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# IFAST INNOVATION FUND
# EvB meeting
# 1st round of evaluations

14.10.2022 - Geneva,

Marcello Losasso / CERN

IFAST

# IIF – 1st round of evaluation

- At the deadline for submission (September 15) 18 projects were presented
- 1 project was not eligible (not presented according to the pitch template)
- 3 projects were not clear about the budget. Asked and received clarifications

**in total we have assessed 17 projects.**

However, 1 of these projects also has problems related to eligibility (missing a budget slide)

# IIF – 1st round of evaluation

- 1 evaluator was not able to present his assessment and will not be participating to our meeting (Carsten Welsh, travelling to USA)

- 1 evaluator (G.Bisoffi) declined to assess 2 projects

[Millisecond flash lamp treatment for SRF accelerating cavities
and
AM applications of refractory metals for ION Sources ]
for reason of perceived Conflict of Interests

- 2 evaluators (P.Fork and M.Losasso) declined to assess project

[UTMOST CLEEN Atmosphere: Ultra-Thin Membrane Overlay STacks to Channel Low Energy ElectroNs to Atmosphere ]
because, in their judgement it was not eligible

# pitch content: what was mandatory to submit for assessment

| | |
|---|---|
| Background and aim | Tell Evaluators about your invention/ aim of project |
| Technical overview | highlights the value of the proposed solution |
| Work Plan and risk analysis | Team / organization - WP and responsibilities among partners<br>schedule of the project, risk analysis |
| Applications and impact | potential applications or uses |
| Business plan | scalability, manufacturability, business and revenue models |
| The commercialization | what is next for your technology |
| Resources and budget | Team/ resources /industry dedicated to the project |
| Contact info | |

# IIF – 1st round of evaluation score

Even with the provision of above, I think the evaluation can be considered valid with the assessment received from 10 members.

**THANK YOU to ALL OF YOU !!**

Assessments based exclusively on the documentation presented

Not possible for the projects to provide too many technical details:
(2 slides in the pitch) and
we cannot be expert in all the domains presented.

I have assembled the individual work but last contributions from several of you was received only last night, and another are still missing.

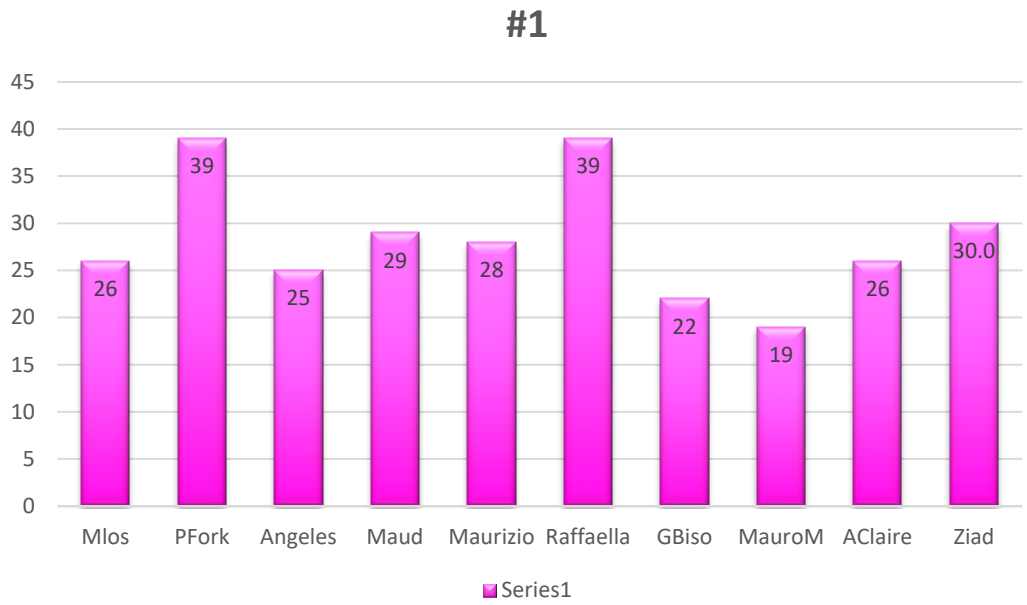
--------- what i am presenting shall need to be (completed) and verified. ------

