

Road2CPS is a 24 month coordination and support action, co-funded under the European Community's H2020 Research and Innovation Programme in the area of Smart Cyber-Physical Systems.

The project aims to carry out strategic action for future CPS through roadmaps, impact multiplications and constituency building.

Editorial

It is our pleasure to present to you the first issue of our Road2CPS Newsletter, marking the beginning of a series of publications aimed at giving you an insight into what is happening in the project.

During the project life, 4 newsletters will be published, and available on our website: www.road2cps.eu

Please take a look at our [website](#) and social network profiles for further information about our project.

Social Networks:

TWITTER
and
[FACEBOOK](#)

In this first issue, we would like to introduce you to the general objectives of the project and the roadmapping methodology we are going to follow, as well as some of the activities already

implemented after the project's start in February 2015.

Yours sincerely,

The Road2CPS consortium

Strategic action for future CPS through roadmaps, impact multiplication and constituency building



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What do we understand by CPS?

The term Cyber-Physical System (CPS) describes hardware-software systems which tightly couple the physical world and the virtual world, under the control of humans. They are established from networked embedded systems that are connected with the outside world through sensors and actuators, acquiring data streams from the physical world, establishing and continuously updating a virtual

twin of the physical world and with the capability of interacting with the physical world, following instructions from the virtual sphere. Furthermore, CPSs are not merely networked embedded systems but software-intensive, intelligent systems with the capability to collaborate, adapt, and evolve. CPS can be considered to be the technological foundation for the Internet of Things in which every physical object has a virtual representation and in which the physical and virtual reality form a continuum.

What are you going to find in this Newsletter?

General presentation of the Road2CPS project and its consortium.



Kick-off meeting Road2CPS

Karlsruhe, 3rd March 2015



Roadmapping Workshop

Paris, 24th June 2015



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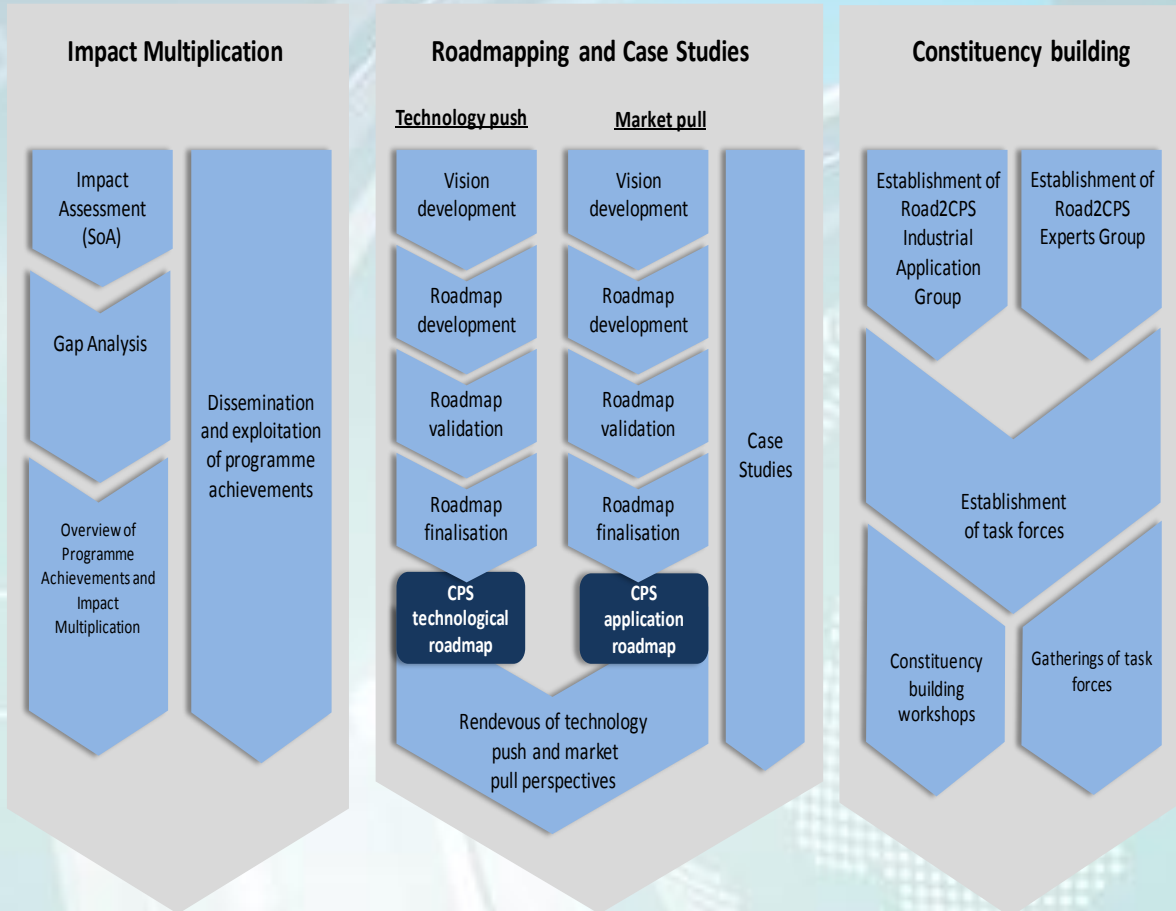
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General presentation Road2CPS project

