



This project has received funding from the European Union's Horizon 2020 Research and Innovation programme under GA No 101004730.

The I.FAST Innovation Potential

I.FAST WP3 Industry Engagement

Djamschid Safi, DESY

iFAST



The Industry Engagement WP3

- WP3 will explore ways to boost the **involvement of industry** in R&D and technical development activities, while maximizing the mutual benefits.
 - WP3.1 [INFN (Mauro Morandin), CEA, CERN, CIEMAT, DESY]: Explore and leverage the **potential and original contributions of industry** partners in I.FAST, particularly SMEs
 - WP3.2 [DESY (Djamschid Safi), CERN, UKRI]: Stimulate the **development of the Knowledge Transfer potential** in I.FAST activities and promote its exploitation
 - WP3.3 [CIEMAT (Jose M. Perez), CEA, CERN, INEUSTAR, CDTI] : **Extend the involvement** of industry, favoring early engagement in R&D activities

Main WP3 activities so far



Industry Advisory Board

IAB Members

Who we are
The IFAST Industry Advisory Board (IAB) is composed of representatives of European companies that have been successfully involved in the largest scientific under particle accelerator scientist with a experience in the industry and re



Spas Stres
IAB Chair - Director of the Center for Technology Transfer and Innovation (CTI)

I.F.AST

Innovation Fostering in Accelerator Science and Technology
Horizon 2020 Research Infrastructures GA n° 101004730

MILESTONE REPORT

I.F.AST KT Report ready

MILESTONE: MS9

Document identifier:	IFAST-MS9
Due date of deliverable:	End of Month 10 (February 2022)
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Work package:	WP3: Industry engagement
Lead beneficiary:	DESY
Document status:	Final

ABSTRACT

The IFAST Knowledge Transfer (KT) Report has been made available as an IFAST note and its release represents the completion of the IFAST milestone MS09. The report contains the outcome of a survey carried out in second half of 2021, as a combined effort of the IFAST Tasks 3.1: "Coordination and industrial partnership support" and Task 3.2: "Knowledge Transfer and Business Opportunities in Accelerator R&D". The survey was aimed at assessing the innovation potential and the Technology Transfer opportunities of the IFAST R&D activities.

The KT report covers the general methodology and survey background, as well as the goals and the results of the analysis and briefly discusses possible and planned next steps to be executed in the framework of the Task 3.2.



• WP3.1

- **IAB has been setup** (MS08 achieved)
 - first working meeting this week
- **Co-Innovation WS organized** with large industrial participation
 - testifying that industry is interested in what I.F.AST is doing!

