EuroCPS

Cyber-Physical Systems

A network of design centers boosting and initiating synergies between Innovative companies, major CPS-platforms and CPS-competency providers

ICT1-clustering and communication event

Ph.Bonnot, Vienna April 14 2016

THALES   cea   CATAPULT Connected Digital Economy   LULEÅ TEKNISKA UNIVERSITET   (intel)

Fraunhofer   Infineon technologies   MŰEGYETEM 1782

fine power®   AVL   ST life.augmented   High Tech NL   Schneider Electric

Smart Anything Everywere intiative

Innovation Services for European Smartization by SMEs
Coordinator: Blumorpho

Smart Access to Manufacturing for Systems Integration
Coordinator: Hahn-Schickard Ges.

CPS Engineering Labs
Coordinator: Fortiss

Industrial access to CPS technologies and competencies
Coordinator: CEA-Leti

➲ >25M€ of funding invested by the European Commission to catch the CPS market
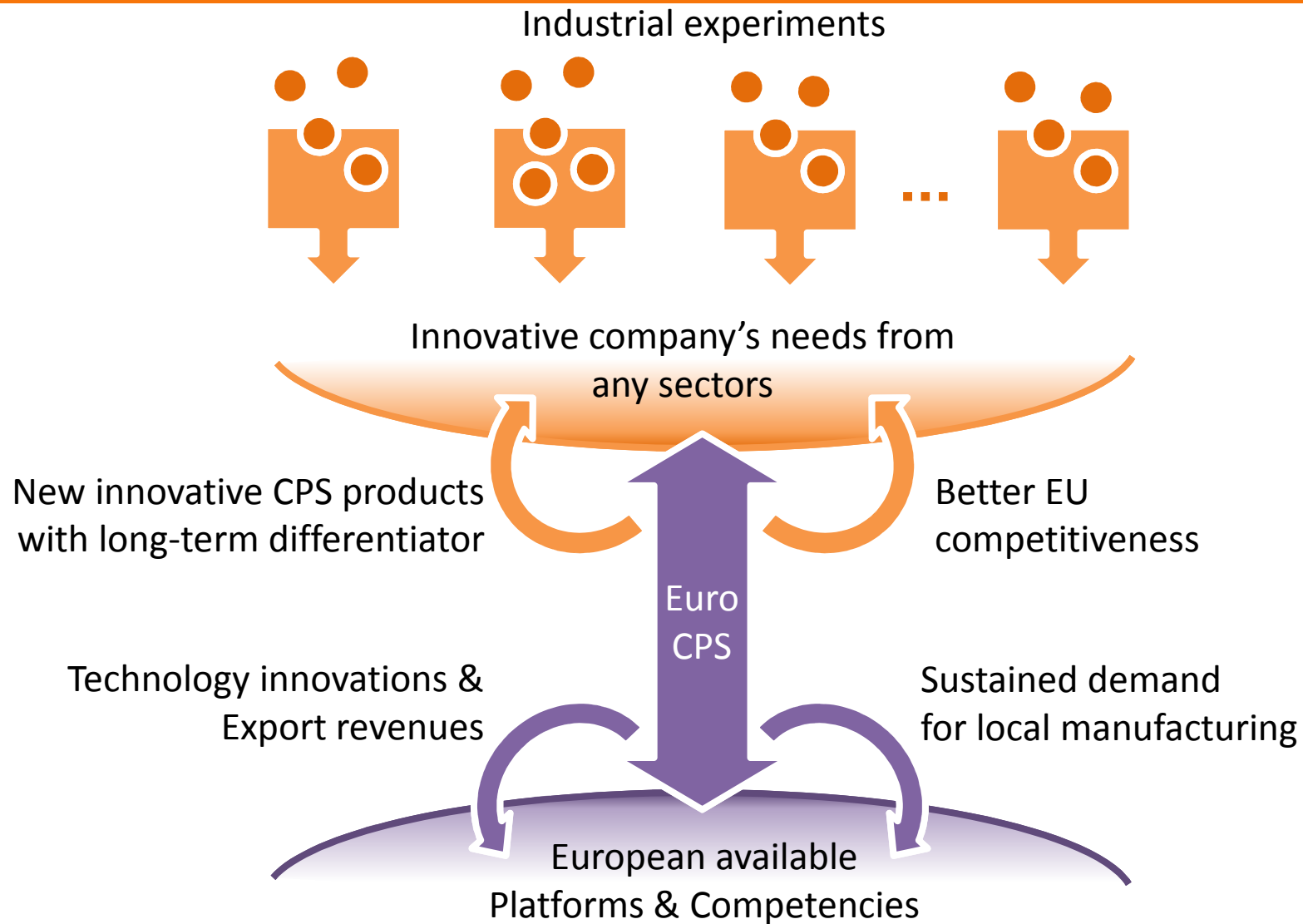
EuroCPS in a nutshell

