Smart Agri-Food Logistics
Smart AgriMatics International Conference, 14 June 2012, Paris

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**Pilot
Quality Controlled Logistics
in Flowers & Plants Supply Chains**

Presentation Smart AgriMatics

13 June 2012, Paris

Robbert Robbemond (Presenter)

Nicole Koenderink (Pilot Coordinator)

Cor Verdouw (Work Package Leader)

SEVENTH FRAMEWORK PROGRAMME

Agenda

- General overview of the pilot
- Business case description
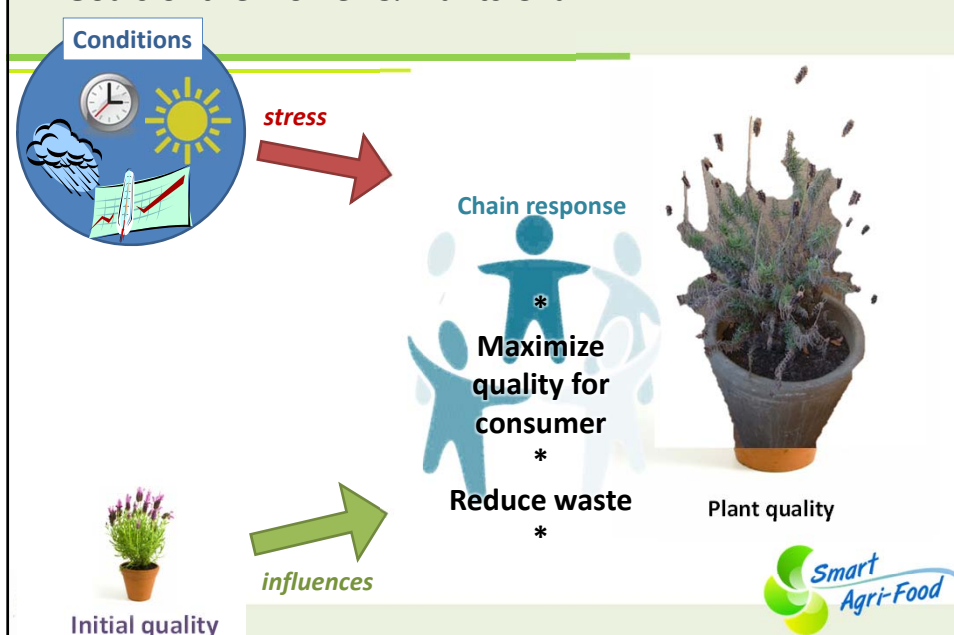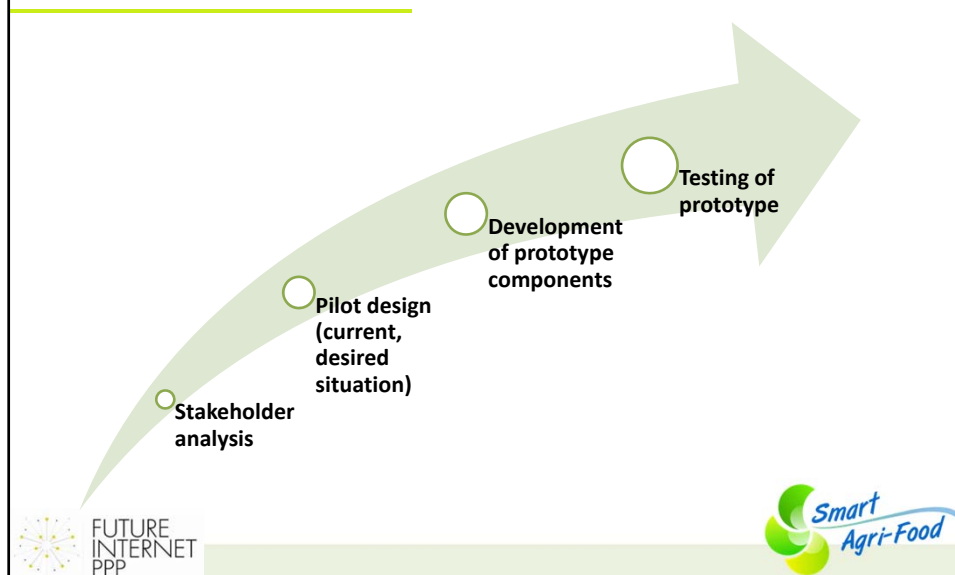- Technical overview of the pilot
- Illustrative demo
- Conclusions

