



FutureFarm: The European Farm of Tomorrow

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FutureFarm overview 1/3

- Meeting the challenges of the farm of tomorrow by integrating Farm Management Information Systems to support real-time management decisions and compliance to standards
 - Integration
 - Real-time FMIS
 - Compliance to standards



FutureFarm overview 2/3

- Integrate information systems
 - Precision agriculture
 - On-farm data and off-farm guidelines
- Real-time FMIS
 - Improve economics reduce environmental impact
 - Support at the right time, in the right place, in the right way
- Compliance to recognised management standards
 - Requirement of the EU single payment scheme



FutureFarm overview 3/3

- Investigate the socio-economic aspects
 - Look at the social implications
 - Identify the economic consequences
- Demonstrate the potential of mobile robots
 - Design a new robotic mechanisation system
 - European field day. www.fieldrobot.nl
- Consider aspects of bio-fuels
 - 'Closed loop' on-farm system

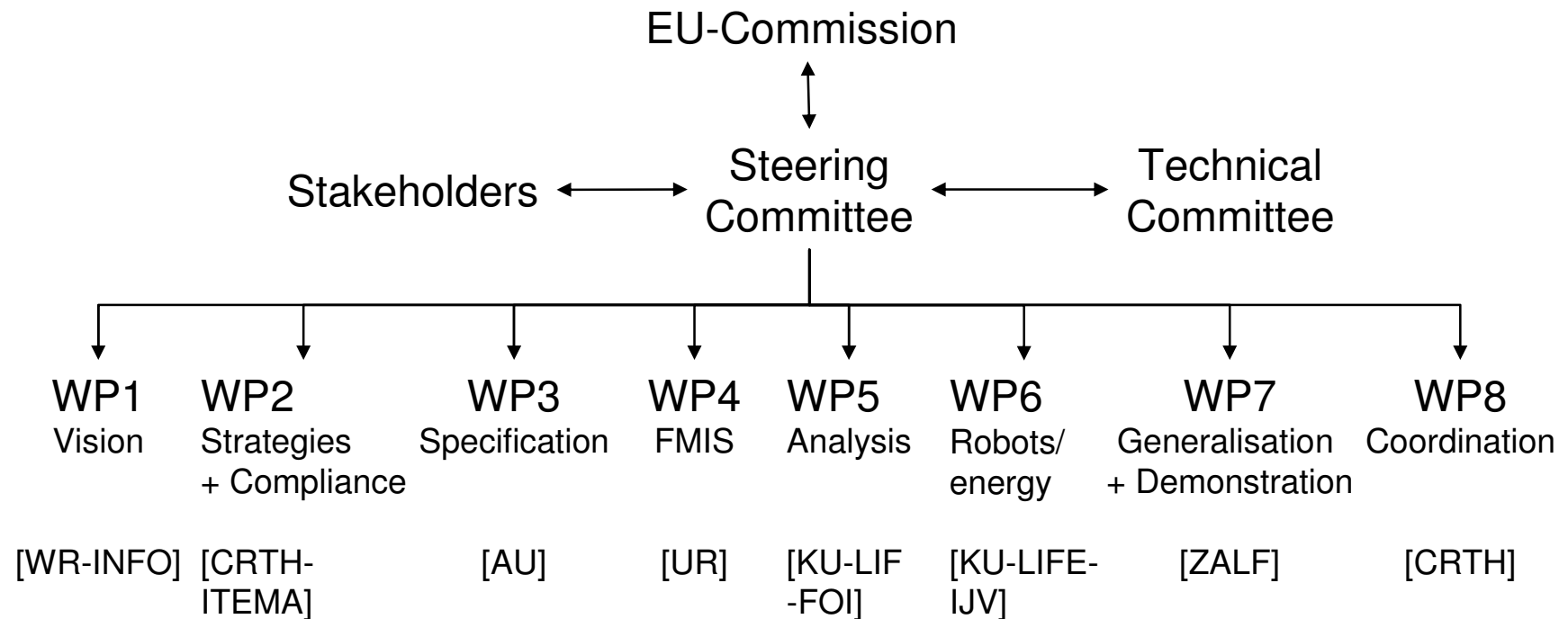


FutureFarm details

- 'Small collaborative project' funded by the EU.
- 3 years duration 2008-2010
- 3m Euros
- 4 demonstration farms
 - Denmark, Germany, Czech Republic, Greece
- 8 work packages
- 10 countries
- 15 partners



FutureFarm Structure

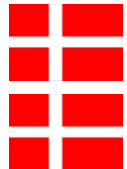




Participating organisations



- CERETETH – Greece



- Aalborg Univ – Denmark
- Univ Copenhagen – Dk



- Univ Rostock –Germany



- ZALF – Germany



- WR-INFO – Czech R.



