

IAgrE Landwards Conference 2019

## **The contribution of data harvest on the development of the new LEXION generation – the impact of the digital transformation**

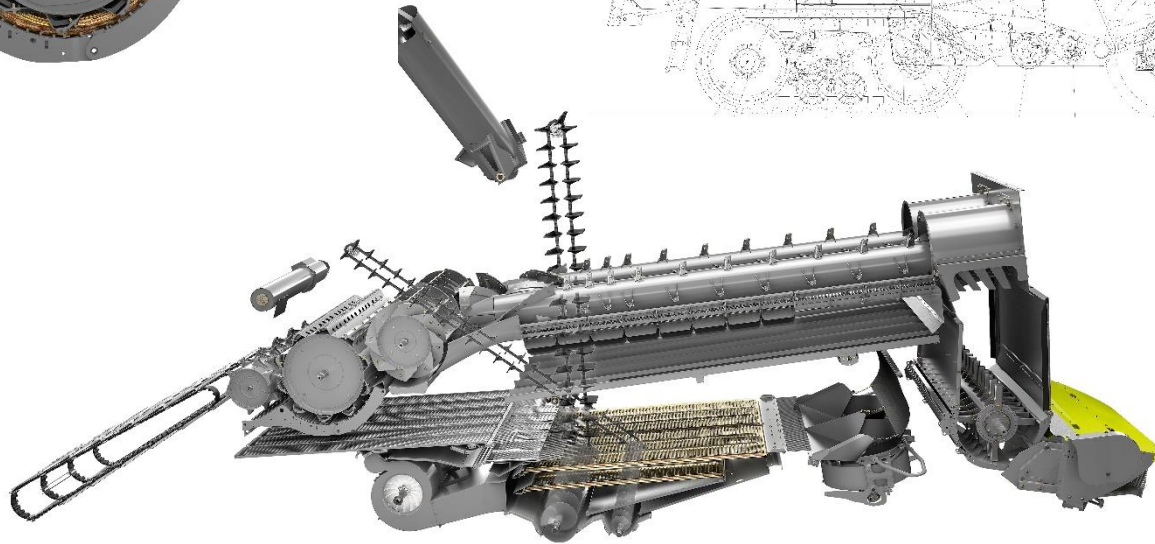
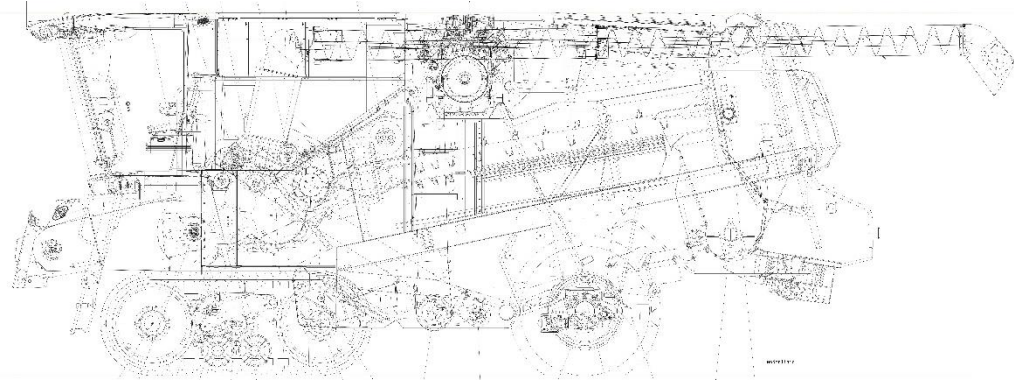
Dr. Joachim Stiegemann (Head of Product Management CSE)

Edward Miller (CLAAS UK)

