

IRISS Implementation of Research & Innovation on Smart Systems Technologies

**MNBS 2012
Athens, 2012-05-03**



Project Acronym: IRISS

Project Title:

Implementation of Research &
Innovation on Smart Systems
Technologies

Project Number: 287842

Funding Scheme:

Coordination and Support Action

Start Date: 1 October 2011

End Date: 30 September 2013

Duration: 24 months

Project Cost: 2.1 million Euro

Project Funding: 1.5 million Euro

16 Contractual Partners

15 Associated Partners

Contractual Partners

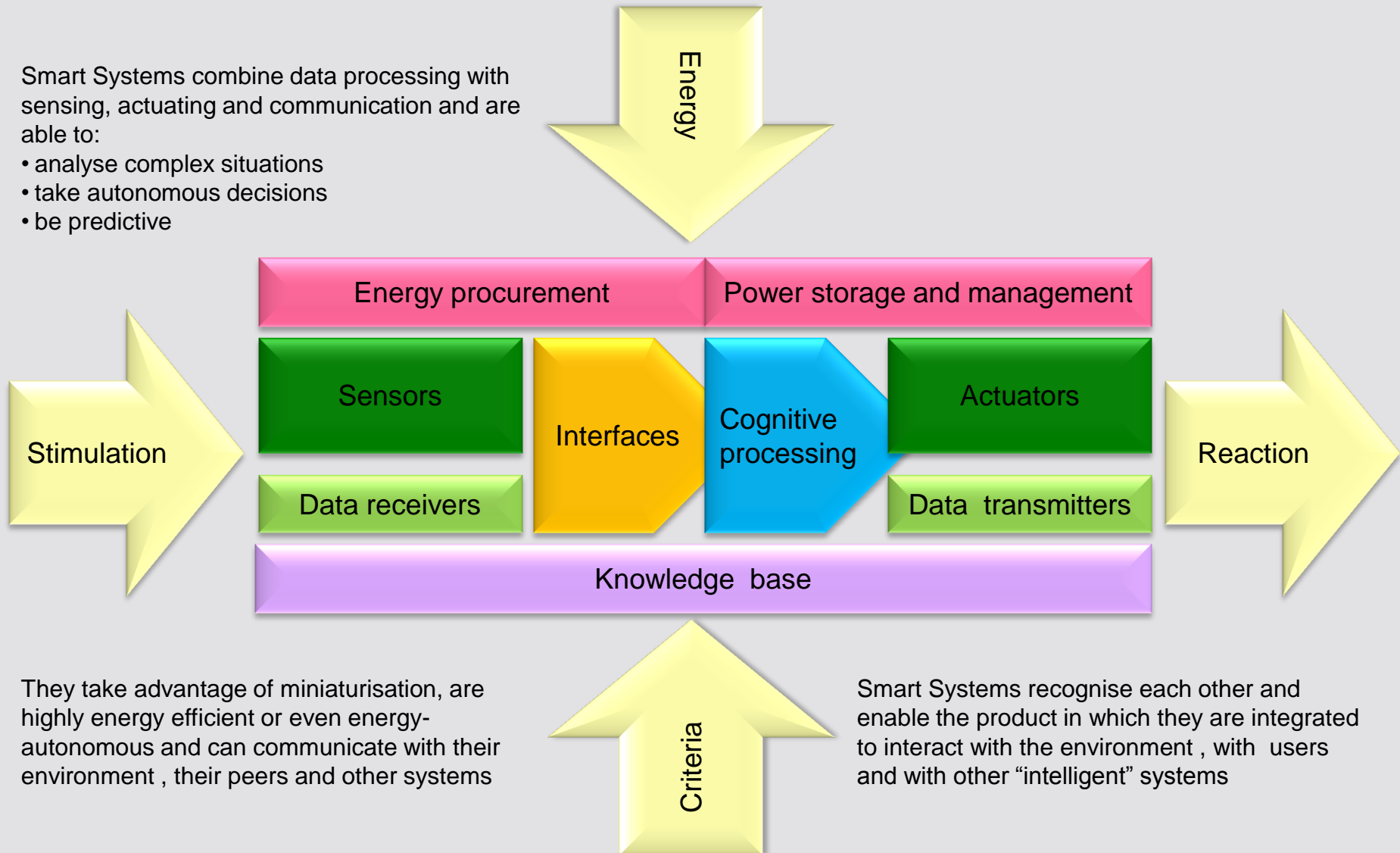
VDI/VDE-IT
ARTSCI
CEA
CSIC
CRF
CSEM
ENAS
Hitachi
HSG
IKERLAN
PARAGON S.A.
Siemens
Sorin
Starlab
STM
Thales