- MTT – Finland



- UNIBAS – Italy



- WUR - Netherlands

- AGROCOM – Germany

- PROGIS – Austria

- AUTH – Greece

- TKK – Finland

- Univ Almiria – Spain

- Cranfield Univ - GB







FutureFarm objective 1/7

- *Vision of new knowledge based biological, technical, social and economic innovations.*
 - Develop a vision of the farm of tomorrow from the perspective of the project team and invited stakeholders to show a better understanding of how farming will develop. This will include identifying relevant drivers and their potential impact on crucial processes in knowledge management in arable crop production.



FutureFarm objective 2/7

- *Cost efficient compliance with standards as an integral part of farm operations.*
 - Identify and analyse a range of formal and informal management strategies in crop production and identify required indices in terms of management and practices that would constitute compliance to standards within the strategy.



FutureFarm objective 3/7

- *Special requirements for high value markets, sharing good farming practices, recognition and communication of ecological and cultural diversity as well as regional demands on multifunctional production of non-commodities.*
 - Analyse and specify the required knowledge, information and methods needed to adopt specific management strategies. Produce a set of specifications that can be used to define a flexible and dynamic Farm Management Information System (FMIS).



FutureFarm objective 4/7

- *Integrated technologies and ICT tools to make cost efficient compliance with standards an integral part of farm operations.*
 - Apply and test the general principles of a FMIS by developing a prototype of an integrated a FMIS. This will include elements from different methods and sources. Ease of use and largely automated data handling procedures will be an important aspect. Working prototype will be made available for evaluation.



FutureFarm objective 5/7

- *Understanding of overall trends of European societies, new models of relationships with consumers and citizens, rural economy, the multifunctional European farming model delivering public goods.*
 - Provide a socio-economic, environmental and technology assessment to understand the drivers and issues from Objectives 1, 2, 3 and 4. Recommendations will be expected to show how development can be made to take advantage of opportunities and avoid obvious problems.



FutureFarm objective 6/7

- *New models of material flow management, based on information and knowledge management supporting on-farm or local integration of environmentally friendly closed loop processing facilities, energy efficient cultivation with light machinery, precision farming and robotics.*
 - Assess the influences of robotics and biofuels on economic and energetic efficiencies of farm production. Existing robotic and closed-loop on-farm biofuel systems will be demonstrated and evaluated as examples of internal flow management.