- Call: ICT-01-2014
- Launched: Feb 1st, 2015
- Duration: 3 years

- 9 Countries
- 15 Partners
- 8 Technology Platforms

- Budget: 9,178,641€
- EC funding: 8,186,835€

⮑ **Industrial Experiment support: 76% of the EuroCPS funding**

EuroCPS objectives

Industrial experiments

Innovative company's needs from any sectors

New innovative CPS products with long-term differentiator

Better EU competitiveness

Euro CPS

Technology innovations & Export revenues

Sustained demand for local manufacturing

European available Platforms & Competencies

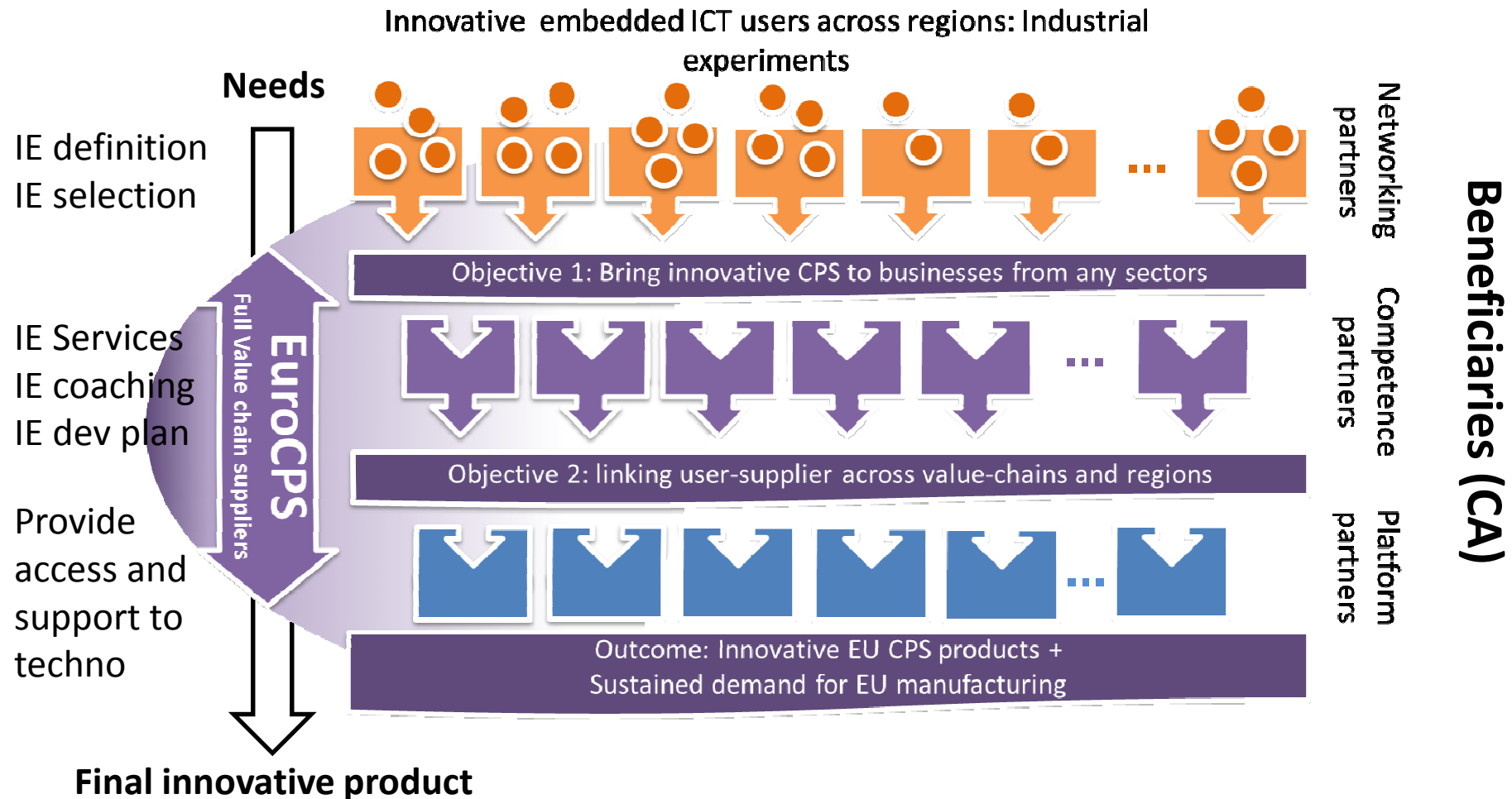**EuroCPS**
Cyber-Physical Systems
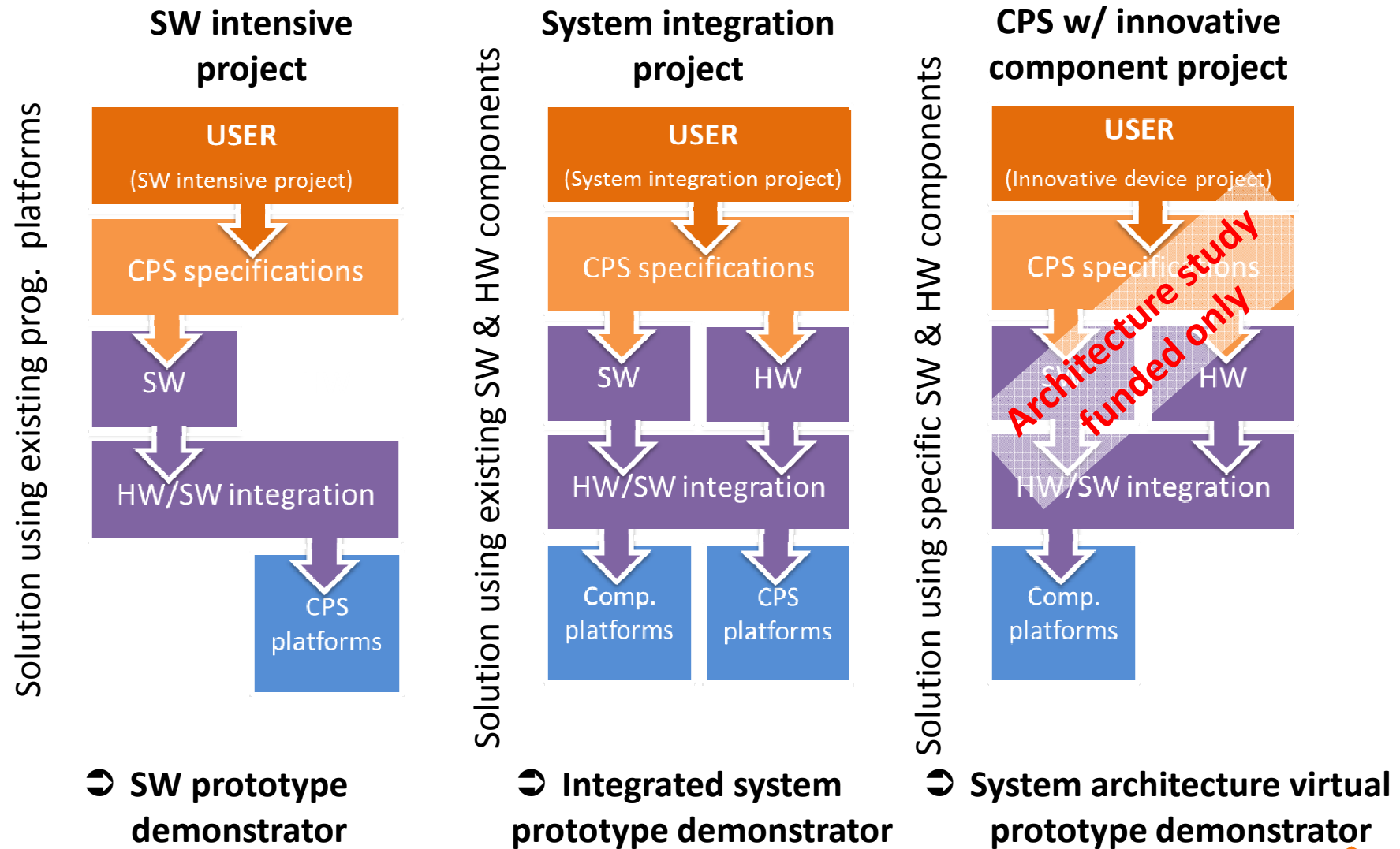
EuroCPS mission

