AMICI - Industry partnership sessions

Mauro Morandin - INFN

CERN industrial Liaison Officer for Italy
Introducing the second day of the workshop

- the agenda tomorrow is focused on the central theme of the workshop: **the synergic interplay** between the European Technology Infrastructure (TI) and European Industry

- which is in fact one of the two main goals of the project, as outlined in the H2020 INFRAINNOV-02-2016 call:
  - ...The coordination of Technological Infrastructures ... will contribute to **harmonize their operation conditions** and **increase their operation efficiency**...
  - ...This will permit the creation of a more **efficient integrated ecosystem** between academic laboratories, large companies as well as SMEs, motivated by the **innovative environment** and the **market opportunities** created by the Research Infrastructures ...

- besides, the message clearly spelt out by the EC is that, in pursuing these goals, activities have to be carried out **in collaboration with industrial partners**
The vision

• at end of the day, AMICI should have demonstrated not only that effective TI-Industry collaboration can be expanded and strengthened but also that
  • **added value**, in terms of improved business opportunities for Industry, can be created and can positively feed back in the TI operational sustainability
  • **investing in the TI's future** is in an investment for **European competitiveness**

• the outcomes of this collaboration complements the work performed in the R&D labs

• making it possible to transform a prototype into a system that is demonstrated to work in a realistic environment
  • from **TRL4** (technology validate in a lab)
  • to **TRL6** (technology demonstrated in a relevant environment)
Where are the industrial partners in AMICI?

- first of all, **key industrial representatives** are the most important constituency of the AMICI advisory committee
  - 11 members out of 14 come from industry
- we could have also built the AMICI collaboration including **industrial beneficiaries** from the beginning
- however, we didn’t want to take the risk of making a priori **rushed choices** that could have resulted in a limited, perhaps biased, most likely non representative and, non inclusive set of companies
  - rather, we decided to **allocating specific efforts and time** in the project to establish in a more effective way the contacts with Industry
  - aiming in fact at creating the widest network of European companies
- and we **did commit** ourselves to engage European companies from the very beginning
  - this workshop is the first important step in making that happen
- the presence of **more then 30 of the key European Industrial players** here in Padova is encouraging and important for AMICI.
Who?

- A preliminary issue we addressed was to decide which industrial sectors would fall within the AMICI scope.
- The current proposed list includes:
  - RF technology
  - Vacuum technology
  - Cryogenic systems
  - Superconductor magnets and conductors
  - Other specialized mechanical components for accelerators
  - Electronics and instrumentation for accelerators
  - Power systems for magnets
- The CERN, ESRF, F4E, ESS ILO offices will be asked to help us in reaching the companies that have experience in these sectors.
How?

There are several ways we envisage to collaborate with industry in AMICI:

● keep the **widest industrial audience informed** of AMICI activities and outcomes

● get **important feedback** from companies through a few surveys
  • aiming at a very comprehensive and representative involvement

● participation in **working groups** dedicated to key AMICI topics
  • the initial teams will be built tomorrow with **the companies** that will express interest in participating (in one or more WG)

**Your participation in the discussions tomorrow are particularly important**

● to **streamline and improve** the proposed program of activities with the European industry

● to suggest **additional approaches or actions** that have not been considered so far and may be effective for achieving the project goals
The first two round table discussion sessions

- We have two main activity tracks in AMICI:
  - **WP4: Innovation** lead by Anthony Gleeson (STFC - Warrington)
  - **WP5: Industrialization** lead by Pasquale Fabbricatore (INFN - Genova)

- we decided to organize two “round table” discussion parallel session, one for each WP
  - not enough time to organize them serially, the outcomes will be anyway reported in the plenary session
  - discussions may extend beyond schedule if needed, at the expense of delaying and shortening the coffee break

- the topics will be jointly presented by an AMICI representative and an Industrial company representative to try to embrace from the beginning the views from both worlds
WP4: Innovation

How can the TI work together with the European Industry to foster the product and process innovation potential?