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Context Flowers & Plants domain

RFID for flowers and plants

Electronic market places

Integration

Data loggers that log sensor data

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Goals of the Flower & Plants Chain

Conditions

stress

Chain response

*

Maximize quality for consumer

*

Reduce waste

*

Plant quality

influences

Initial quality

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Phases in Flower and Plants Pilot

Testing of
prototype

Development
of prototype
components

Pilot design
(current,
desired
situation)

Stakeholder
analysis

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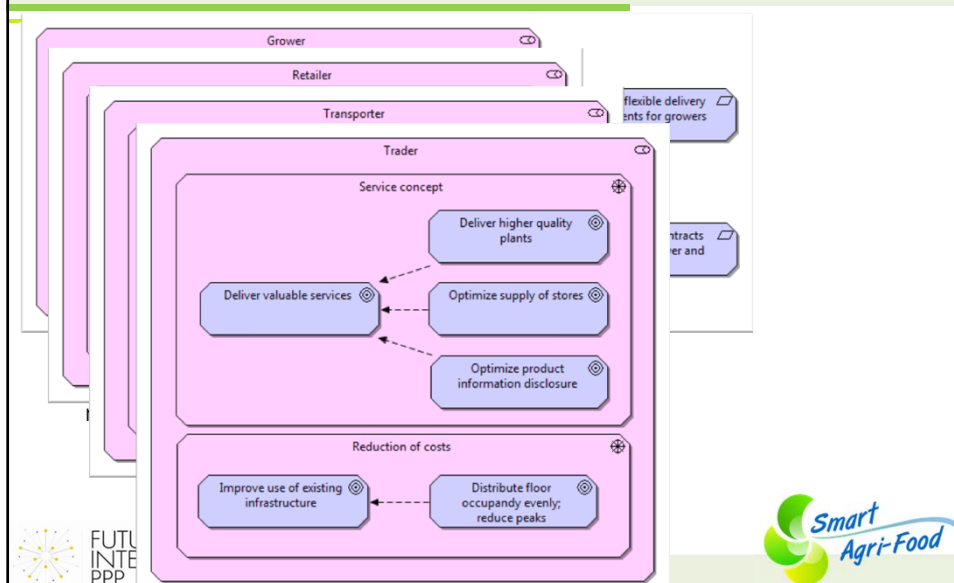- Illustrative demo
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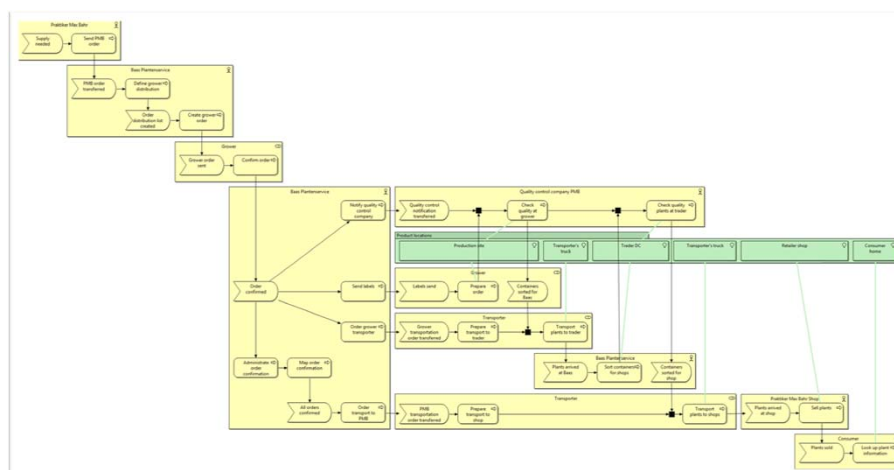
Project Partners

