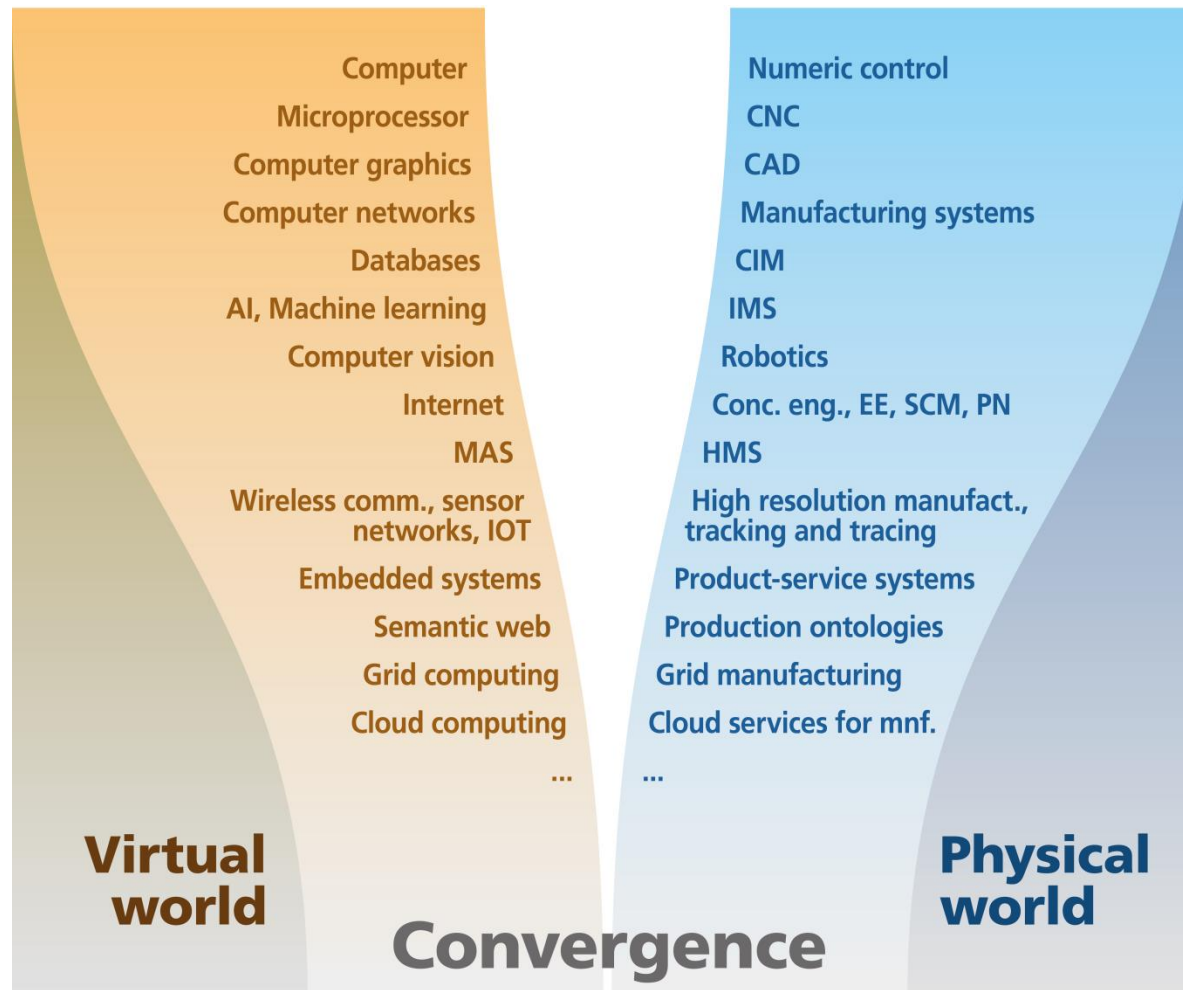

Industry 4.0: New rooms for cooperation

László Monostori

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Centre of Excellence in Production Informatics and Control (EPIC)
Ipar 4.0 National Technology Platform, Hungary