Road2CPS Objectives and Approach



Road2CPS Main Results



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Project Partners

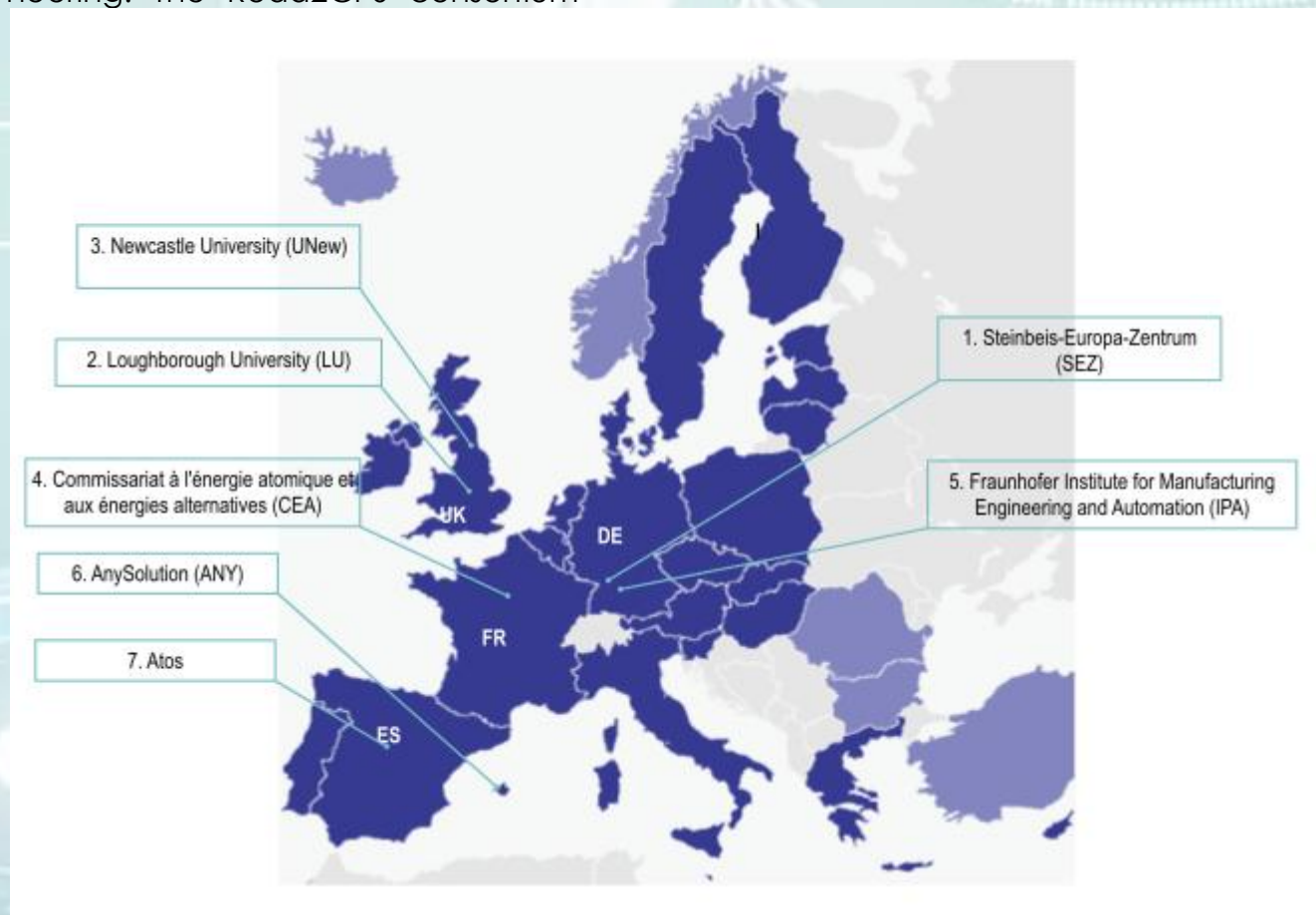
The Road2CPS consortium consists of a well-balanced group of 7 partners from 4 European countries (Germany, France, United Kingdom and Spain), who bring together diverse but complementary competencies in roadmapping, impact multiplication and constituency building.