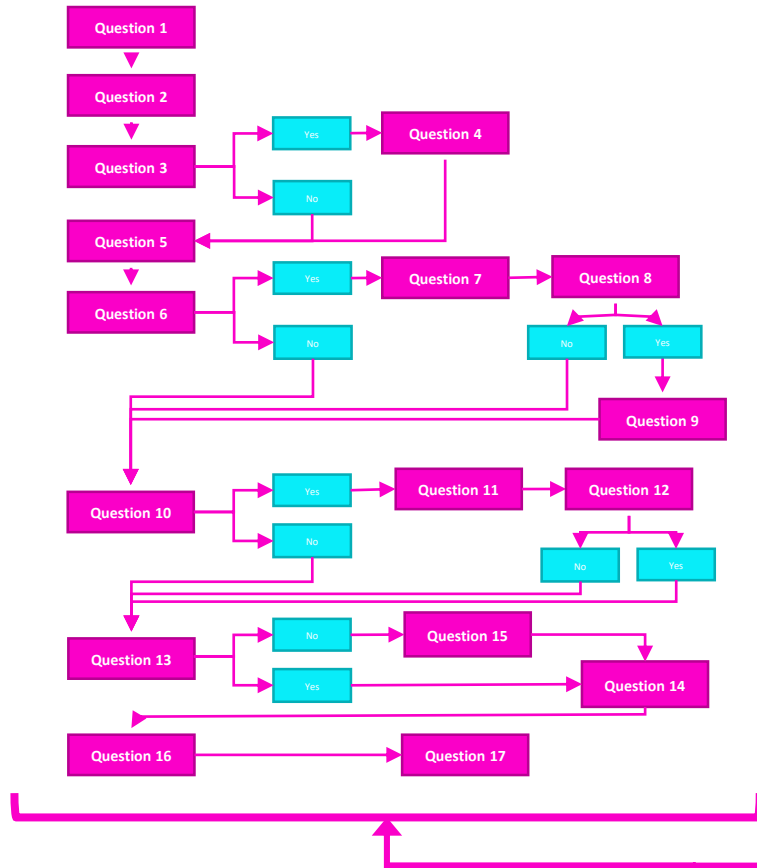
• WP3.2

- **Innovation and TT survey** carried out and **TT report** as note (MS9 achieved)
 - Main outcomes will be presented in this talk

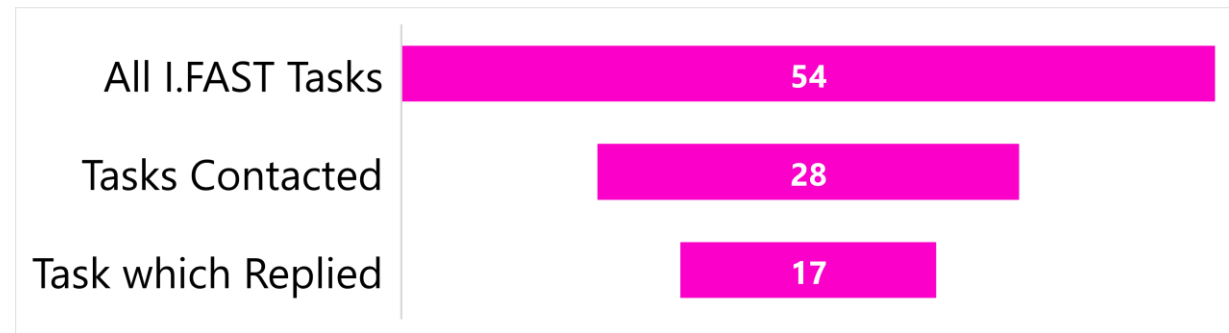
• WP3.3

- Assessment of how Industrial companies see the possibility of **stronger engagement** in accelerator R&D activities performed
 - ... interviews with European companies
 - first report of what we have learned presented in the Co-Innovation Workshop by Jose M. Perez

