



Towards Industry 4.0: Digital Technologies in Process Industry

SPIRE Thematic Workshop

1 October 2018

Crowne Plaza Le Palace, Brussels

Organized by A.SPIRE aisbl

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#SPIREdigital

Digital European process industry - SPIRE Vision

Digitalization will be a major source and driver of transformational change across all SPIRE industries. In order to strengthen its global competitiveness in a more turbulent and disruptive economic environment, the industry will have to reap the full benefits of what key digital technologies and new data management tools have to offer.

Digitalization will have both **social** and **economic impact** thus making process industries plants and operations more resource and energy efficient, contributing to industries pathway to a carbon-neutrality, and will contribute to substantial value addition therefore securing jobs in Europe over the next decades.

Companies will consistently assess the (economic) potential of digital ecosystems (e.g. IoT) and key technologies such as data analysis, cyber security, and artificial intelligence and incorporate these elements into **long-term** business strategies.

New digital technologies present **major chance** for all SPIRE industries to contribute to other long-term European policy goals, such as substantially increasing resource or energy efficiency and thus reducing carbon and other environmental footprints. This can be implemented both through enhanced production processes and management systems (e.g., data based plant operation and monitoring) as well as through new digital enabled supply chain-structures (e.g. sharing/symbiosis & recycling platforms).

Advanced data analytics, artificial intelligence and supercomputing will be considerably **scaled-up** where they are already used today (e.g. predictive maintenance, “digital twins”) and be fully integrated into new business models, likewise including areas such as research and development (e.g., text and data mining, in-silico materials and process modelling).

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AGENDA

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9:30 – 10:00 Registration & welcome coffee

10:00 – 10:20 The role of Digital technologies in SPIRE Vision 2050 (15')

- Martin Winter, CEFIC, Member of SPIRE PPP Advisory Group & Event Chairperson

10:20 – 10:50 Perspective of the European Commission (30')

- Angelica Marino, EC DG RTD
- Anne-Marie Sassen, EC DG CNECT

10:50 – 11:15 European Roadmap for Industrial Process Automation (25')

- Pär-Erik Martinsson, Manager Digital Sweden

11:15 – 11:40 Digitalisation in Steel Industry, current situation and future trends (25')

- Harald Peters, BFI

11:40 – 12:00 Coffee break

12:00 – 12:20 Towards Industry 4.0: How to make chemical plants cognitive, with ability to adapt and predict, using well established advanced control technology (20')

- Svein Olav Hauger, Cybernetica

12:20 – 12:45 IbD: Intensified by Design - Digital Platform for Process Intensification Design and Analysis (25')

- Ignacio Montero, IRIS
- Jose Antonio Ibarra, IRIS

12:45 – 13:00 Q&A and discussion time

13:00 – 14:00 Lunch

14:00 – 14:25 CoPro: From unit control to optimal management of plants, sites and chemical parks (25')

- Sebastian Engell, TU Dortmund

14:30 – 14:55 RECOBA: Real-time control and optimization of semi-batch processes (25')

- Wolfgang Gerlinger, BASF

14:55 – 15:20 COCOP: Advanced scheduling, platforms, communication architecture of plant-wide monitoring and control, and new digital technologies (25')

- Matti Vilkkö, Tampere University of Technology

15:20 – 15:45 Monsoon project: Boosting the development and deployment of data enabled predictive control solutions for process industries (25')

- Claudio Pastrone, ISMB

15:45 – 16:00 Q&A and discussion time (permanent coffee in the room)

16:00–16:50 Next steps towards digital European process industry – how to accelerate transformations?

Moderated by Prof. Dr. Sebastian Engell, TU Dortmund

- Harri Kulmala, DIMECC
- Ana García Robles, Big Data Value Association Secretary General
- Roberto Cascella, Senior Policy Officer at European Cyber Security Organisation
- Manuel Remelhe, Bayer
- Martin Winter, CEFIC, Member of SPIRE PPP Advisory Group

16:50 – 17:00 Debrief and Key Takeaways

- Martin Winter, CEFIC, Member of SPIRE PPP Advisory Group

17:00 Close