The beneficiaries contribute knowledge and experiences from a variety of different industries like energy, transport, manufacturing and engineering. The Road2CPS consortium

consists of three categories of partners:

- (i) academic/research partners
- (ii) technology transfer institutions,
- (iii) industrial partners

involved with the design and large scale implementation of IT solutions.



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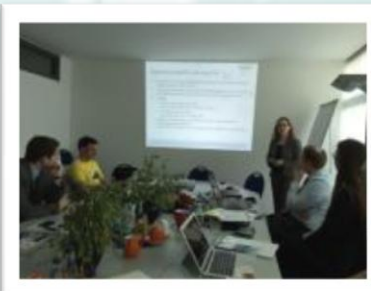
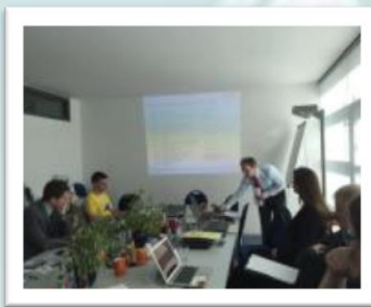
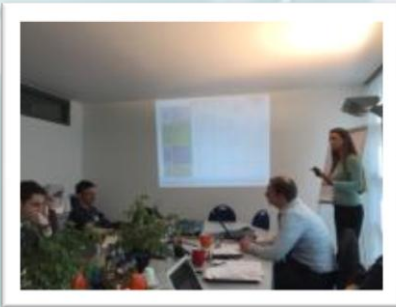
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Kick-Off meeting

The kick-off meeting was held in Karlsruhe 3rd March 2015. During the kick-off meeting, a project overview was presented by the project coordinator Dr. Meike Reimann. The different work packages were presented by the partner responsible in order to fix the roles and responsibilities clearly during the project term, and achieve the objectives and results expected.



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Roadmapping Workshop

The first Road2CPS roadmapping workshop is part of the Road2CPS project and was implemented on 24th June, 2015 in Paris. The workshop was set to discuss visions and priorities of recently produced roadmaps in the area of cyber-physical systems (CPS). Apart from the consortium members CPS-experts from industry, academia and policy-making were invited to elaborate on specific CPS-themes, detail priority topics and strategies for implementation. Above others experts were presenting results and perspectives from the ARTEMIS-IA SRA, CPSoS, CyPhERS, Road2SoS, T-Area-SoS, COMPASS, Road4FAME, TAMS4CPS and Road2CPS roadmaps as well as the ATOS Vision on CPS.



The agenda included short presentations of each roadmap, comparison of converging visions, prioritisation of research fields and crosscutting topics (technology/engineering/implementation), discussion on main enablers and barriers, elaboration of priority fields, discussion on gaps and strategies for implementation. The experts elaborated a research priorities and CPS-specific technologies matrix and ranked the following themes on the top three positions: 1) Integration, interoperability, standards; 2) Safety, reliability, resilience, fault tolerance; 3) Modelling and simulation.