- **Provide an easy path to build innovative CPS systems** to SMEs from any sector
  - ➢ Leverage the existing regional ecosystem across the full value chain and range of competencies

- **Facilitates user-supplier partnerships** across value chains and regions
  - ➢ One-stop-shop providing a critical mass of technologies and competencies

- **Enable a new cooperation model** linking software, system and nano-electronic industries along the full CPS value chain
  - ➢ Industrial experiments initiated and led by SMEs

↻ Reduce development time and certification efforts

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EuroCPS structure

Innovative embedded ICT users across regions: Industrial experiments

Needs

IE definition
IE selection

IE Services
IE coaching
IE dev plan

Provide
access and
support to
techno

Full Value chain suppliers

EuroCPS

Objective 1: Bring innovative CPS to businesses from any sectors

Objective 2: linking user-supplier across value-chains and regions

Outcome: Innovative EU CPS products +
Sustained demand for EU manufacturing

Networking partners

Competence partners

Platform partners

Beneficiaries (CA)

Final innovative product

⮌**Supported, manage and monitor by cascade funding partners**

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EuroCPS Industrial Experiments

SW intensive project

Solution using existing prog. platforms

USER
(SW intensive project)

CPS specifications

SW

HW/SW integration

CPS platforms

➲ **SW prototype demonstrator**

System integration project

Solution using existing SW & HW components

USER
(System integration project)

CPS specifications

SW   HW

HW/SW integration

Comp. platforms   CPS platforms

➲ **Integrated system prototype demonstrator**

CPS w/ innovative component project

Solution using specific SW & HW components

USER
(Innovative device project)

CPS specifications

Architecture study funded only

HW

HW/SW integration

Comp. platforms

➲ **System architecture virtual prototype demonstrator**

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The 8 EuroCPS platforms

Software

Avionics Platform
Processing board & real time SW solutions provided by Thales

Integrated and Open Development Platform
Simulation methods and tools for development provided by AVL

Integration system

Connectivity Platform
Solution for digitalization application provided by Schneider

