Smart Agri-Food Logistics:

Future Internet as a Driver for Virtualization, Connectivity and Intelligence of Agri-Food Supply Chain Networks

Food Dynamics IGLS-Forum 2013, February 18-22, 2013 - Innsbruck-Igls

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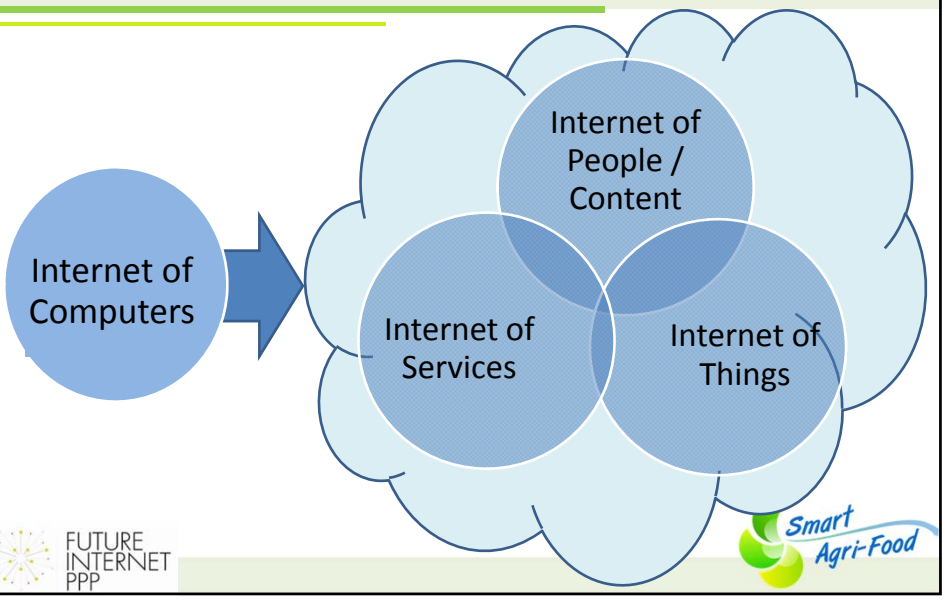
Agenda

- Future Internet
- Project Context
- Smart Agri-Food Logistics
- Next steps

Evolution of the Internet



Future Internet

- "Developing the Future Internet" to combine several trends in internet development into an integrated approach
- Aims to overcome limitations of the current internet, including:
  - a lack of data integrity, reliability, provenance and trust
  - a lack of data and software integration & federated storage solutions
  - lack of flexibility and configuration capabilities
  - segmentation of data and control

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FIspace Business Collaboration

Future Internet Public Private Partnership

FI-WARE Technology Foundation

Phase 1
- **Requirements Definition & Demo Prototypes**
- **8 Use Case Projects (each 5 m€ EC contribution)**

Phase 2
- Development based on FIWARE
- 5 Use Case Trials (each 13,5 m€ EC contribution)

Phase 3
- Expansion of Use Cases
- Up to 20 CP-CSAs, in total 100 m€

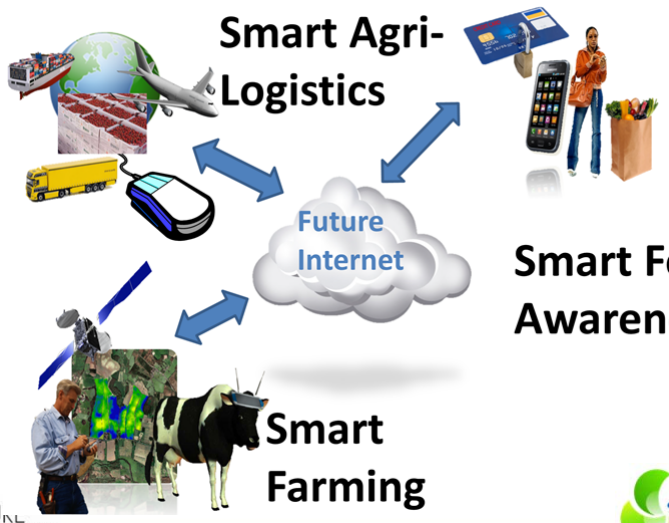
Investment by the European Commission	€300 million
Partner organizations and companies	158
Industry share in the programme	68%
Countries represented	23