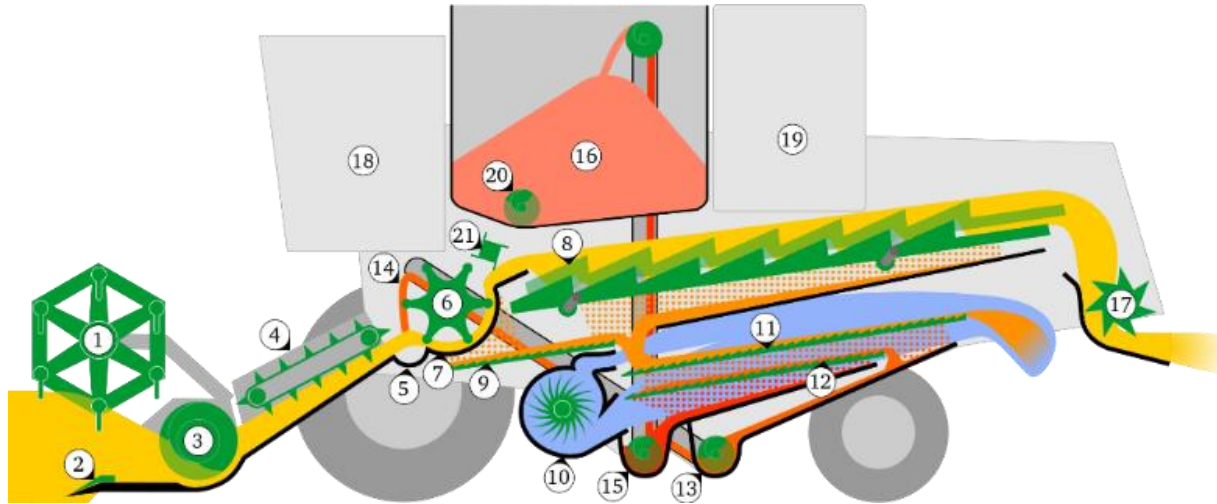
**CLAAS**



# The CLAAS nucleus is machine construction



# Engineering works without IoT – a consistent digital data approach – so far

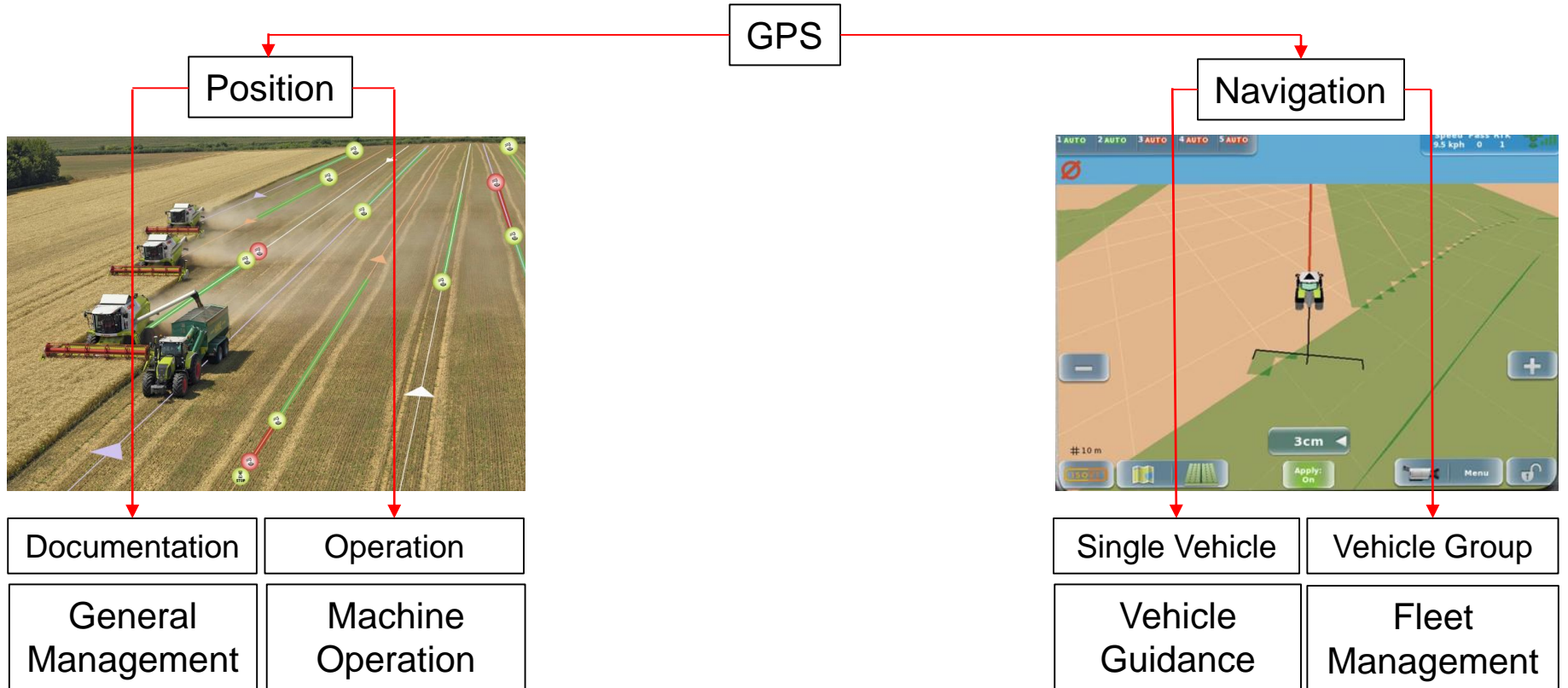


AutoCAD / Inventor, Hypermesh, Unigraphics, I-Deas, SolidWorks, Ansys, CATIA V5 and V6  
Fluent, Pro/Engineer, Xsteel, RAM, CADS, SFRAME, RSA, ORION, GTS Strudl, AutoCAD  
STAAD, ETABS, AutoCAD, ArchiCAD, Rivet,

# Game Changer: GPS – from “PoKéMoN GO” to Precision Farming and Engineering



# GPS: Connects location and time with any kind of action, activity or procedure



# Competitive markets – boost the ambitions for shortening the time to market

This fuels the application of sophisticated virtual product models

...frequently referred to as “**digital twin**”

Enabled by:

- Digitalization of manufacturing
- Cyber-physical production systems
- Model-based system engineering
- Data gathering and processing
- Models with production and operation data.

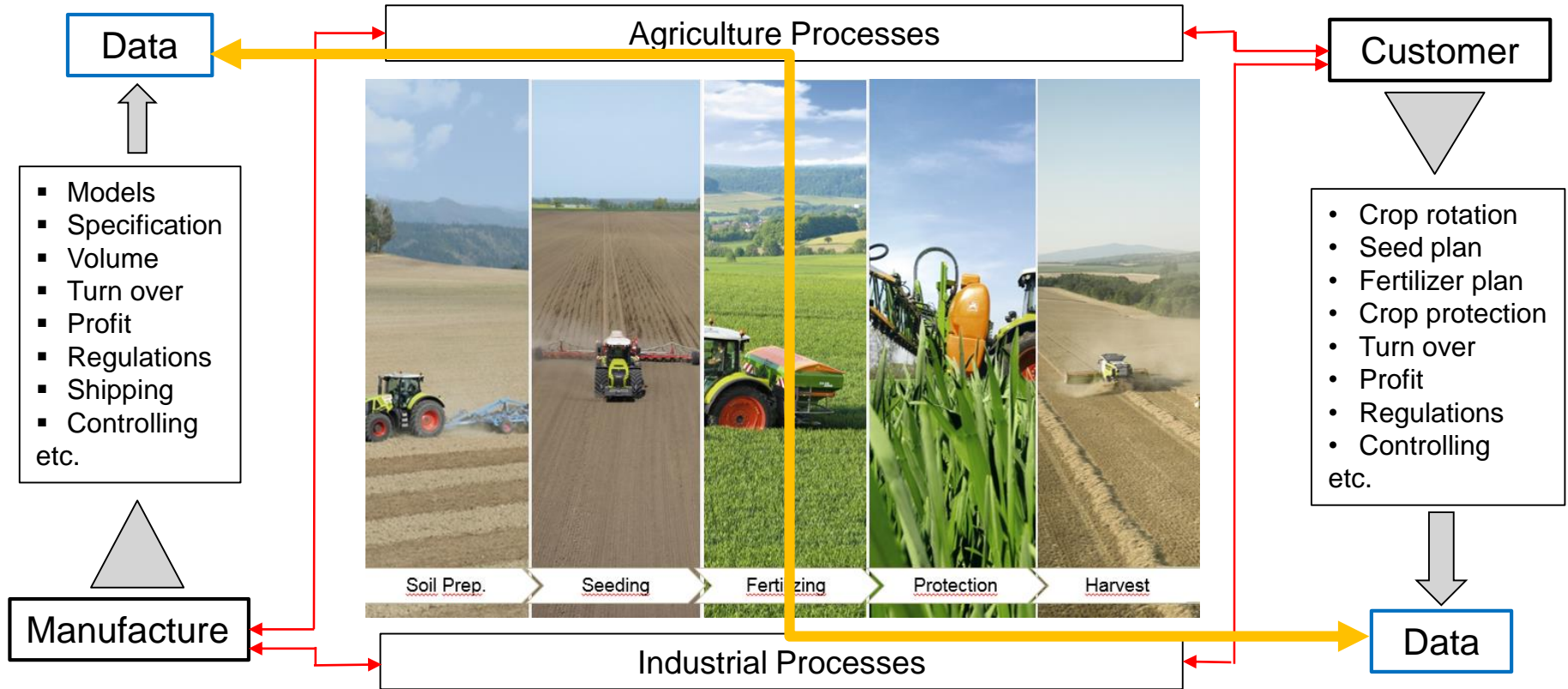
Value for:

- Product and process development
- Operating and servicing decisions on the product behavior
- Optimization and maintenance
- Product design – simulation and monitoring

Reduce the need for costly and time-expensive physical mock-ups



# Data Sources from Processes



# Steering Systems

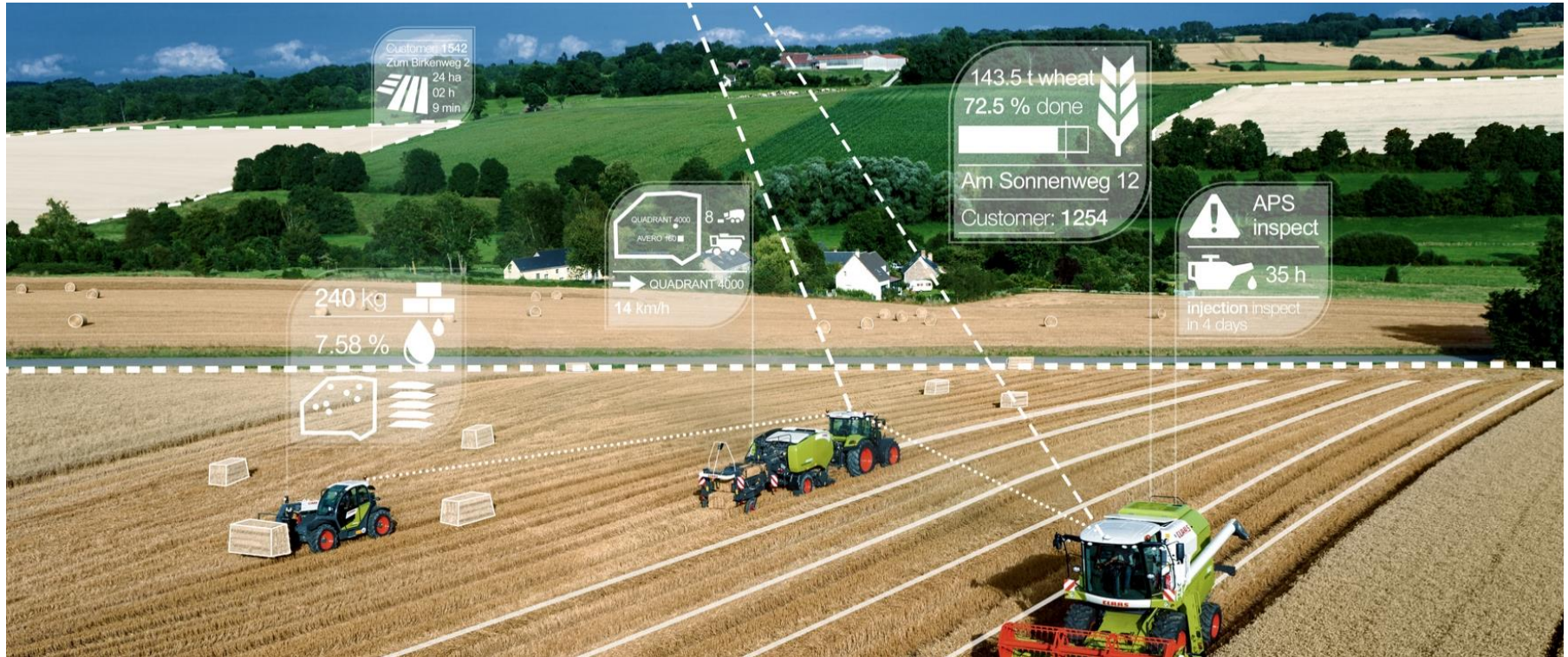




