



# Quality Controlled Logistics in the Floricultural Sector: Chain Optimization by Smart RFID, Sensor, and Internet Technology

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## OUTLINE



Motivation



Methodology



Results

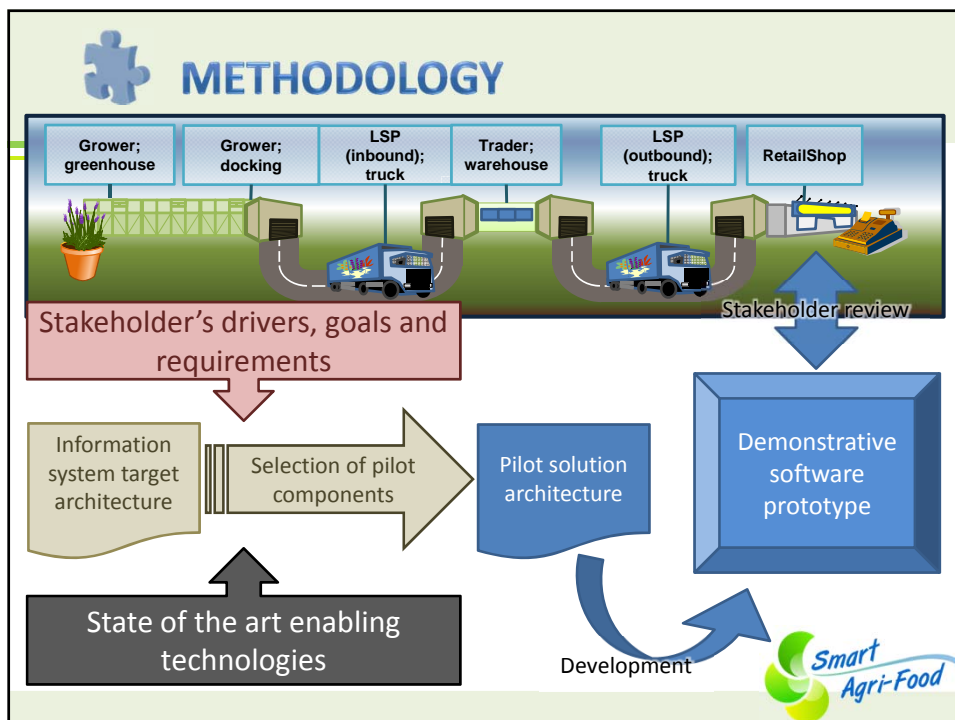
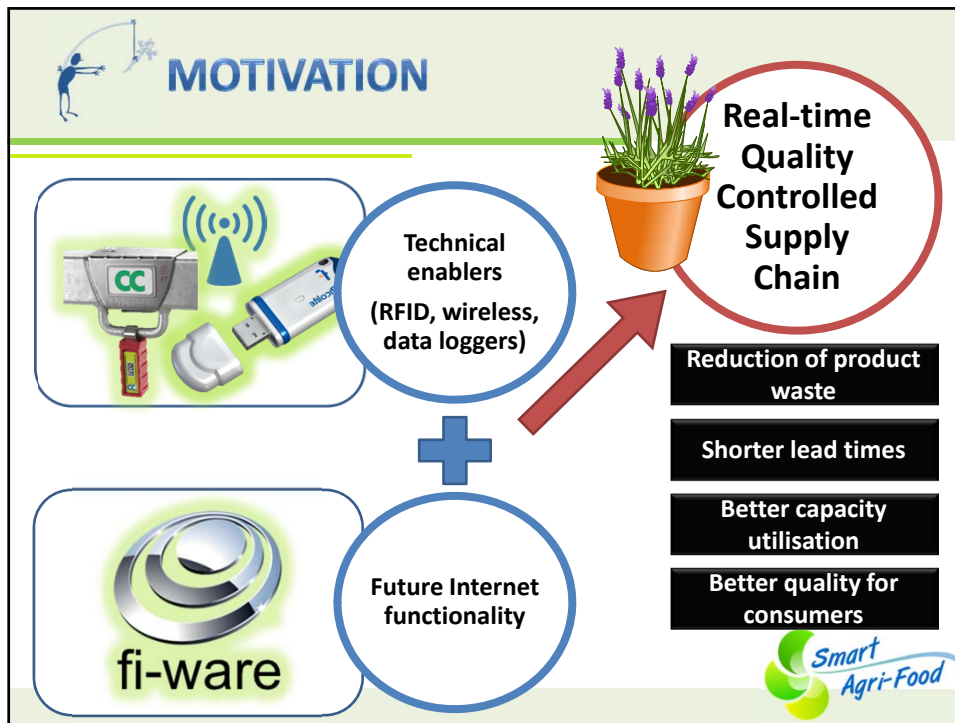


