

AEF

Providing electronic communication to the Ag sector

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Partner in H2020 projects



ATLAS
AGRICULTURAL INTEROPERABILITY
AND ANALYSIS SYSTEM



agROBOfood

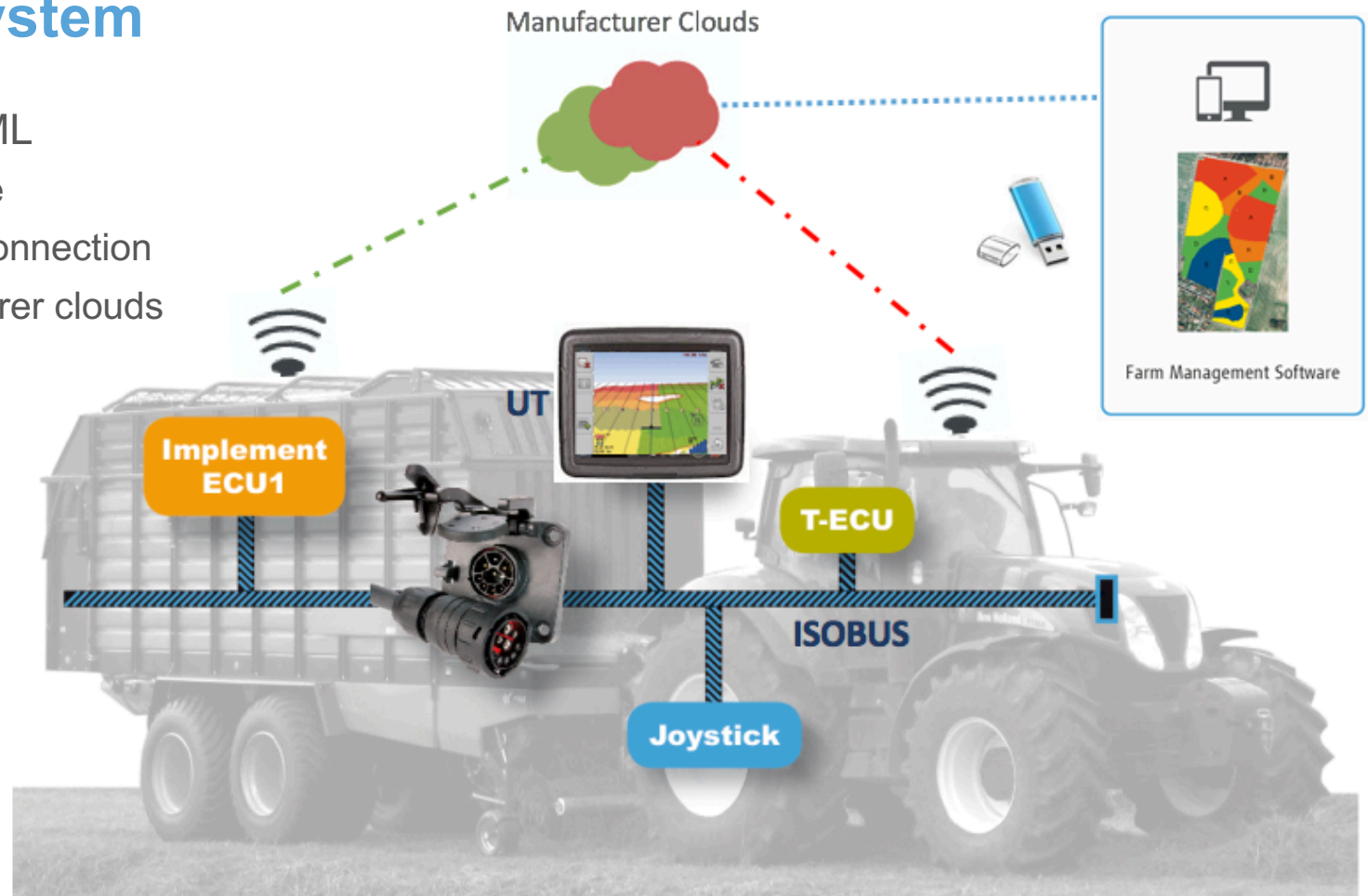
Who are the AEF?

- Agricultural Industry Electronics Foundation
 - Founded in 2008; 8 major agricultural equipment manufacturers and 3 trade associations
 - Over 230 member companies
- Worldwide support of ISOBUS implementation
 - Structured in up to 15 different teams
 - Supported by 5 international test labs to certify products
- Define guidelines for Ag industry
 - Focus on Tractor – Implement connection using ISOBUS
 - Data exchange between machines and clouds
 - Coordinate activities and developments



Typical ISOBUS system

- Data interface via ISO-XML
 - Exchange via USB device
 - Transfer via proprietary connection
 - Connected via manufacturer clouds



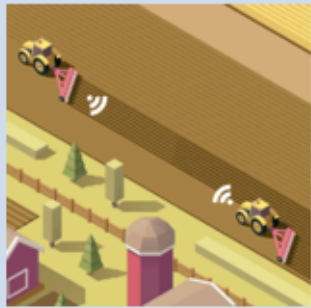


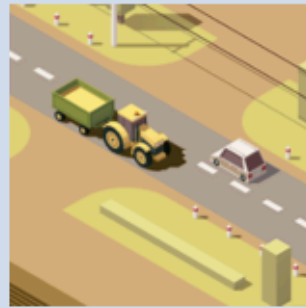
FMIS = Farm Management Information System
UT = Universal Terminal

ISOBUS machines moving into digitized world

- Working with systems of mixed fleet is challenging
- Communication in rural areas is even more challenging
- Robust solutions for farming needed
- Interoperability depend on communication
 - Key success factor



Motivation & Use Cases

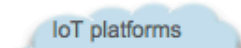
	Process Data Exchange (Coverage)	Cooperative Machines (Platooning)	High Volume Data Streaming (Camera)	Road Safety
				
<i>Range</i>	High (2/6 km)	Low (up to 50 m)	Medium	High
<i>Bandwidth</i>	Medium	Low	High	Low
<i>Latency</i>	Average	Low	Low	Low
<i>Relationship</i>	n to m	1 to 1	1 to 1	n to m

- Standardized M2M communication in mixed fleets creates high value opportunities for customers worldwide by enhancing work efficiency, quality and safety even in rural areas.

Farmers complexity today



Farmers complexity today



- Data collection and connectivity
 - Most manufacturers have own software platform or uses joint platforms connecting vehicles
 - Using different data models
- Farmer needs to manage their machines
 - Capable to use multi-branded fleets with standard for cloud communication
 - Data and reports need to be in the system directly after the work on the field is done



Interface to connect different platforms needed

AEF is working on a solution to reduce interoperability issues!

Main scope of AEF work

- Wireless Infield Communication
 - High Speed ISOBUS
 - Platform to Platform
 - Tractor Implement next generation
 - Conformance testing for compatibility
- ➔ Fulfil safety, security and liability requirements and regulations



Thank you

