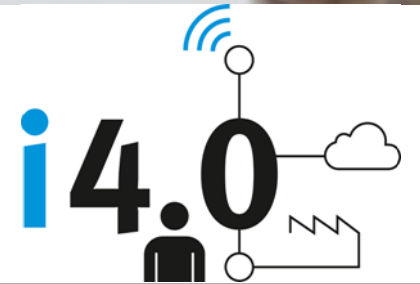


Implementing Industry 4.0 - Core elements



Andy Parker-Bates
Product Marketing Manager
Festo GB



Toolbox Industry 4.0 | Structures for Industry 4.0 thinking

Guideline Industrie 4.0

Guiding principles for the implementation of Industrie 4.0 in small and medium sized businesses

Toolbox Industrie 4.0					
					Industrie 4.0
Produkte					
Integration of sensors / collection					
Communication / Connectivity					
Functionality for data storage and information exchange					
Monitoring					
Product-related IT services					
Business models around the product					

Toolbox Industrie 4.0					
					Industrie 4.0
Production					
Data processing in the production					
Machine-to-machine Communication (M2M)					
Company-wide networking with the production					
ICT infrastructure in production					
Multi-machine interfaces					
Efficiency with small batches					

Bottom up and top down | Two approaches to implement Industry 4.0



REVOLUTION

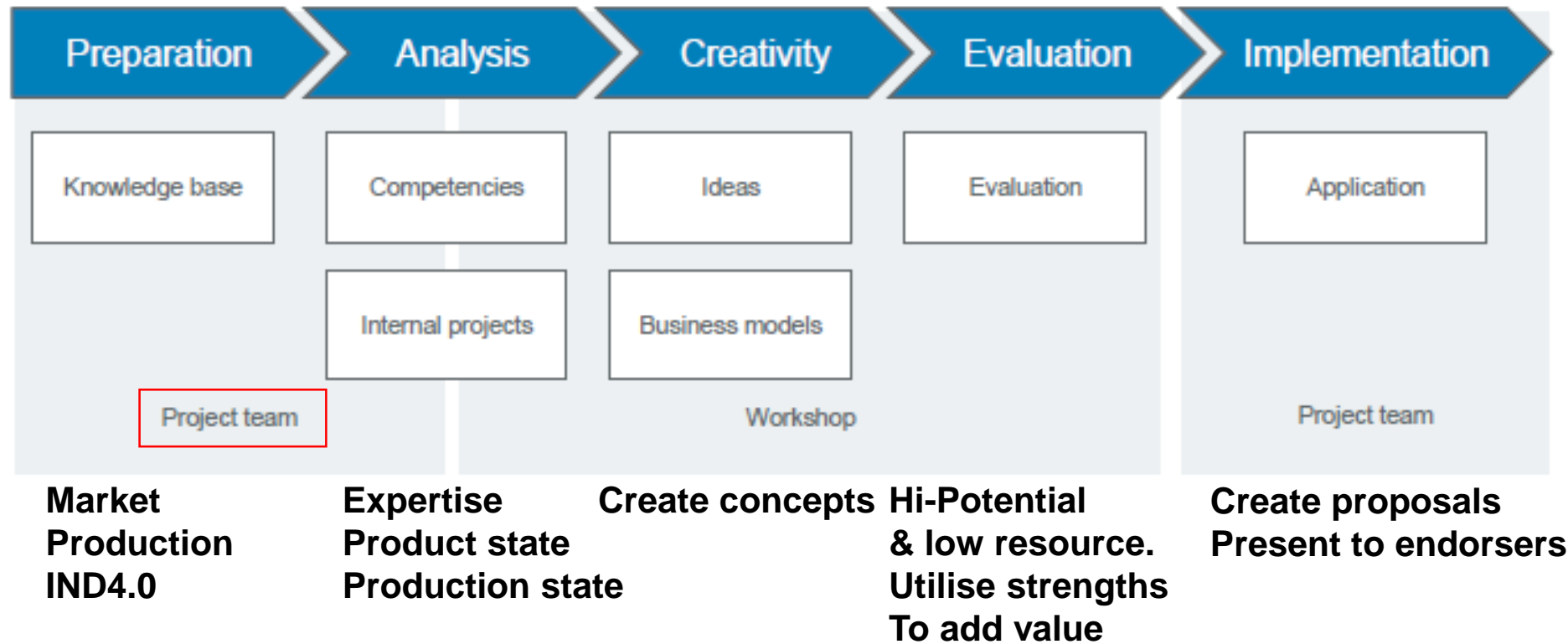
Top down strategy:
From the whole to
the details

Industry 4.0

Bottom up strategy:
From the details to the whole

EVOLUTION

Top down | Five stages of the top down approach




Bottom up | Where to start

☰

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- Where are we now ?
- What route are we taking ?
- Who will get us there ?
- What will we need to get there ?
- How will we know we are on track ?
- Where we want to be





Bottom up | From value added and waste...

