

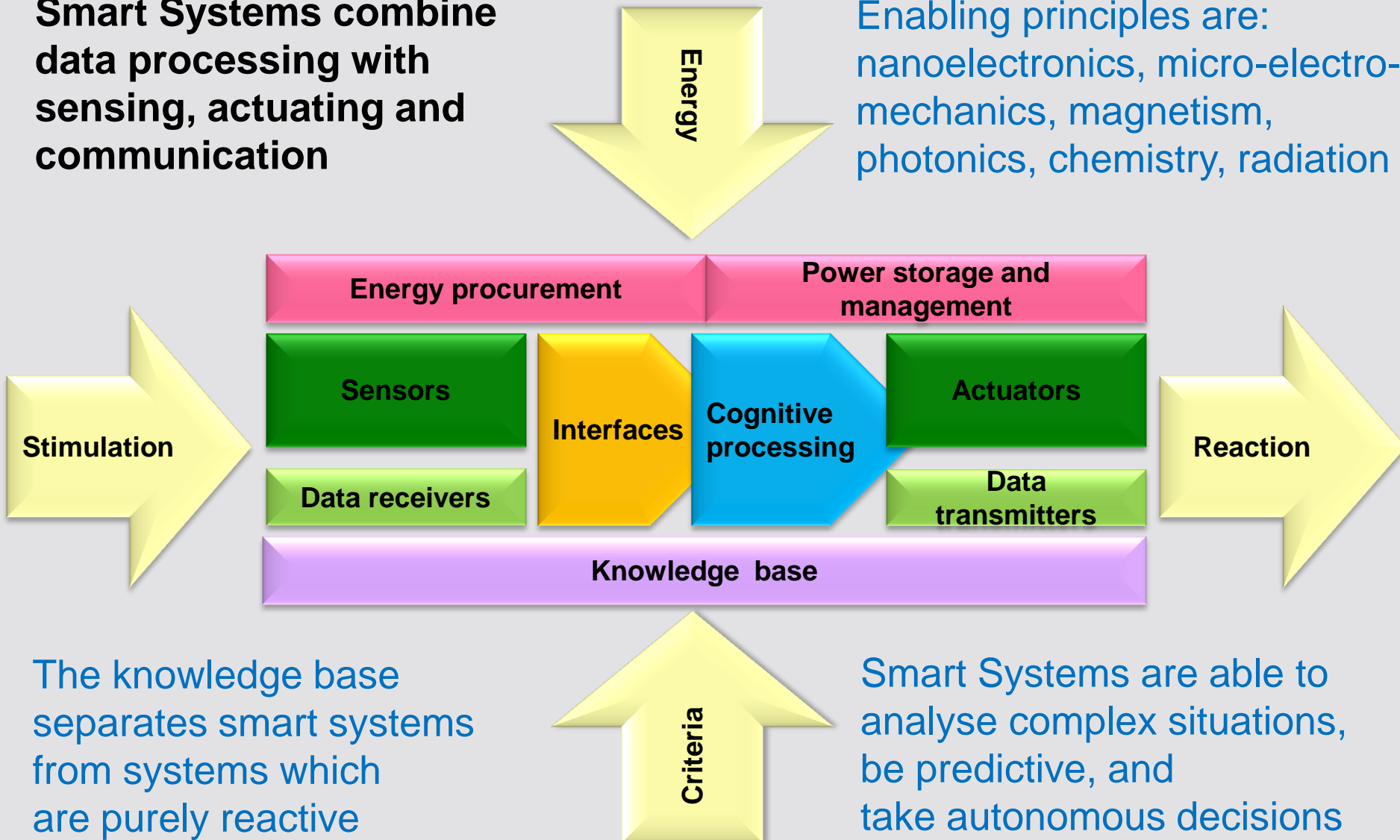
Smart Systems and Robotics in the ECSEL JTI

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Smart Systems Building Blocks

Smart Systems combine data processing with sensing, actuating and communication

Enabling principles are:
nanoelectronics, micro-electro-mechanics, magnetism, photonics, chemistry, radiation



Evolution of Smart Systems

**System functionalities
determine advancements in “smartness”**

1st Generation Smart Systems

integrate sensing and or actuation
as well as signal processing to enable actions