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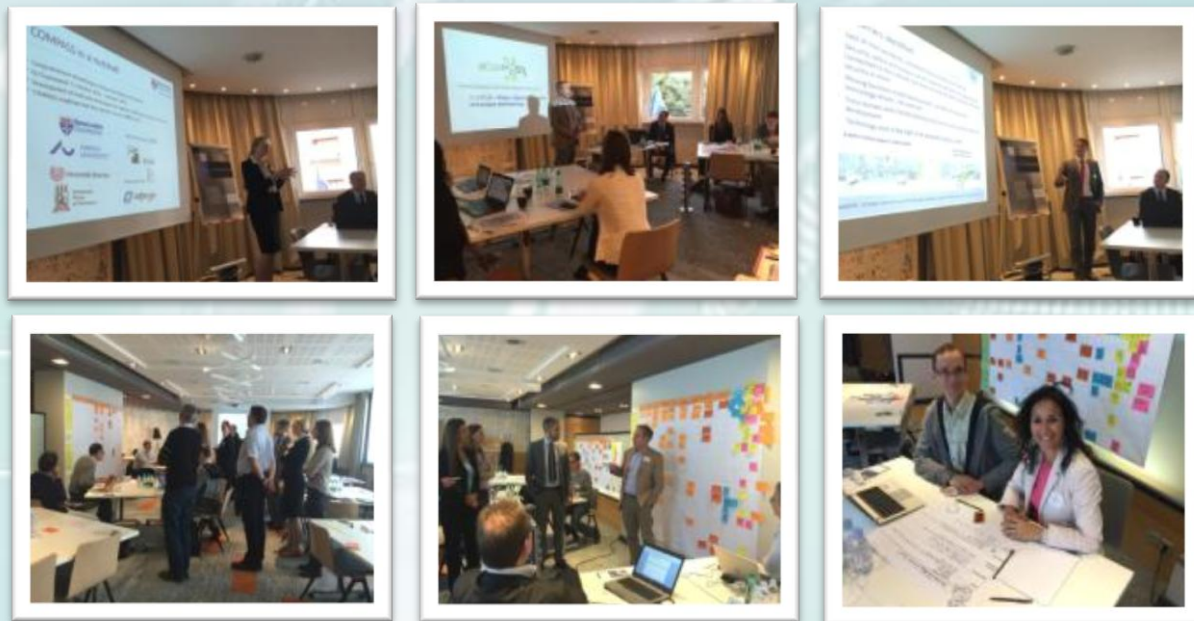


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The participants were also asked to work out a priority matrix for implementation and non-technical topics – the top three prioritised themes were 1) demonstrators and pilots, 2) platforms and reference architectures, and 3) education, training, skills, awareness raising. In addition, the representatives of industry and academia considered which funding strategies might be the most useful ones – open calls, open source or networks and platforms were exemplary mentioned. A lack of skills, training, and financial aspects were inter alia seen as potential barriers for the further development of CPS. Finally, the most five important topics that were chosen from the priority matrices, were discussed and elaborated in detail.



The Roadmapping methodology used was highly welcomed by the experts and interesting conclusions were achieved in all domains (for example, during the workshop it was observed that the topic of interoperability/ integration/ standards was featured in the top five priorities for all of the roadmaps) and will be published soon.

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Artemis Summer Camp

Road2CPS members were invited to the Artemis Summer Camp held in Helsinki on 10th June, where it became clear again that Embedded & Cyber-Physical Systems play an ever-increasing role in our future products and services and that in fact the area of Embedded & Cyber-Physical in general includes or largely overlaps the areas of Digital Platforms & the Internet of Things (IoT). On the first day, ARTEMIS-IA invited experts from several support projects active in CPS road-mapping, such as Cyphers, CPSoS, Road2CPS, together with experts from several related organisations, such as ITEA, NESSI and EFFRA, to present information on their roadmaps in order to give a broader insights to our community to open discussions on the future challenges for CPS. Meike Reimann & David Servat of the Road2CPS consortium highlighted in their presentation:

'Strategic action for future CPS through themes and priorities identified from various Roadmaps of CPS, IoT & FoF'.



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Upcoming events

8th International Workshop on Model-Based Architecting of Cyber-physical and Embedded Systems

September 28th, 2015

Artemis Technology Conference 2015

October, 6th-7th, 2015
Turin (Italy)

Road2CPS Constituency Building Workshop

October 8th, 2015
Turin (Italy)

TAMS4CPS Theme 2 US workshop

October 12th – 14th 2015,
Georgia Institute of
Technology, Atlanta, USA

ICT 2015

October 20th-22nd, 2015
Innovate, Connect,
Transform. Lisbon (Portugal)

TAMS4CPS Theme 1 & 2 Workshop

November 9th – 10th 2015,
Brussels, Belgium

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