The Alliance on Internet of Things (AIOTI): The potential of digital platforms in agriculture

H2020 SC2 Infoweek 2017 - Digitising agriculture and food value chains

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About Gradiant

• Private RTO focused on digital technologies based in NW Spain

• +100 staff serving Security, Intelligence and Connectivity technology needs from multinationals to local SMEs

• Promoter of the Galician agrifood DIH in joint effort with the Univ. of Santiago de Compostela and with support from the regional government
About AIOTI

• AIOTI WG06 “Smart farming and food security” is already an ecosystem:
  • More than 50 members: large corporations, SMEs, trade associations, associations of farmers/ cooperatives, RTOs, consultants…
  • Led by:
    • Chair: Luis Pérez Freire (Gradiant)
    • Co-chair: Thomas Engel (John Deere)
  • Scope: smart farming, food safety/traceability, business models

• 4 lines of work:
  • Mapping of smart farming area
  • Networking with farmers and agrifood sector
  • Case studies and tests/pilots
  • Educational training programmes

Some WG06 members during the AIOTI Strategy Workshop held in Toulon, France, 3 May 2017
Digital Industrial Platforms: what do we mean?

• Platforms are understood as:*

• Narrow sense: “multi-sided market gateways creating value by enabling interactions between several groups of economic actors”

• “Digital platforms are like operating systems that integrate different technologies and various applications and services”

• Broad sense: “agreements on functions and interfaces between industry players that create markets and market opportunities leading to ecosystems and standards”. This encompasses platforms (in the narrow sense) together with reference architectures, interaction protocols, and interoperability frameworks.

* DEI strategy (1st and 2nd DEI WG2 reports)
Digital Industrial Platforms: Why so important?

**Community**
- Connecting users
- Marketplace

**Infrastructure**
- Integrating systems
- Third party applications

**Data**
- Accessibility
- Relevance
A case study: smart agriculture

Vision

**Digital agriculture platforms** for global optimization of farmers’ operations: greater efficiencies, reducing environmental impact, increasing sustainability

### Farmer-centric
- Not limited to large farms: platforms must support diverse needs
- No vendor lock-in
- Increasing the choices farmers can make between suppliers of the new technologies
- Make sure that systems link to each other.

### Data-centric
- Creating value and services from data
- Farmers generate and consume huge amounts of data
- Data/information should be fully exploited
- Connection with the whole value chain, new business models
- Great opportunity: sharing of data amongst farmers

Image source: Euractiv
Main issues and gaps in smart agriculture

Interoperability and standardisation

• Connecting machinery and sensors (technical systems cannot be linked up)
• Interconnect existing platforms
• Platforms open to all farmers/vendors. Open APIs

Data management and sharing

Access to data, control, security, privacy, liability, trust in the platforms

Prove value/effectiveness

• Ensure that farmers get value from data
• Data/information/knowledge remain un-used
• Decision-support systems
• Benchmarking
Digitising agriculture through platforms

Mainstreaming digital platforms equals mainstreaming digital agriculture

- Foster a digital ecosystem around platforms and the needs of farmers and the whole value chain
- Attraction of investments. Snowball effect
- Availability of mature solutions

Growth-hacking agriculture digitisation

Support agriculture DIHs as key catalysts of the digital transformation locally → AIOTI WG06 position paper

- Align efforts at EU (CAP 2021-2027), MS and regional levels
- Go for low-hanging fruits first, then expand