Information and Communication Technologies and Robotics for Sustainable Agriculture

ICT-AGRI

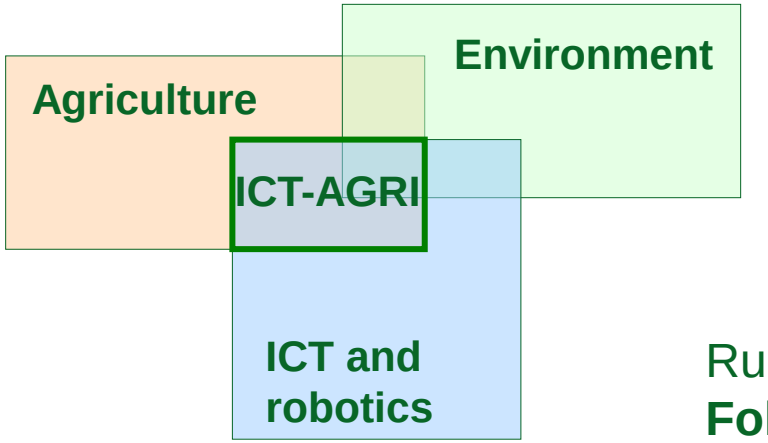
FP7 ERA-NET 2010-2014 -2017

Xenophon Tsilibaris

Greek Research & Technology Network (GRNET)

ict-agri.eu

A cross-thematic FP7 ERA-NET



ICT and robotics for a greener and competitive agriculture

Runs from May 2009 to March 2014.
Follow-up from March 2014 to March 2017

19 partners
2 associated partners
10 observers
21 countries

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What is an ERA-NET?

- **E**uropean **R**esearch **A**rea - **NET**work
- Participants must be a national funding agency or associated with such
- Focus on a sub-area within the ERA
- Currently 64 active networks in FP7
- Typical activities:
  - Mapping of current research and development
  - Elaboration of Strategic Research Agenda
  - Conduction of transnational joint calls

Information and Communication Technologies (ICT) and robotics for sustainable agriculture - ERANET

There is a growing worldwide need to integrate modern agricultural engineering tools for enabling agriculture to meet the global demand for food, feed and bio-based products, to reduce the environmental footprint of agriculture, to respond to customers demand for healthy food and to combine precision livestock farming with high animal welfare standards.

The aim of this ERA-NET is to link-up efficiently national research programmes in ICT and robotics for sustainable agriculture. In consultation with relevant Technology Platforms (TP), like Manufacture-Agricultural Engineering Technologies, TP Organics and others, a common European research agenda based on shared priorities will be established and updated. The ERA-NET will build on previous mapping to enhance the coordination of European Research capacity.

Goals, results and expectations

	GOALS	RESULTS & EXPECTATIONS
1	A public knowledge base concerning R&D	Country Report ICT-AGRI Meta Knowledge Base
2	A widely accepted Strategic Research Agenda	Final version approved. Release 12th December 2012
3	Three calls for trans-national projects	1st call 2010 – 7 projects funded 2nd call 2012 – 7 projects funded 3rd call 2013 - considered
4	Viable networks for funders and researchers	ICT-AGRI 2 from 2014
5	Support actions for coordinated R&D	Public-Private Partnerships

ICT-AGRI Meta Knowledge Base

- By users: Input of profiles and abstracts
- For users: Search for partners and knowledge
- ICT-AGRI: Source for research agenda and call topics

Registered users	1056	
Organisation profiles	211	
Person profiles	481	
Research (concluded and ongoing) abstracts	243	
Search in external databases	2	
Discussion forum	9	
Online consultation of SRA		
Call: Partner search	new	
Call: Electronic Submission System		

ICT AGRI - PPP Action

Definition: Public-Private Partnerships in the broader sense (end users, Private companies, Public research centers, etc.)

