



FP7-REGPOT-2011-1 project:
ACROSS –
– Centre of Research Excellence for
Advanced Cooperative Systems

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ACROSS Abstract (1 of 4)

- The project *Centre of Research Excellence for Advanced Cooperative Systems*, project acronym **ACROSS**, aims at unlocking and strengthening the existing research potential of the Faculty of Electrical Engineering and Computing of the University of Zagreb (UNIZG-FER) in the area of cooperative systems related to
 - cognitive and robotic systems,
 - networked embedded systems and
 - renewable energy systems.

ACROSS Abstract (2 of 4)

- **Possible applications of such cooperative systems are numerous:**
 - advanced flexible manufacturing,
 - home and office automation,
 - renewable and sustainable energy,
 - transport and logistics,
 - environmental monitoring,
 - healthcare,
 - security and surveillance,
 - human augmentation
 - etc.

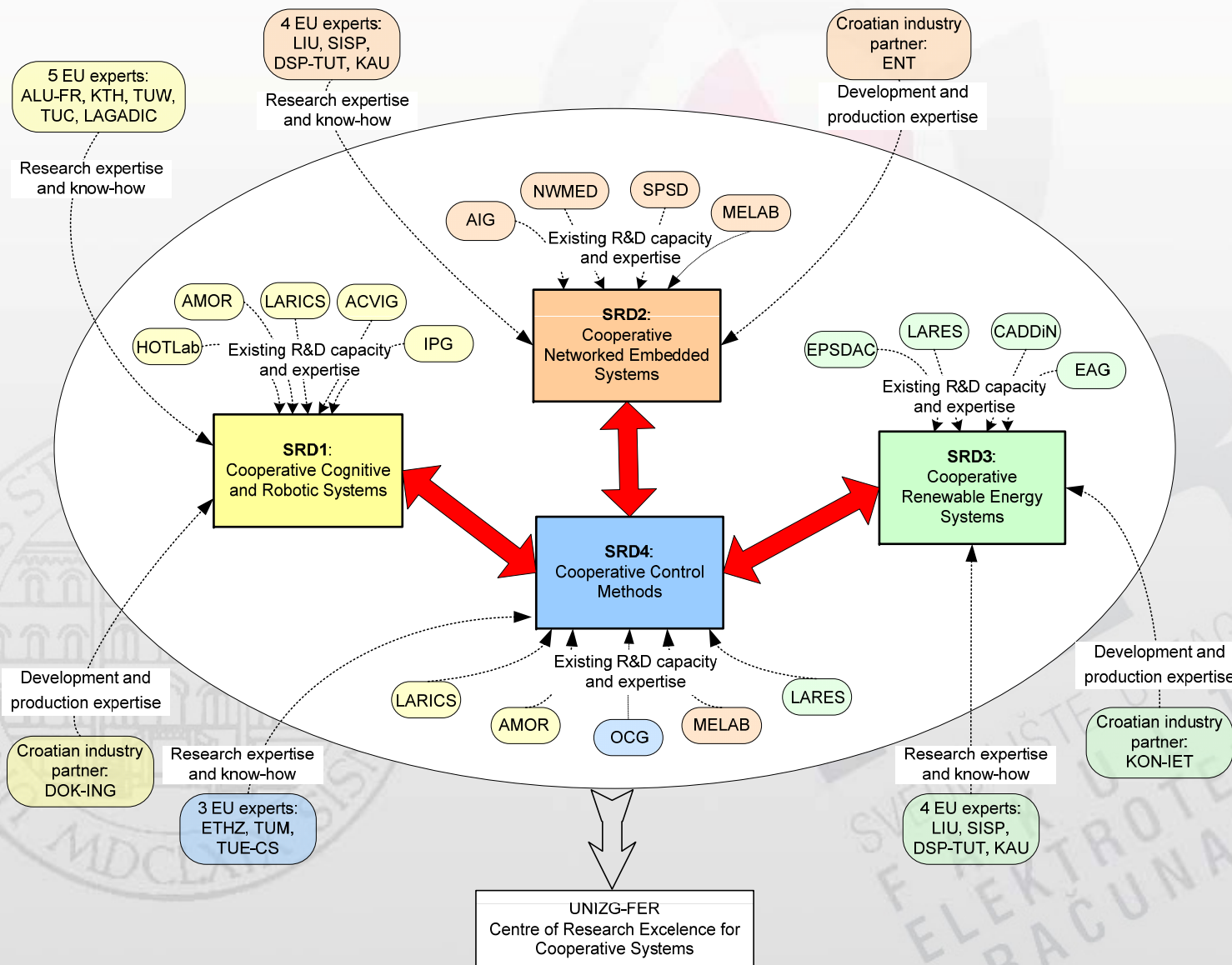
ACROSS Abstract (3 of 4)