Value added:

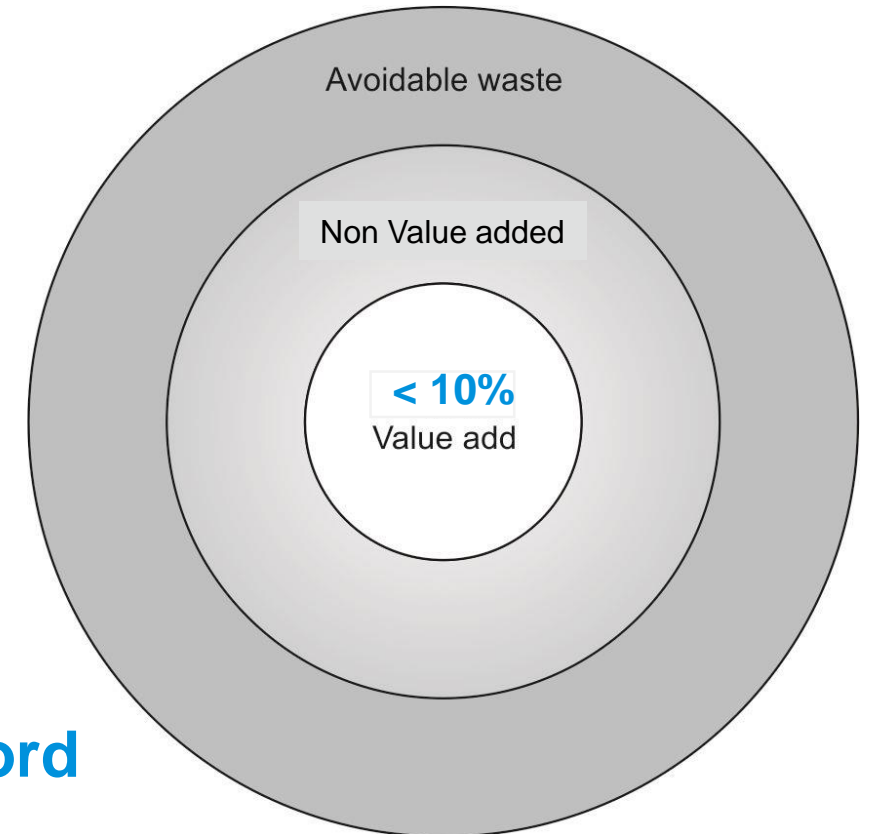
Value added is that part of an activity for a product or a service for which the customer is actually willing to pay.

Non value added:

All activities which are necessary to enable the value added but which do not add to the value itself.

Avoidable waste:

Work that does not result in a benefit for the company or the employees, but which circumstances dictate has to be done.



“First organisation, then automation” – Henry Ford

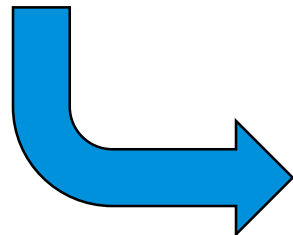
Business models Industry 4.0 | Disruptive business models

Technological enabler Industry 4.0

New dimensions of interconnection

Increasing computing capacity

Maturity and affordability of high-tech technologies



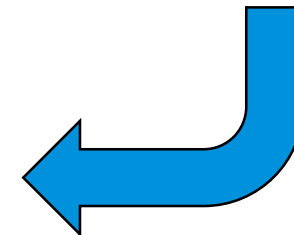
Possibility of new (disruptive) business models

Non-technological enabler Industry 4.0

Innovation capacity and flexibility of start-ups

Faster market acceptance by new media

Political support / funding



Business models Industry 4.0 | 365FarmNet – an initiative of agriculture mechanical engineering