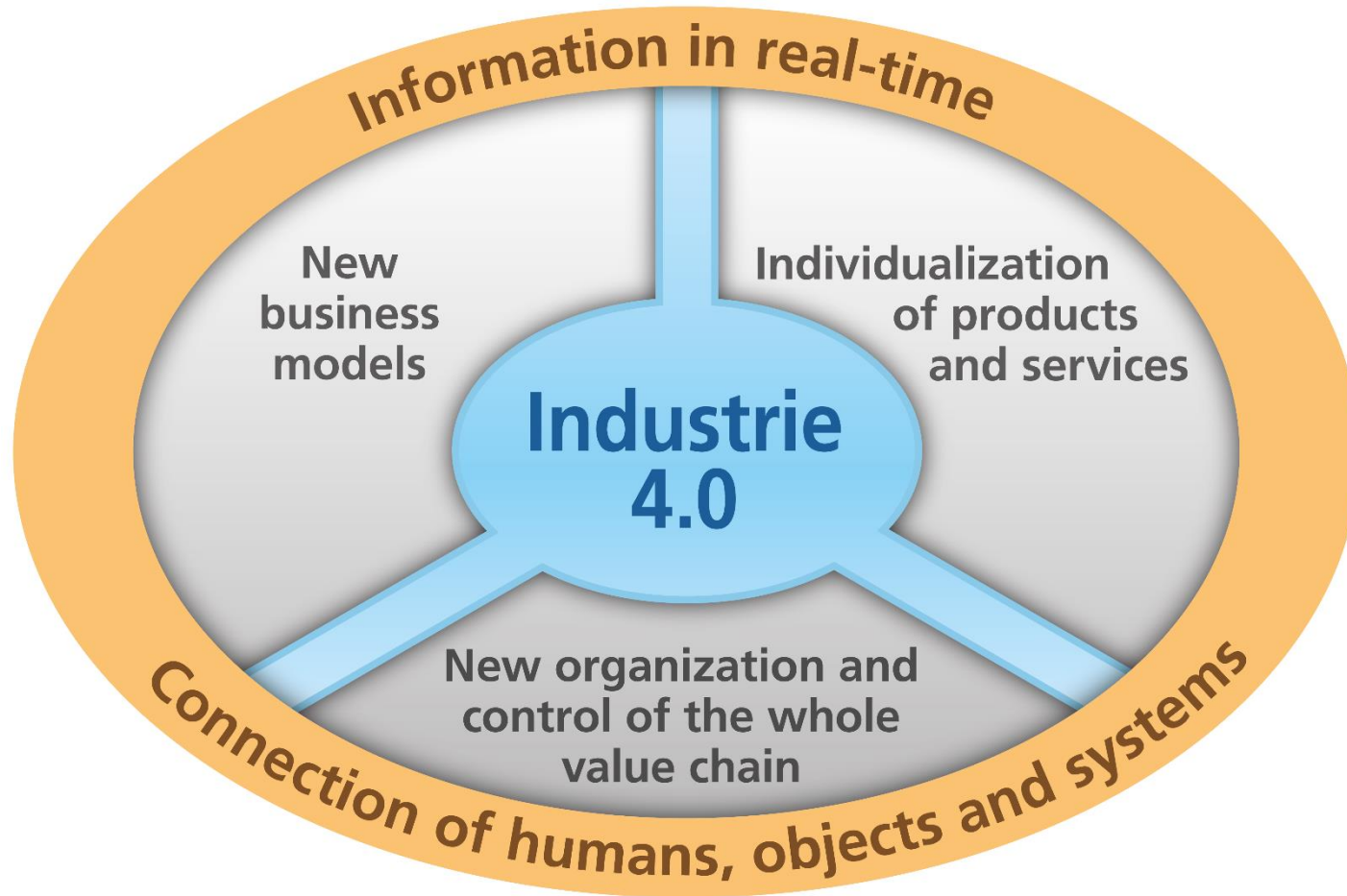
Central European Cooperation for Industry 4.0 Workshop
20-21 September 2017, Budapest

Interplay between CS, ICT and manufacturing



After: Monostori, L. (2014), *Procedia CIRP*, 17:9-13.