- The **ACROSS** ultimate goal is to create a Centre of Research Excellence for Advanced Cooperative Systems within UNIZG-FER, which will be at the forefront of research and development of novel methodologies and advanced engineering approaches for cooperative systems with the following objectives:
 - Strengthening the Research Management Potential;
 - Developing the Strategic Partnerships with Outstanding Research Centres in EU and leading Croatian industrial partners;
 - Increasing the Human Potential;
 - Increasing the Technology Potential;
 - Increasing Scientific Visibility and International Reputation;
 - Improving responses to socio-economic needs of Croatia;
 - Earning a certified recognition “EU Centre of Research Excellence”.

ACROSS Abstract (4 of 4)

- **The ACROSS Project implements a coherent set of measures for execution of these objectives:**
 - Exchange of know-how and experience with leading EU centres;
 - Recruitment of experienced researchers;
 - Upgrading research equipment and establishing three new laboratories;
 - Organisation of workshops and conferences, dissemination and promotional activities;
 - Ex-post Evaluation of research potential by EC.

ACROSS Project Concept



SRD1: Cooperative Cognitive and Robotic Systems

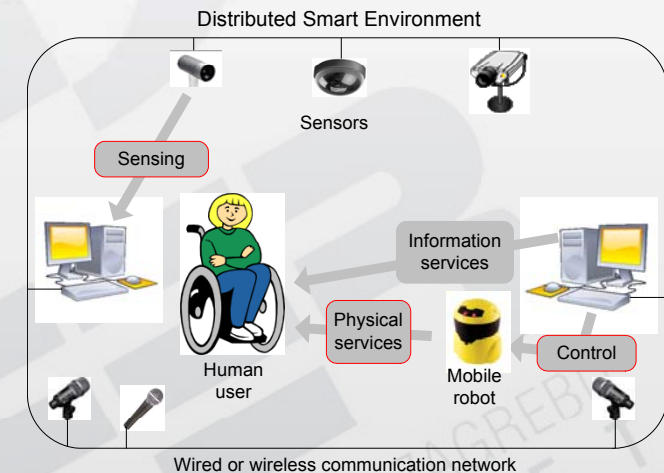
- Three illustrative examples of cooperative cognitive robotic systems



a Cooperative Human-Robots System



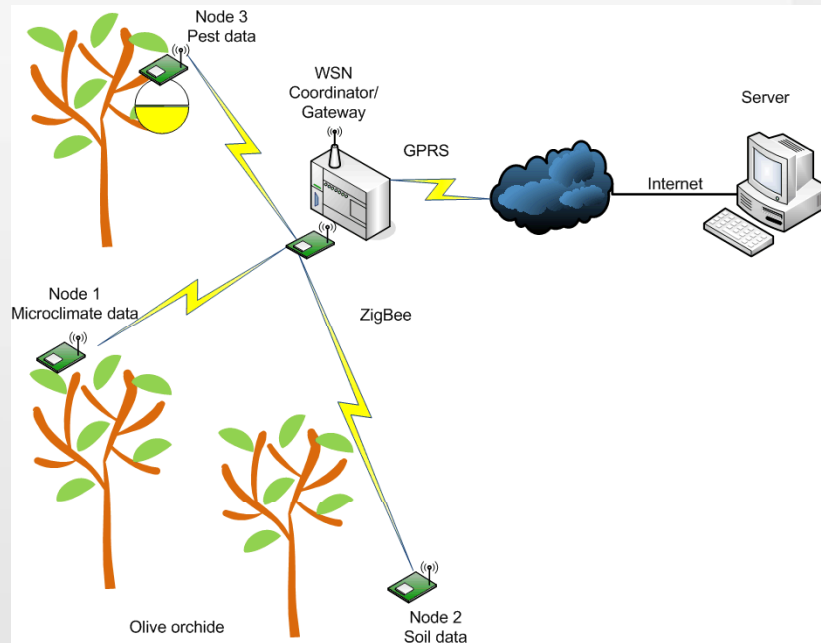
a Cooperative Heterogeneous Multi-Robot System



a Robot Embodied in a Distributed Smart Environment – Ambient assisted living scenario