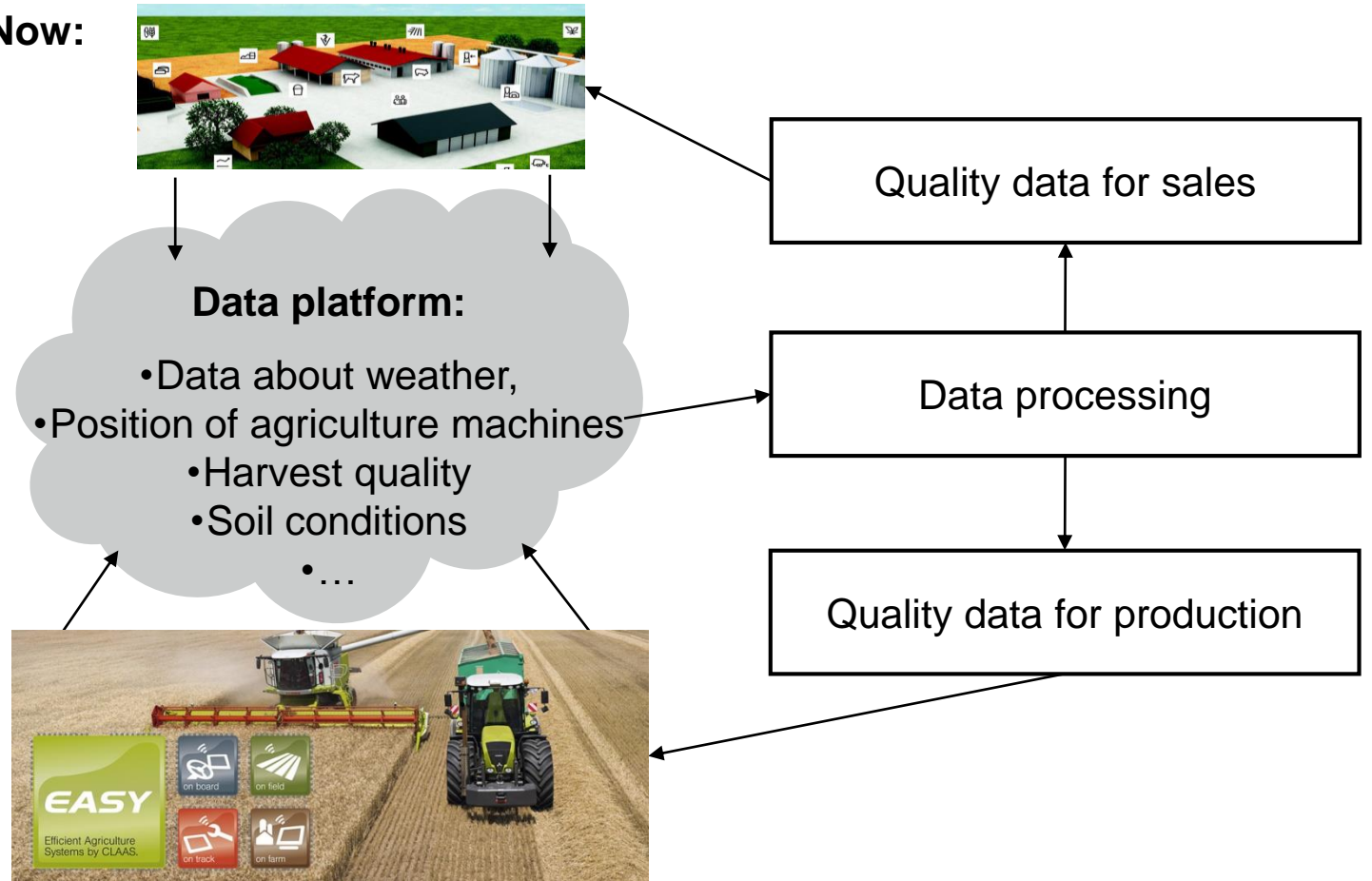
Before:

Several aspects must be considered to have an optimal harvest:

- Weather
- Market prices for seed
- Fertilizers
- Fertilizer specification and amount
- Market prices for products
- Maturation of products
- Quality of products
- Soil conditions
- Logistics of harvest machines
- ...

