



M. Vretenar, CERN, Project Coordinator

3rd Steering Committee Meeting, 2 March 2022

Agenda for this Steering Committee Meeting

Mainly devoted to **preparation for the next steps**:

- The internal call for proposals of the **I.FAST Innovation Fund** (1 M€, open in May, deadline in August)
- The **1st Annual Meeting** that will be at CERN in the week 2 – 6 May.

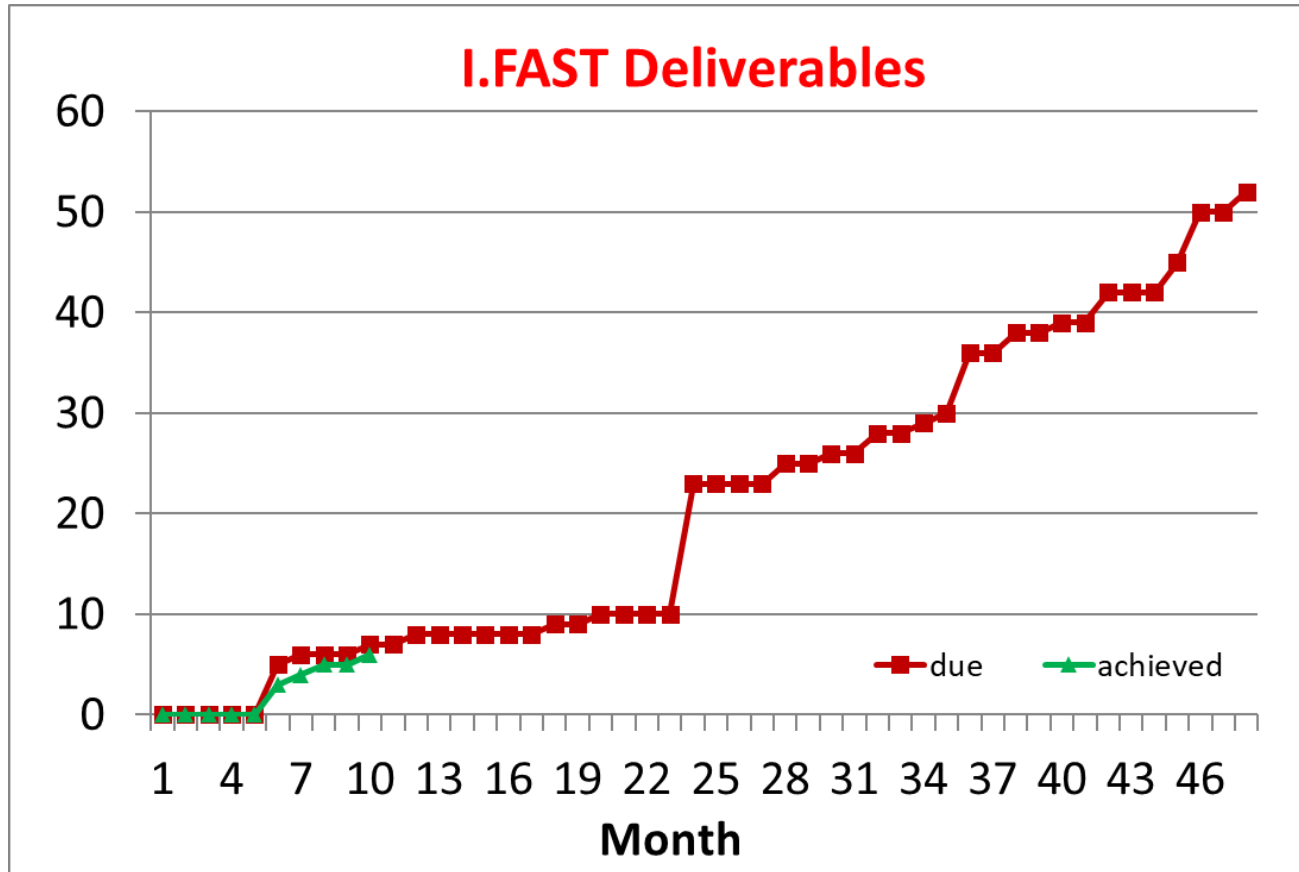
Agenda:

- Introduction by Project Coordinator (M. Vretenar, 15')
- Presentation of the I.FAST Innovation Fund and discussion (M. Losasso, 15')
- Presentation of the I.FAST Annual Meeting 2022 and finalisation of agenda (M. Vretenar, 15')
- Short presentations by WP Coordinators (5' each, no need of slides)
- AOB

Status of I.FAST

- In general, I had a number of feedbacks indicating that the project progressed well in the first year.
- Of course, a few delays happened but «within the norm» for such large projects.
- Today I will listen to your short reports to see if there is anything more going on.