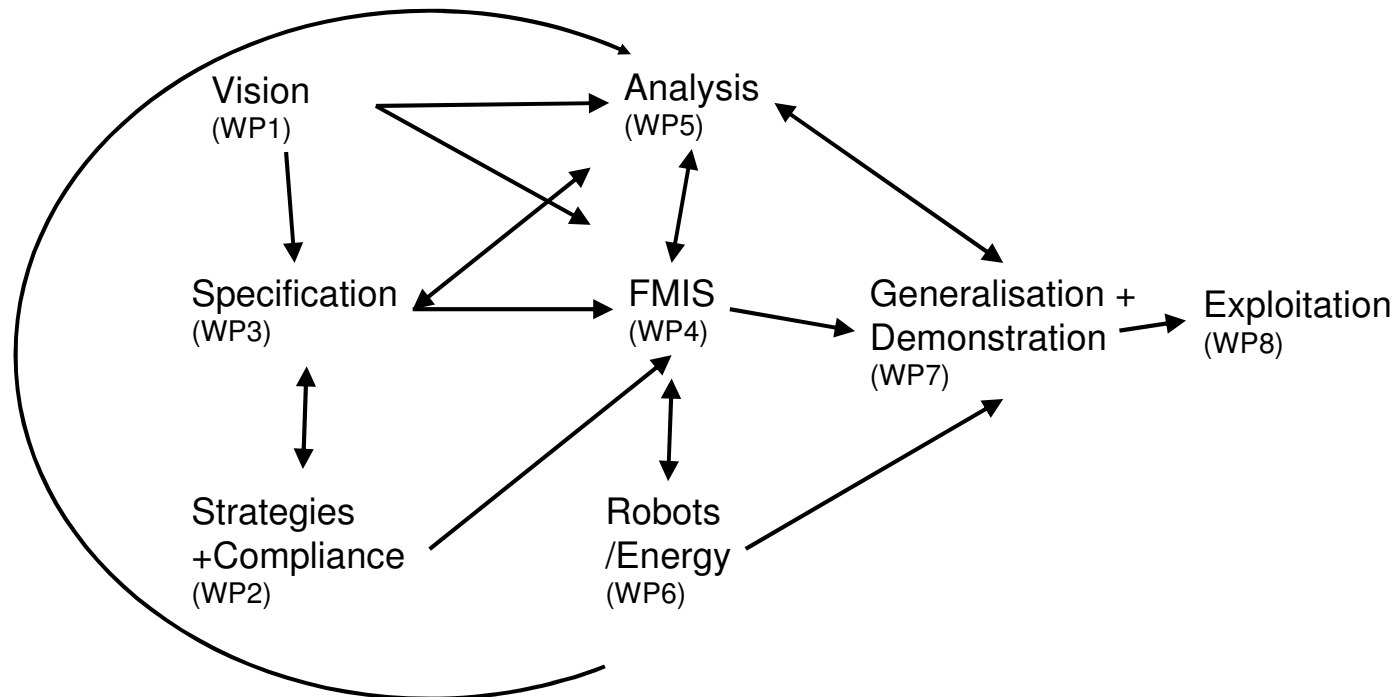


FutureFarm objective 7/7

- *Generalisation of project results and demonstration of all of the above points and showing its feasibility for many future farms in the EU.*
 - Develop a typology for information technologies in European farming (like precision farming) and a typology on its suitability for different farm groups within the member states of the EU. Application, integration, demonstration, generalisation and dissemination of project results on commercial farms within EU-countries.



Workpackage interactions





WP1: Vision of the farm of tomorrow

- Develop a vision of the farm of tomorrow from the perspective of the project team and invited stakeholders to show a better understanding of how farming will develop.
- This will include identifying relevant drivers and their potential impact on crucial processes in knowledge management in arable crop production.
- 36 person months



WP2: Analysis of management strategies and required compliance to standards

- Identify and analyse a range of formal and informal management strategies in crop production and identify required indices in terms of management and practices that would constitute compliance to standards within the strategy
- 34 person months



WP3: Analysis and specification of knowledge based farm management

- Analyse and specify the required knowledge, information and methods needed to adopt specific management strategies.
- Produce a set of specifications that can be used to define a flexible and dynamic Farm Management Information System (FMIS)
- 55 person months



WP4: Knowledge management in the FMIS of tomorrow

- Apply and test the general principles by developing a prototype of an integrated FMIS.
- This will include elements from different methods and sources
 - e.g. GIS, DSS, expert systems, trusted third party knowledge, formal and informal knowledge transfer etc.
- Ease of use and largely automated data handling procedures will be an important aspect.
- Working prototypes will be made available for evaluation
- 89 person months



WP5: Socio-economic and technology assessment – economic and environmental impact

- Provide a socio-economic, environmental and technology assessment to understand the drivers and issues from other WPs
- Recommendations will be expected to show how development can be made to take advantage of opportunities and avoid obvious problems in the future.
- 43 person months



WP6: Influences of robotics and biofuels on economic and energetic efficiencies of farm production

- Assess the influences of robotics and biofuels on economic and energetic efficiencies of farm production.
- Existing robotic and closed-loop on-farm biofuel systems will be demonstrated and evaluated as examples of internal flow management.
- 36 person months



WP7: Generalisation, integration, application and dissemination

- Develop a typology for information technologies in European farming (like precision farming) and a typology on its suitability for different farm groups within the member states of the EU.
- Application, integration, demonstration, generalisation and dissemination of project results on commercial farms within EU-countries.
- 72 person months



WP8: Project coordination

- Scientific management and administrative coordination of the project
- 419 person months in the whole project
 - 35 years effort in 3 calendar years!
 - 14 milestone reports
- Project manager and Project administrator
- Steering committee
- Technical committee
- 54 person months



And finally.....

- My thanks to:
 - Prof Houstis and Prof Kittas for hosting FutureFarm
 - Frank Dreger, Angelika Wurbs and Armin Werner for their great help in developing the proposal.
 - Georgia Pahlitzanakis for organising this meeting!
- Visit www.FutureFarm.eu
- Presentations from the work package leaders