STM32 Microcontroller Platform
32-bit product range provided by STMicroelectronics

iNEMO Inertial Platform
A sensor platform provided by STMicroelectronics

Quark System on Chip Platform
Low-power platform provided by Intel

Hardware

Power management Platform
Component platform provided by Infineon

Silicon Process and Package Technology
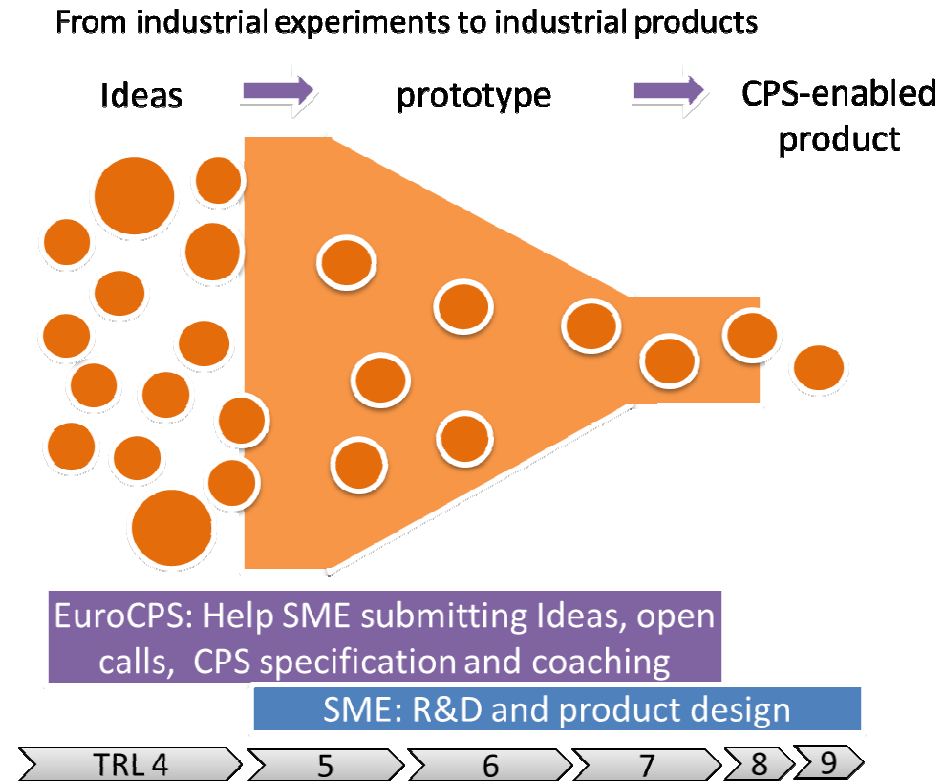Leading-edge silicon processes and package technologies provided by STMicroelectronics