Associated Partners

Alcatel
Bosch
Conti
IBC
IFEVS
MSTBW
Philips
RGA
Sensoror
SINTEF
VTI
BUMAR
HWU
IMT
VTT

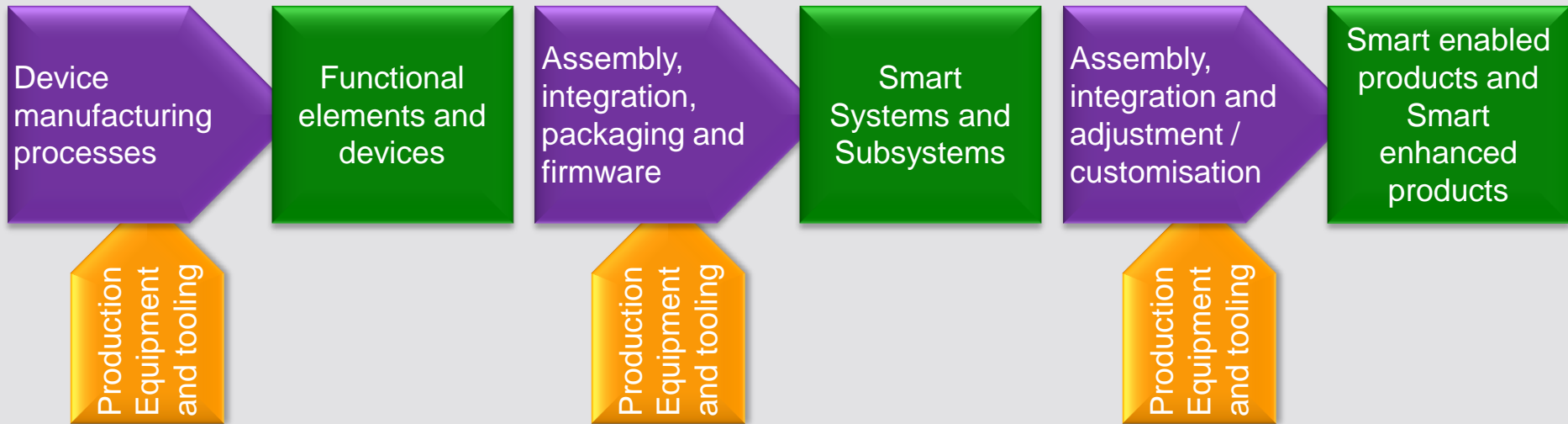
Smart Systems combine data processing with sensing, actuating and communication and are able to:

- analyse complex situations
- take autonomous decisions
- be predictive

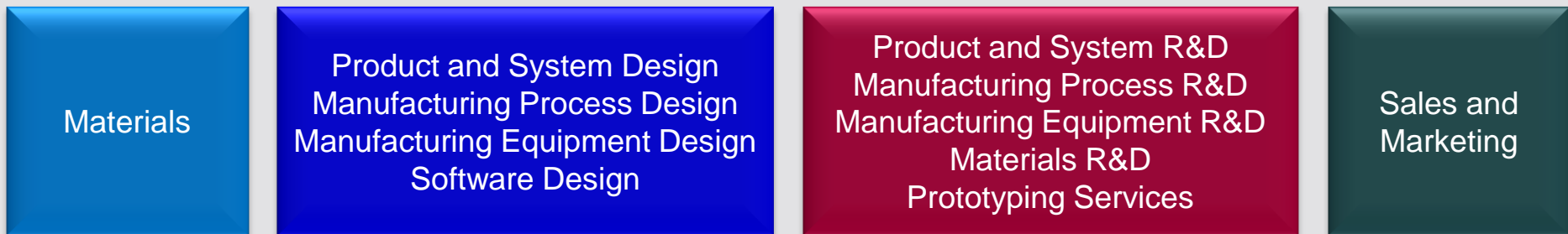


The Smart Systems Value Chain

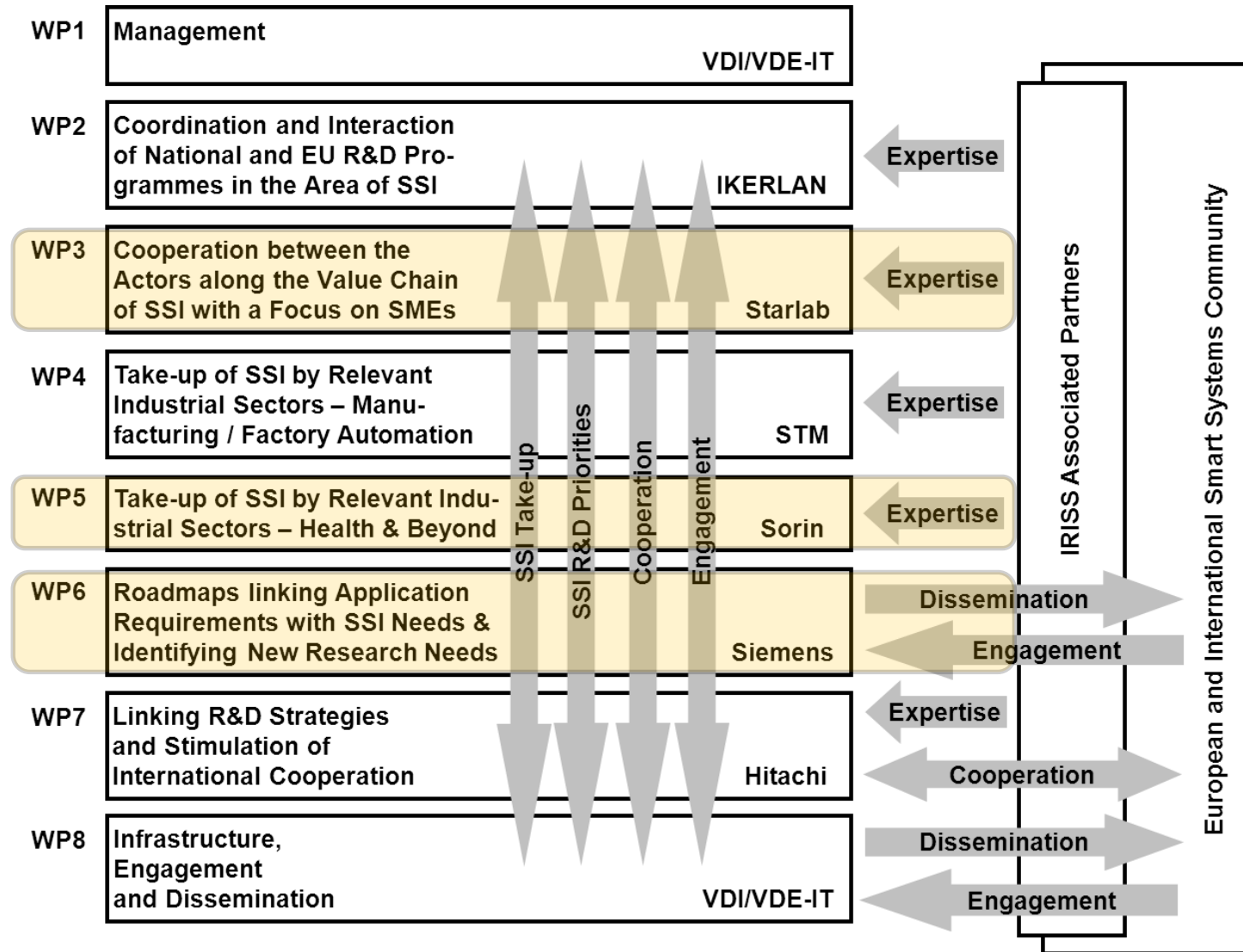
Manufacturing supply chain



Supported by:



Structure of work packages, interdependencies and information flows



EPoSS Surveys, Roadmaps and SRA



EPoSS
European Technology Platform
on Smart Systems Integration

IRISS
Implementation of Research & Innovation
on Smart Systems Technologies

Participate in IRISS Surveys

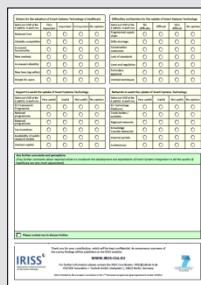
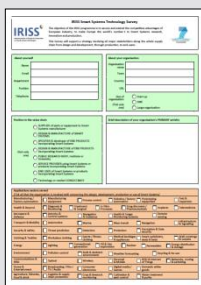
Secure and extend competitive advantages of European industry, to make Europe the world's number 1 in Smart Systems research, innovation and production

Survey on Smart Systems Technology

- Supports R&D&I strategy involving all major stakeholders along the supply chain

Survey on Smart Systems & MNBS in Healthcare

- Provides strategic foundation for exploitation of these technologies to enhance healthcare in Europe and globally



Participate in IRISS Video Interviews

Share YOUR experiences working in Smart Systems and tell what you would like to see in the future in terms of support from the European Commission – with Specific focus on SMEs

Short informal interviews

- IRISS is particularly interested in SMEs and those working with SMEs
- IRISS can provide a powerful platform for expressing the views of companies on what works and what can be improved

Have your Say!