Innovation and TT Survey: Overview & Responses

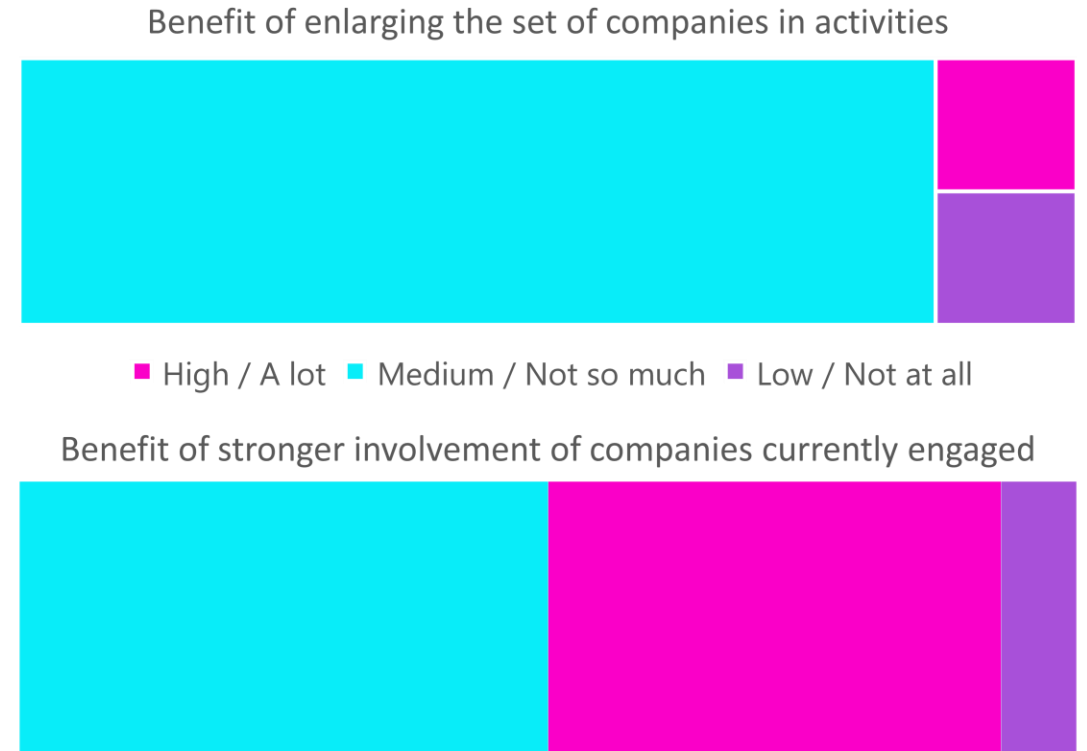
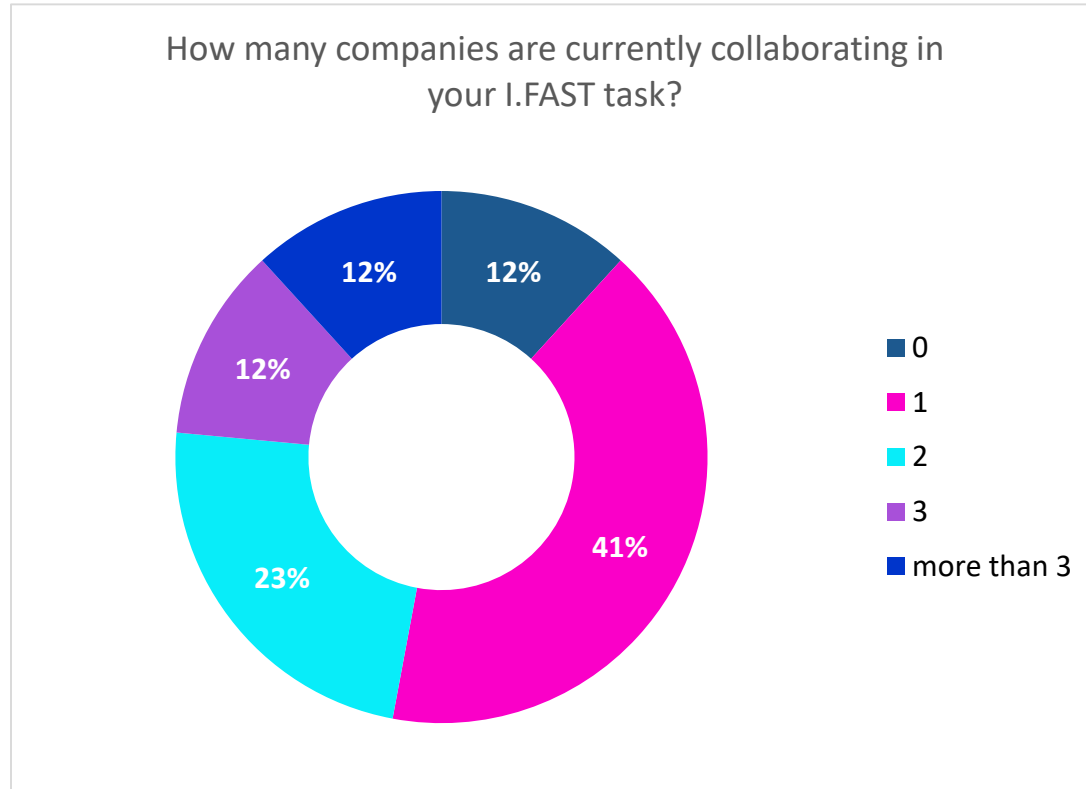


- General assessment of potentials
- Identify risks, limits and opportunities
- Evaluate the level of industrial engagement

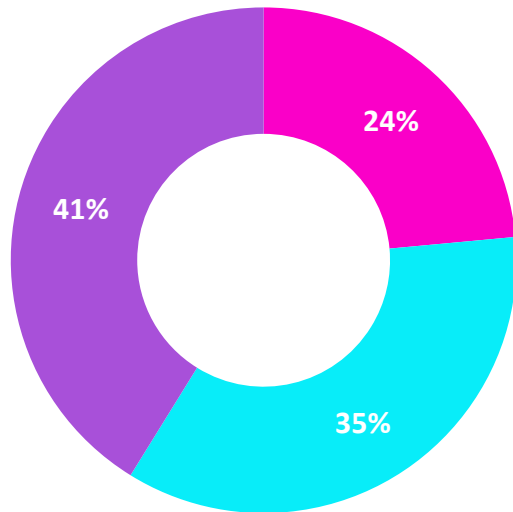


- Aspects considered in the survey:
 - Potential of industrial innovation.
 - Industrial participation and involvement.
 - Technology transfer expectations
 - Applications and commercialization.