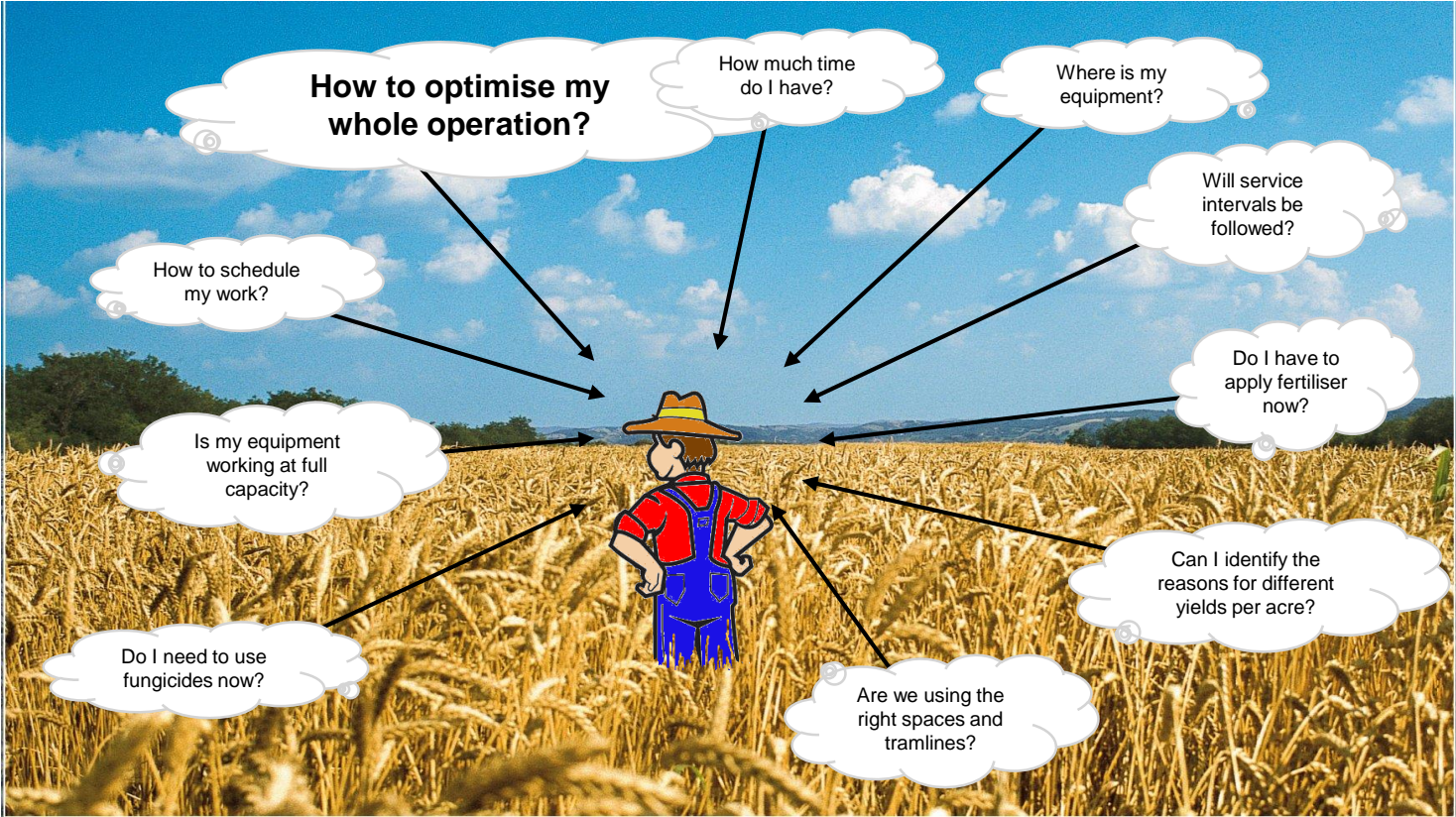
# Process Automation



# Machine Data



# The busy farmer





# What next?

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Are customers prepared to share data?

Where should it go?

How should it be used?

Who will process the data?