Chain Stakeholders

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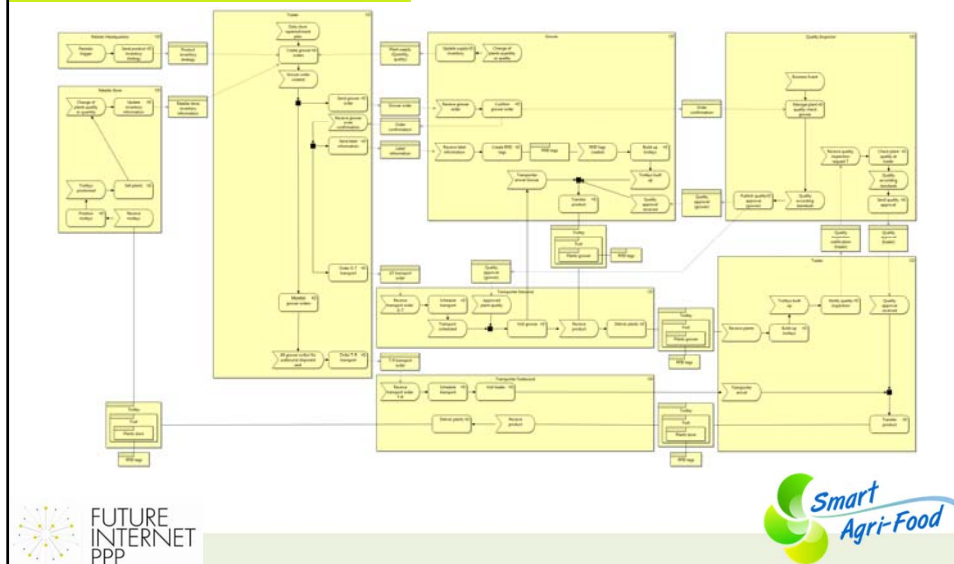## Current chain situation