Involvement of Industry in Activities



Expected Kinds of Innovation

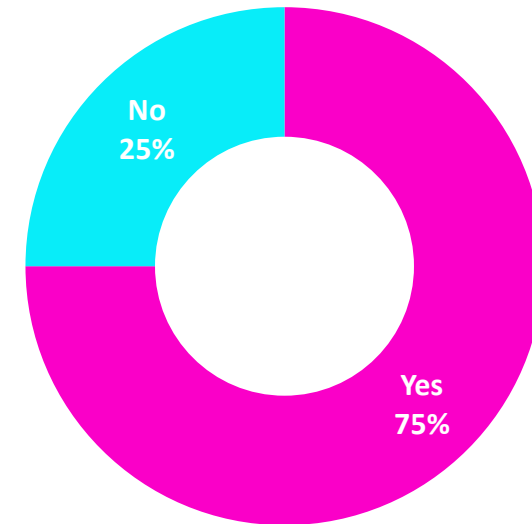


■ option 1: limited innovation spillover to industrial partners (supply of: off the shelf, build to print components)

■ option 2: industry involvement and Knowledge transfer can bring significant innovation to industrial products and/or processes.

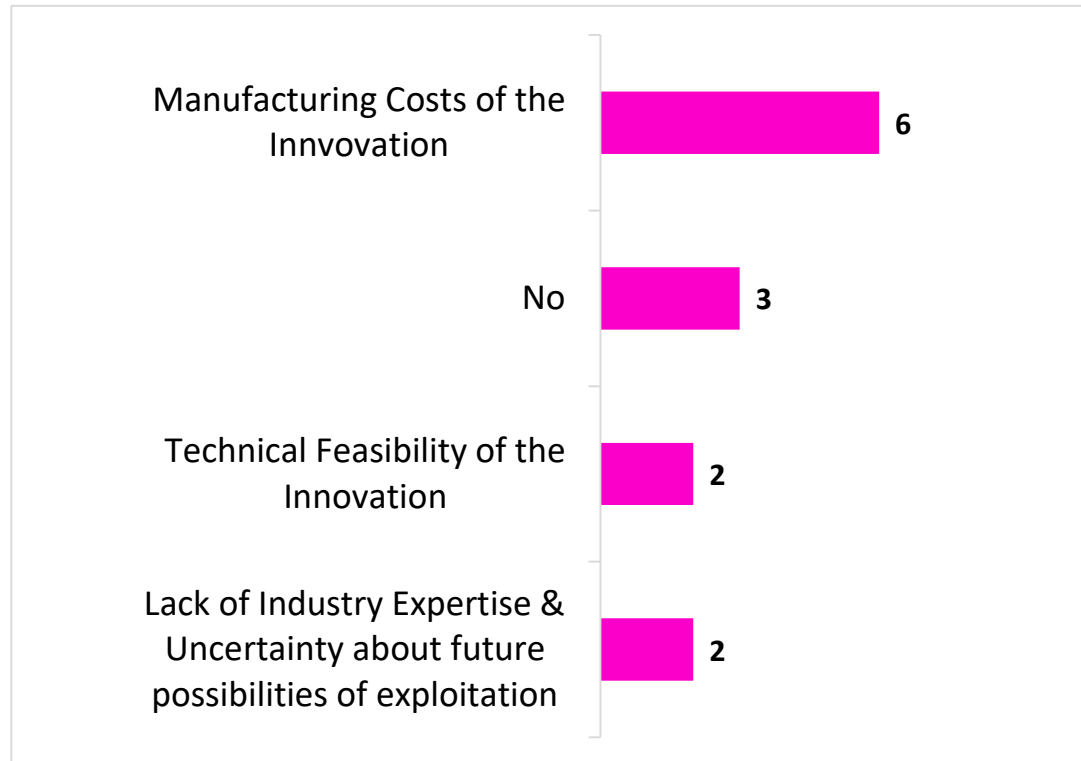
■ option 3: industrial innovation is an expected outcome.