The Smart Agri-Food project aims to:

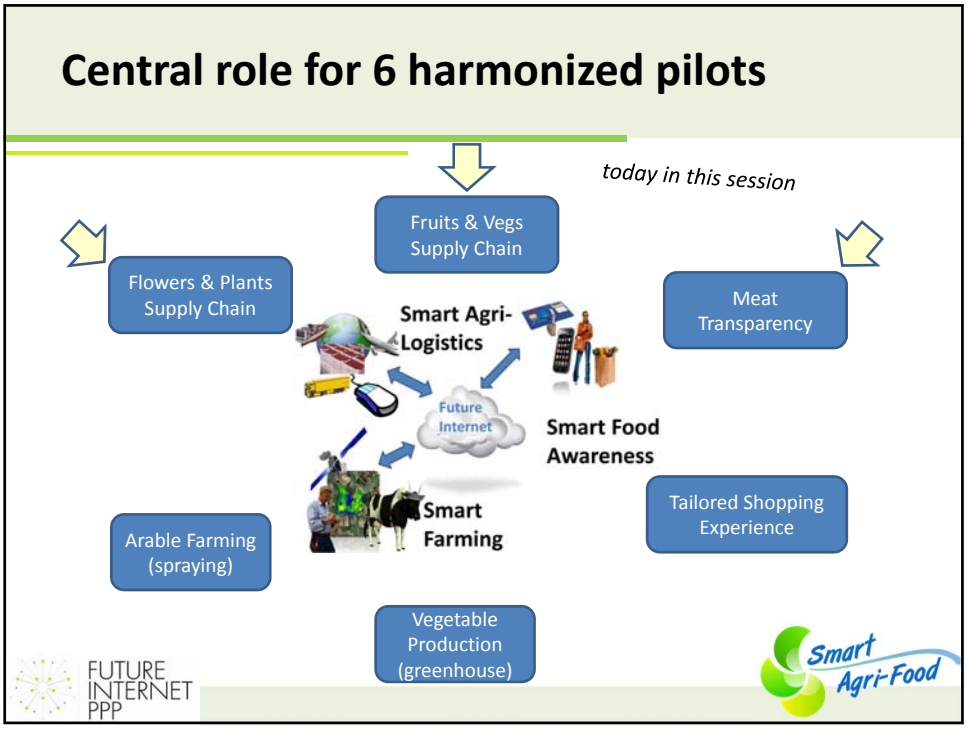
- Boost the application and use of future internet ICTs in Agri-Food
- Increase the competiveness and sustainability of Agri-Food
- Affect a huge number of Agri-Food SMEs throughout Europe

EC contribution	5 m€
Start date	01.04.2011
Duration	24 months
Partners	21
Countries represented	7