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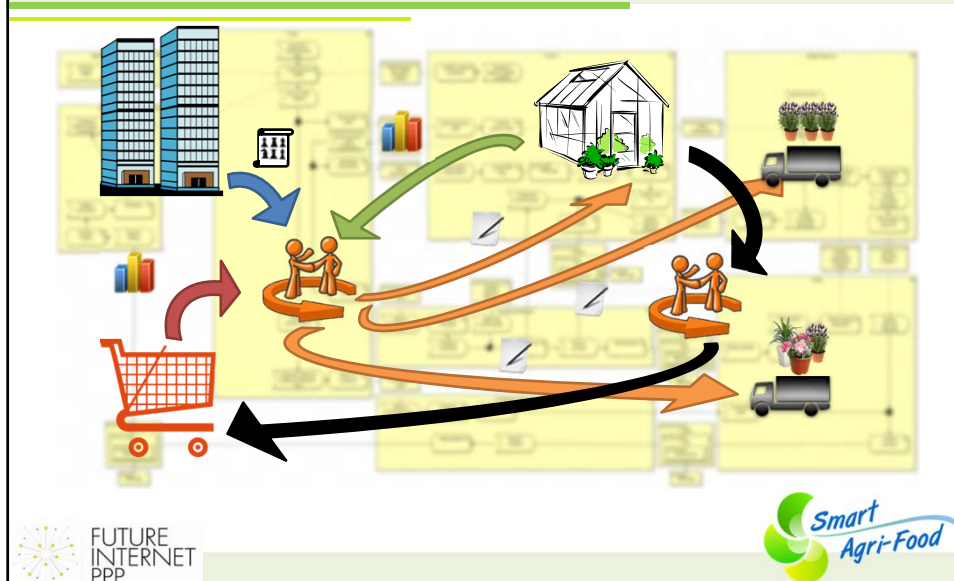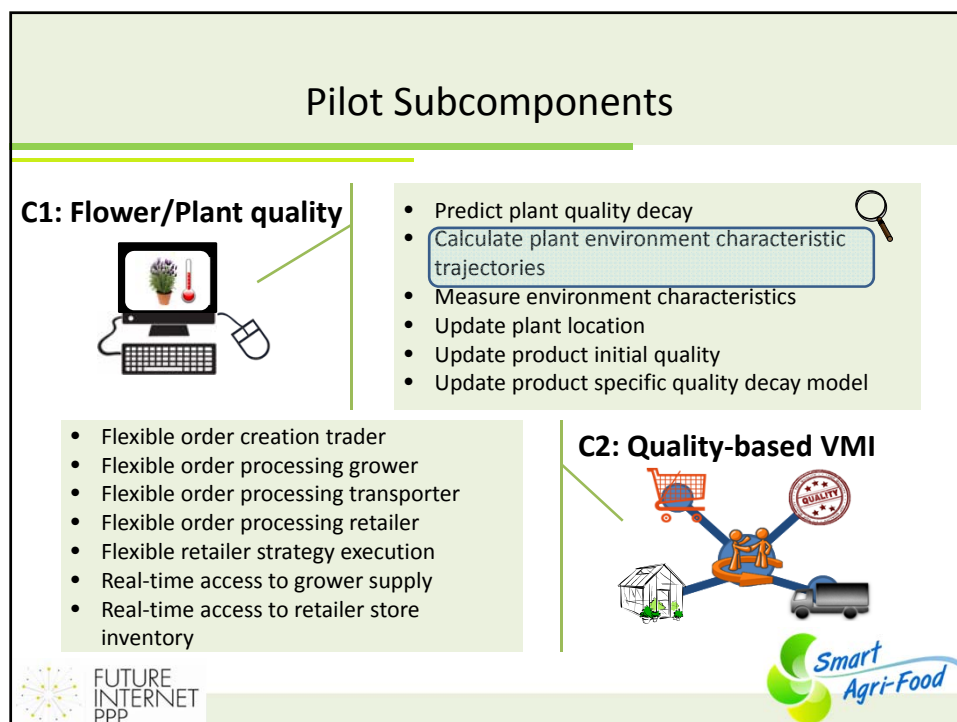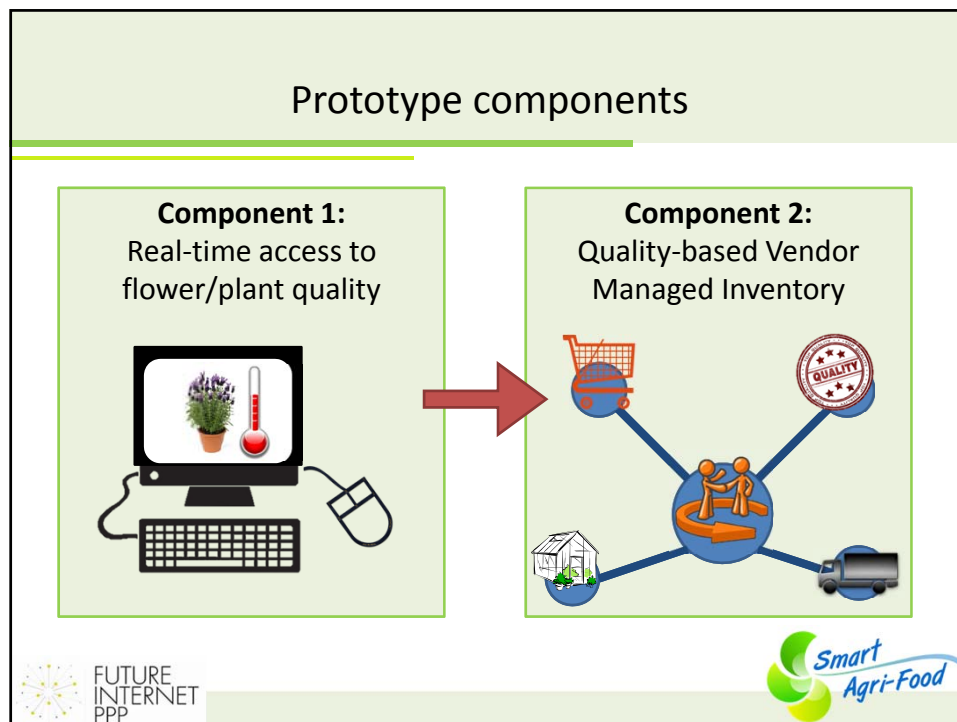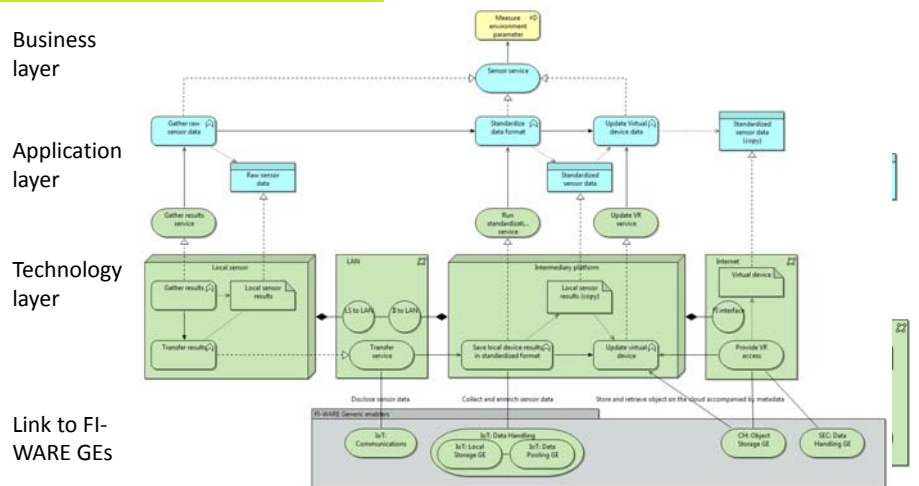
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Desired chain situation

