATF White paper



- **A topic: Precise management of animals**
 - Innovative sensors and intelligent models to monitor efficiency, health and welfare
 - Adaptation of PLF to nature based systems
 - Evaluation of social consequences of the implementation of PLF
- **A cross cutting issue: PLF**
 - Development of automated data sampling and analysis
 - Development of ICT/infrastructure to promote data exchange
 - Data driven research
 - Development of predictive biology approaches in PLF
 - New business models

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**For latest news and upcoming activities:
www.animaltaskforce.eu**

- ATF Scoping paper
Aug. 2015
- ATF Blog on PLF
- ATF Position Paper
2016

Thanks!



@AnimalTaskFrc



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