Status of Deliverables



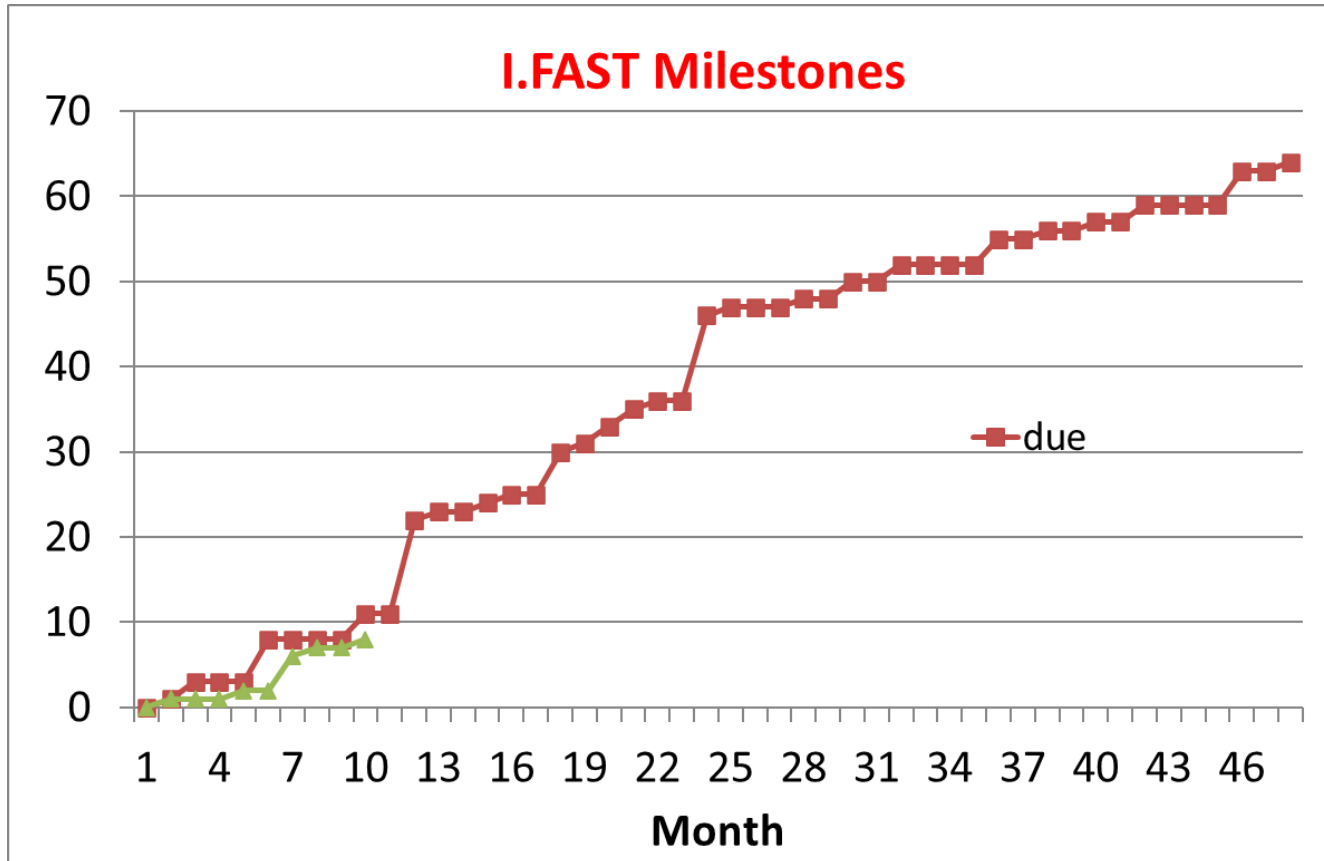
- Only 1 Deliverable late (delay accepted by EC officer):

D8.1 HTS European Strategy Group, from M6 to M12 (end April) – draft to be sent in March!