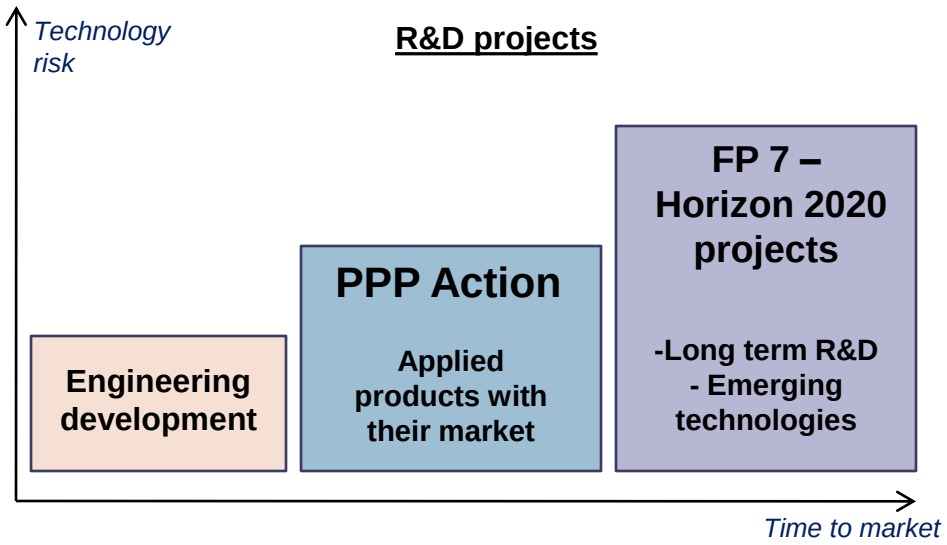
Main objective:

To develop public-private partnerships/consortia on the European level in ICT and Robotics in Agriculture.

Main idea:

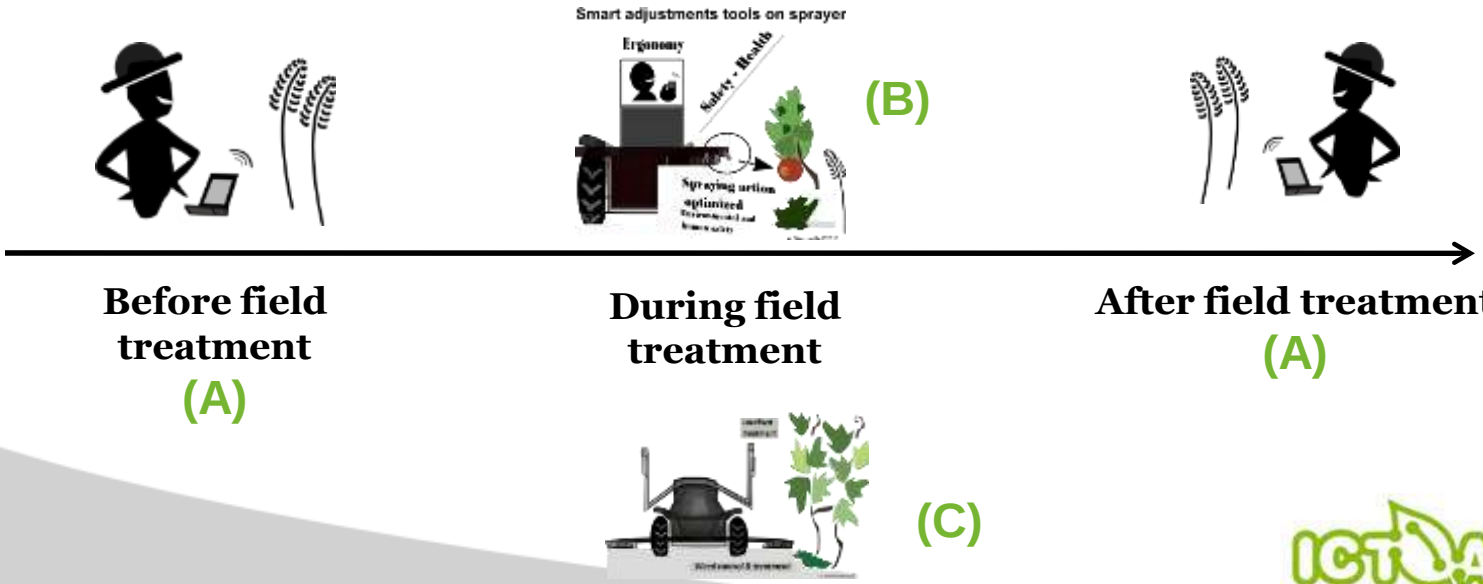
Innovation Partnerships :