Gyro Mouse
Gyration

2nd Generation Smart Systems

are built on multifunctional perception
and are predictive and adaptive



Continuous
Glucose
Monitoring
Medtronic

3rd Generation Smart Systems

perform human-like perception and action
and generate energy



Fully
Automated
Driving
Google

Working Groups of EPoSS

Backbone of the SRA



EPoSS
European Technology Platform
on Smart Systems Integration





ECSEL:

Electronics Components and Systems for European Leadership

ECSEL Joint Undertaking:

- A European funding instrument for RD&I in electronics components and systems
- Based on the Public-Private Partnership model
- Public sector plus Industry Associations
- Using a tri-partite funding model
- National, EU and private sector funds

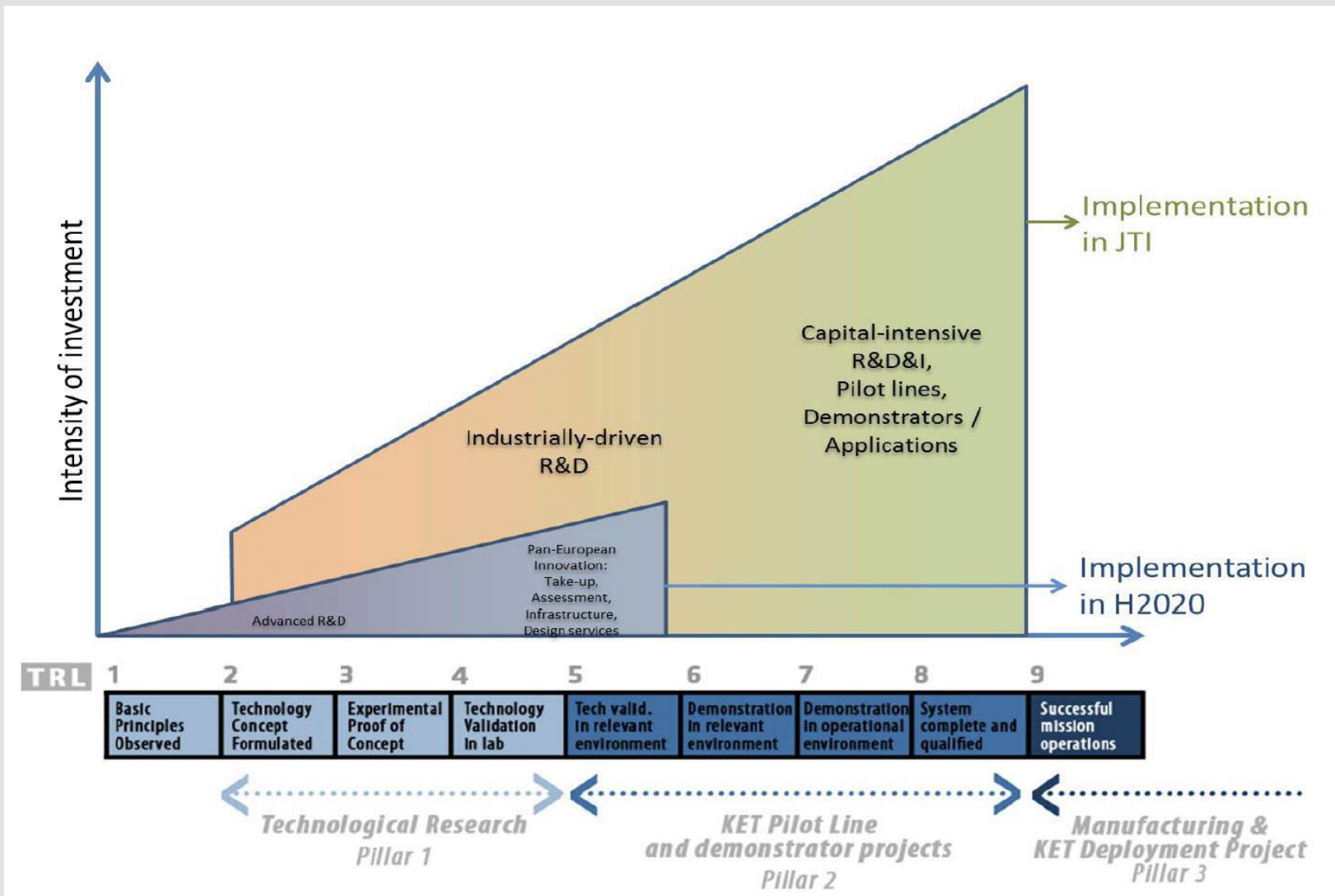
Complementing other funding instruments with a market-facing programme of high impact