- Next deliverables (2022):

Del. no.	Deliverable name	Task	Planned delivery date (m)	Due date (d/m/y)	Requested delivery date (m)
D10.3	Additive-manufactured SRF cavities	10.3	12	30/04/22	18
D8.3	First Engineering design of HTS demonstrator	8.3	18	31/10/22	
D4.1	Evaluation criteria for IIF projects, and Evaluation Body	4.1	20	31/12/22	

Status of Milestones



- More worrying: 3 Milestones late

MS50	Workshop on energy for sustainable science at research infrastructures	11.1	6	31/10/21	12
MS33	Conceptual design of HTS magnet	8.3	10	28/02/22	12
MS57	Projects identification for development funding	12.1	10	28/02/22	

2 have requested a delay (to April), but no news of MS57 from WP12

- 11 Deliverables due at end of April! Reminder: the report has to be sent by end of March!

13 Milestones due end of April !!

MS14	Evaluation of a CCM alternative to Molybdenum-Graphite	4.4
MS23	Target manufacturing and characterization	6.3
MS6	Definition of CBI scheme: proposed topic and organisation at ESI	2.3
MS38	First seamless copper 1.3 GHz cavity produced as substrate for the coating of the SC film	9.2
MS39	Coating facility built and tested at STFC, USI and INFN	9.3
MS43	Dissemination and communication plan	10.1
MS46	Performance of Superconductive Cavities made by AM technology by Nb or Cu with Nb thin spattered film on the internal surface	10.4
MS47	First NEG coated samples are installed on SR beamline at DLS and Soleil	10.5
MS49	Delivery of an electro-optic waveguide prototype for demonstration at RHUL test bench	10.7
MS55	Design review	11.2
MS63	Demonstration of operation with high efficiency and nominal power of the first GaN amplifier	13.3

MS50	Workshop on energy for sustainable science at research infrastructures	11.1	6	31/10/21	12
MS33	Conceptual design of HTS magnet	8.3	10	28/02/22	12

The IIF in a nutshell

The I.FAST Innovation Fund will be described by M. Losasso in the next presentation. The proposal **needs your endorsement** before being submitted for approval to the Governing Board in May.

1. Funding between 100 and 200 kEUR;
2. Consortium: at least one I.FAST beneficiary and one industry;
3. TRL of 4 or higher (laboratory validation, after proof-of-concept);
4. Project has to improve sustainability of particle accelerator technologies;
5. Project must have potential for industrialisation or commercialisation.
6. Project must have potential to attract more resources than what deployed by IFAST alone.

The I.FAST Annual Meeting

Day	Date	Sessions	Events
1	Monday 2 May	ARIES Final Meeting WP Parallel Meetings Governing Board	ARIES Dinner
2	Tuesday 3 May	WP Parellel Meetings (am) Industry Workshop (am) Plenary ind. Workshop (pm)	Industry Dinner
3	Wednesday 4 May	IFAST Plenary CERN visit (17:30-19:30)	IFAST welcome cocktail
4	Thursday 5 May	IFAST Plenary (9:00-15:30) Multidisciplinary Workshop	IFAST Banquet
5	Friday 6 May	EU projects, highlight talks IAB, SAC reports, conclusions	SC lunch

Some issues with the Meeting

- Overload on Monday:
- people will travel, start not before 10:00-10:30.
- The Governing Board is in principle foreseen for 14:00-16:00
- We made a poll of options for the ARIES Final meeting, and there was a (small) majority for the 1st day of IFAST meeting. Need 4 hours, e.g. 10:30-12:30 and 16:00-18:00.
- Is there any need of WP parallel meetings on Monday, and is there any problem of overlap with ARIES and GB?

Additional information

- Who is willing to organise WP Parallel Meetings, and when? Options: Monday, Tuesday morning (and if really needed afternoon), Friday afternoon.
- Propose subjects and speakers for highlight talks, possibly from young researchers (20').

	START	END	DURATION	TITLE	SPEAKER
MONDAY 02/05/2022					
	IFAST Parallel Meetings (CERN rooms)				
	09:00	13:00	04:00	IFAST Parallel Meetings (CERN rooms)	
	14:00	16:00	02:00	Governing Board Meeting (hybrid)	
	16:00	18:00	02:00	IFAST Parallel Meetings (CERN rooms)	
TUESDAY 03/05/2022					
	09:00	13:00	04:00	IFAST Parallel Meetings (CERN rooms)	
	09:00	13:00	04:00	IFAST Industry Workshop (Globe) - parallel session	
	14:00	18:00	04:00	IFAST Industry Workshop (Globe) - plenary session	