CPPS – Industrie 4.0 (Industry 4.0)



Source: Bauernhansl, T. 2016

CPPS programmes world-wide

- Industrie 4.0 (D)
- Advanced Manufacturing, Industrial Internet (US)
- Made in China 2025 (RC)
- Industry 4.0 → Society 5.0 (J)
- Robot Revolution Initiative (J)
- The Catapult Programme (UK)
- Alliance Industrie du Futur (F)
- Industrie 4.0 Österreich (A)
- Made in Sweden (S)
- Smart Industry (NL)
- Smart Connected Factory (Korea)
- Initiative Industry 4.0 Průmysl 4.0 (CZ)
- **Ipar 4.0 National Technological Platform (H)**

Industry 4.0 National Technology Platform in Hungary

Membership:

- SZTAKI and the Ministry for National Economy, and 37 founding members
- 26 organisations have joined since
- 27 organisations waiting for getting admitted

Organisation:

- Presidium headed by SZTAKI
- 7 Working Groups
 - Strategic Planning
 - Employment, Education and Training
 - Production and Logistics
 - ICT Technologies (safety, reference architectures, standards)
 - Industry 4.0 Cyber-Physical Pilot Systems
 - Innovation and Business Model
 - Legal Framework



Members The Presidium Contact

The Industry 4.0 National Technology Platform was established under the leadership of the Institute for Computer Science and Control (SZTAKI), Hungarian Academy of Sciences, with the participation of research institutions, companies, universities and professional organizations having premises in Hungary, and with the full support and commitment of the Government of Hungary, and specifically that of the Ministry of National Economy.

The background of the initiative is that Hungary, too, is witnessing the advent of the era of a new technological change, when the internet based economy is transforming the very basics of the production and logistic systems. The theoretical and practical problems to be resolved are of such complexity that make the cooperation between the research and university spheres on the one hand and industrial companies on the other hand indispensable, both in the national and the international arena.

[Read more >](#)



Horizon 2020 Widening Programme Winners

Prof László Monostori, Director of MTA SZTAKI, Head of the Centre of Excellence in Production Informatics and Control (EPIC) participated at the international press conference held in Brussels the 23rd November, 2016, where the results of the "Teaming" research excellence programme which is the most prestigious call of the Horizon 2020 Widening Programme were announced.

[Read more >](#)

WORKING GROUPS

The Hungarian Industry 4.0 National Technological Platform operates several Work Groups in order to fulfil its mission defined in its Organisational and Operational Regulations. Their activity focusses on specific issues related to I4.0 and they formulate answers and recommendations to the challenges presented by the practice.

The participants of the Work Groups are delegated by their own organisation, members of the Platform and they represent special expertise in the given area. They work closely together with the corresponding governmental forums and bodies thus contributing directly to the formation and implementation of the Government's strategic goals.

Currently the Platform has 7 Work Groups:

English | magyar



Search

MEMBERSHIP REQUEST

Would you like to join the Platform?

[Read more](#)

EVENTS

29 January

Visit to a Learning Factory in Germany - An offer of the FESTO company to the Platform's Members

< 2017. April >
Mon Tue Wed Thu Fri Sat Sun

Centre of Excellence in Production Informatics and Control (EPIC)

2002: Virtual inst. with FhG IPA



Fraunhofer–SZTAKI PMI
MTA SZTAKI
Fraunhofer IPA, Fraunhofer Austria

EPIC CoE

EPIC Ltd.

MTA SZTAKI

Fraunhofer IPA, IPT, IPK, Fraunhofer Austria

BME GPK, KJK

2001: SZTAKI EU CoE

SZTAKI CoE

Upgraded SZTAKI CoE

2001 ... 2010 ... 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 ...



