



Preparatory Meeting on Industry 4.0

6th June 2017, CERN

Summary of Discussions and Conclusions

Participants: Jean-Marie Le Goff (CERN), Bojil Dobrev (Sofia University, Bulgaria), Eleonora Getsova (Sofia University, Bulgaria), Duncan Atkins (ILL), Michele Barone (Demokritos, Greece), Dan Enache (IFIN-HH, Romania), Evangelos Gazis (NTUA, Greece), Jan Jadlovski (TUKE, Kosice, Slovakia), Slavka Jadlovska (TUKE, Kosice, Slovakia), Yannis Charalabidis (University of the Aegean, Greece), Amalia Polydoropoulou (University of the Aegean, Greece)

Jean-Marie welcomed the participants and briefly described the concept of Industry 4.0 in relation to HEP in 2 main aspects: (i) control systems of accelerators and experiments and (ii) construction of detectors in experiments (prototyping)

Slavka Jadlovska presented the main pillars of Industry 4.0 focusing on the main application areas of Industry 4.0 and technologies used.

She proposed an introductory event (part of a series) on Industry 4.0 aiming to present some key issues related to HEP, with participants from HEP Tech, leading companies (e.g. SIEMENS), representatives of research institutions/universities, CERN, etc.

The HEP Tech nodes' representatives discussed the state-of-the-art of industry 4.0 in their countries. Generally, the situation appeared to be very similar – recent initiatives and forums with strong involvement of the national governments and IT sector, and still lack of interest from industry as a whole. Main areas of potential interest are IoT, Cloud computing, Big data analytics.

Bojil summarized the discussions as follows: TTOs and HEP Tech should serve as an interface between research and industry – this should be the framework of our future events.

Or how we fit in the picture of Industry 4.0 and what we can bring in (Jean-Marie).

CONCLUSIONS:

The participants recommended:

1. HEPTEch to organise a series of events (AIMEs/workshops) focusing on the impact of Industry 4.0 on HEP and vice versa.
2. To propose to the HEPTEch Board to establish a Task Force that will be dealing with Industry 4.0 series of events (identification of their specific topics, scope and timing).
3. Members of the Task Force will be the participants in the preparatory meeting.
4. The Task Force will be chaired by Bojil Dobrev.
5. For each particular event an Organising committee with leading experts from research and industry will be established and it will be chaired by a representative of the hosting institution.
6. It was proposed to organise 2 events (AIMEs) in 2018:
 - in Q1, hosted by TUKE, Kosice, with a chair of the Organising committee Slavka Jadlovska
 - in Q4, hosted by a node in Greece (NTUA, UAegean, Demokritos) – to be determined at the Board Meeting in December 2017
7. Jan proposed the following topics for the event in Q1 2018 to be hosted by TUKE:
 - Cyber-physical systems (Sensors, control systems)
 - Modelling and simulation
 - Integration through protocols and interfaces through IoT
 - Data concentration in a data base – big data, application of data in diagnostics and quality control

N.B. Should anyone else is interested to participate in the Task Force or join the Organising committees of the events – please contact Eleonora Getsova – eleonora.getsova@cern.ch