Agricultural Data Exchange along the Value Chain with Data-Hub
DKE-Data GmbH & Co. KG

based at Innovation Centre Osnabrück (ICO), Albert-Einstein-Str. 1
founded in July 2014
What is going on in the Market?
Life Cycle Analysis for Precision Farming

Data-Management will be a big part of Precision Farming!

Source: International Society for Precision Agriculture (ISPA) (U.S.), Precision Agriculture Research Association (PARA) (U.S.), PrecisionAg Institute (U.S.), SPAA Precision Agriculture (Australia), Press Releases, Magazines, Investor Presentations, Expert Interviews, and MarketsandMarkets Analysis
Customers have precise Data management Requirements

Cross Manufacturer Data Exchange
Open Interfaces
Automatic Collection of Data
Easy Data Processing
Easy Evaluation of Data
Easy Data Access
Data Security
Apps for Process Improvement
**Goal of DKE-Initiative**

**Goal:**
Development of a neutral & crossmanufacturer Data Exchange Platform along the Value Chain
As part of Industry 4.0 developments, agricultural machines are part of a complex ecosphere & will follow the evolution of this ecosphere.

Source: Harvard Business School
A typical Process on a Farm: Growing Wheat
A typical Process on a Farm: Growing Wheat
Today's situation is not really satisfying from the Customers and App Provider point of view.
Data Exchange along the Value Chain

Value Chain: From Seed to Food

1. Data Exchange

Seed, fertilizer, plant protection → Farm → Field → Machine → Storage → Food processing
Data Exchange today becoming more & more challenging
Data Exchange along the Value Chain

Value Chain: From Seed to Food

1. Seed, fertilizer, plant protection
2. Farm
3. Field
4. Machine
5. Storage
6. Food processing

Data Exchange

Seed, fertilizer, plant protection → Farm → Field → Machine → Storage → Food processing
Data Exchange today becoming more & more challenging
Data Exchange with Data Hub will be much more easy
Data-Hub Overview: The main connected market participants
Farming 4.0: What will be possible in the Future?
Example: „Opti-Clean App for Potatoe Harvester“

Apps connected to data basis could replace online sensors.

Opti-Clean App

Data HUB

GPS Position

Conditions of
• Weather
• Soil
• Biomass content
• ...

Machine specific Apps

Settings Cleaning unit

Apps connected to data basis could replace online sensors.
Inside Data-Hub

- **REST-Interface**
  - **App Information Area (GUI)**
  - **Data & Connection access management (GUI)**
  - **Data-Buffering**
  - **Testing Suite**
  - **Usage Counter (Pricing)**

**Legend**
- **API**
- **Application Programming Interface**
- **R²B**
- **Interpretation and Routing Rules Box**
- **Storage**
Data-Hub and EFDI (Extended FMIS Data Interface)
The DataHub business model

Data-Hub use must be paid from App Providers

Price Model
On consumption or flatrate

App Provider has to pay
X € per month
to Data-Hub Provider

The user of an app is the purchaser for receiving or sending data.
Machine data will not be transferred to the data hub if no app requires data.
Operation of Data-Hub: The Farmer controls the settings
SimpleShow Video Data-Hub

See on www.dke-data.com
Conclusion

10 Manufacturers will develop and sell a product through the newly founded DKE-Data

The Requirements of the future data management will be fulfilled with the Data Exchange Platform "Data-Hub" and additional software applications

The Data Exchange platform „DATA-Hub“ will become a central element in Farming 4.0

The user can define individually which software applications and machines he combines with his “Data-Hub” account.
Together
WE
Achieve
More