EPIC Phase 1

EPIC H2020 Teaming Project

Operational Phase 1 Start-up

Operational Phase 2 Evolving period

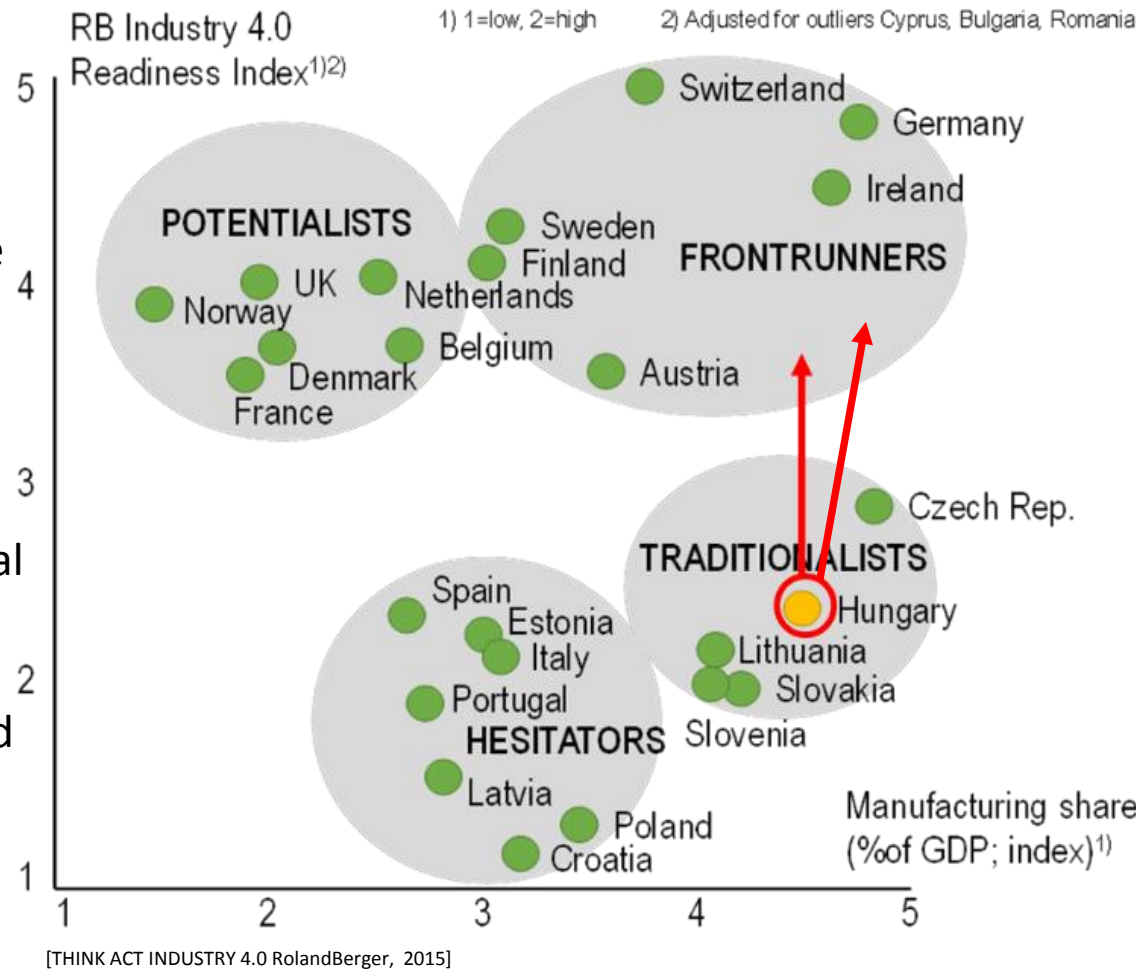
Maturing period

Operational Phase 3 Self-sustained

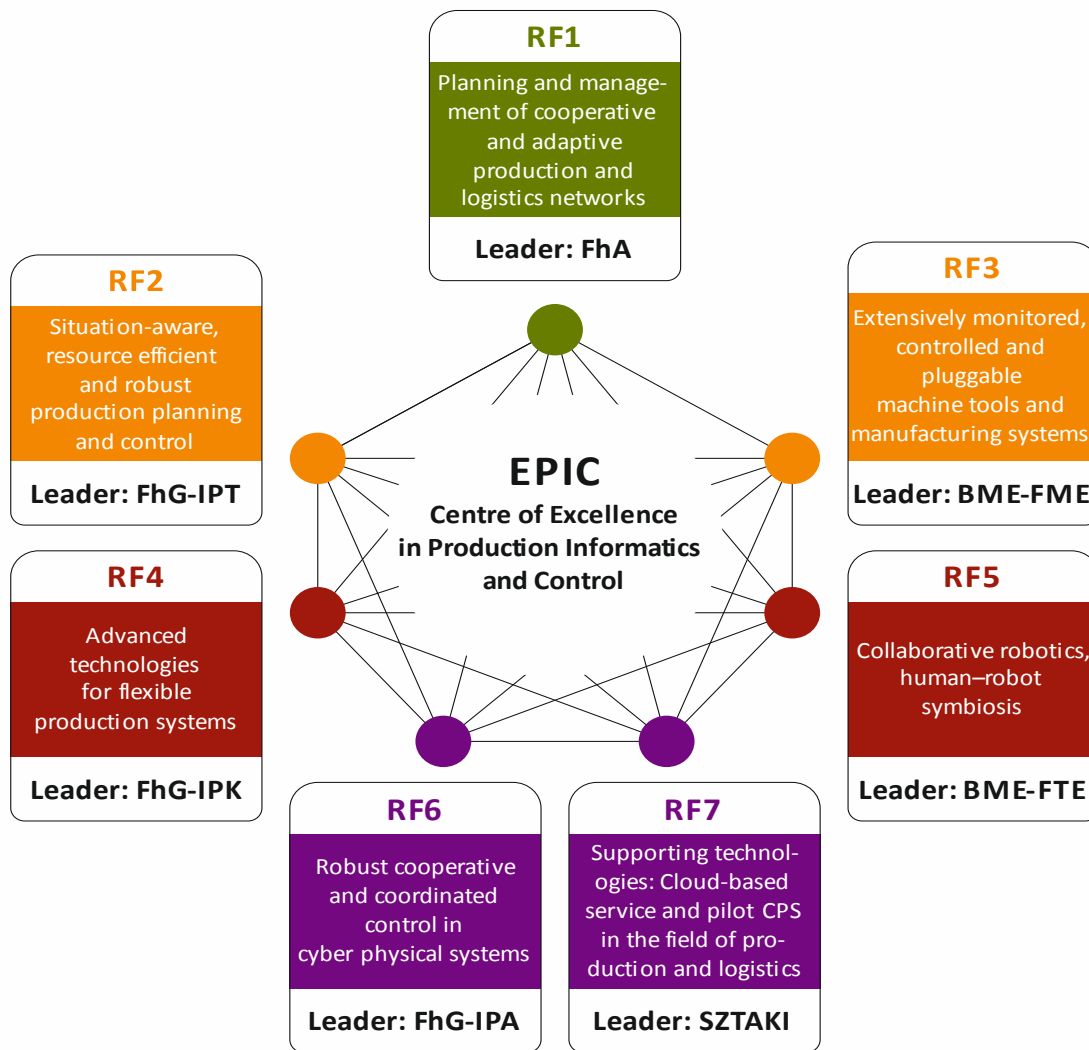
2010: Fraunhofer-SZTAKI Project Centre

EPIC: Main goals and mission

- The **overarching goal** of the project is to establish the **Centre of Excellence in Production Informatics and Control (EPIC CoE)** as a leading, internationally acknowledged and sustainable focus point in its field representing excellence in research, development and innovation related to **Cyber-Physical Production**.
- The **mission of EPIC CoE** - as a leading-edge knowledge centre of cyber-physical production systems - is to accelerate innovation, realize industrial solutions, train new generations of highly qualified professionals and support the development of a sustainable and competitive European manufacturing ecosystem.



EPIC: Priority research fields and main activities



- Strengthening of the innovation culture and accelerating the innovation process
- Spreading of new technologies and methodologies in Hungary with the support of the foreign partners
- Industry 4.0 oriented developing of production enterprises including SMEs within the framework of innovation projects
- Strengthening the supplier industry and by this way making them more competitive
- Developing and deploying Pilot Industry 4.0 solutions and systems
- Educating and training of specialists
- Setting up of knowledge triangles in different regions of the country

Future trends of Industry 4.0 – Panel discussion with keynote speakers

- *László Monostori*
Introduction – Industry 4.0: New rooms for cooperation
- *Engelbert Westkämper*
Strategies for reindustrialisation of European industries
- *Joerg Bauer*
Industry 4.0: An industrial view
- *Tullio Tolio*
Demufacturing and remanufacturing systems for circular economy
- *Sebastian Schlund*
Human centred cyber-physical assembly
- *Lukas Merkel*
Cognitive assistance systems in manufacturing