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EuroCPS SME financial support
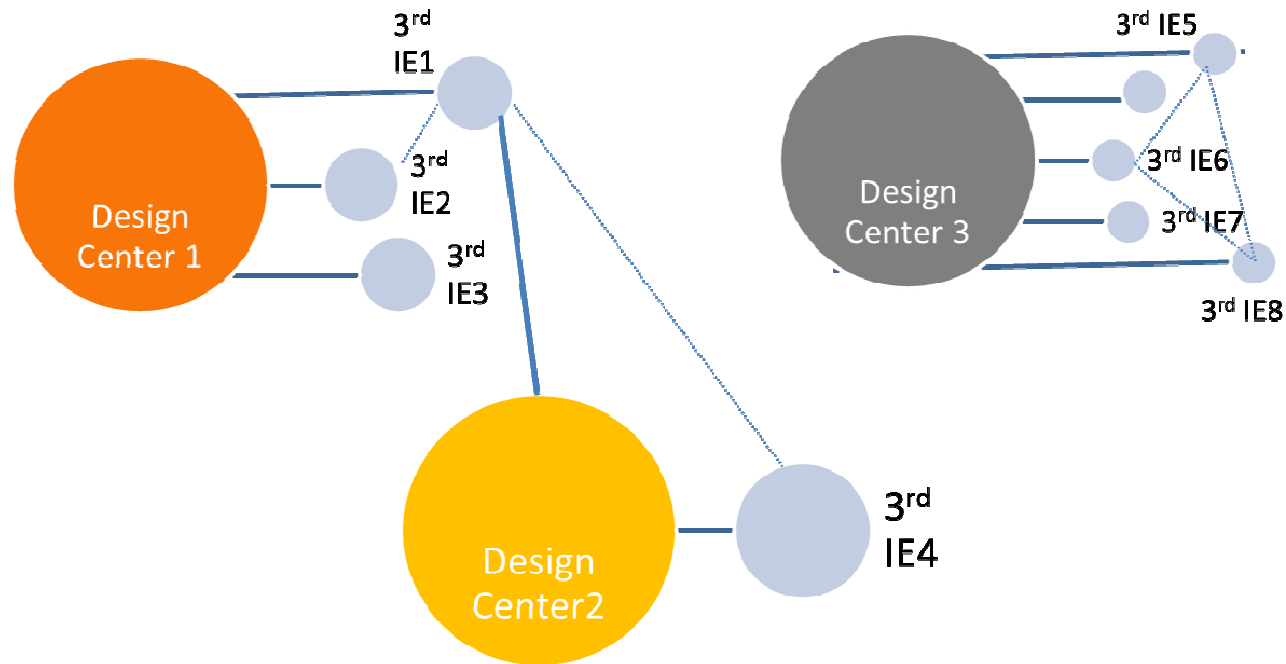
⮑ Cascade funding (70% of the budget): Support R&D work of 3rd parties
+ Platform funding: Support the technology access
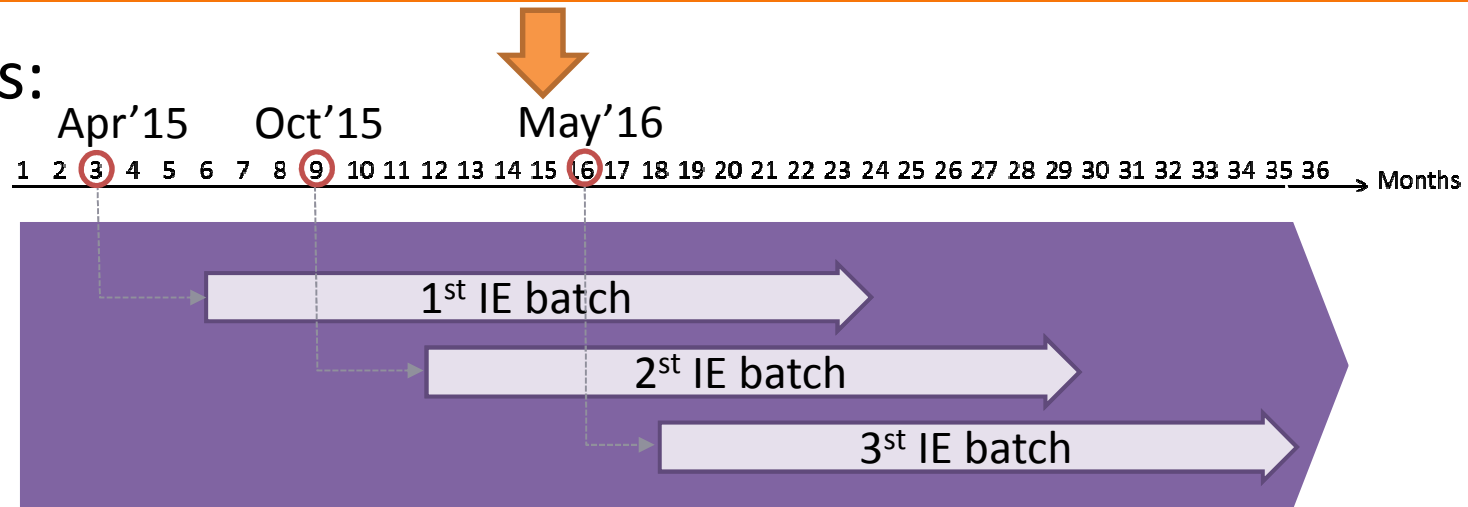+ Competence funding: Support the expertise, know-how access
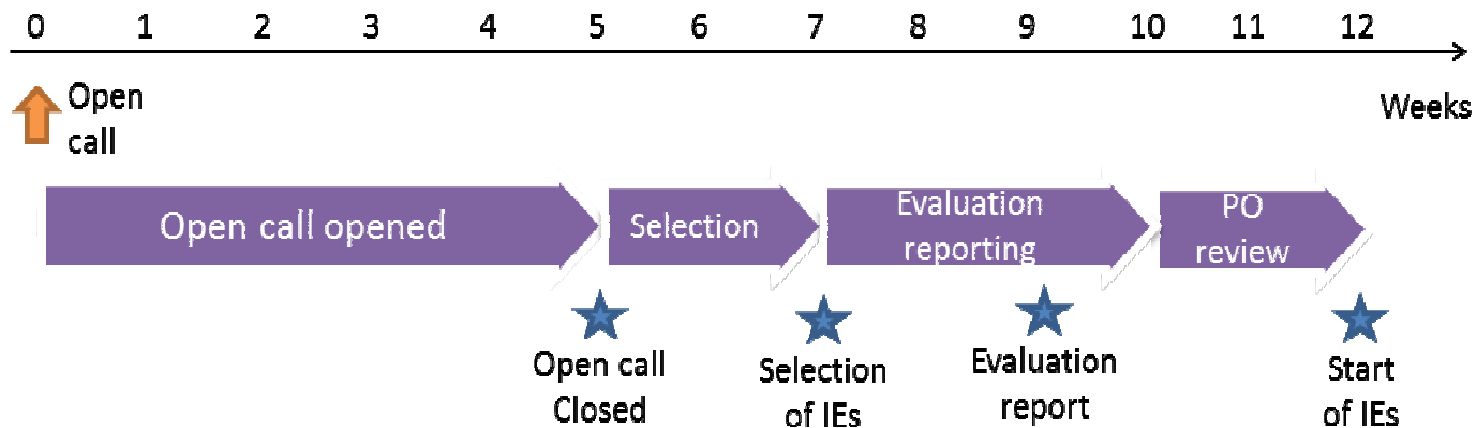
EuroCPS industrial experiments