3 Use Case Scenario's: from Farm to Fork



Central role for 6 harmonized pilots



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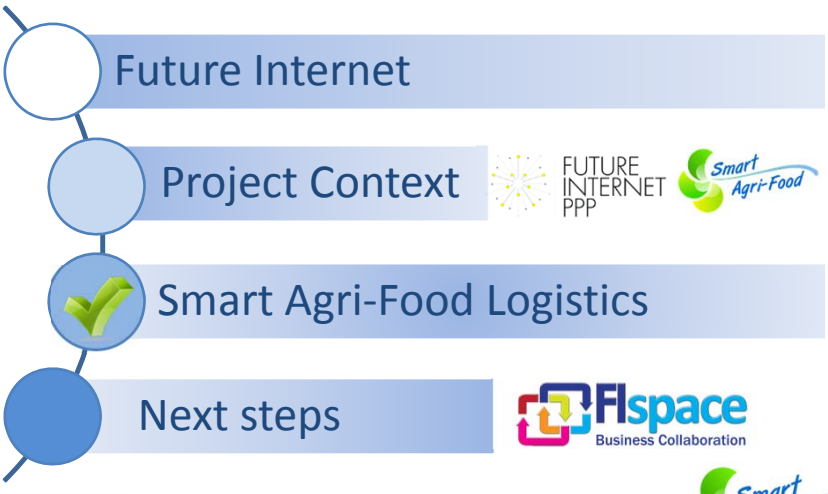
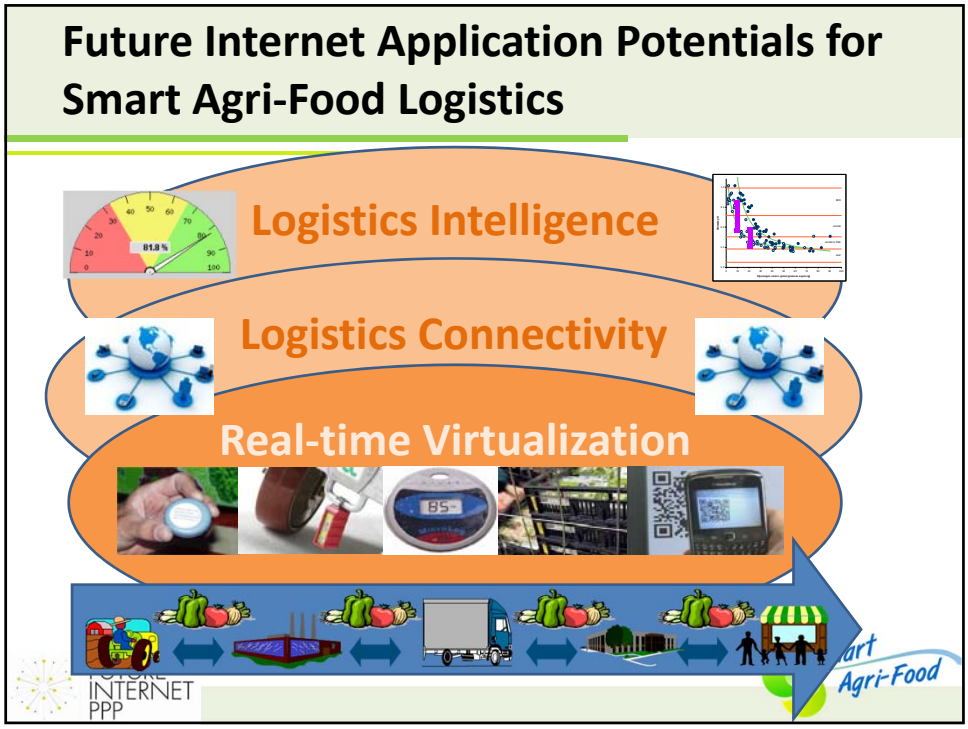


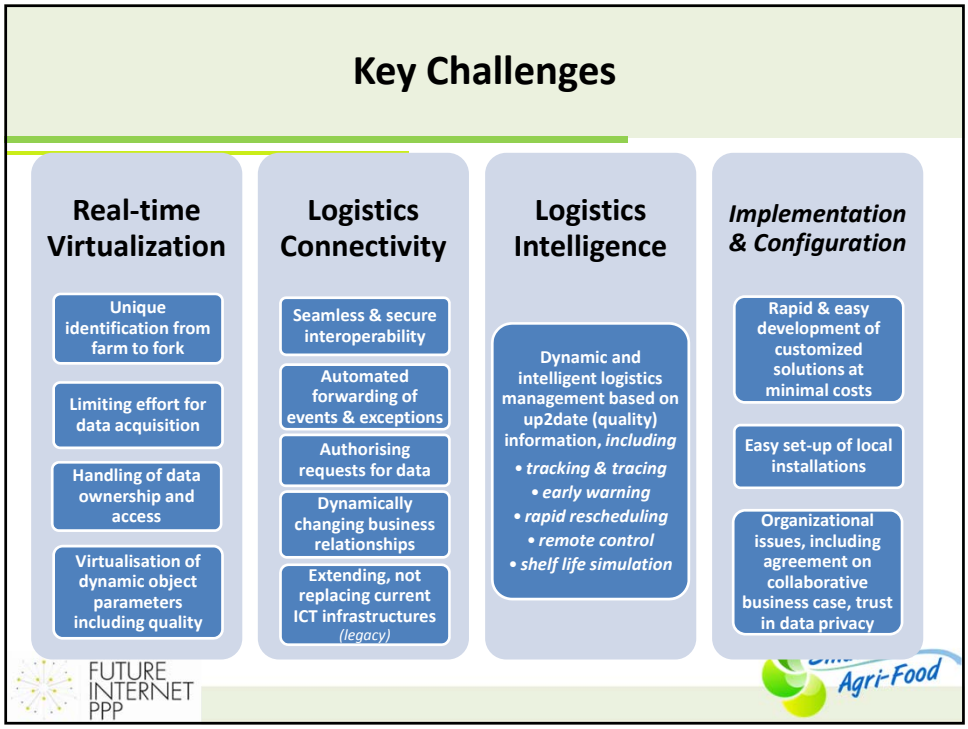
Smart Agri-Food Logistics: Diverse and Dynamic Supply Chains