They have to be able to make that decision

It is their data after all

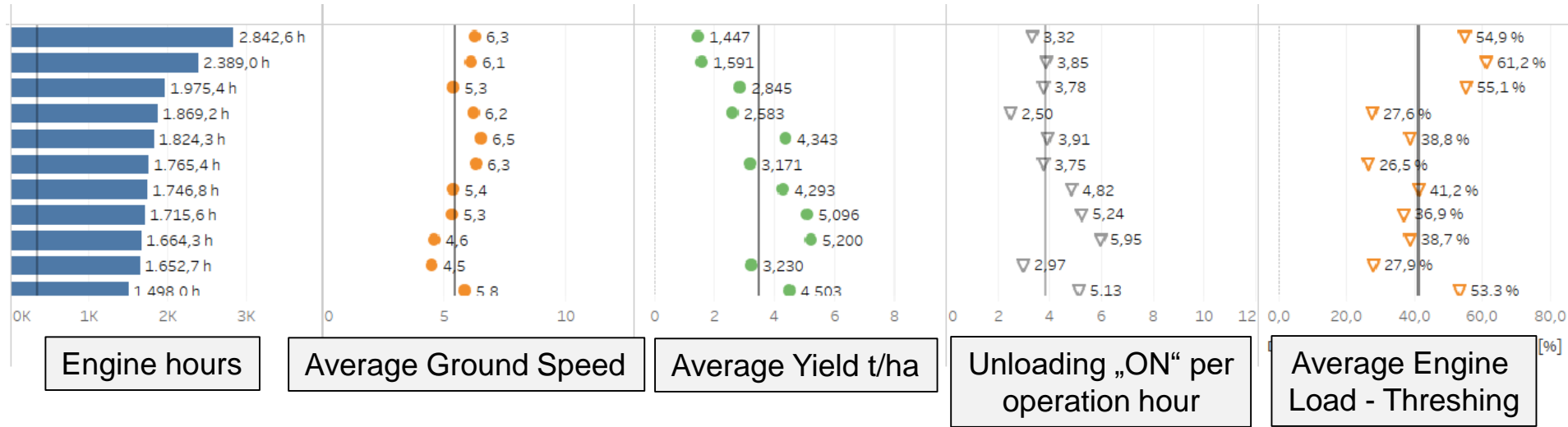
# Digital technology at an entry level is unconsciously already incorporated