Is there any possibility to strengthen limited innovation spill-over?

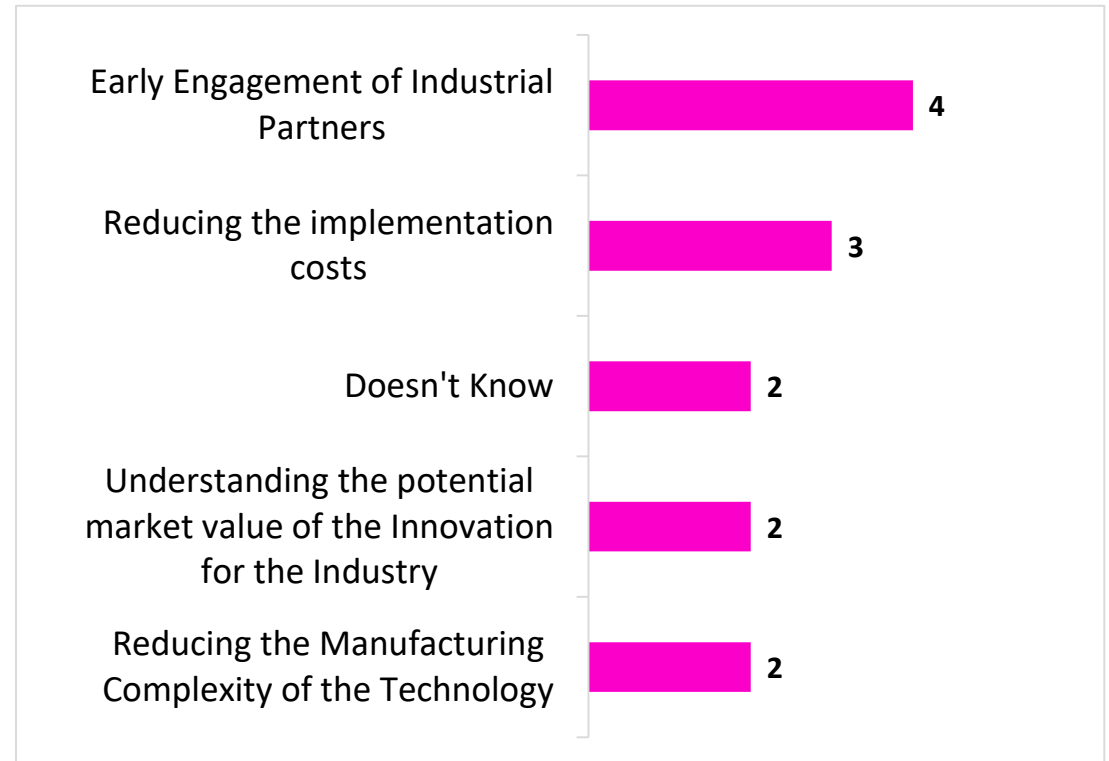


Obstacles and Chances

Obstacles towards the effective exploitation of the innovation potential by industry