SRD2: Cooperative Networked Embedded Systems

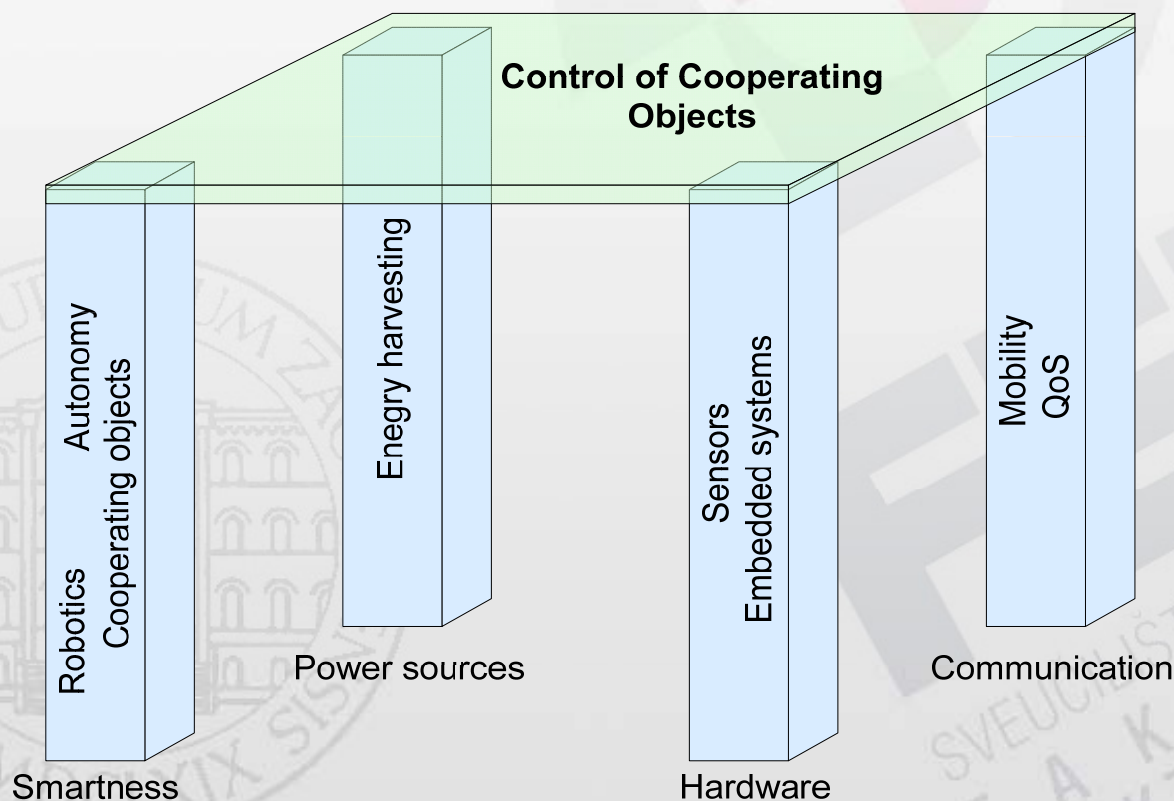
- **An illustrative example**



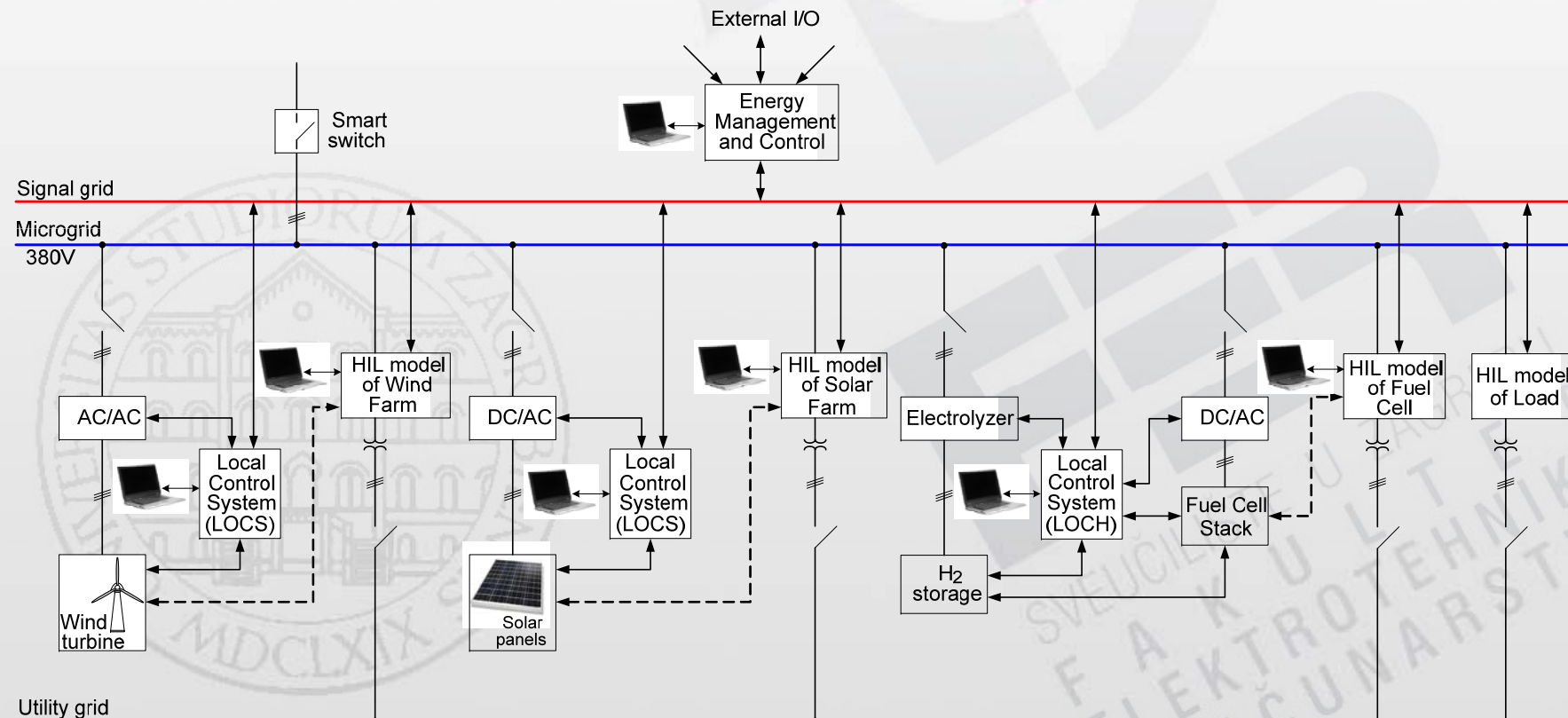
Wireless sensor network for olive orchard monitoring: WSN structure (left), a node on the olive tree (middle) and sink node power with solar panel (right)