"**From the idea to the market**"**(with success!!)**



Challenge & 3 products/solutions

- **Challenge :** The reduction of the use of pesticides *(European Directive **2009/128/EC)** & **the possibilities offered by ICT and robotics***
  - **A** product: **E-services package** (unified portal of 'e-services')
  - **B** product: **Smart Adjustment Tools on sprayer machines**
  - **C** product : **Combined Robotic Platform** (combine several actions)



ICT-AGRI Joint Calls

Virtual pot: National funding to national partners
Minimum 3 countries, European added value

Farm level integration of ICT, automation and robotics (2010)

7 projects funded with 4,210 k€

Started 2011, duration 2 years

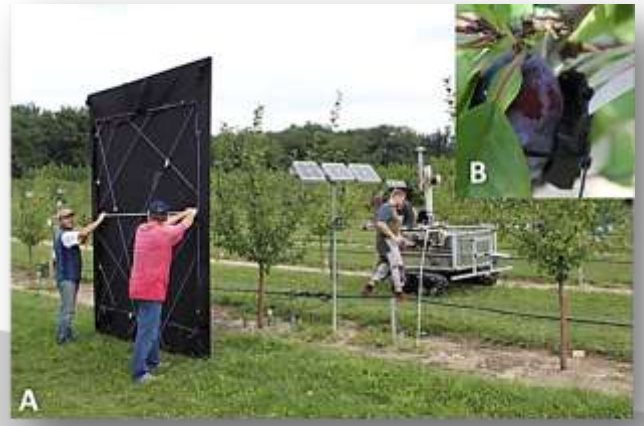
Presentations in this Conference

ICT and Automation for a Greener Agriculture (2012)

8 projects funded with 5,630 k€

Starting 2013, duration 3 years.

Look up details on ict-agri.eu



Call 2010 projects

3D-Mosaic: Advanced monitoring of tree crops for optimized management
GeoWebAgri: Geospatial ICT infrastructure for agricultural machines and FMIS in planning and operation of precision farming
PIGWISE: Optimizing performance and welfare of pigs using high-frequency RFID and synergistic control on an individual level
Predictor: Preparing for the EU Soil Framework Directive by optimal use of information and communication technology across Europe
QUAD-AV: Ambient awareness for autonomous agricultural vehicles
ROBOFARM: Integrated robotic and software platform as a support system for farm-level business decisions
STRATOS: Open system for tractors' autonomous operations

Call 2012 projects

DairyICT: ICT in large and small dairy systems
FarmFUSE: Fusion of multi-source and multi-sensor information on soil and crop for optimized crop production
GrassBots: User-centric adoption of sustainable farming opera-tions involving ICT and robotics – Case: Grassland harvesting operations for biogas and biorefinery plants
ICTGRAZINGTOOLS Use of ICT tools to capture grass data and optimize grazing management
i-LEED: Advanced cattle feeding on pasture through innovative pasture management
ITApic: Application of information technologies in precision apicul-ture
SILF: Smart Integrated Livestock Farming: integrating user-centric & ICT-based decision-support platforms
USER-PA: Usability of environmentally sound and reliable tech-niques in precision agriculture

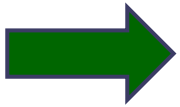
Strategic Research Agenda Recommendations

Inter-disciplinary research	⇨	Coordinated, cross-thematic research Researcher mobility and career Innovative solutions for farmers
Stakeholder's expertise	⇨	Shared farm data Third-party products in farm ICT Education and training of farmers
Compatible systems	⇨	European effort on standardisation Involve automation + ICT producers Involve national + EU administration

ICT-AGRI-2

Principal objective:

enhanced and improved use of ICT and robotics



eco-efficient, resource-efficient and competitive agriculture

ICT-AGRI-2 SRA implementation

Identify needs and solutions

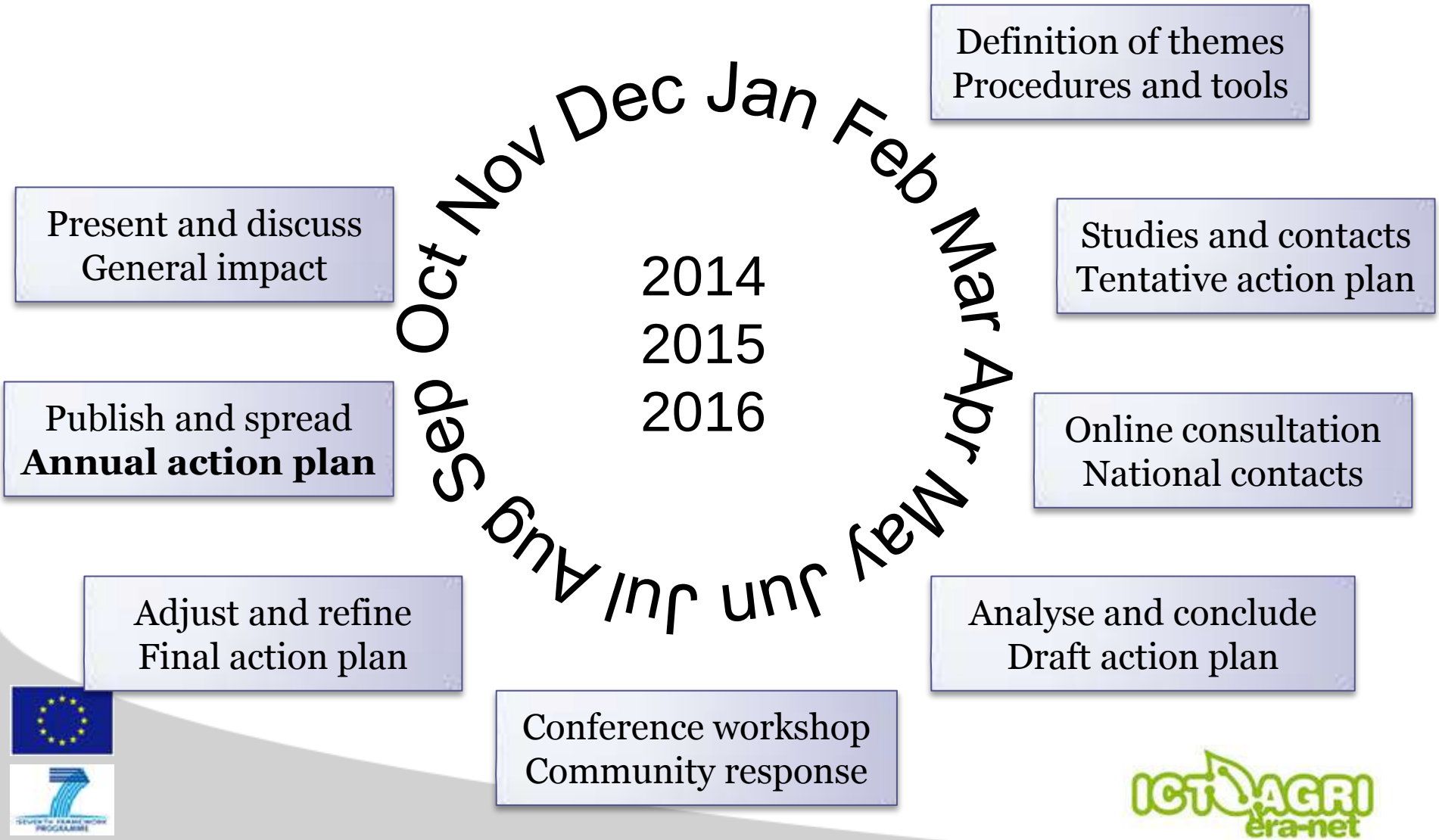
Action plan for implementation of the Strategic Research Agenda