WEDNESDAY 04/05/2022

IFAST Meeting - Session 1 - Introduction, Management, Industry					
09:00	09:20	00:20	Introduction by the Project Coordinator	M. Vretenar (CERN)	
09:20	09:30	00:10	Presentation of the Scientific Advisory Committee	A. Yamamoto (KEK), M. Minty (BNL), C. Welsch (UL)	
09:30	09:40	00:10	Presentation of the Industry Advisory Board	S. Stres	
09:40	10:00	00:20	The I.FAST Innovation Fund	M. Losasso (CERN)	
10:00	10:10	00:10	Industrial Training associated with knowledge transfer	T. Ekelöf (UU)	
10:10	10:30	00:20	The I.FAST Challenge Based Innovation	N. Delerue (CNRS)	
10:30	11:00	00:30	Coffee Break		
IFAST Meeting - Session 2 - Technology infrastructure, sustainability					
11:00	11:15	00:15	The IFAST Innovation potential	D. Safi (DESY)	
11:15	11:40	00:25	Development of the European Technology Infrastructure	S. Leray (CEA)	
11:40	11:55	00:15	New RF Amplifiers based on GaN Semiconductors	D. Dancila (UU)	
11:55	12:10	00:15	Sustainable Concepts and Technologies	M. Seidel (PSI)	
12:10	12:25	00:15	High Efficiency Klystron Prototype	O. Brunner (CERN)	
12:25	12:40	00:15	Permanent Magnet Quadrupoles	B. Shepherd (UKRI)	
12:40	14:00	01:20	Lunch Break		
IFAST Meeting - Session 2 - Status Reports					
14:00	14:15	00:15	Carbide-carbon materials for multipurpose applications	F. Carra (CERN)	
14:15	14:45	00:30	Innovative Superconducting Magnets	L. Rossi (INFN)	
14:45	15:00	00:15	Development of ReBCO HTS nuclotron cable	T. Winkler (GSI)	
15:00	15:15	00:15	Strategy for Implementing new Societal Applications	R. Edgecock (HUD)	
15:15	15:30	00:15	Design of Advanced Electron Accelerator Plant for Biohazard Treatment	A. Chmielewski (INCT)	
15:30	15:45	00:15	Internal RF Ion Source for Cyclotrons	J. Perez/D. Perez (CIEMAT)	
15:45	16:10	00:25	Coffee Break		
16:10	16:40	00:30	Additive manufacturing - plans and recent results	T. Torims (RTU)	
16:40	16:55	00:15	Machine Learning techniques for accelerator and target diagnostics	T. Shea (ESS)	
16:55	17:10	00:15	AM manufacturing of Superconducting cavities	A Pepato (INFN)	
17:10	17:25	00:15	Development of electro-optical waveguide sensors	S. Gibson (RHUL)	
17:25	19:30	02:05	CERN Visit (synchrotron, CLEAR, ATLAS visitors' centre)	2 or 3 groups (20-30 people) rotating on the 3 visit sites	
19:30	21:45	02:15	Welcome cocktail	Globe or Globe terrasse (if good weather)	



THURSDAY 05/05/2022

IFAST Meeting - Session 3 - Status reports

	09:00	09:20	00:20	I.FAST Communication and Outreach - the 1st year	A. Le Gall / P. Burrows
	09:20	09:35	00:15	Ultra-low Emittance Rings	R. Bartolini (DESY)
	09:35	09:55	00:20	Longitudinally Variable Dipole	Y. Papaphilippou (CERN)
	09:55	10:15	00:20	C-band Very High Gradient Guns	D. Alesini (INFN)
	10:15	10:35	00:20	CompactLight Prototype Structures	G. Dauria (Elettra)
	10:35	11:00	00:25	Coffee Break	

IFAST Meeting - Session 4 - Status reports

	11:00	11:30	00:30	Innovative Superconducting Thin Film Coated Cavities	O. Malyshev (UKRI)
	11:30	11:45	00:15	Innovative Beam Windows for high-power accelerator applications	M. Tomut (GSI)
	11:45	12:00	00:15	Pushing Accelerator Frontiers	F. Zimmermann (CERN)
	12:00	12:15	00:15	Muon Colliders Strategy Network	N. Pastrone (INFN)
	12:15	12:35	00:20	Improvement of slow extraction	P. Fork (GSI)
	12:35	14:00	01:25	Lunch Break	

IFAST Meeting - Session 5 - Status Reports and Highlight talks

	14:00	14:15	00:15	Novel Particle Accelerators Concepts and Technologies	R. Assmann (DESY)
	14:15	14:25	00:10	Lasers for Plasma Accelerators	L. Gizzi (CNR)
	14:25	14:35	00:10	Multi-scale targets for laser-plasma accelerators	C. Thaury (CNRS)
	14:35	14:45	00:10	Laser focal spot stabilization for compact plasma accelerators	F. Mathieu (CNRS)
	14:45	15:05	00:20	Highlight talk 1	
	15:05	15:25	00:20	Highlight talk 2	
	15:25	15:45	00:20	Coffee Break	
	15:45	18:00	02:15	<i>Multidisciplinary Workshop on Additive Manufacturing Applications</i>	
	15:45	18:00	02:15	<i>SAC meeting (CERN room)</i>	
	20:00	22:15	02:15	<i>Banquet</i>	Geneva (with public transport)