SRD2: Cooperative Networked Embedded Systems

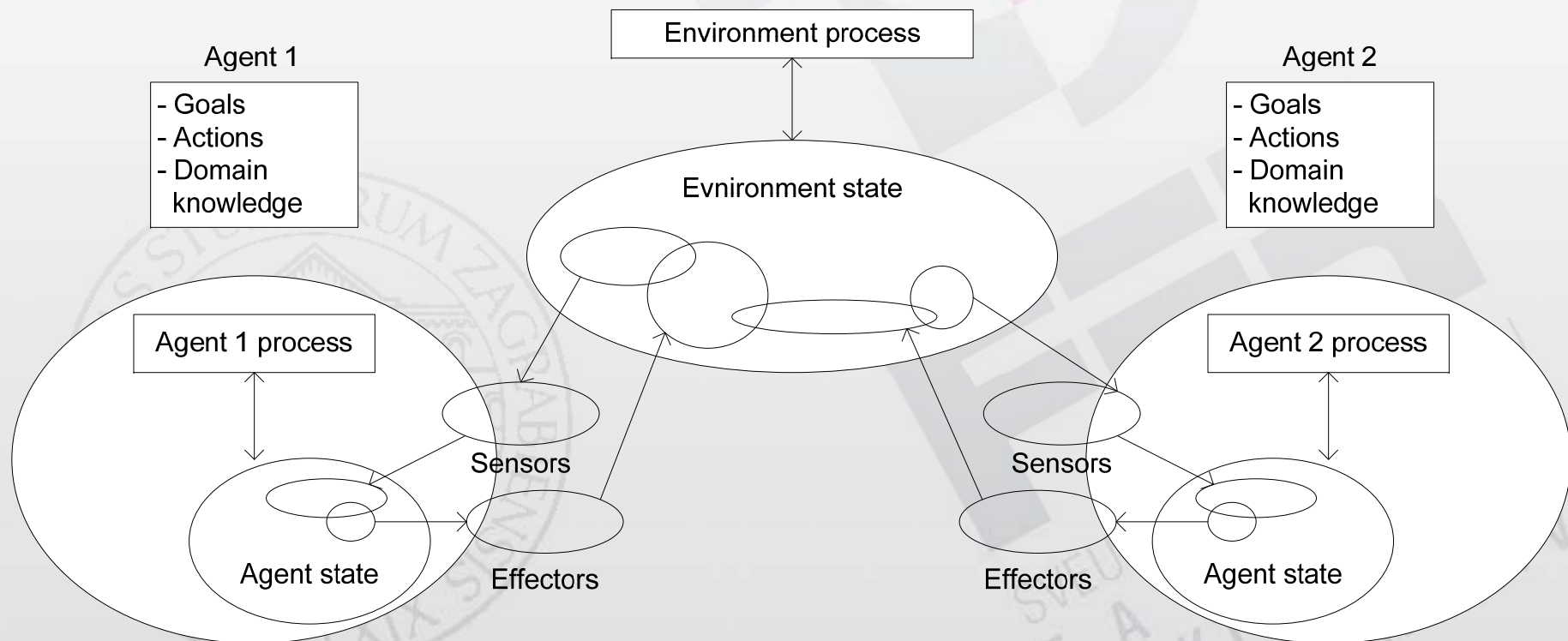
- **Research approach**



- A concept of the microgrid that will be established, enabling new research directions