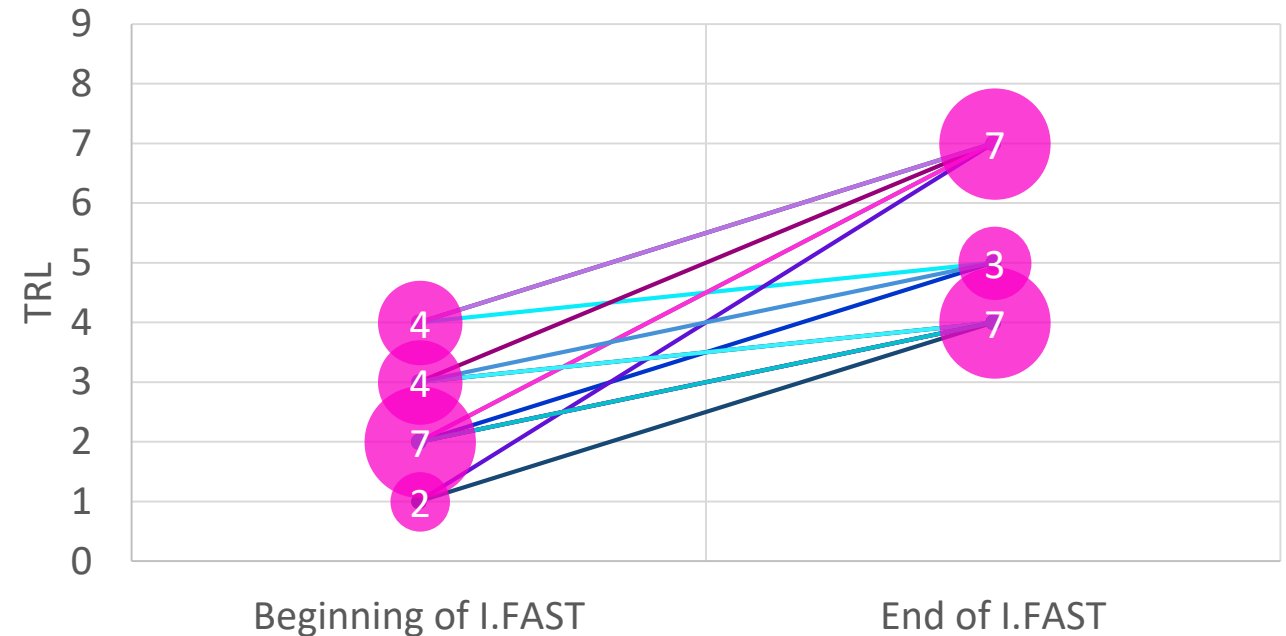


Opportunities to improve the chance or the extent of exploitation

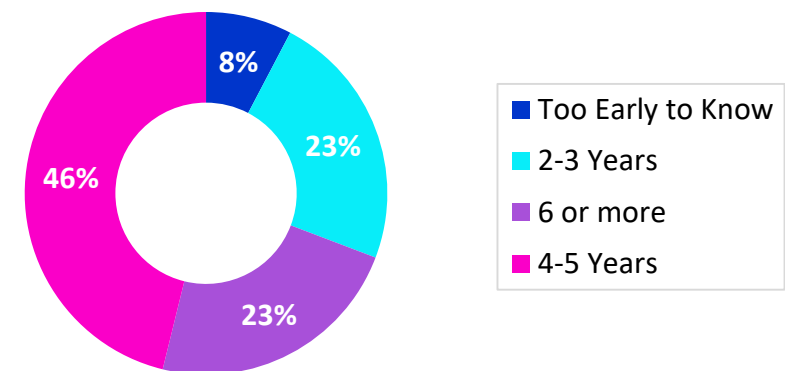


Technology Readiness Levels (TRL) of the activities now and at the end of I.FAST

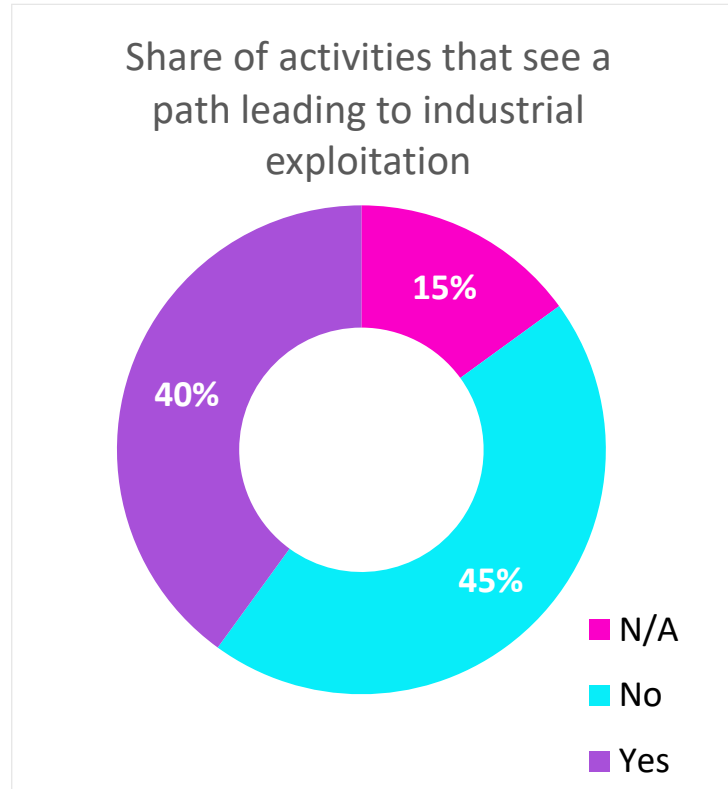
- Average TRL of 2.6 at the start of I.FAST (time of survey)
- Most activities in lab validation or proof of concept phase
- Average increase of 2.75 foreseen within I.FAST time frame
- 69 % of activities see significant progress towards maturity within I.FAST