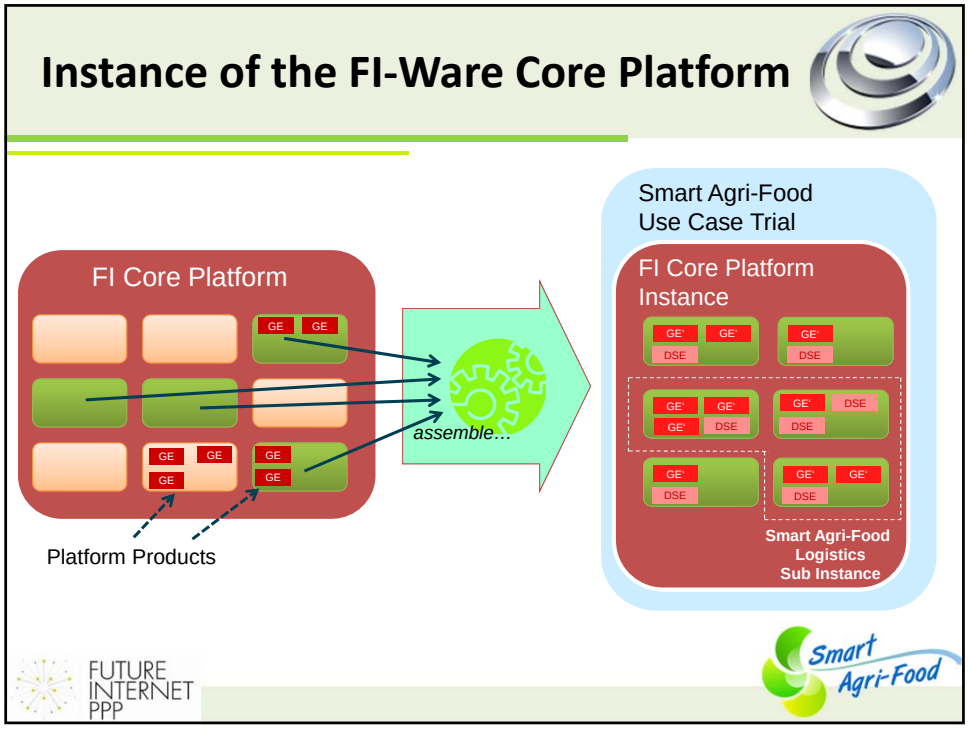
Illustrative example of a meat supply chain (source: GS1)

Logistics in the Food and Agribusiness

- Demanding sector-specific challenges, including:
  - High supply uncertainty due to natural production
  - High perishability
  - Seasonable growing, global sourcing
  - High demands on food safety, quality and legislation
  - High tracking and tracing and planning complexities
  - Additional phytosanitary and veterinary inspections
  - Many SMEs
- Current ICT solutions not sufficiently meet these demands
  - Poor level of integration
  - Limited flexibility
  - Intelligent use of data lags behind


Future Internet Application Potentials for Smart Agri-Food Logistics
Logistics Intelligence
Logistics Connectivity
Real-time Virtualization


Key Challenges
Real-time Virtualization
Unique identification from farm to fork
Limiting effort for data acquisition
Handling of data ownership and access
Virtualisation of dynamic object parameters including quality
Logistics Connectivity
Seamless & secure interoperability
Automated forwarding of events & exceptions
Authorising requests for data
Dynamically changing business relationships
Extending, not replacing current ICT infrastructures (legacy)
Logistics Intelligence
Dynamic and intelligent logistics management based on up2date (quality) information, including
• tracking & tracing
• early warning
• rapid rescheduling
• remote control
• shelf life simulation
Implementation & Configuration
Rapid & easy development of customized solutions at minimal costs
Easy set-up of local installations
Organizational issues, including agreement on collaborative business case, trust in data privacy