- A general concept of the multi-agent architecture of cooperative control

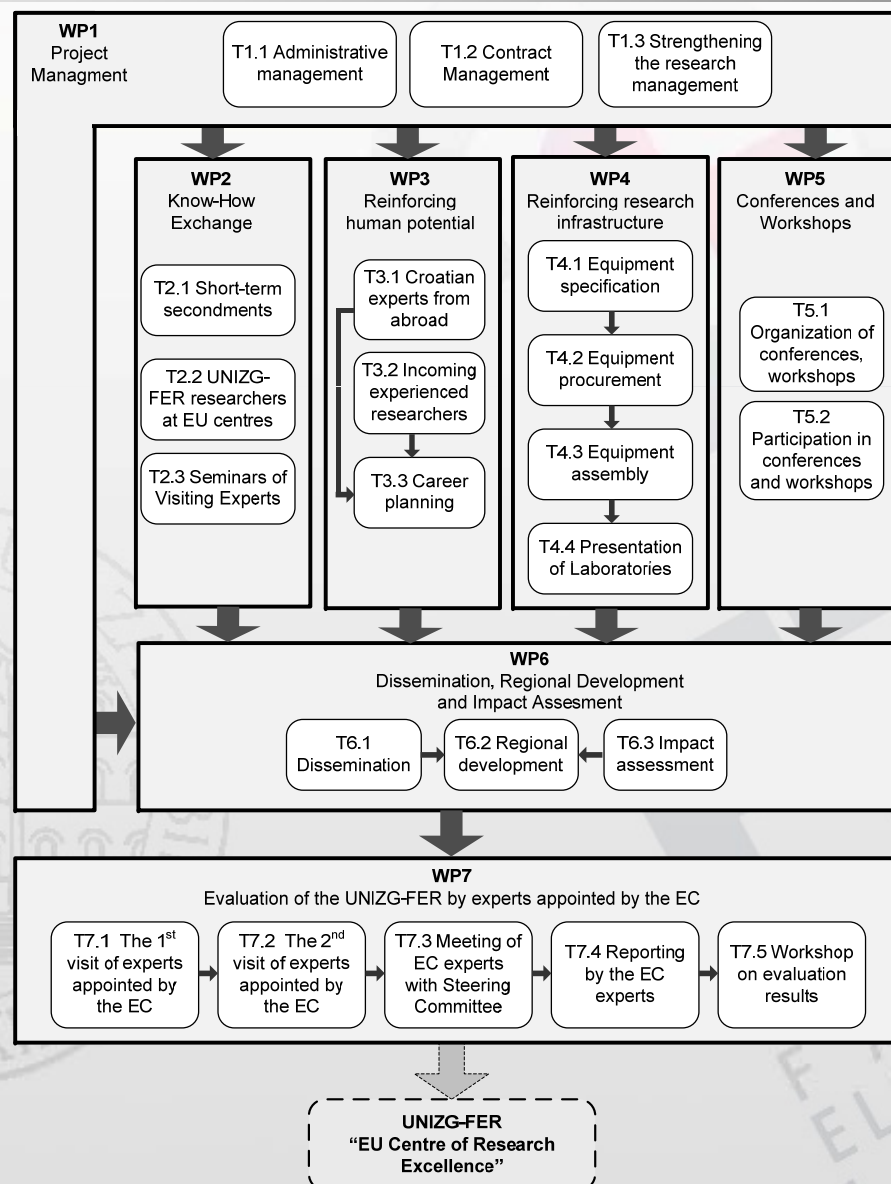