Possible timescale for the new derived products, processes or services to be market-ready



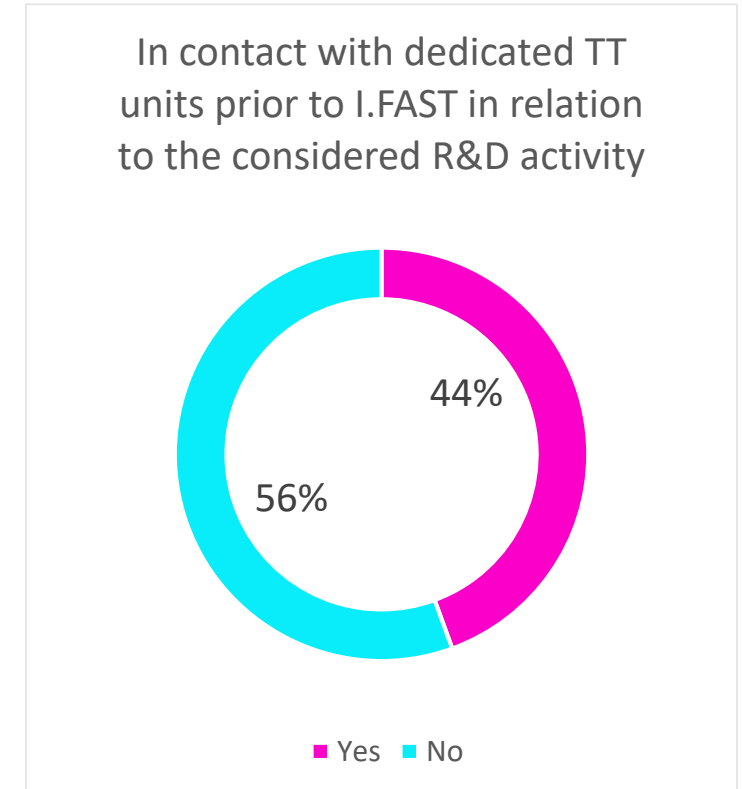
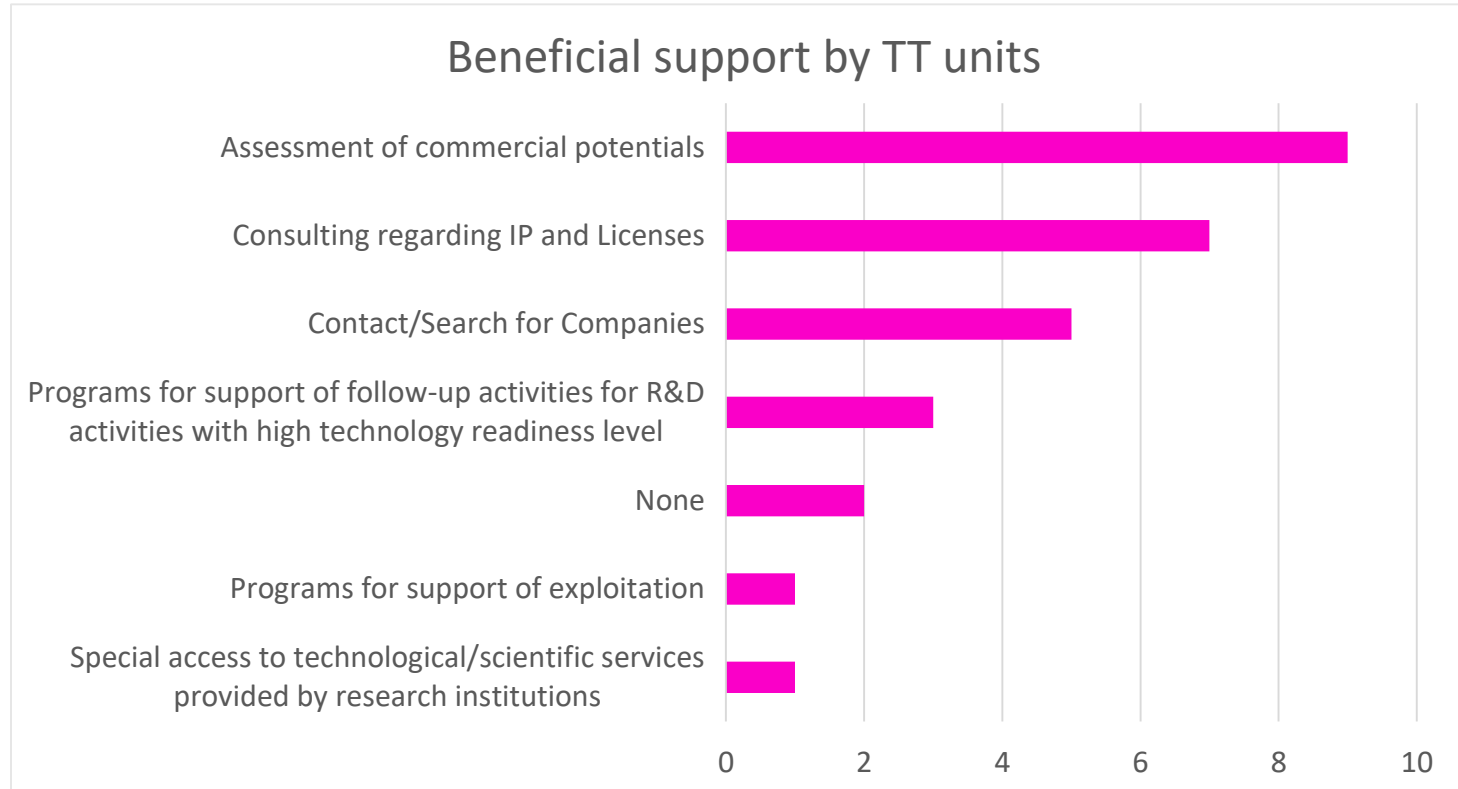
Necessary Steps for Successful Exploitation