# What are the Next Steps: Getting Bigger



# Operation characteristics of LEXION combines



N = 1183 combines

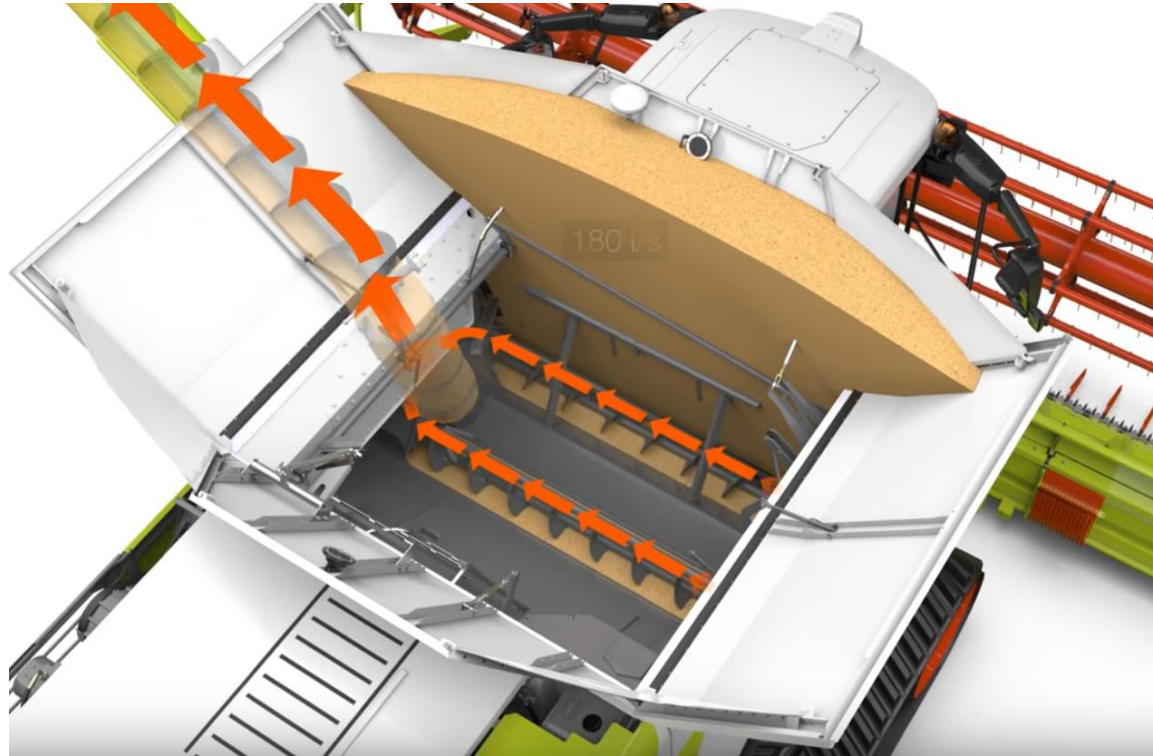


# Grain tank unloading operations over engine hours (UK LEXION)

Unloading „ON“	Engine hours	Unloading „ON“ per hour
2.535	241	11
1.660	220	8
1.688	226	7
1.995	307	6
577	90	6
662	104	6
492	77	6
1.806	285	6
566	89	6
552	87	6
428	69	6
202	33	6
487	79	6
516	84	6
2.581	421	6
522	87	6

N = 180 combines

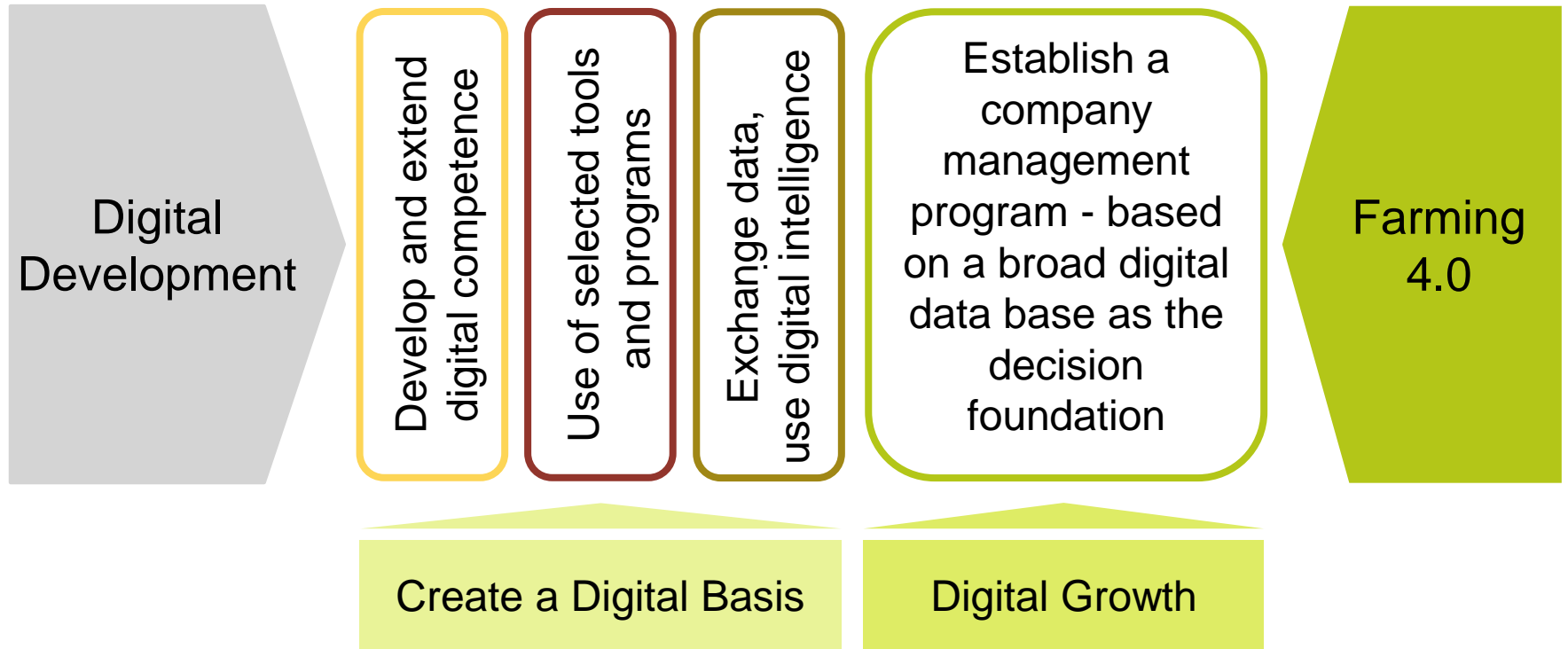
# Grain tank unloading operations – virtual reality



... Step by step we are leaving the analog/linear data setup



# Digital Agenda



Progress and penetration of digital agriculture on farms and industry depends on results

Keep and improve bottom line result

Secure sustainability

Provides compliance with regulations

Guarantees data integrity

Does not create problems

...appreciate your attention!