Conclusions



Planned Improvements







## STAKEHOLDER'S DRIVERS, GOALS AND REQUIREMENTS



Long term contracts between grower and trader



More flexible delivery moments for growers and transporters



Store specific replenishment orders



Reduced duration of shop replenishment processes



Product specific information gathering

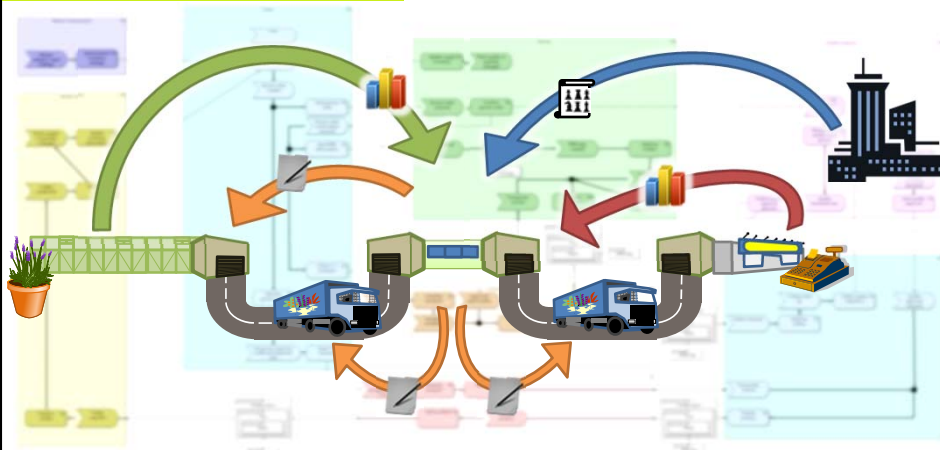


Real-time control product environment conditions

**Most important stakeholder requirements**



Gewenste situatie



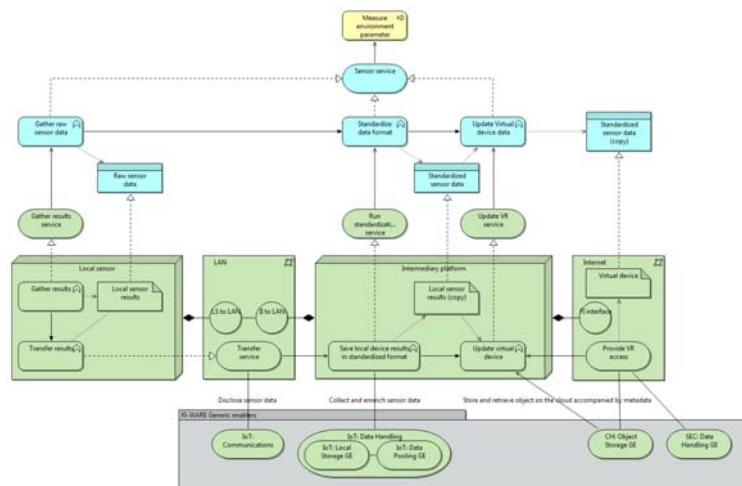
## INFORMATION SYSTEM TARGET ARCHITECTURE

Business layer

Application layer

Technology layer