# IIF – 1st round of evaluation –projects assessed

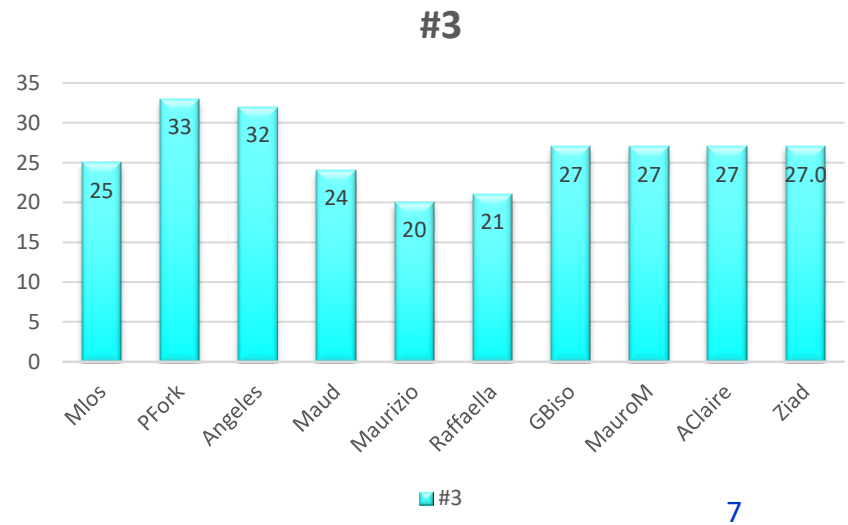
| num | Project title | requested budget |
|---|---|---|
| #1 | Superconducting opposite-field septum magnet prototype | 152.5 |
| #2 | High-Temperature High-Gradient Superconductors (â€œHIGHESTâ€ | 160 |
| #3 | Permanent magnet solenoid for High efficiency Klystron | 115 .0 |
| #4 | Development of highly efficient megawatt class cross field vacuum tube amplifier for particle accelerators driven by a solid-state power amplifier at 750 MHz | 200 KE |
| #5 | inBEST | 129 |
| #6 | BASE3 | 200 |
| #7 | MAGNETRONS | 150 |
| #8 | KAIO-Accelerator | 200 |
| #9 | High-quality Electron Accelerator driven by a Reliable Laser for Industrial uses (EARLI) | 200 |
| #10 | Demonstration of additive manufacturing for large and complex shaped vacuum chambers by Plasma Metal Deposition (PMDÂ®) | 100 |
| #11 | AM applications of refractory metals for ION Sources | 100 |
| #12 | Millisecond flash lamp treatment for SRF accelerating cavities | 160 |
| #13 | UTMOST CLEEN Atmosphere: Ultra-Thin Membrane Overlay STacks to Channel Low Energy ElectroNs to Atmosphere | not indicated / missing slide resource and budget |
| #14 | A Field Emission Cathode for a Travelling-Wave RF gun for High Brightness beams in Industrial and Small Research Facility Settings | 200 |
| #15 | Software Defined Radio based custom signal analysis and generation tool | 200 |
| #16 | Graphenic foil stripper for high intensity particle beams | 150- |
| #17 | Electron guns for societal applications exploiting opportunities offered by additive manufacturing | 200 |

# IIF – 1st round of evaluation - draft

For each project the evaluation from EvB (so far) is reported, i.e:



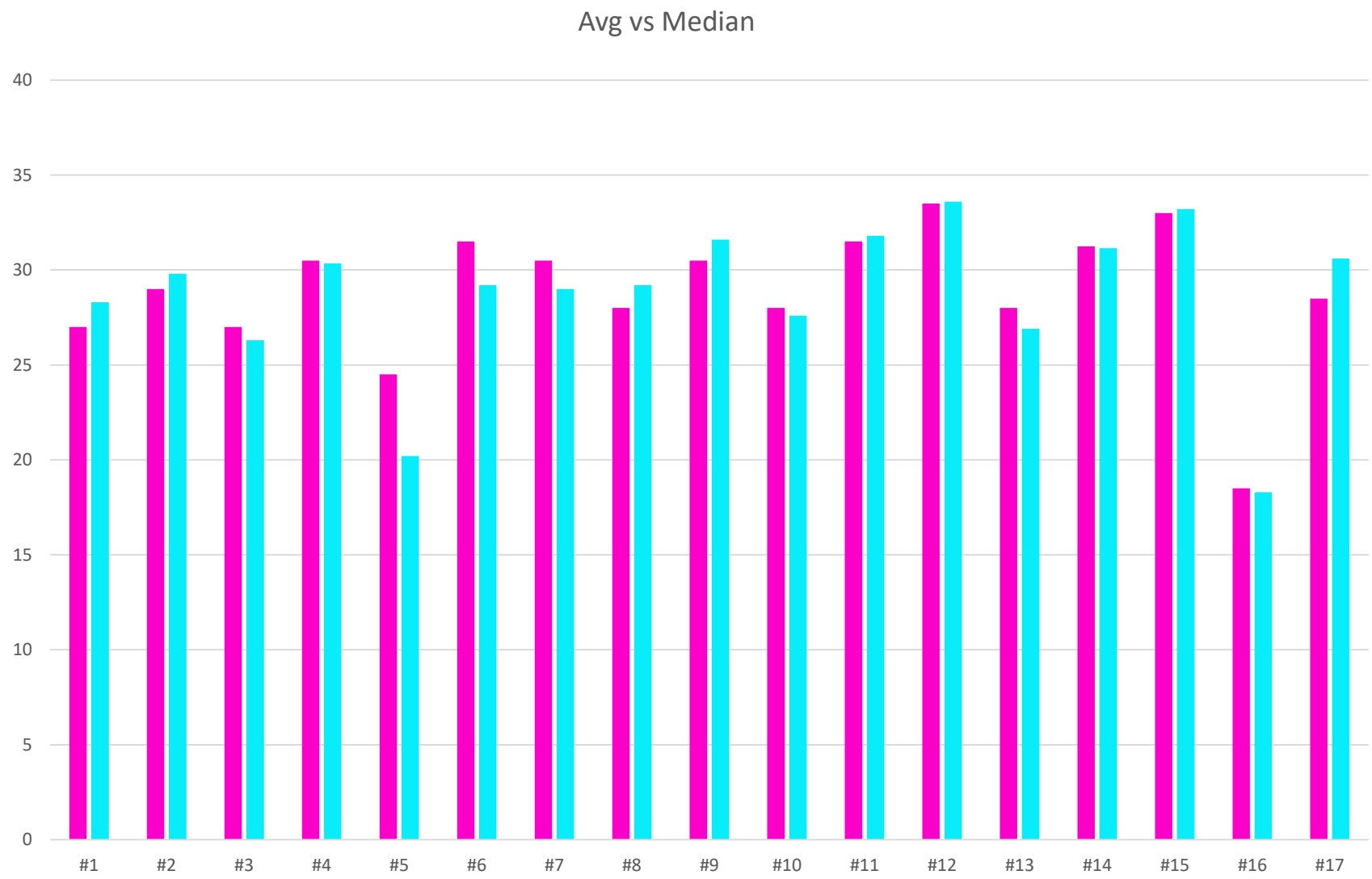




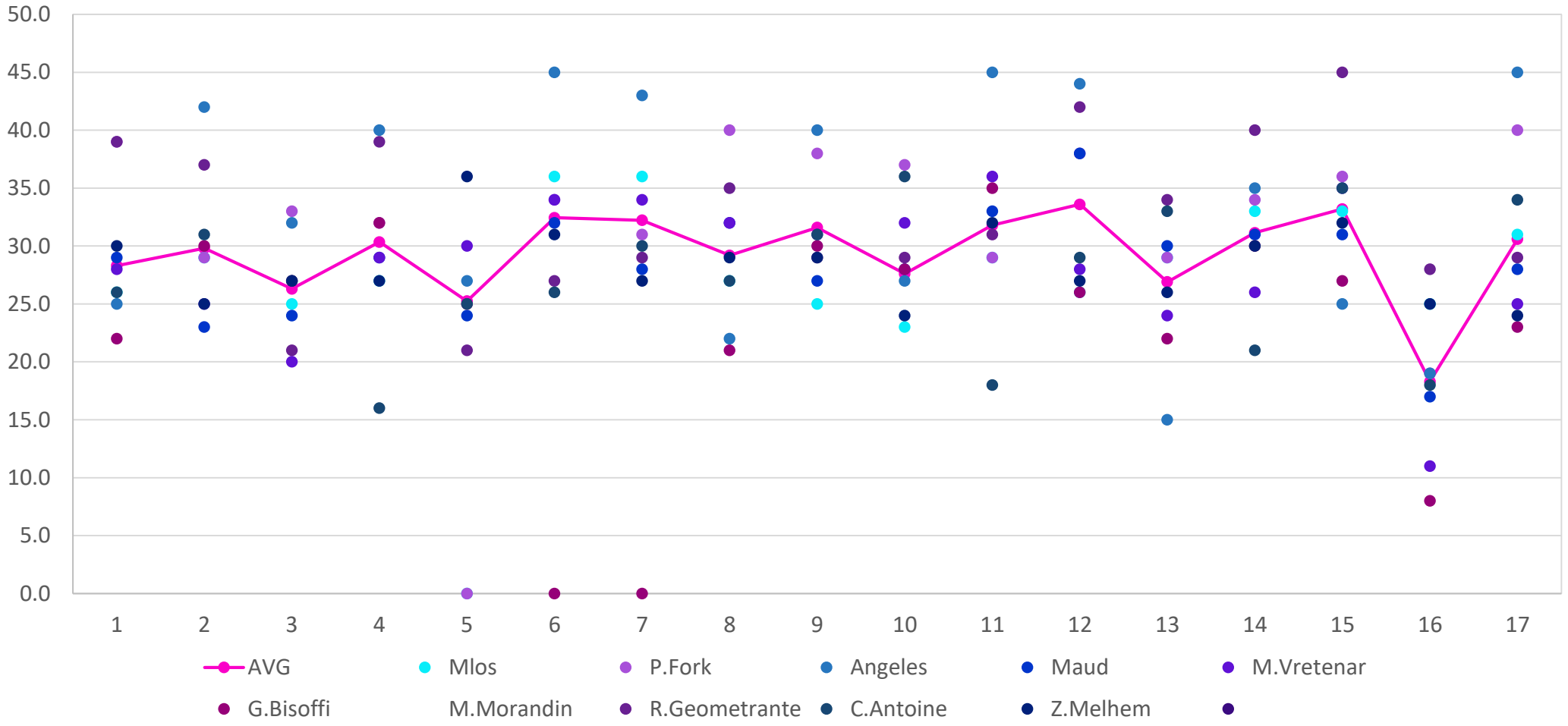

There are differences reflecting the individual considerations of the assessments –

- ***but there are no large, not unreasonable divergences***

# consolidated assessment as average of individual assessments



# IIF evaluation – spread is reasonable -



# IIF – budget - draft

| | |
|---|---|
| Total budget requested by submitted projects | 2526 |
| Budget available in I.FAST (Maurizio to confirm) | 1200 |
| Total budget requested by first 8 scored projects | 1235 |

| project title scored | requested budget | |
|---|---|---|
| Permanent magnet solenoid for High efficiency Klystron | 115 | |
| Development of highly efficient megawatt class cross field vacuum tube amplifier for particle accelerators driven by a solid-state power amplifier at 750 MHz | 200 | |
| inBEST | 129 | |
| AM applications of refractory metals for ION Sources | 100 | |
| Superconducting opposite-field septum magnet prototype | 152.5 | |
| KAIO-Accelerator | 200 | |
| High-Temperature High-Gradient Superconductors (â€œHIGHESTâ€ | 160 | |
| Demonstration of additive manufacturing for large and complex shaped vacuum chambers by Plasma Metal Deposition (PMDÂ®) | 100 | 1156.5 |
| A Field Emission Cathode for a Travelling-Wave RF gun for High Brightness beams in Industrial and Small Research Facility Settings | 200 | |
| Graphenic foil stripper for high intensity particle beams | 150 | |
| High-quality Electron Accelerator driven by a Reliable Laser for Industrial uses (EARLI) | 160 | |
| Electron guns for societal applications exploiting opportunities offered by additive manufacturing | 200 | |
| MAGNETRONS | 150 | |
| Superconducting opposite-field septum magnet prototype | 152.5 | |
| Software Defined Radio based custom signal analysis and generation tool | 200 | |