- **Assess the European Industry potential for innovation**, including technical capabilities, appetite for commercial innovation, current attitude to risk and possible societal applications and potential market sizes in:
  - accelerator related technology domains
  - SC magnets technology sector

- Identify **existing good practices, and barriers** to effective engagement, between Industry and the Technological Infrastructures
WP5: industrialization

How can we improve the competitiveness of European Industry as suppliers for the next generation of research facilities in Europe and elsewhere?

- Define the required conditions and propose a model for professional training and apprenticeship programs in both TI and industry.
- Establish the basis for a common knowledge, background and use among TIs and related laboratories and industries in relation to material and components involved in accelerator and large SC magnets.
- Create a new working group at CAN/TC 268 on specific helium technology applications and develop a new European standard on safety of liquid helium cryostats.
- Identify the requirements and the conditions for developing prototypes in industry.
The agenda for tomorrow (I)

**Wednesday, 19 April 2017**

08:30 - 10:40  
**Round Table Discussion 1 (WP5)**  
Convener: Pasquale Fabbricatore (GE)  
08:30  
**Introduction 10’**  
Speaker: Pasquale Fabbricatore (GE)  
08:40  
**Professional training and apprenticeship 40’**  
Speakers: Dr. Stéphane Berry (CEA), Eric Giguet (Alsyom)  
09:20  
**Harmonization - Material and component reference 40’**  
Speakers: Dr. Mohammed Fouaidy (CNRS), Mr. Bernd Spaniol (Heraeus Deutschland GmbH & Co. KG)  
10:00  
**Prototyping with industry 40’**  
Speakers: Paolo Michelato (MI), Mr. Giorgio Corniani (Ettore Zanon s.p.a)

08:30 - 10:40  
**Round Table Discussion 2 (WP4)**  
Convener: Anthony Gleeson  
08:30  
**Introduction 10’**  
Speaker: Anthony Gleeson (STFC)  
08:40  
**Industry Survey - Accelerator Technologies 40’**  
Speakers: Anthony Gleeson (STFC), Dr. Sophie Muller (Thales Communications and Security)  
09:20  
**Industry Survey - Magnets Technologies 40’**  
Speakers: Dr. Pierre Védrine (CEA), Dr. Ziad Melhem (Oxford Instruments NanoScience)  
10:00  
**Good practices and barriers 40’**  
Speakers: David Alesini (LNF), Dr. Andrea Ceracchi (CECOM)
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<tr>
<th>Time</th>
<th>Agenda Item</th>
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<tr>
<td>10:40 - 11:25</td>
<td>Coffee break and Posters</td>
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<td>11:25 - 12:45</td>
<td>The collaboration with industry in the AMICI project 1/2</td>
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<td>Convener: Mauro Morandin (INFN/PD)</td>
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<td>11:25</td>
<td><strong>Strategy: goals/activities and discussion 40’</strong></td>
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<td>Speaker: Dr. Walid Kaabi (CNRS)</td>
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<td>12:05</td>
<td><strong>Cooperation: goals/activities and discussion 40’</strong></td>
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<td>Speaker: Dr. Riko Wichmann (DESY)</td>
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<td>12:45 - 14:15</td>
<td>Lunch</td>
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<td>14:15 - 15:30</td>
<td>The collaboration with industry in the AMICI project 2/2</td>
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<td>14:15</td>
<td><strong>Summary of the Round Table 1 10’</strong></td>
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<td>14:25</td>
<td><strong>Summary of the Round Table 2 10’</strong></td>
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<td>Speaker: Anthony Gleeson (STFC)</td>
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<td>14:35</td>
<td><strong>General Discussion 25’</strong></td>
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<td>15:00</td>
<td><strong>Industry feedback 20’</strong></td>
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<td>15:20</td>
<td><strong>Close out 10’</strong></td>
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**Technology roadmaps, global landscape and sustainability**

**Networking, cooperation and collaboration**

Don't miss this !!!
Organization of first round table sessions

Location

- The most popular parallel session will take place here
- The other one in room Venezia

We need to know approximately who will go to each session

- let’s make a rough estimate by raising hands
See you at the restaurant ... and tomorrow at 8:30

Bus will leave

- the Galileo Hotel at 19:20
- the Biri Hotel at 19:30