I.FAST

Innovation Fostering in Accelerator Science and Technology

From May 1st, 2021

Status of Project preparation

M. Vretenar, CERN

Project Coordinator

Open Steering Committee meeting, 3 March 2021

Why this meeting

Temporary logo

- Thank you for taking part in this preparation meeting!
- Start of the project is confirmed for **May 1st** (good to start on a holiday!), less than 2 months from now.
- A lot of **preparation** work is going on, mainly at CERN, and it is important to inform you on the preparation status and on the few ongoing issues.
- We are also progressing in the **branding** of IFAST, and before finalising we want to collect your feedback, more in general on our communication strategy.
- We need to agree when and how we will organise our **kick-off meeting**.
- I would also like to know where you are with the **preparation work** in the different Work Packages, to be sure that in May we can start at **full speed**.

I.FAST
Innovation Fostering in Accelerator Science and Technology

I.FAST in a nutshell

- Innovation Fostering in Accelerator Science and Technology
- 4 years duration, 01 May 2021 – 30 April 2025
- 48 beneficiaries (SigmaPhi left the project), 14 partner organisations, >20 collaborating institutes.
- 13 Work Packages, 55 Tasks.
- Full cost budget 18.7 M€, EC contribution 10 M€.
- One goal: identify and develop in collaboration with industry the technologies for tomorrow’s particle accelerators.

I.FAST
Innovation Fostering in Accelerator Science and Technology

I.FAST Structure

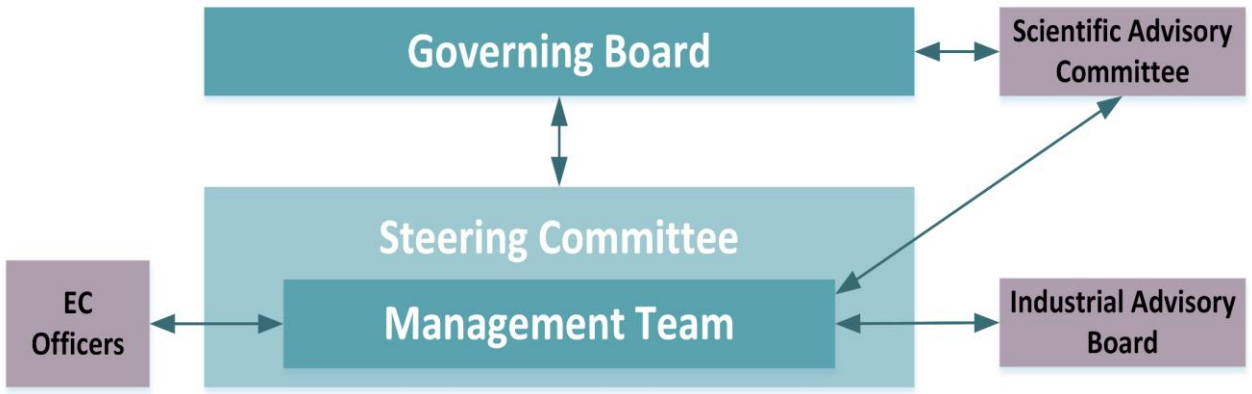
Difficult to read, but please check the names of Coordinators and Task Leaders and if changes are needed send a mail to myself and to Valerie.

Additional:
WP14 Ethics Requirements
Added by the EC, on data protection and health and safety procedures.