| UTMOST CLEEN Atmosphere: Ultra-Thin Membrane Overlay STacks to Channel Low Energy ElectroNs to Atmosphere | not indicated / missing slide resource and budget | |
| inBEST | 129 | |

| | AVG TOT | project title scored | requested budget | |
|---|---|---|---|---|
| #12 | **33.6** | Permanent magnet solenoid for High efficiency Klystron | 115 | |
| #15 | **33.2** | Development of highly efficient megawatt class cross field vacuum tube amplifier for particle accelerators driven by a solid-state power amplifier at 750 MHz | 200 | |
| #6 | **32.4** | Millisecond flash lamp treatment for SRF accelerating cavities | 160 | |
| #7 | **32.2** | AM applications of refractory metals for ION Sources | 100 | |
| #11 | **31.8** | BASE3 | 200 | |
| #9 | **31.6** | KAIO-Accelerator | 200 | |
| #14 | **31.2** | High-Temperature High-Gradient Superconductors (â€œHIGHESTâ€ | 160 | |
| #17 | **30.6** | Demonstration of additive manufacturing for large and complex shaped vacuum chambers by Plasma Metal Deposition (PMDÂ®) | 100 | **1235** |
| #4 | **30.4** | A Field Emission Cathode for a Travelling-Wave RF gun for High Brightness beams in Industrial and Small Research Facility Settings | 200 | |
| #2 | **29.8** | Graphenic foil stripper for high intensity particle beams | 150 | |
| #8 | **29.2** | High-quality Electron Accelerator driven by a Reliable Laser for Industrial uses (EARLI) | 160 | |
| #1 | **28.3** | Electron guns for societal applications exploiting opportunities offered by additive manufacturing | 150 | |
| #10 | **27.6** | MAGNETRONS | 150 | |
| #13 | **26.9** | Superconducting opposite-field septum magnet prototype | 152.5 | |
| #3 | **26.3** | Software Defined Radio based custom signal analysis and generation tool | 200 | |
| #5 | **25.3** | UTMOST CLEEN Atmosphere: Ultra-Thin Membrane Overlay STacks to Channel Low Energy ElectroNs to Atmosphere | not indicated / missing slide resource and budget | |
| #16 | **18.3** | inBEST | 129 | |