IRISS “Implementation of Research and Innovation on Smart Systems Technologies” is funded by the European Commission in FP7 (grant agreement no 287842)

www.iriss-csa.eu

IRISS
Implementation of Research & Innovation
on Smart Systems Technologies



1. A Compendium of the European Smart Systems Technology community, including:
 - European players, activities, trends and R&D priorities
 - A view of the current and developing Smart Systems Technology landscape
 - *An analysis, not a directory*
2. Roadmaps for Smart Systems Technology
 - A proper roadmap includes directions, and timescales
3. Based upon the roadmaps, a new Strategic Research Agenda (SRA)
4. A concept for a Public-Private Partnership based on the priorities defined in the new SRA

The information required for compendium, roadmaps and EPoSS SRA

1. Basic company information

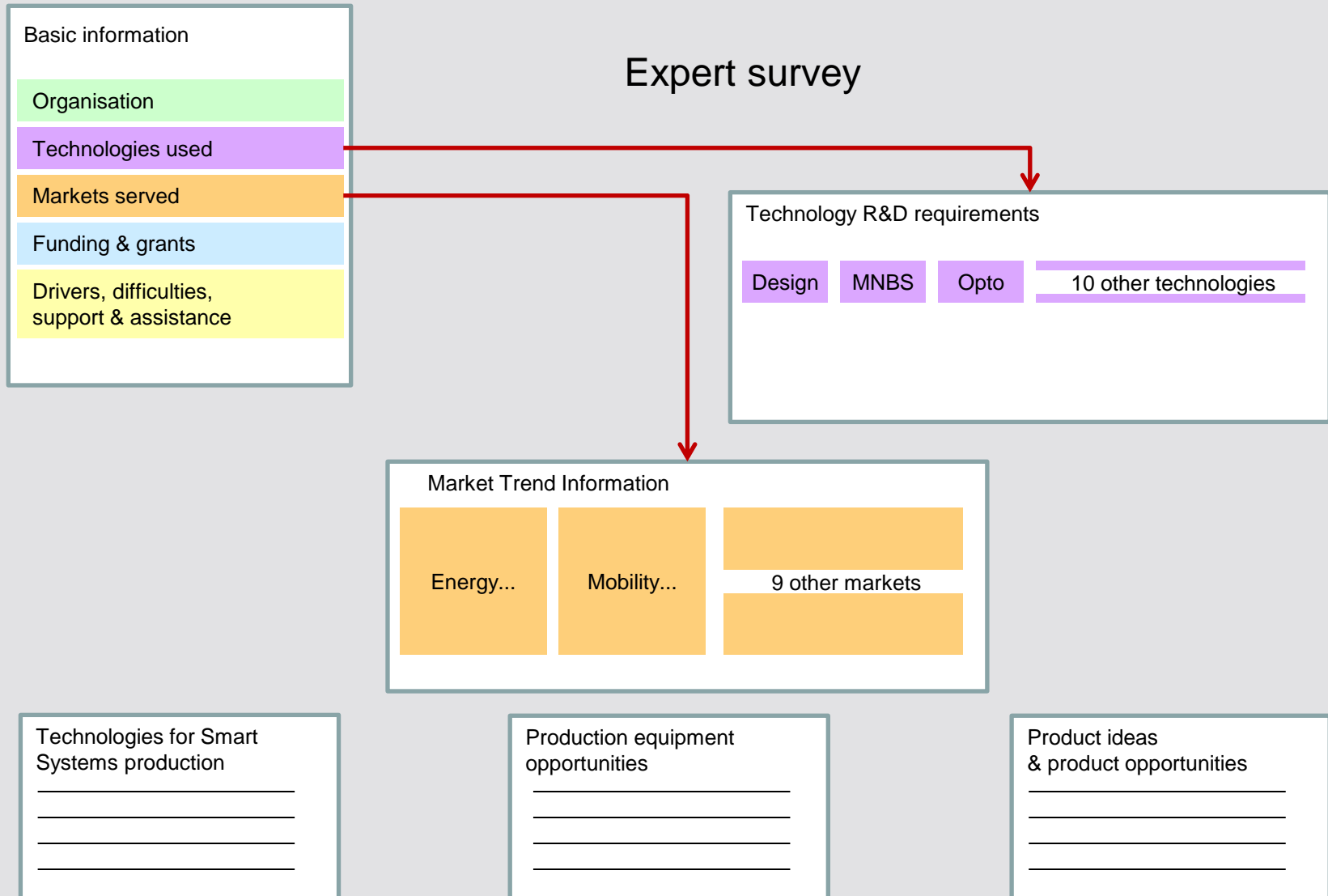
- Contact person, company address
- position in the value chain
- Headcount and value trends related to Smart Systems Integration activity
- Participation in projects, networks and communities
- Primary market sector served