Link to FI-WARE GEs



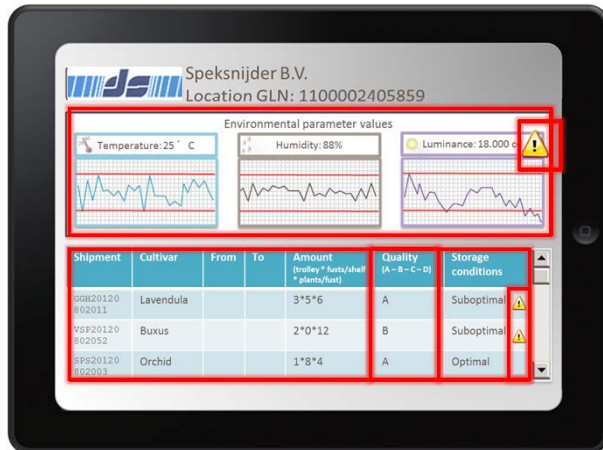
## STATE OF THE ART ENABLING TECHNOLOGIES



Simulated screens to demonstrate the concept



## SELECTION OF PILOT COMPONENTS

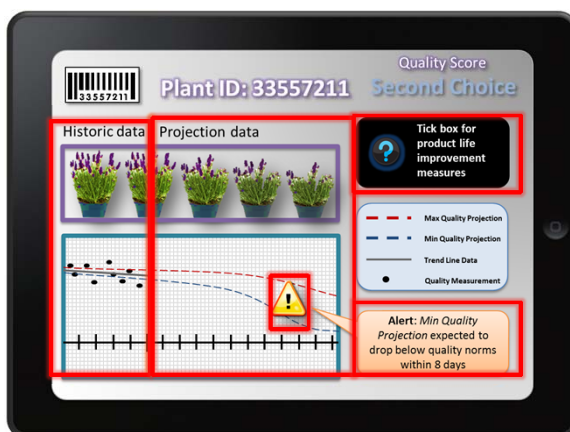


- Overview of conditions
- Overview of cultivars in docking area
- Quality of cultivars
- Appropriateness of storing conditions for cultivars present
- Alarms for problem notification

Mock-up quality monitoring screen



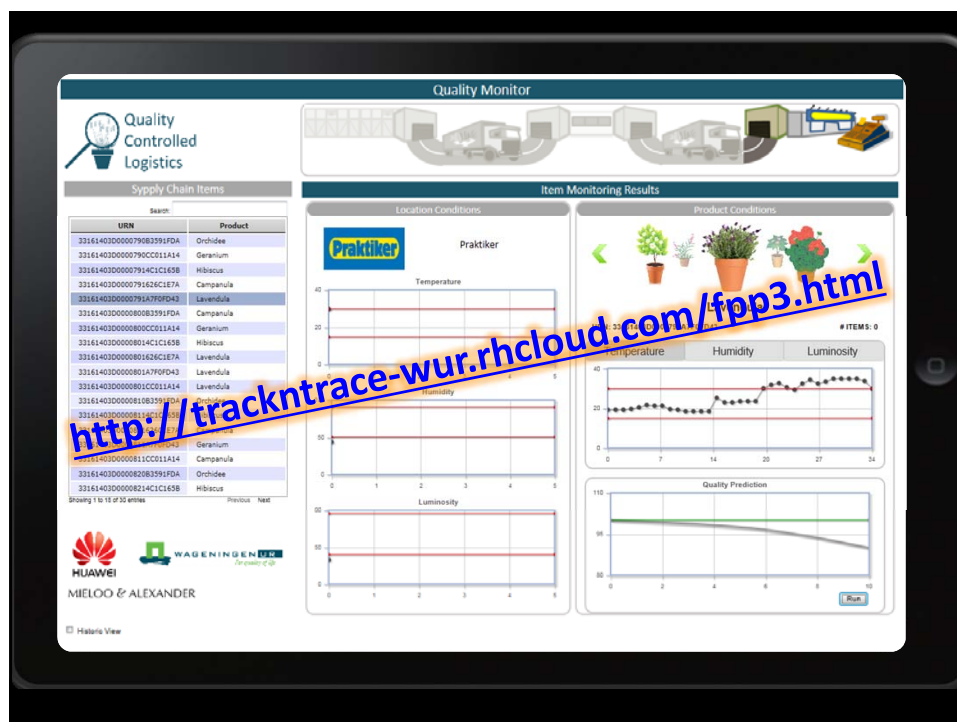
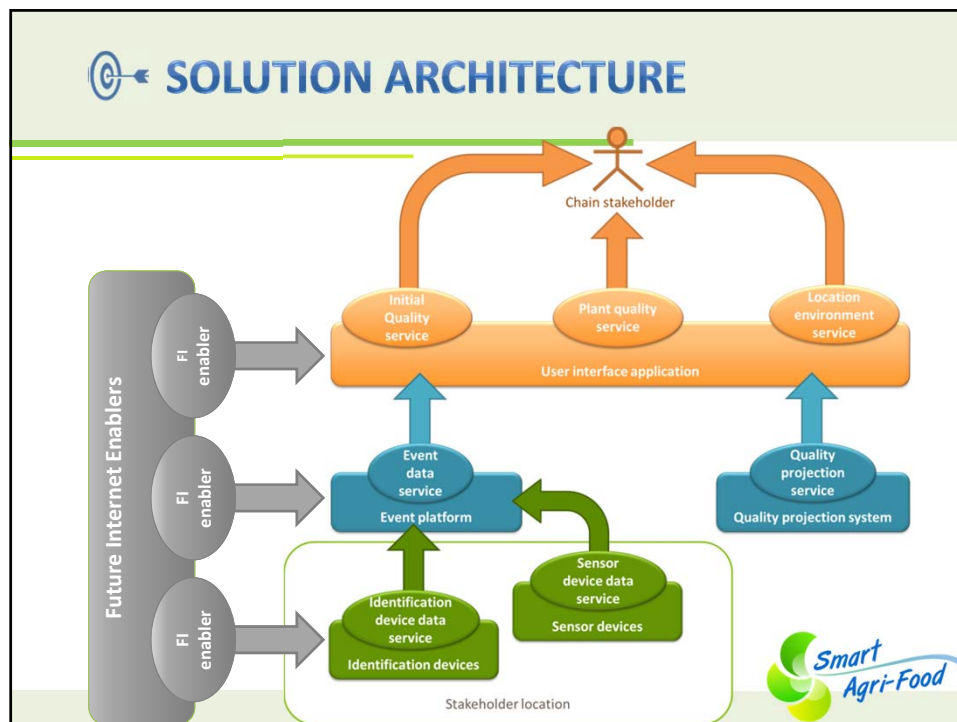
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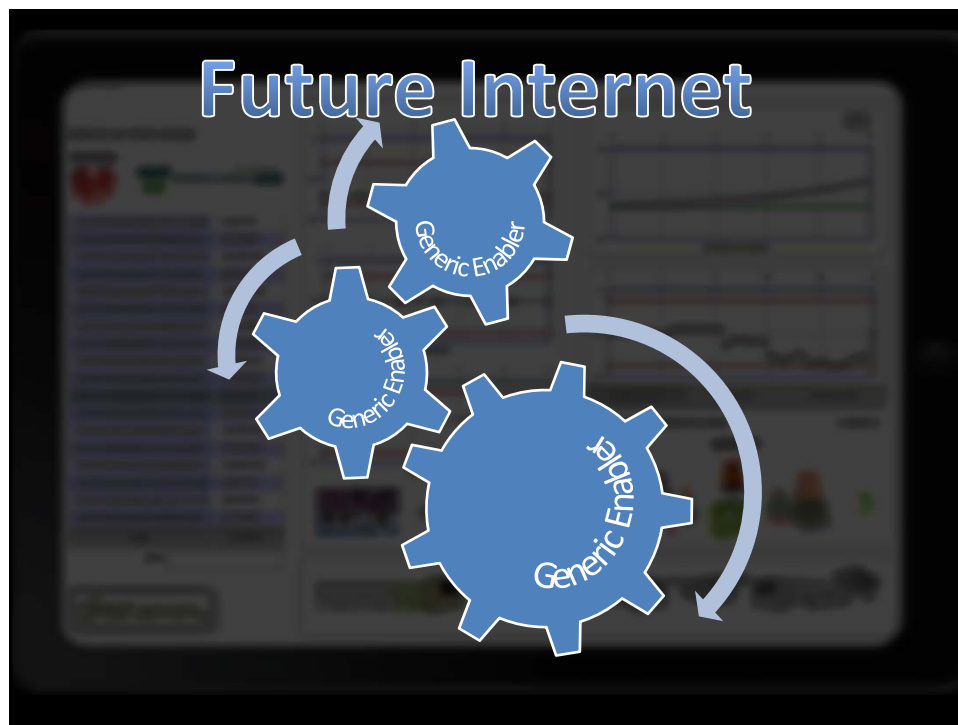


