



I.FAST Kick-off-Meeting - 4 May 2021

Sylvie Leray - CEA/Irfu



European Technology Infrastructure for Accelerators and Magnets

Global context:

- The European accelerator and magnet Technology Infrastructure (TI) is the ensemble of Technological Facilities (TFs), encompassing large-scale Technical Platforms (TPs) for development, fabrication, assembly, integration and performance verification of accelerator and magnets components, together with large concentrations of dedicated, highly-skilled personnel.
- In view of ensuring the long-term sustainability of the TI, the H2020 AMICI project investigated how the TI could be reinforced, harmonized and made more efficient, and industry could benefit more from the possibilities offered by TPs, favoring a more effective knowledge transfer and fostering industrial innovation potential.

Relation between AMICI and I.FAST-WP13

- The AMICI Collaboration set up at the end of the H2020 AMICI project aims to ensure the long-term sustainability of the European accelerator and magnet Technology Infrastructure formed by the partners by implementing the actions defined in the Collaboration Agreement
- I.FAST/WP13 allows and provides funding to realize some of the actions defined by AMICI, during 2 years
- Other actions are supported in WP2 and WP3
- The AMICI goal is to obtain dedicated funding to continue / develop the actions initiated in I.FAST and support the TI in the future

Technology Infrastructure for Accelerators and Magnets

WP13 General objectives:

- Propose a strategic approach ensuring the long-term sustainability of the TI and the development of its capabilities in view of the construction of future accelerator-based RIs.
- Extend and strengthen the cooperation with industry to exploit opportunities of fostering innovation in related technologies.
- Develop and promote services, within a common approach, for the benefit of RIs, future scientific projects and high-tech industry.

Technology Infrastructure for Accelerators and Magnets

WP13 Tasks:

- **Task 13.1:** Strategy for the development of the AMICI TI(M1-M24)
Partners: CEA, CIEMAT, CNRS, DESY, IFJ-PAN, INFN, KIT, PSI, UKRI, UU
- **Task 13.2:** Developing and promoting services to industry in AMICI TFs (M1-M24)
Partners: DESY, CEA, CIEMAT, CNRS, DESY, IFJ-PAN, INFN, KIT, UKRI, UU
- **Task 13.3:** New RF amplifiers based on GaN semiconductors(M1-M24)
Partners: UU, CERN
 - ↳ An example of an upgrade of a TP allowing to keep the TF at the forefront of the technology in a Key Technical Area (presentation by D. Dancila)

Task 13.1: Strategy for the development of the AMICI TI (M1-M24)

Partners: CEA, CIEMAT, CNRS, DESY, IFJ-PAN, INFN, KIT, PSI, UKRI, UU

- **Sub-Task 13.1.1:** Define the roadmap for the strategic evolution and development of the AMICI TI, in terms of key TPs in key technological areas, required in view of the possible opportunities of engagement in new projects, in and outside Europe.
 - Use of the Accelerator R&D Roadmap under development following the European Strategy for Particle Physics Update, which should be delivered end 2021, but complete it for domains not considered (fusion, neutron sources, light sources...) and establish the TI roadmap
 - One person per partner, ideally also involved in the ESPP strategy and covering different technical areas

Task 13.1: Strategy for the development of the AMICI TI (M1-M24)

Partners: CEA, CIEMAT, CNRS, DESY, IFJ-PAN, INFN, KIT, PSI, UKRI, UU

- **Sub-Task 13.1.2:** Optimize the complementarity between the different TFs and maximize the involvement of their industrial partners by defining which interventions are needed to adapt the European TI in order to satisfy the requests from Industry.
 - Inventory of requests received within or outside of AMICI and answers
 - Categorization of the different TPs
 - Updating of information for each TP keeping only the TPs really open or to be open to external users
 - Identification of needed adaptation/upgrade/improvement

Task 13.1: Strategy for the development of the AMICI TI (M1-M24)