WP1	Management, coordination and dissemination	M. Vretenar (CERN)	Task 1.1	Project management, external coordination, sustainability	M. Vretenar (CERN)	
			Task 1.2	Information flow management and cross-coordination	T. Torims (RTU)	
			Task 1.3	Internal communication and dissemination	P. Foka (GSI)	
			Task 1.4	Relation with other innovation pilots	*M.Losasso (CERN)*	
WP2	Training, communications and outreach for accelerator science and technology in Europe	P. Burrows (UOXF)	Task 2.1	Management	P. Burrows (UOXF)	
			Task 2.2	Communication and outreach	D. Antonio (CERN)	
			Task 2.3	Challenge-based innovation (CBI) with particle accelerators	N. Delerue (CNRS)	
			Task 2.4	Industrial Training associated with knowledge transfer	T. Ekelof (UU)	
WP3	Industry engagement	M. Morandin (INFN)	Task 3.1	Coordination and industrial partnership support	M. Morandin (INFN)	
			Task 3.2	Knowledge transfer and business opportunities in accelerators R&D	Arik Willner (DESY)	
			Task 3.3	Extended participation of industry in collaborative R&D activities	Jose M. Perez (CIEMAT)	
WP4	Managing innovation, new materials	M. Losasso (CERN)	Task 4.1	Innovation management and committee	M. Losasso (CERN)	
			Task 4.2	Management of the Innovation Fund	M. Losasso (CERN)	
			Task 4.3	Innovative beam windows for high-power accelerator applications	M. Losasso (CERN)	M. Tomut (GSI)
			Task 4.4	Large scale Carbide-Carbon Materials for multipurpose applications	F. Carra (CERN)	
WP5	Strategies and Milestones for Accelerator Research and Technologies	F. Zimmermann (CERN), N. Pastrone (INFN), P. Fork (GSI)	Task 5.1	MUon colliders STrategy network (MUST)	N. Pastrone (INFN)	
			Task 5.2	Pushing Accelerator Frontiers (PAF)	F. Zimmermann (CERN)	G. Franchetti (GSI)
			Task 5.3	Improvement of Resonant slow EXtraction spill quality (REX)	P. Fork (GSI)	
WP6	Novel Particle Accelerators Concepts and Technologies	R. Assmann (DESY), …	Task 6.1	Novel Particle Accelerators Concepts and Technologies	R. Assmann (DESY)	
			Task 6.2	LASers for PLasma Accelerators	I. Gizzi (CNR)	
			Task 6.3	Multi-scale Innovative targets for laser-plasma accelerators	C. Thaury (CNRS)	
			Task 6.4	Laser focal spot stabilization systems	F. Mathieu (CNRS)	
WP7	High Brightness Accelerators for Light Sources	R. Bartolini (UOXF), …	Task 7.1	Coordination & communication	R. Bartolini (UOXF)	
			Task 7.2	Enabling Technologies for Ultra-Low Emittance Ring	R. Bartolini (UOXF)	
			Task 7.3	Variable Dipole for the upgrade of the ELETTRA storage ring	Y. Papaphilippou (CERN)	
			Task 7.4	Very high gradient RF Guns operating in the C-band RF technology	D. Alesini (INFN)	
			Task 7.5	CompactLight Prototype Accelerating Structure	G. D'Auria (Elettra)	
WP8	Innovative superconducting magnets	L. Rossi (INFN), L. Quettier (CEA), G. Roux (GSI)	Task 8.1	Coordination and HTS Strategy Group	L. Rossi (INFN)	D. Schoerling (CERN)
			Task 8.2	Preliminary Engineering design of curved CCT magnet	D. Tommasini (CERN)	L. Rossi (INFN)
			Task 8.3	Preliminary Engineering design of HTS CCT	L. Quettier (CEA)	D. Schoerling (CERN)
			Task 8.4	Construction of curved CCT magnet demonstrator	M. Gehring (BNG)	M. Vieweg (Scanditronix)
			Task 8.5	Construction of HTS CCT magnet demonstrator	?	A. Echeandia (Elytt)
			Task 8.6	Development of ReBCO HTS nuclotron cable	T. Winkler (GSI)	G. Roux (GSI)
WP9	Innovative superconducting thin film coated cavities	C. Antoine (CEA), O. Malyshev (UKRI)	Task 9.1	Coordination and Strategy for Innovative Superconducting Accelerating Cavities	C. Antoine (CEA)	O. Malyshev (UKRI)
			Task 9.2	Innovative Superconducting Accelerating Cavities	C. Pira (INFN)	
			Task 9.3	Optimisation of process parameters and target development for SRF cavity coating with A15 material	R. Valizadeh (UKRI)	
			Task 9.4	Surface Engineering by Atomic Layer Deposition (ALD)	T. Proslier (CEA)	
			Task 9.5	Improvement of mechanical and superconducting properties of RF resonator by laser radiation	A. Medvids (RTU)	
			Task 9.6	Optimization of flat SRF thin films production procedure	O. Kugeler (HZB)	
WP10	Advanced Accelerator technologies	T. Torims (RTU), …	Task 10.1	Coordination and communication	T. Torims (RTU)	
			Task 10.2	Additive Manufacturing – Survey of applications and potential developments	M. Vedani (POLIMI)	
			Task 10.3	Refurbishment of accelerator components by AM technologies	T. Torims (RTU)	
			Task 10.4	Development of AM-manufactured superconductive RF cavities	M. Pepato (INFN)	
			Task 10.5	Photon Stimulated Desorption (PSD) from NEG coatings for accelerator vacuum chambers	O. Malyshev (UKRI)	
			Task 10.6	Machine learning techniques for accelerator and target instrumentation	T. Shea (ESS)	
			Task 10.7	Development of electro-optical waveguide sensors as beam electric field sensors	S. Gibson (RHUL)	
WP11	Sustainable concepts and technologies	M. Seidel (PSI)	Task 11.1	Sustainable Concepts for Accelerator driven Research Infrastructures	M. Seidel (PSI)	
			Task 11.2	High Efficiency Klystron Industrial Prototype	E. Jensen (CERN)	O. Brunner (CERN)
			Task 11.3	Permanent Magnet Quadrupoles & Combined Function Magnets for Ultra Low-Emittance Rings	B. Shepherd (UKRI)	
WP12	Societal Applications	R. Edgecock (HUD),	Task 12.1	A Strategy for Implementing Novel Societal Applications of Accelerators	R. Edgecock (HUD)	
			Task 12.2	Design of advanced electron accelerator plant for biohazards treatment	A. Chmeliewski (INCT)	
			Task 12.3	Design of Internal Rf Ion Source for Cyclotrons	J. Perez (CIEMAT)	
WP13	Technology Infrastructure	S. Leray, M.H. Moscatello (CEA)	Task 13.1	Strategy for the development of the AMICI TI	S. Leray (CEA)	M.H. Moscatello (CEA)
			Task 13.2	Developing and promoting services to industry in AMICI TFs	H. Weise (DESY)	R. Wichmann (DESY)
			Task 13.3	New RF amplifiers based on GaN Semiconductors	D. Dancila (UU)	