ECSEL Objective

Drive innovation by focus on higher TRL

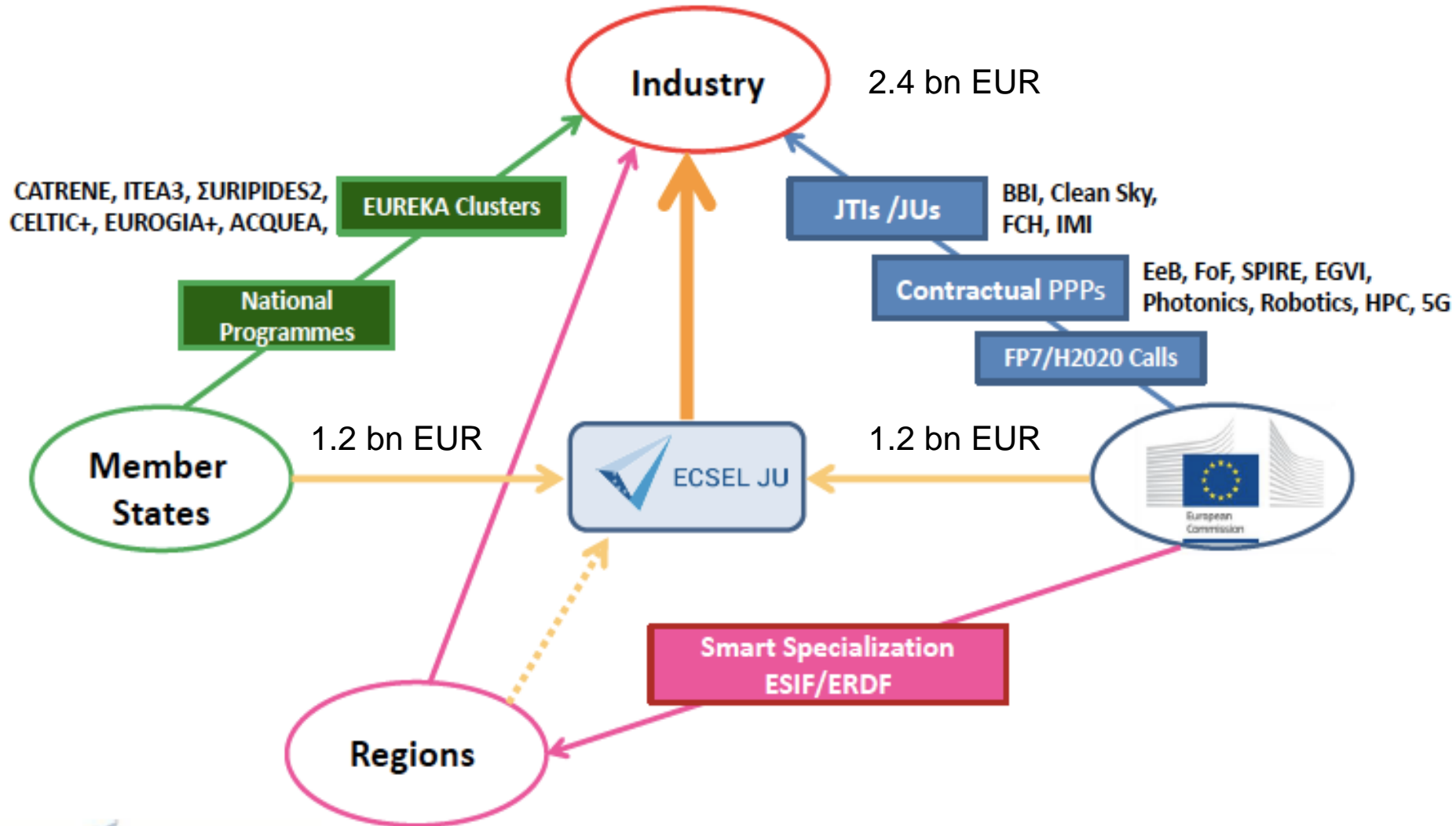


EPoSS