- Historic quality trajectory based on measurements
- Simulated quality based on decay models
- Alarms for expected quality problems
- Advices for interventions

Mock-up quality simulation screen







## DESIRED IMPROVEMENTS

The screenshot shows a 'Quality Monitor' interface with a table of products and their quality metrics. Five callout boxes highlight specific areas for improvement:

- Group items and focus on 'problem items'**: Points to a list of products in the table.
- Improve product representation**: Points to a product image in the table.
- Expand with contract agreements**: Points to a 'Contract' column in the table.
- Add expert quality assessments and certificates**: Points to a 'Quality' column in the table.
- Improve quality prediction**: Points to a 'Quality Prediction' graph.

The interface also includes a 'Quality Controlled Logistics' section and a 'Smart Agri-Food' logo in the bottom right corner.





## CONCLUSIONS

### Real-time Quality Controlled Supply Chain

	Phase 1 (conceptual prototype):	Phase 2 (Large scale experimentation):	Phase 3 (Large scale expansion):
Reduction of product waste	✓	?	?
Shorter lead times	✓	?	?
Better capacity utilisation	✓	?	?
Better quality for consumers	✓	?	?



## PLANNED IMPROVEMENTS



Improve integration  
with logistic planning



Realize link to expert  
quality assessments



Improve alerts and  
advise module



Increase integration  
with FI-enablers





Funded by the



Thank you!

[www.smartagrifood.eu](http://www.smartagrifood.eu)

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