From industrial experiments to industrial products

Ideas ➡ prototype ➡ CPS-enabled product

EuroCPS: Help SME submitting Ideas, open calls, CPS specification and coaching

SME: R&D and product design

TRL 4 > 5 > 6 > 7 > 8 > 9

➲ Project criteria: Excellence, Impact, Quality
➲ Fast track experiments (18 months maximum)

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EuroCPS open calls

Dates:

Apr'15   Oct'15   May'16

1 2 ③ 4 5 6 7 8 ⑨ 10 11 12 13 14 15 ⑯ 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 → Months

1st IE batch

2st IE batch

3st IE batch

Basic principal:

0 1 2 3 4 5 6 7 8 9 10 11 12

Open call

Weeks

Open call opened

Selection

Evaluation reporting

PO review

Open call Closed

Selection of IEs

Evaluation report

Start of IEs

EuroCPS 1ˢᵗ and 2ⁿᵈ call IEs

Innovation Branding Through Trusted IoT IBT3

Mb/s Green-OFDM IoT
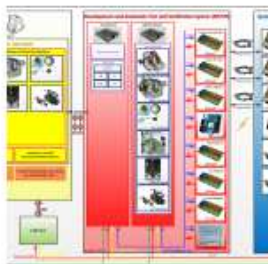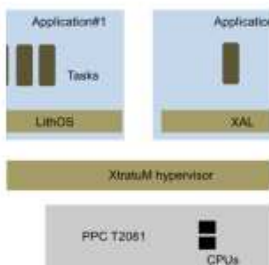
Development and Automatic Test and Verification System (DATVS)

GUDA – Multifunctional graphical universal data display

Localization and Tracking with inertial sensors for agri-food applications (LTIS)

Mixed Critical Avionics on Multicore Xtratum Hypervisor (MCS-MX)

SmartLAB – Sample Management with RFID Tags for Laboratories

SmartSSL

WEETSY2 – Wearable Eye Tracking System V2

⮰ 72 proposals, 24 granted IEs

Thank you

www.eurocps.org

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