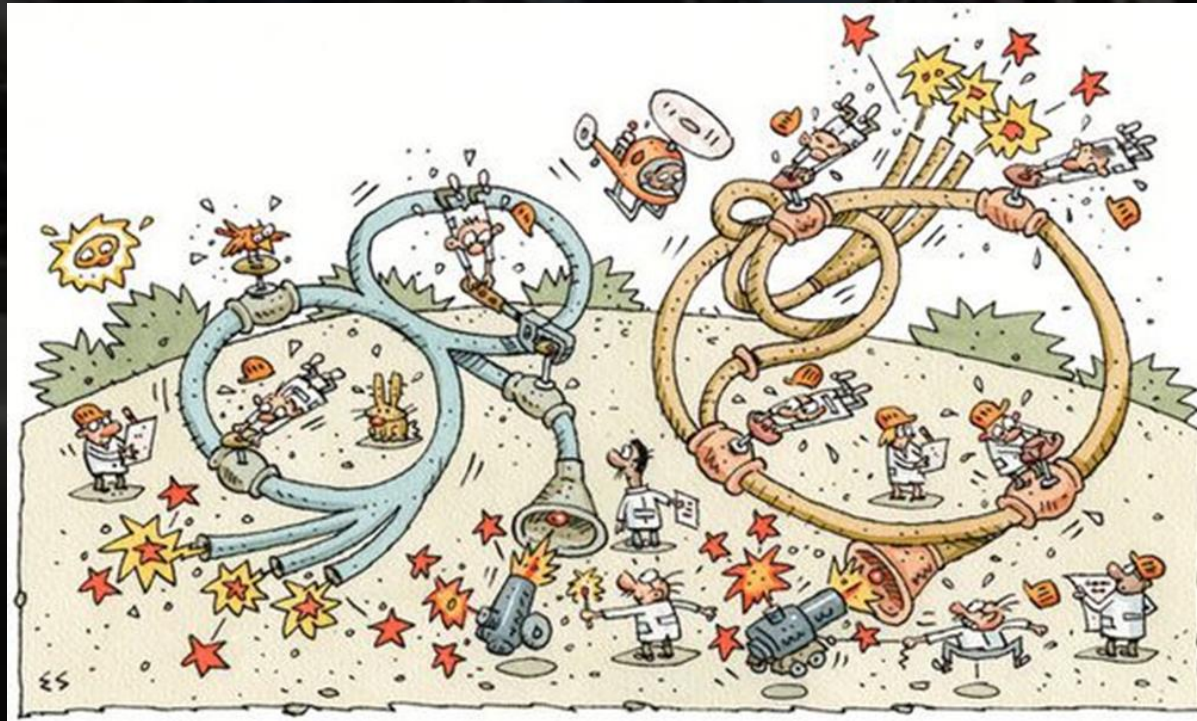
FRIDAY 06/05/2022

IFAST Meeting - Session 6 - Highlights and conclusions

	09:00	09:20	00:20	The TIARA strategy for support to accelerator R&D	J.M. Perez (CIEMAT)
	09:20	09:35	00:15	LEAPS-INNOV and the long-term LEAPS strategy	
	09:35	09:50	00:15	AIDA-INNOVA and the detector development strategy	
	09:50	10:05	00:15	EURO-LABS, crossroads of three communities	I. Iftymiopoulos (CERN)
	10:05	10:35	00:30	Coffee Break	
	10:35	11:15	00:40	<i>Special Seminar / Highlight talks</i>	
	11:15	11:35	00:20	Presentation by the SAC chair	
	11:35	11:50	00:15	Presentation by the IAB chair	S. Streis
	11:50	12:00	00:10	Presentation by IFAST GB chair	J. M. Perez
	12:00	12:15	00:15	Concluding remarks	M. Vretenar (CERN)
				Adjourn	
	12:30	14:30	02:00	Steering Committee Meeting	
	14:30	18:30	04:00	IFAST Parallel Meetings (CERN rooms)	

iFAST

THANK YOU FOR YOUR ATTENTION!



*Image credit: Elwood
H. Smith, The New
York Times*



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