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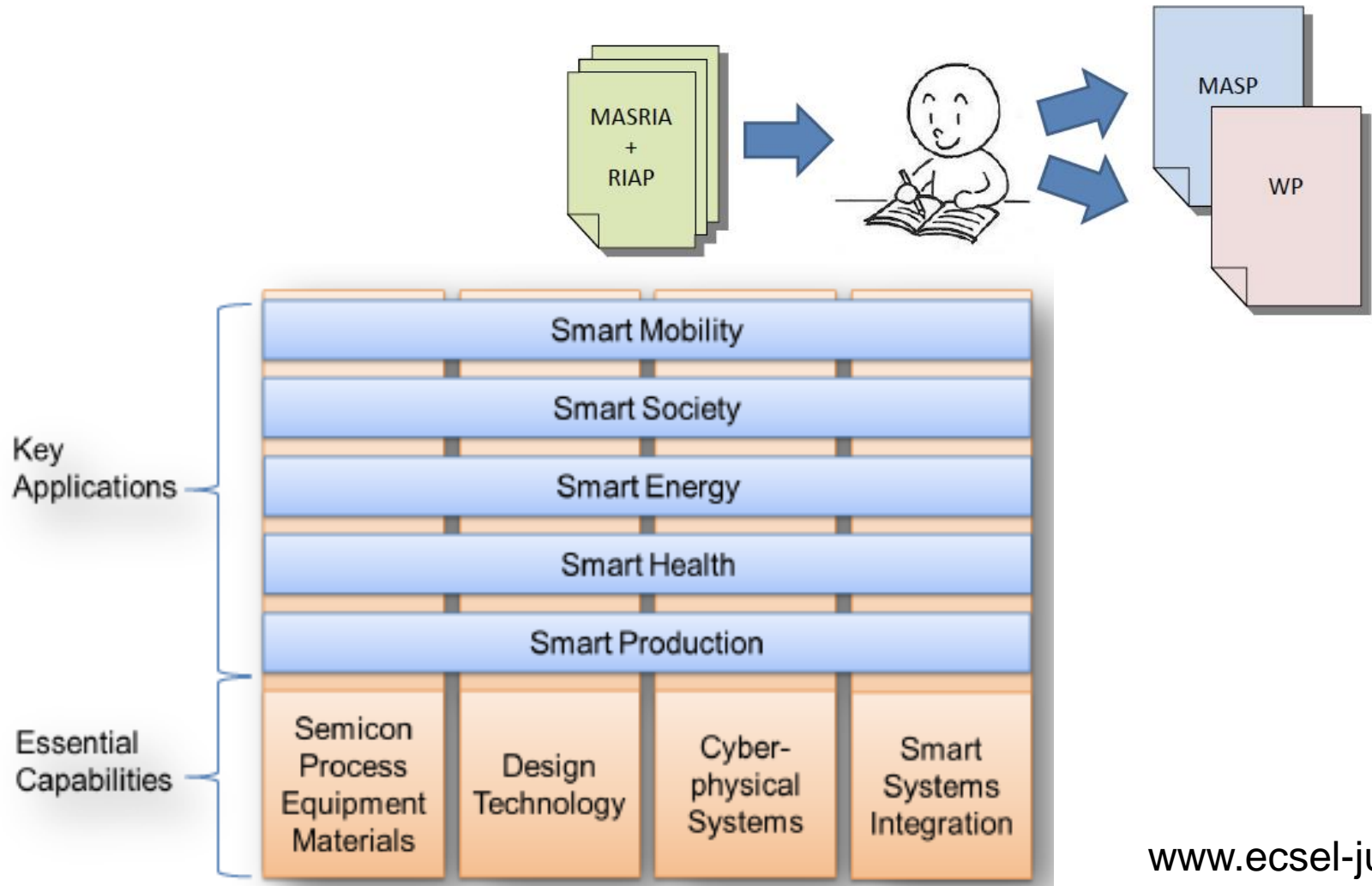
ECSEL Mechanism