2. Product/Market information

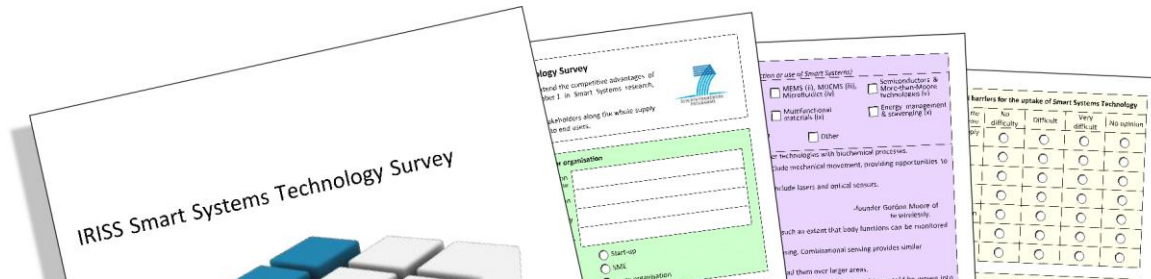
- The opportunities, barriers and timescales regarding the introduction and exploitation of Smart Systems, and products enhanced or enabled by Smart Systems, into different, *quantified*, market sectors
- The opportunities, barriers and timescales regarding the introduction and exploitation of *manufacturing equipment* for the production of Smart Systems

3. Technology development information

- The prospects, likely barriers and timescales for Smart Systems technologies to rise from the research phase, through to widespread application
- The prospects, likely barriers and timescales for the *technologies for manufacturing Smart Systems* to rise from the research phase through to widespread application



- Complete the basic survey here, today.....



... and be the first to receive the results !

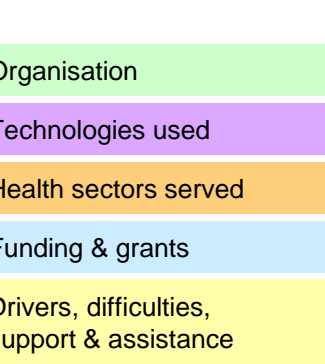


...or the in-depth on-line expert survey at www.iriss-csa.eu ...

- Development and promotion of a common position in the health sector & beyond
- Development of roadmaps in the health sector & beyond
- Analysis and identification of relevant Smart Systems initiatives in the health sector & beyond
- Recommendations on how to enhance the impact of national and European measures in Health & beyond
- Federation of companies (and research organisations) and aiming at getting support from national and European public authorities
- Setting up of MNBS topical group in EPoSS and common action plan

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Implementation of Research & Innovation
on Smart Systems Technologies

Expert survey



Basic information

Organisation

Technologies used

Health sectors served

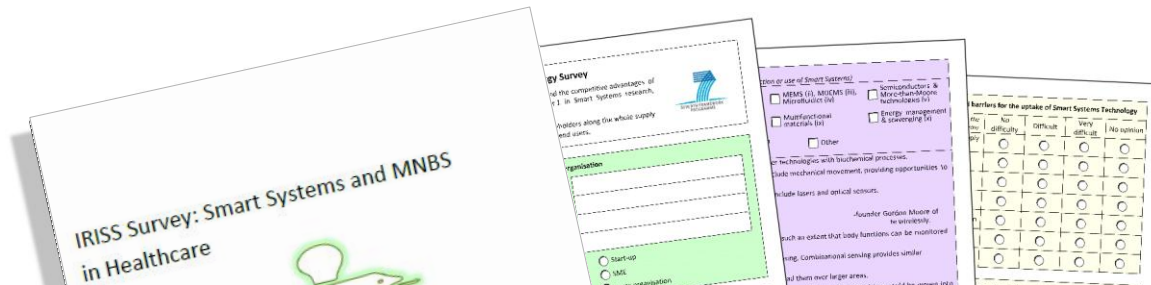
Funding & grants

Drivers, difficulties,
support & assistance

[illegible]