Partners: CEA, CIEMAT, CNRS, DESY, IFJ-PAN, INFN, KIT, PSI, UKRI, UU

- **Sub-Task 13.1.3:** Raise awareness about the AMICI TPs and promote their use by external users in particular industry.
 - ↳ Website updating and continuous feeding
 - ↳ Participation to workshops, conferences, industry forums
 - ↳ Updating of the AMICI booklet

Task 13.2: Developing and promoting services to industry in AMICI TFs (M1-M24)

Partners: CEA, CIEMAT, CNRS, DESY, IFJ-PAN, INFN, KIT, PSI, UKRI, UU

- **Sub-Task 13.2.1 (CEA):** Organization and operation of a central information and contact point for industry and other external partners to access TPs with the aim to ensure the dissemination of information, analysis of requests and contacts to the appropriate TP.
 - ↳ In the AMICI website, general email address to coordinator + one contact email for each TF, in particular to ease access by potential users outside the typical accelerator community
 - ↳ A small group of people able to analyze the requests, dispatch and answer the needs will be created.
 - ↳ Regular coordination between the contact points to know who answered and what happened, including to requests sent directly to TFs

Task 13.2: Developing and promoting services to industry in AMICI TFs (M1-M24)

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- **Sub-Task 13.2.2 (DESY):** analysis of the different procedures in different TFs, corresponding to different cases, and propose a set of standardized rules, making the access simpler and faster for external partners.
 - ↳ Gathering information on what other laboratories are already doing or what is done in the community
 - ↳ Collecting available experience, including as far as possible existing contracts, with the help of legal experts to standardize the rules

Task 13.2: Developing and promoting services to industry in AMICI TFs (M1-M24)

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- **Sub-Task 13.2.3 (INFN):** At least two small workshops dedicated to a particular type of TP will be organized per year, which will gather personnel from the labs operating TPs of this type and possible users in particular from industry.
 - Organize direct exchange between operators of TPs and possible users
 - Already under discussion:
 - End 2021: test benches for SRF cavities organized by DESY
 - Spring 2022: workshop on high-field magnets organized by INFN
 - Autumn 2022: mechanical tests at cryogenic temperature organized by CEA

Links to other I.FAST WPs

- **WP3 - Industry engagement** (coord. M. Morandin (INFN))
 - Task 3.1: Coordination and industrial partnership support
 - Setup and organize the work of the I.FAST Industry Advisory Board (IAB): to be harmonized with the AMICI IAB
 - Task 3.3 (coord. CIEMAT): Extended participation of industry in collaborative R&D activities

- **WP2 - Training, communications and outreach for accelerator science and technology in Europe** (coord. Ph. Burrows (UOXF))
 - Task 2.4: Industrial Training associated with Knowledge Transfer (T. Ekeloff (UU))

AMICI / I.FAST-WP13 Steering Committee

- Common AMICI / I.FAST-WP13 Steering Committee with one representative per institution
- Steering Committee meetings include the Coordination Team and Mauro Morandin as link with WP3

	Members of the Steering Committee
CEA	P. Védrine
CERN	M. Vretenar
CIEMAT	J. M. Perez
CNRS	W. Kaabi
DESY	H. Weise
IFJ-PAN	D. Bocian
INFN	G. Bisoffi
KIT	O. Baake
UKRI	A. Gleeson
UU	T. Ekelöf

Organization of the work

- A project manager working 50% for AMICI and I.FAST WP13 has been recruited
- Common AMICI / I.FAST-WP13 meetings with clear identification of respective items: first meeting held on April 27
- One meeting per month, alternating between all WP13 participants or only the steering committee
- Use of the AMICI website with links to I.FAST website
 - ↳ Website originally hosted by IFJ-PAN moved to IJCLab (CNRS) (June)
 - ↳ Content update before end 2021
- Use of I.FAST sharing space for exchange of documents
- Next meeting : beginning of June

iFAST

Thank you for your attention



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