ACROSS Action Plan

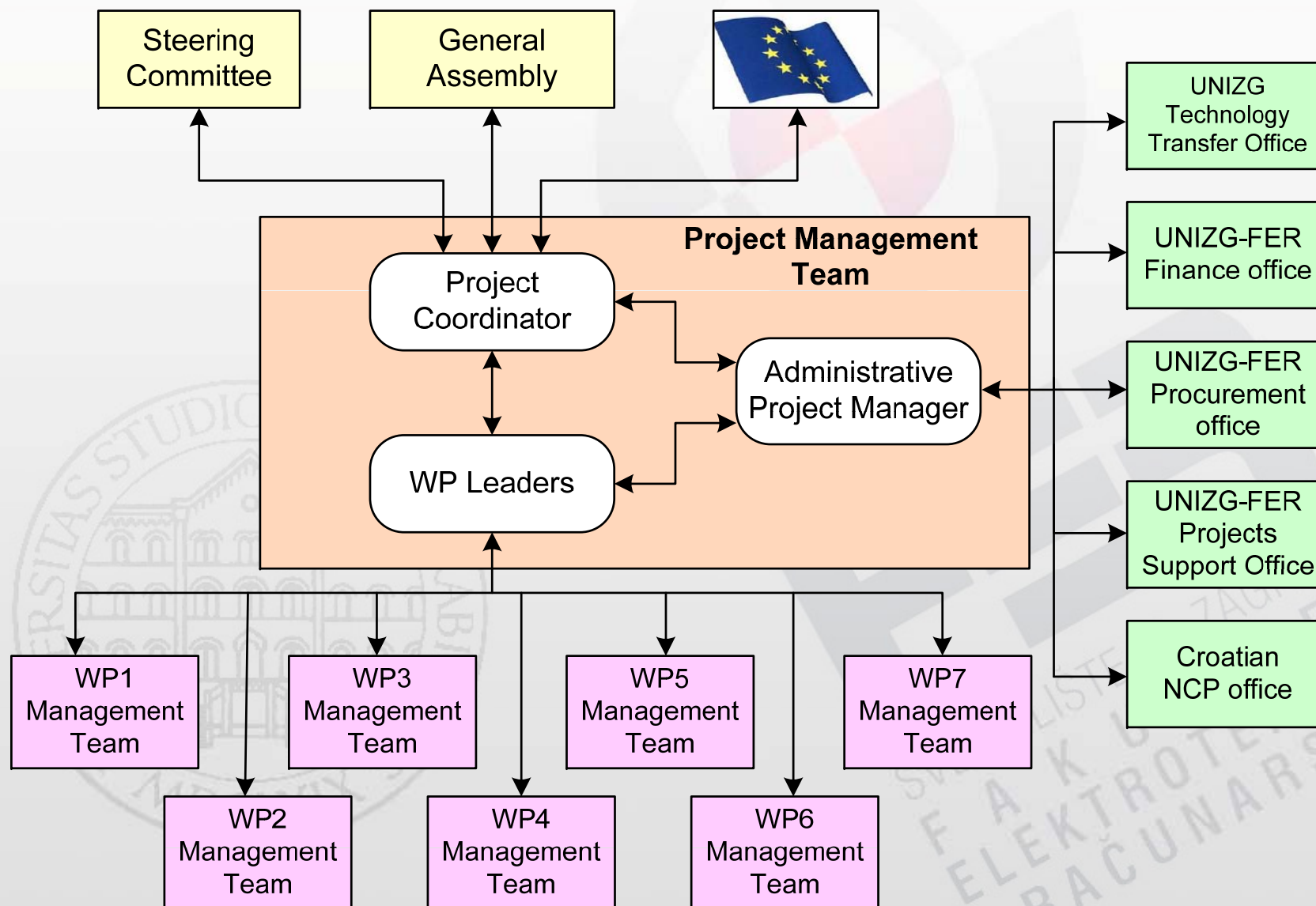
Table 1.4 Matrix
of the ACROSS
Action Plan