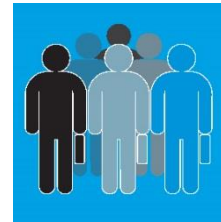
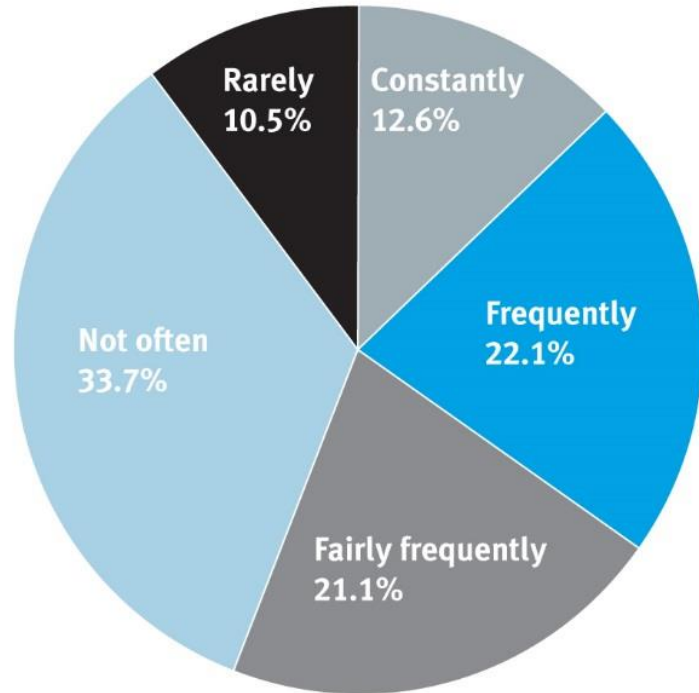
FarmNet 365 is an initiative of 15 partners from different industries (insurance, agriculture machine producer, software companies ...)

Now:



Change management 4.0 - Managing change

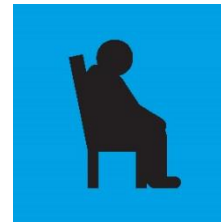
How frequently does your organisation undertake a change management project?



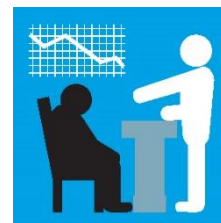
New competition in the market
 Ensure you scan the whole horizon
 Monitor the trends in orders/tenders



Increase in customer complaints
 Do you see complaints as a gift?
 Listen and agree actions

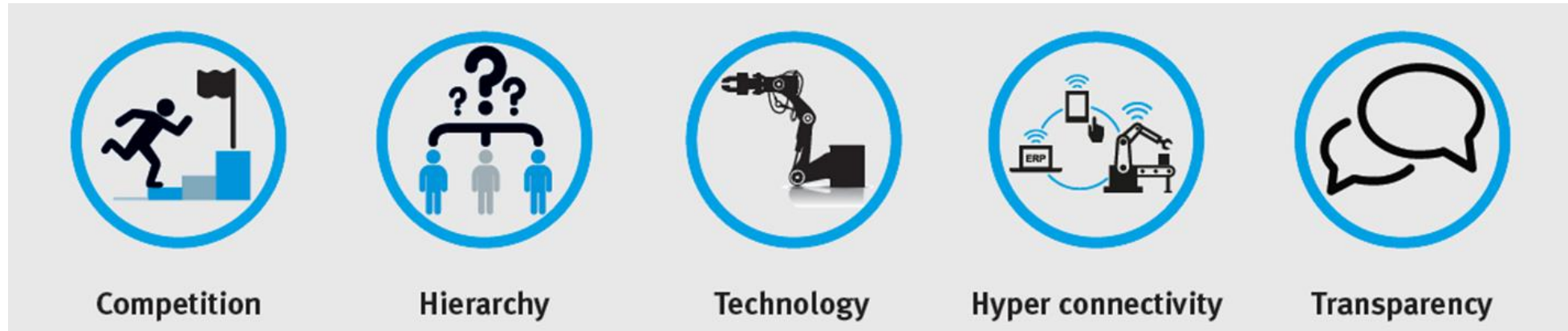


Low employee morale / disengagement
 Focus on alignment as a two way street
 Build open and honest communication



Low productivity
 Who are you measuring yourself against?
 Benchmark and collaborate

Change management 4.0 – Communicating change - Leadership level



Leadership 4.0 means reacting quickly to new competition

Leadership 4.0 needs to free up decision making to maximise new opportunities whilst keeping communication flowing

Leadership 4.0 is about harnessing the talents of individuals who can explore, and maximise new technological advancement

Leadership 4.0 encourages organisations to take advantage of opportunities new connectivity models present

Leadership 4.0 places open and honest communication at its heart