Desired chain situation explained

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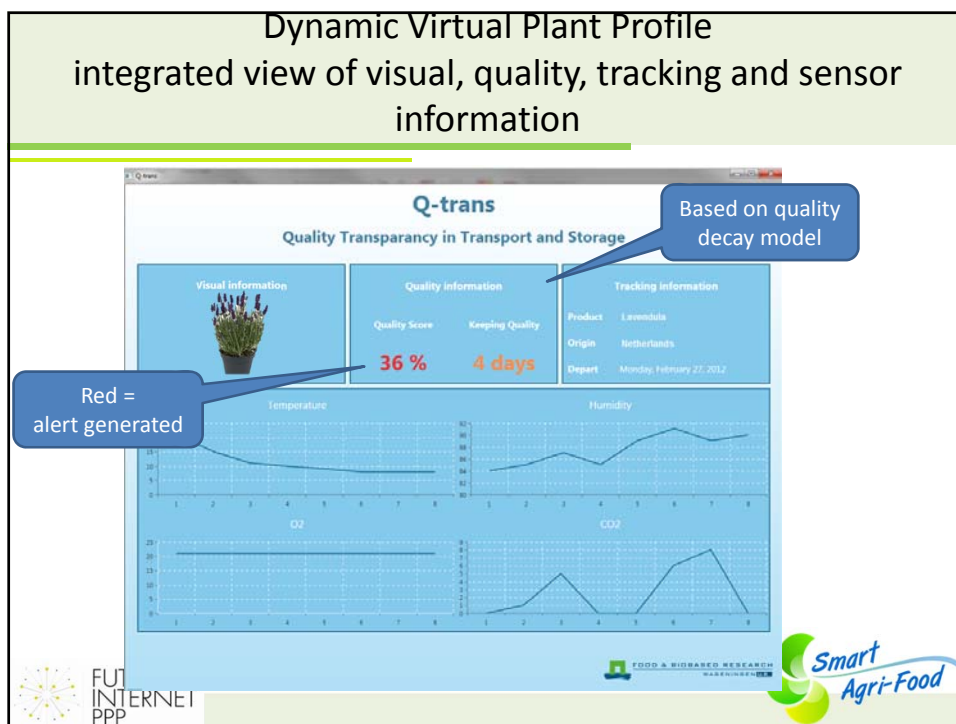*Smart AgriMatics International Conference, 14 June 2012, Paris*