I.FAST Governance and Communication

Body	Composition	Goal	Meetings
Governing Board	Representatives of all parties	Changes to contract, financial matters	1 / year
Steering Committee	All WP Coordinators	Scientific decisions on work programme	2 / year
Enlarged Steering Comm.	WP Coordinators + Task Leaders	Information, feedback on activities	2 / year
Project Management Team	Coordinator, 2 Deputies, Admin. Manager, Assistant, Comm. officer	Day-to-day follow up of administrative, financial and communication issues	6 / year
Advisory Bodies	Experts nominated by Gov. Board		1 / year



My committment: keep the meetings and the administration at the minimum, to leave you time to do the work!

Today:
1st Enlarged Steering Committee Meeting

Quick I.FAST User Guide

I.FAST
Innovation Fostering in Accelerator Science and Technology

Partners

European Commission

Deliverables and reporting

Science and Innovation

Project coordinator

Maurizio Vretenar

Deputies:
Toms Torims (RTU)
Marcello Losasso (CERN)

Administrative Manager

Svetlomir Stavrev

Admin. Support:
Sabrina El Yacoubi

Project assistant

Valérie Brunner

Communication:
D. Antonio (CERN)

Dissemination:
Y. Foka (GSI)

Revision of the mill (servicing):

Every year at the annual project meeting (April – May)

I.FAST
Innovation Fostering in Accelerator Science and Technology

Project Status

- All documentation and information for the **Grant Agreement** was submitted on 20 January, and is in the process of being reviewed in Brussels. We expected to be invited to sign the Agreement in early March.
- The draft **Consortium Agreement** was sent to all partners (beneficiaries and partner organisations) by the CERN Legal Service with deadline for comments 26 February. Minor requests for changes received, a remaining issue on ethics clause with Thales is being solved.
- From **May 1st**, you will be able to charge IFAST-related eligible expenditures to the European Commission.
- My advice: start preparing your work now, so that you can start at full speed in May.

I.FAST
Innovation Fostering in Accelerator Science and Technology

Proposals for I.FAST Committees

I.FAST will have 2 external committees:

Scientific Advisory Committee (SAC): external advisory panel nominated by the Governing Board based on their expertise. Will advise the GB on technical and strategic matters. The SAC will provide an internal assessment to the Project Management on the mid-term review and status of the project.

Ideal composition: 3 people, not from IFAST participants, possibly one from outside Europe, with a good balance of genders.

We ask you to send me proposals of names for the SAC before May 1st

Industrial Advisory Board (IAB): appointed in WP3 with the mandate to provide industry opinion regarding the potential of technologies developed in I.FAST, and help defining suitable business plans.

*Again 3 people as ideal composition, I assume that **WP3 (Mauro)** will take care of it.*

I.FAST
Innovation Fostering in Accelerator Science and Technology

Composition of the Governing Board

In May we will organise the first meeting of the Governing Board (GB), the highest body of the Consortium (in other projects called “General Assembly”).