# IIF – payments and monitoring

**Payments: 2 batches of payments to be done:**

**Not all projects have exactly some duration.**

**1st interim payment in January 2023 (50%)**

***I.FAST AM in April could be too early for projects presentation.***
***A full projects report could be at special session of mid-term project review → Nov/.Dec 2023***

**2nd final payment → at the end of the project**

***I reserve the possibility to meet / inspect the projects during implementation***

# IIF: timeline of Evaluation

Few meetings in persons for EvB

projects can start beginning 2023

End of projects -> End of IFAST – 1M

| Timeline | |
|---|---|
| Deadline for 1st submission | September 15, 2022 |
| Deadline for 1st round of evaluation | October 17, 2022 |
| Deadline for 2nd round of evaluation | November 30, 2022 |
| Start of the project | January 2023 |

| 2022 | | | | | | | | | | | | | 2023 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 15-Feb | 2-May | 1-Jul | 15-Sep | | | 17-Oct | | 31-Oct | | 30-Nov | 1-Dec | 15-Dec | |
| STC approval of the precedures for IIF | presentation of the IIF to the IFAST AM | STC appointment of Evalauators Committee | deadline to submitt project | OS, DE | EP,DE,PER | CE, end of 1st evaluation round | NOT, notification to first 10 selected projects | live presentation from selected proposals | OS, SE,PER | end of 2nd evaluation round | AGB, Award by GB | NAD, Notification of the award decision to the proposals | |

| meeting & reporting preparation | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | 14-Oct | | 28-Oct |
| | | | | | | CE (meeting of Evaluators to consolidate results and reports) | | CE (meeting of Evaluators to consolidate results and reports) |

| | | | |
|---|---|---|---|
| | | | Opening session and Administrative Evaluation |
| DE | | | Digital Evaluation process (1st round) |
| SE | | | Evaluation Process (2nd round) |
| CE | | | Consolidation of the results (meeting of Evalautors) |
| PER | | | Preparation of evaluation report |
| NOT | | | Notification to first 10 scored Proposals and Presentaiton at CERN |
| AGB | | | Validation of the recommendations and final award decision by GB |
| NAD | | | Notification of the award decision tothe tenderers |

# What next for implementation:

If we agree on the scoring, next is:

- me to consolidate all contributions (the one from Carsten however is not going to be on time)
- EvB to confirm. If no agreement then we will need to meet again
- inform all projects about the ranking outcome (to be done by Oct. 31st, latest).
- invite the first 10 ranked projects to a live presentation in CERN on Nov. 15th.
- select the exact number of projects to be funded
- ask the GB in December to award the funding to these project

- internally in CERN it will be discussed with the finance Department the payments to the selected projects

# The live presentation in CERN on Nov. 15th

- in 45 min to present *10 (or more?) projects, a full day of work for EvB):*

- Technical details of project
- Details of schedule, deliverable, payments
- Details of team working on the tasks

- As a result of this,  EvB shall decide on the few projects to exclude

with extended projects description, the decision will be based on the same criteria used so far

# Q &A

**Thank you**


iFAST
I.FAST Internal Innovation Fund
Innovation
The fund will contribute to advancing the status-of-art of I.FAST thematic areas.
Sustainability
The fund shall contribute to improving the sustainability of accelerator technologies.
Funding
The fund will finance projects, each receiving a contribution between 100 and 200 kEUR.
About the fund
The I.FAST Internal Innovation Fund (IIF) aims at stimulating the innovation potential of accelerator technologies. The primary objective of the fund is to encourage I.FAST beneficiaries to identify innovative solutions with viable industrial or commercial potential. This fast-track, competitive process will finance emerging technologies, processes, research, business models and other innovative solutions, at both development and prototype stages. Apply by September 15, 2022.
Apply by September 15, 2022
More information: ifast-project.eu/iif
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