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Prototype components

Component 1:
Real-time access to flower/plant quality

Component 2:
Quality-based Vendor Managed Inventory

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Pilot Subcomponents

C1: Flower/Plant quality

- Predict plant quality decay
- Calculate plant environment characteristic trajectories
- Measure environment characteristics
- Update plant location
- Update product initial quality
- Update product specific quality decay model

- Flexible order creation trader
- Flexible order processing grower
- Flexible order processing transporter
- Flexible order processing retailer
- Flexible retailer strategy execution
- Real-time access to grower supply
- Real-time access to retailer store inventory

C2: Quality-based VMI

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Example Subcomponent functional description

Business layer

Application layer

Technology layer

Link to FI-WARE GEs

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Main components of the prototype

Main components of the prototype

Dynamic Virtual Plant Profile
integrated view of visual, quality, tracking and sensor information
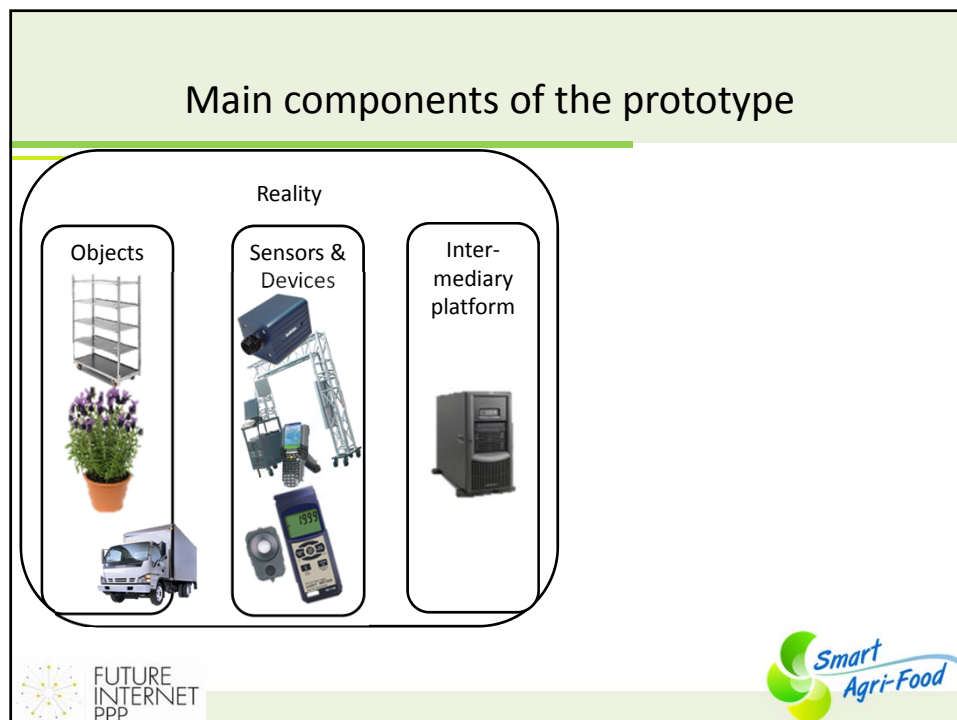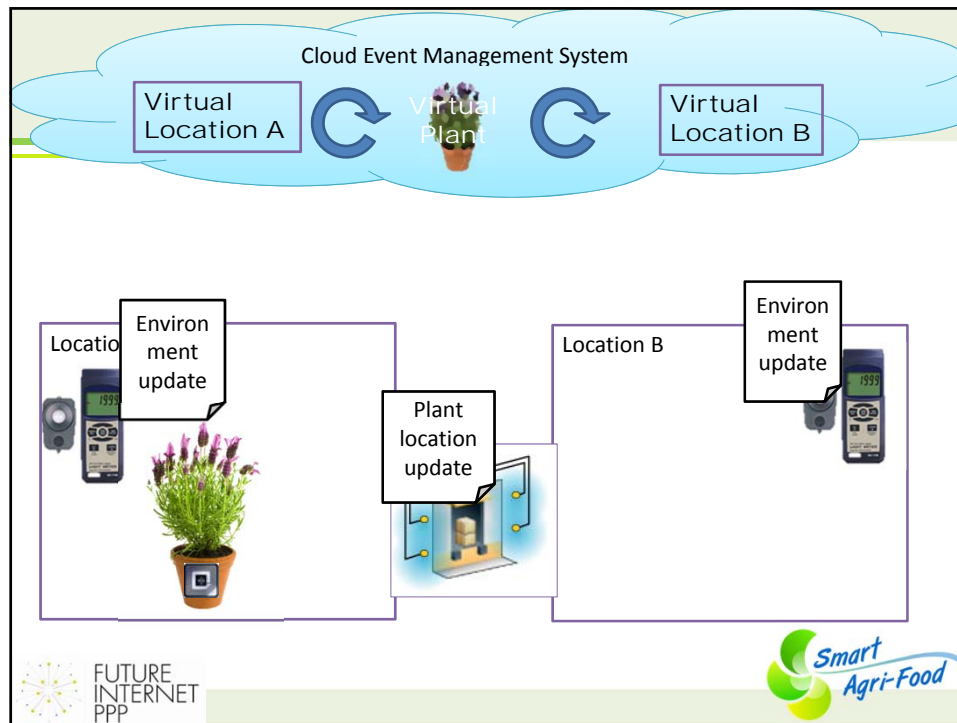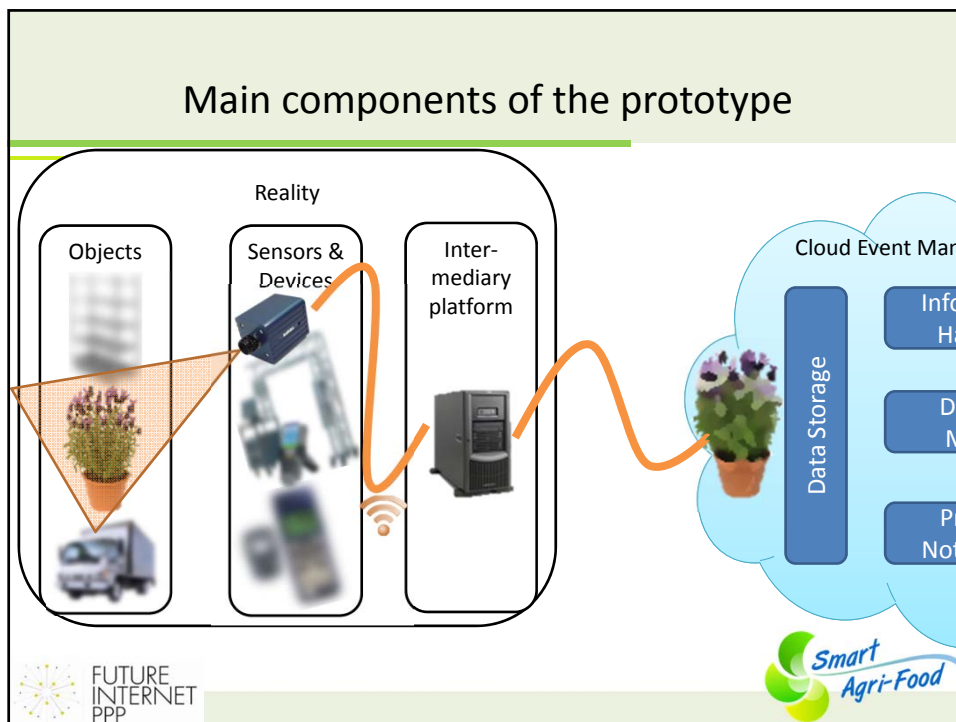
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Conclusions 1/2

Challenging requirements for the future internet

- Dynamic updating of rich virtual plants profiles
- Combination of different types of sensor data
- Continuous (re)calculating of remaining shelf live based on diverse data
- Proactive monitoring and control (alert generation and management)
- Dynamic planning and (re)scheduling, balancing demand/supply

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Conclusions 2/2

Major advantages of future internet for all parties involved

- Grower: less energy in stressing plants to be ready "in time"

- Trader: better capabilities to optimally match supply and demand

- Transporter: smarter scheduling of orders and optimization of routes

- Retailer: higher service level to customers (full shelves, higher quality products)

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