Each partner (beneficiaries and partner organisations) has to **nominate a representative** in the Governing Board. We will soon contact the scientific contacts of partners, and in parallel send the official request for nomination to the legal representatives of the partners (the directors who sign the Grant Agreement).

The GB representative might be the Director himself or a person appointed by him, external to the project or internal – might be a Task Leader, a WP Coordinator, or the IFAST scientific contact for the partner.

For CERN, the new Director for Accelerators and Technologies Mike Lamont has already agreed to represent CERN in the Governing Board – a very positive signal.

I.FAST
Innovation Fostering in Accelerator Science and Technology

Options for kick-off meeting

- It is usually very important that project teams meet in person, to know each other and to create the team spirit that is essential for our work (we don't want to work in closed compartments!), at least **at the beginning** and **at the end** of a project.
- The **kick-off meeting** should be in person, my idea was to invite you all at CERN, and we have optimistically booked the **CERN Globe** on two alternative dates, May 4-6 and June 8-11.
- But now the pandemic is still active, and on top of that the CERN DG has just asked us to cancel our reservations because she needs the Globe…
- My proposal at this point is:
  - Organise a virtual kick-off meeting on one day on **Tuesday 8 May**, with presentations by WP Coordinators only, and **parallel Work Package meetings**.
  - Find a date in **October-November** for a plenary IFAST Meeting in presence at CERN, with presentations by all Task Leaders, on the programme and on first results.

Communication material

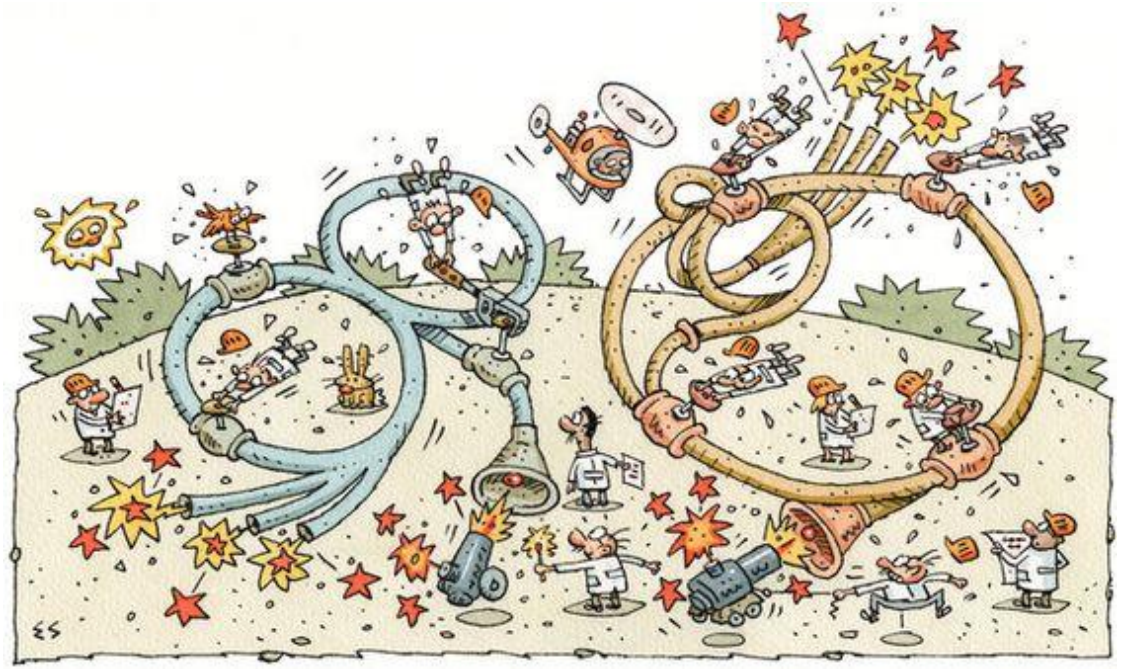
Temporary logo

The next presentation by Daniela will cover all what we are preparing for you to use:

- **Web** site https://ifast-project.eu/ ;
- **Sharepoint** to share internal documents and information and to follow-up milestones and deliverables;
- **Zenodo** to publish notes, reports, presentations and other documents for an external audience.

I.FAST
Innovation Fostering in Accelerator Science and Technology

Questions?



Thank you for your attention!

maurizio.vretenar@cern.ch