The Benefits of Smart System and MNBS	<p>This section reviews the benefits of Smart Systems and Micro-Nano-Bio-Systems in healthcare.</p> <p>You are invited to suggest:</p> <ul style="list-style-type: none"> • which medical disciplines could benefit significantly from Smart Systems and MNBS technologies • the relative importance of improvements in instrumentation and healthcare procedures through the use of Smart Systems and MNBS,
Commercial access to Smart Systems and MNBS	<p>Smart Systems and MNBS technologies may be accessed through the commercial supply chain and through collaborative research mechanisms such as the EU Framework Programme.</p>
The EU Framework Programme and Horizon 2020	
Product Development Opportunities	<p>Here you are invited to suggest ideas and timescales for the development of new products enabled by Smart Systems technologies.</p>
Healthcare uptake and regulation	<p>Here you are invited to comment upon:</p> <ul style="list-style-type: none"> • the uptake of Smart Systems and MNBS by users and regulatory matters • more general views about the healthcare market as a whole, and MNBS research
Predictions for the healthcare market in general	
MNBS technology R&D	

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... and be the first to receive the results !



...or the in-depth on-line expert survey at www.iriss-csa.eu

Setting up of MNBS topical group in EPoSS chaired by Jesús Ruano and Renzo Dal Molin

Applied MNBS

- > MNBS applications in health & (bio-)medical, environment, food & beverage safety
- > Sample preparation & detection in a Lab-on-Chip
- > Computer-Brain-Interface & neural systems based on photonic transistors
- > Body-worn & implanted Bio-MEMS

Automotive



- > Electric Vehicle
- > Optimised power trains
- > Smart, green & interconnected vehicles
- > Weight reduction & energy harvesting
- > IoT applications in the vehicle
- > Safe, efficient & user-friendly mobility

Healthy Living



- > Prevention of disease, and promotion of fitness & healthy lifestyles
- > Personal Medical Devices
- > Point of Care diagnostics
- > Remote monitoring for chronic disease patients
- > Improving the autonomy & integration of disabled and aging people

Manufacturing & Robotics

COMING SOON

Communications for Smart Devices



- > Internet of Things
 - > RFID
 - > Sensors/actuators
- > Power management
- > Machine-to-Machine communication
- > Architecture & modelling
- > Integration with non-standard substrates

Applied MNBS



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Key Technologies



- > Materials & processes
- > Design methodologies & simulation
- > Manufacturing & reliability
- > 3D packaging
- > MEMS in Smart Systems
- > Smart sensor systems
- > Technology radar

- Network and activity map, including best practices, barriers, and opportunities for SMEs and others
- Characterisation of Smart Systems value chains
- Definition/development of tools to promote Smart Systems take-up and to encourage players to take advantage of opportunities
- Review of the value creation of Smart Systems integration for the European economy in the two selected sectors, Health and Manufacturing

Questionnaires for SMEs:

1. Do you use Smart System technologies or are you aware of the possibilities?
 - (YES) Could you identify any barrier for the taking-up of the Smart Systems you use/develop?
 - (YES) Could you list the actors within the Smart System value chain you most interact with (public administrations, other companies, research institutions, universities, etc.)?
 - (NO) What are the reasons, if any, for not using them?
 - Not being aware of them?
 - Too complicated/expensive?
 - Not trusting on the system/technologies at all?
 - Final products not reliable at all?
 - Others

Questionnaires for SMEs:

2. Do you profit from the help of any national or international cluster/platform like EPoSS or similar?
 - (YES) Is there anything you would like them to improve in order to better fit your needs?
 - (NO) What are the reasons, if any, for not using them?
 - Not being aware of them?
 - No trustable approach
 - Not advantageous cost/benefit

Questionnaires for SMEs:

3. Do you take part in R+D projects on Smart Systems?

- (YES) National/International/both (weight)
- (YES) Which programmes/projects and what is your role (technology developer, system/product integrator, end user)?
- (YES) Do you use the mechanisms that exist in Europe to support SMEs?
- (NO) Are you aware of the mechanisms that exist in Europe to support SMEs?

Thank You!

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www.smart-systems-integration.org