		ACROSS Sub-Objectives						
		SO1. Increase Research Manage- ment Potential	SO2. Develop Strategic Partnerships with Outstanding EU and Croatian Partners	SO3. Increase Human Potential	SO4. Increase Technology Potential	SO5. Increase Scientific Visibility and International Reputation	SO6. Improve responses to socio- economic needs of Croatia	SO7. Receive a certified recognition „EU Centre of Research Excellence“
ACROSS Strategic Research Domains	SRD1: Cooperative Cognitive and Robotic Systems	WP1 – Project Management	WP2 - Know-How Exchange	WP3 - Reinforcing human potential	WP4 – Reinforcing research infrastructure	WP5 – Workshops and Conference Organisation and Participation	WP6 – Dissemination, Regional Development and Impact Assessment	WP7 – Evaluation of the UNIZG-FER by experts appointed by the EC
	SRD2: Cooperative Networked Embedded Systems							
	SRD3: Cooperative Renewable Energy Systems							
	SRD4: Cooperative Control Methods							

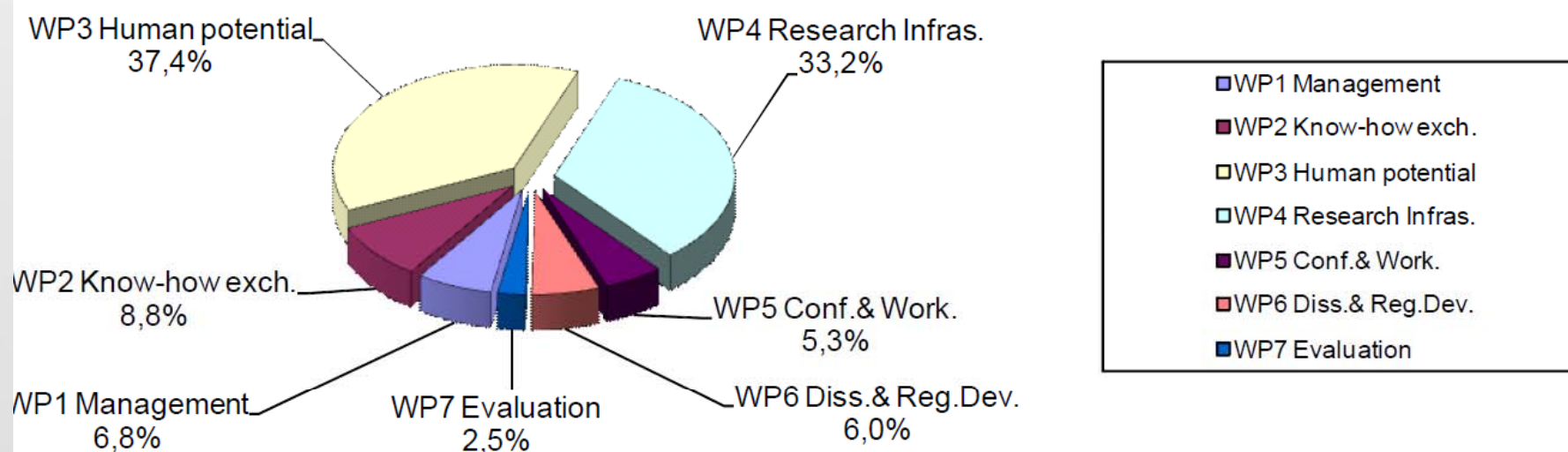
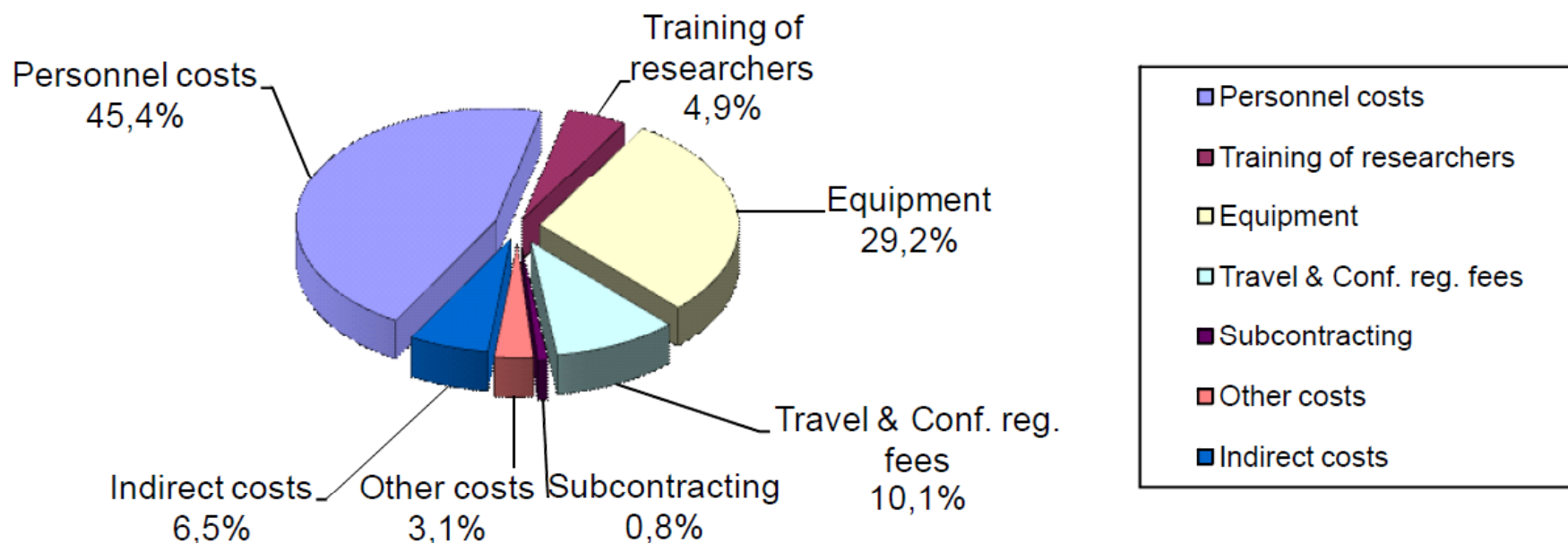
ACROSS Workplan