Implementation in EU and national initiatives

Implementation in transnational calls

Three annual repeats

Action plans: Needs and solutions



Call preparation

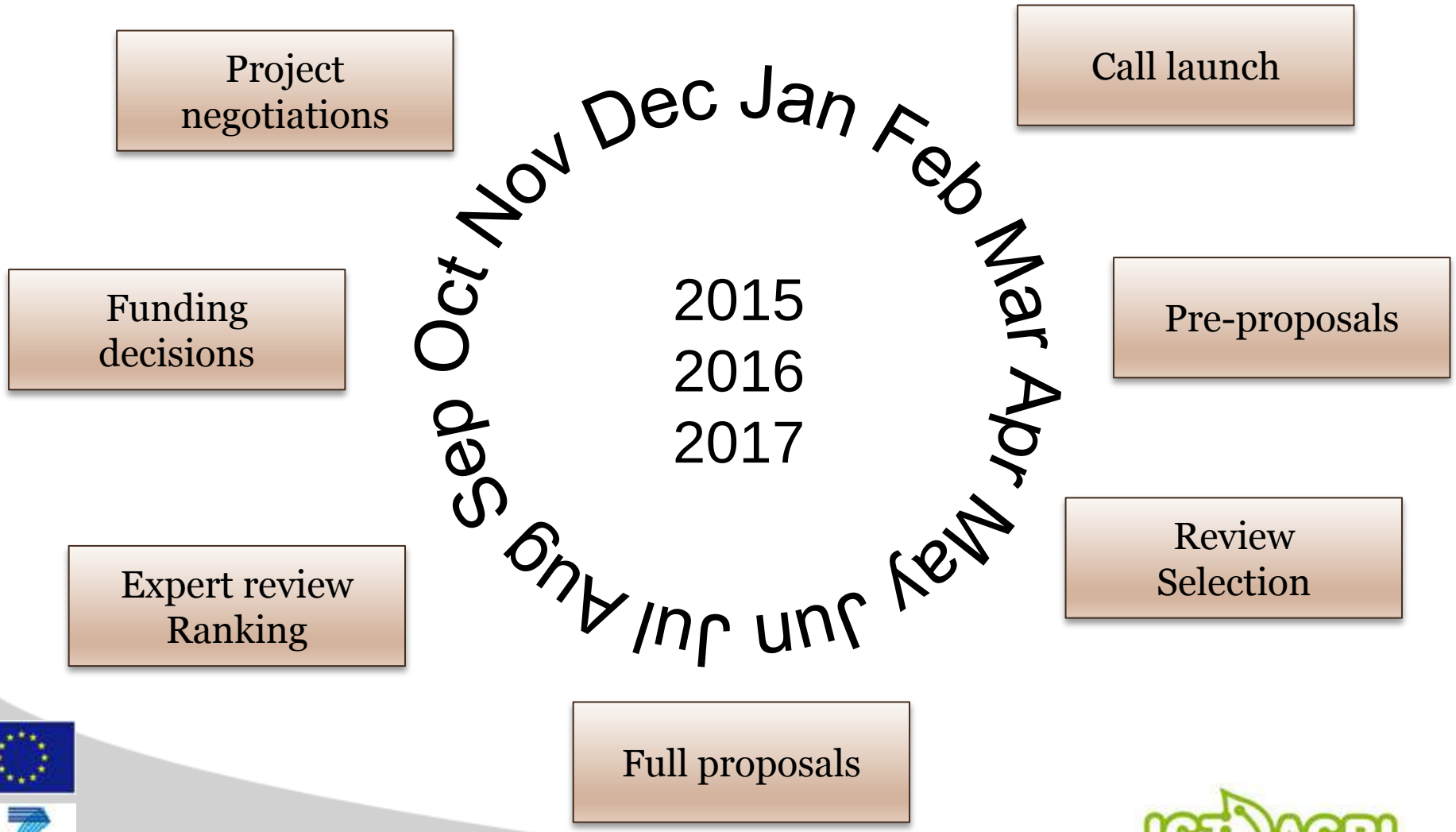
Call documents
Pre-launch

Call and topics decisions
Funding commitments

Approach funders
Funding contributions

Action plan pre-view
Call themes and models

Call implementation (RTD)



Call models

- Trans-national R&D, open topics, best proposals within available funding
- Trans-national R&D, specific topics, one project per topic, competitive or non-competitive
- Trans-national innovation, support of cross-country transfer of ICT and robotics
- Trans-national innovation, ICT-AGRI-2 funded core project and national funded application projects

Coordination within the European Research Area

- Open Access to scientific and technical information – assessment and support
- Researcher mobility and career – facilitation and support by funding activities
- Facilitation of networking activities:
  - Between ICT-AGRI-2 partners
  - With other European coordination actions
  - Amongst ICT-AGRI-2 funded researchers

Help us to achieve our goals

- Visit our website: ict-agri.eu
- Register in Meta Knowledge Base and news
- Be found for projects:
- Find partners for your projects:
- Post to the Forum
- Respond to online consultations
- Contact the national ICT_AGRI partner
- Send a mail

Thank you for your attention