Tri-Partite Joint Undertaking



ECSEL Mechanism

Multi-Annual Strategic Research Agenda



www.ecsel-ju.eu

Key Applications

- Smart Mobility: Automated Driving
- Smart Production: Fab Automation Robots
- Smart Health: Service Robotics

Essential Capabilities

- Cyber Physical Systems: Autonomy and Cooperation
- Smart Systems Integration:
Environment Recognition and Positioning

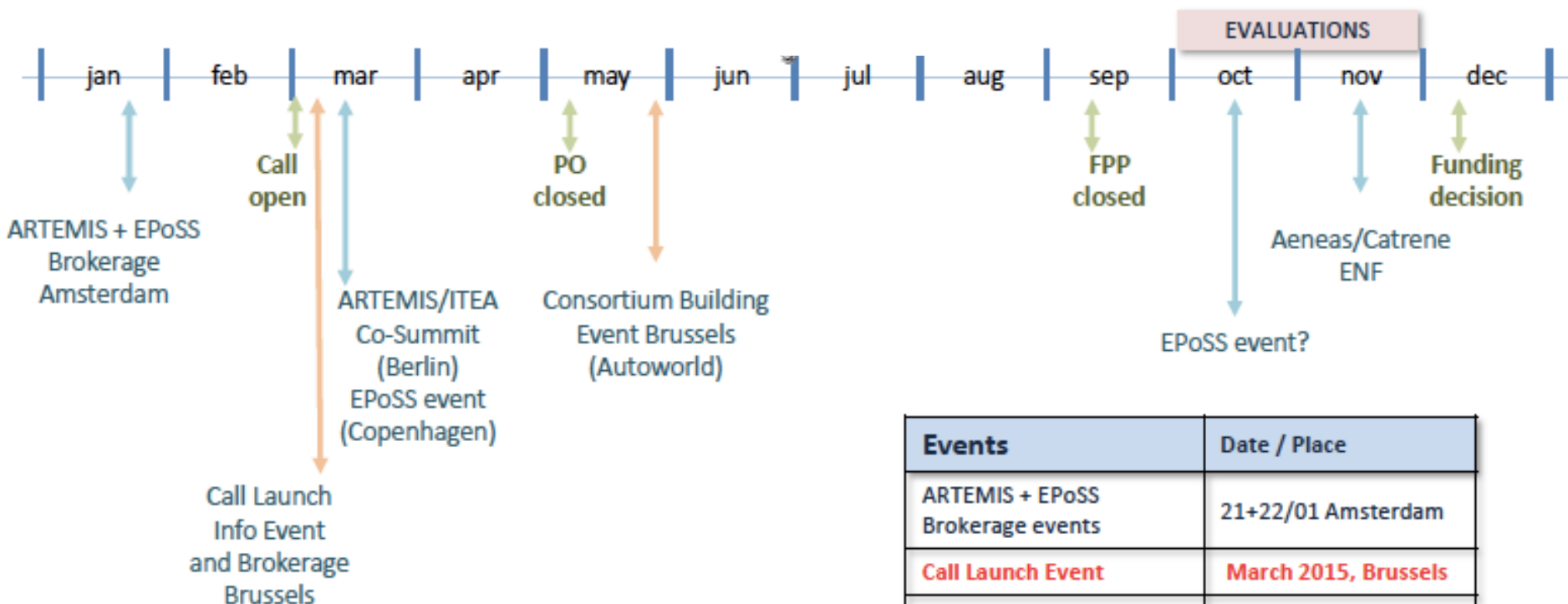
Cross Links

- SPARC
- Technology Transfer Options

Timeline



EPoSS
European Technology Platform
on Smart Systems Integration



Events	Date / Place
ARTEMIS + EPoSS Brokerage events	21+22/01 Amsterdam
Call Launch Event	March 2015, Brussels
ARTEMIS/ITEA CoSummit + EPoSS event	10+11/3/2015 Berlin + Copenhagen
Consortium Building Event	End May / early June 2015

www.smart-systems-integration.org

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