Management structure and procedures



Resources to be committed (In total 3.351.776 €)





FP7-REGPOT-2011-1 project ACROSS:

WP6 – Dissemination, Regional Development and Impact Assessment

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WP6 - Objectives

- Communicate project aims, results and activities of the UNIZG-FER to general public, research community, industry and policy makers in and EU.
- Facilitate regional multi-valued networking of research centres, entrepreneurs, regional government and investors for integrated actions in creating research driven clusters; and coordinated use of Framework Programme and Structural Funds for research and innovation strategy development and implementation.
- Assess ACROSS regional impact and transfer of knowledge.

WP6 - Description of work

T6.1. Dissemination

- Set up the ACROSS website and mailing lists.
- Regular promotion of project news and events via ACROSS website.
- Preparation of a slideshow presentation on the ACROSS's overall objectives.
- Creation and update of promotional packages (e.g. leaflets).
- Regular promotion of project news and events via relevant EU science and technology news websites such as SEE-ERA.NET.
- Organisation of a workshop with the self-tailored programme, dedicated to the protection of our Intellectual Properties.
- Publications of research results in peer reviewed journals and organisation of special issues of international journals (at least one issue for each SRD).

WP6 - Dissemination, Regional Development and Impact Assessment - Description of work

T6.1. Dissemination (cont.)

- Presentation on regional trade shows in the sector (e.g. ARCA International Fair on Zagreb Fair).
- Regular communication with local media and press for promoting social and economic benefits of the technology and impacts of the ACROSS.
- Creation of a data base of R&D laboratories, SMEs, industrial partners, governmental bodies, and all parties interested in Cooperative Cognitive and Robotic Systems, Cooperative Networked Embedded Systems, Cooperative Renewable Energy Systems, and Cooperative Control Methods in Croatia, integrated in the ACROSS web site.

WP6 - Dissemination, Regional Development and Impact Assessment - Description of work

T6.2. Regional development

- Assessment of commercial potential for cooperative systems research and technology in Croatia over next 5 years.
- Preparation of technology platforms for Cooperative Cognitive and Robotic Systems, Cooperative Networked Embedded Systems, Cooperative Renewable Energy Systems, and Cooperative Control Methods in Croatia.
- Organization of round tables (initiation meetings) and workshops - involving R&D actors, SMEs, governmental agencies, financial sector, regional policy makers and invited EU experts - on:
 - Networking for preparation and setting up research driven clusters for the cooperative systems (one round table, one general workshop and four workshops dedicated to each SRD),
 - Coordinated use of Framework Programme and Structural Funds for research and innovation strategy development and implementation (one round table and one workshop)

WP6 - Dissemination, Regional Development and Impact Assessment - Description of work

T6.3. Impact assessment

- Organization of a round table and workshop with Steering Committee on ACROSS's regional impact with emphases on transfer of knowledge.



Thank you for attention!