Instance of the FI-Ware Core Platform
FI Core Platform
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Platform Products
Smart Agri-Food
Use Case Trial
FI Core Platform
Instance
GE'
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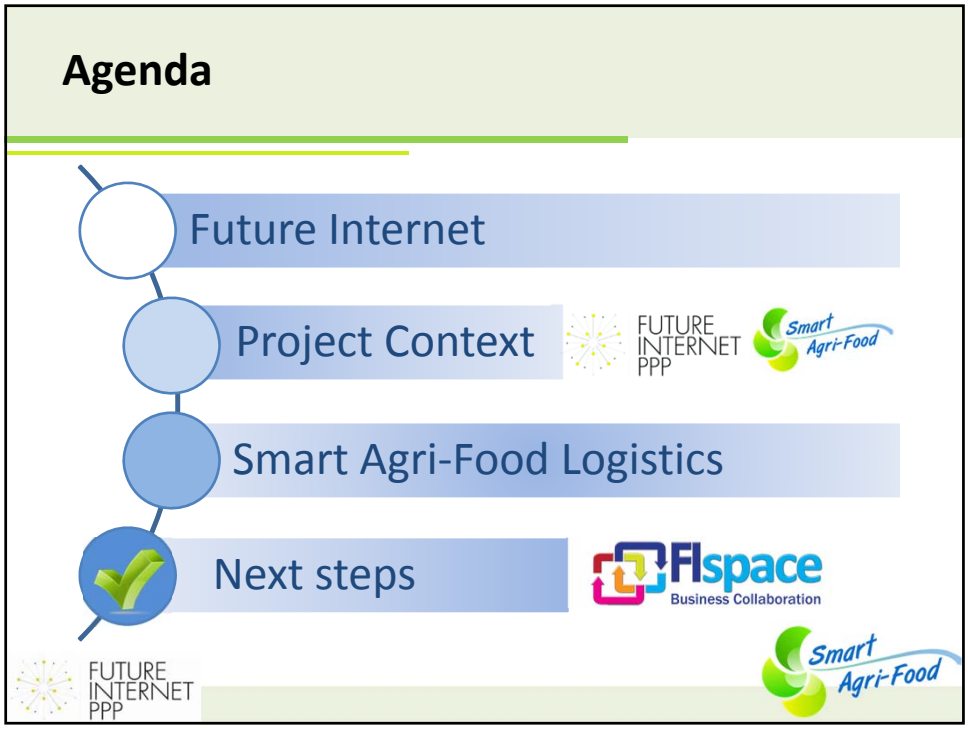
Smart Agri-Food
Logistics
Sub Instance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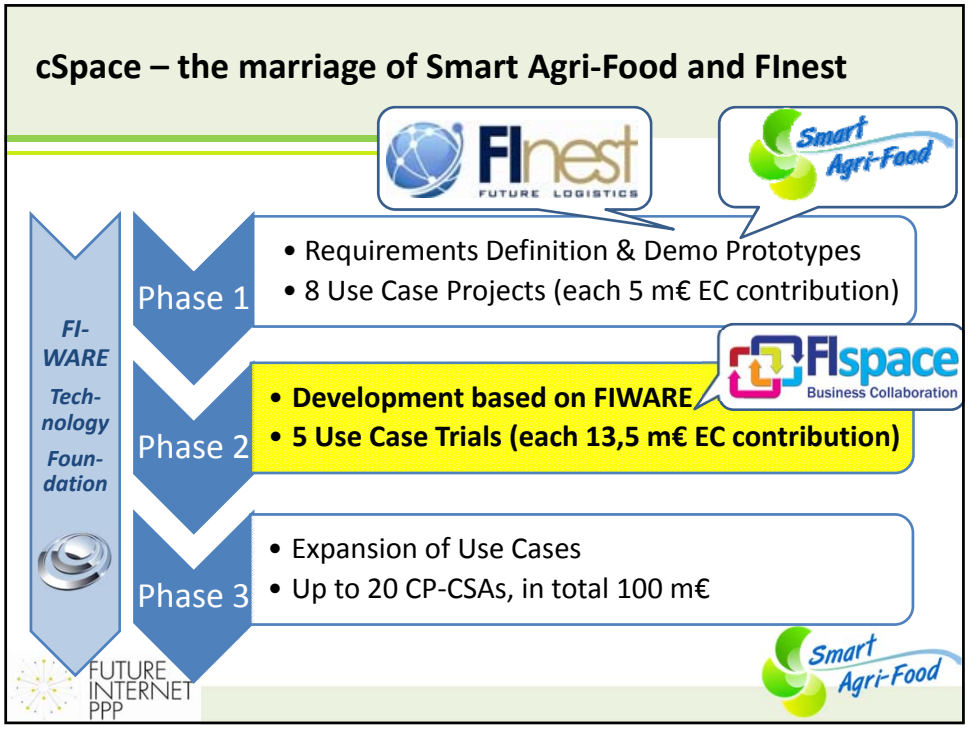
cSpace – the marriage of Smart Agri-Food and FInest
FInest
FUTURE LOGISTICS
Smart Agri-Food
FI-WARE
Tech-nology
Foun-dation
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FIspace
Business Collaboration
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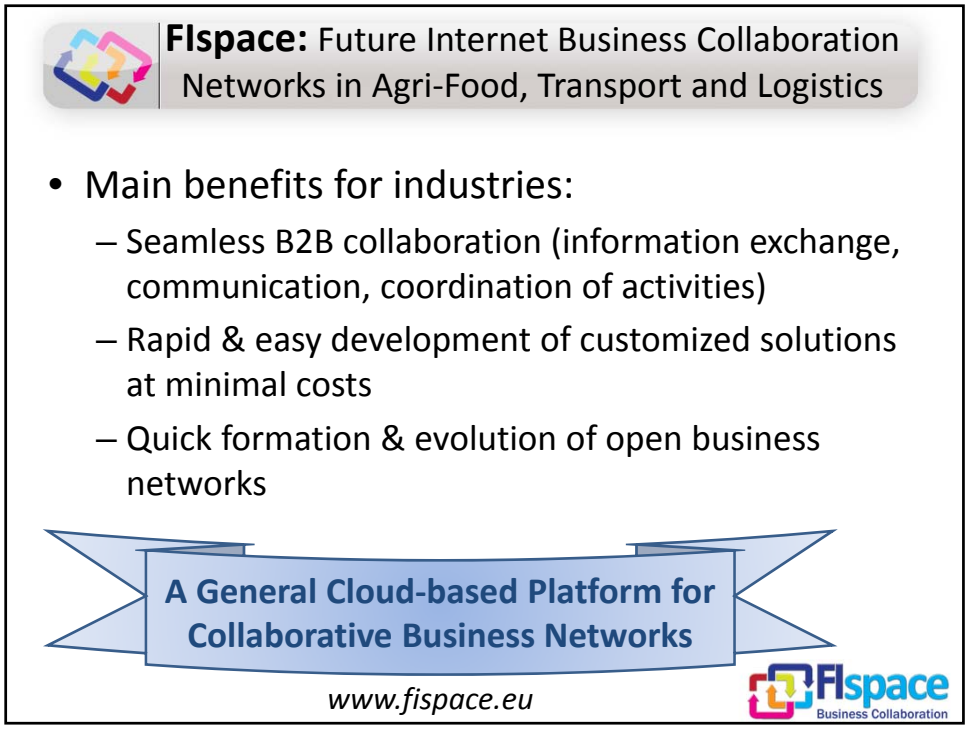
FUTURE INTERNET PPP
Smart Agri-Food


FIspace: Future Internet Business Collaboration Networks in Agri-Food, Transport and Logistics
• Main benefits for industries:
– Seamless B2B collaboration (information exchange, communication, coordination of activities)
– Rapid & easy development of customized solutions at minimal costs
– Quick formation & evolution of open business networks
A General Cloud-based Platform for Collaborative Business Networks
www.fispace.eu
FIspace
Business Collaboration

Smart Agri-Food
Funded by the
European Commission
Thank you!
Questions? Discussion...
www.smartagrifood.eu
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FUTURE INTERNET PPP
The research leading to these results has received funding from the European Community's Seventh Framework Programme (FP7/2007-2013) under grant agreement n° 285 326.
SEVENTH FRAMEWORK PROGRAMME