Some answers found:

- Licensing to industry and commercialization
- Support by industrial partners to derive an industrial product/technology (industrialization, commercialization)
- R&D in the hands of the industrial partners / partnership
- Verification & Testing
- Usage of the developed technology at RIs / application of technologies in research projects;
- Further funding for additional R&D and follow-ups
- Advertisements at scientific conferences / industrial events

Support by Dedicated TT Units



Summary of the Results

- Survey confirmed that activities in I.FAST have in general a **good innovation potential**, there is a **broad participation** of industry, and that their **TRL is expected to grow significantly** during the project.
- Three quarters of the responding activities expect to see industrial innovation or at least consider this a realistic scenario.
- While the current set of industrial partners is mostly considered adequate, a stronger industrial involvement of the current participants (e.g., in terms of support with prototyping) is seen as beneficial.
- Nearly half the activities already are in contact with TT units to support with exploitation and technology transfer.
- Nearly half the activities see a path leading to industrial exploitation.

Suggestions and Learnings from the Initial Survey and Analysis

- Early engagement of industry builds opportunities to improve the chance or the extent of exploitation
 - Several activities would welcome further industrial partners
- Further support of TT units should be fostered, in terms of
 - contacting and searching companies
 - assessing commercial potentials of their activities
 - consulting regarding IP and licenses
- Further discussion with individual activities required to understand the specific needs in detail
- Investigation only presents the current (early) status!

Ideas and plans for follow-up activities for WP 3.2

Plan is currently being set up, to be proposed to Steering Board:

- > Follow-up interviews with selected activities from I.FAST (e.g., based on survey answers)
- > Set up **contacts between activities and TT units**, as well as **industry** (both where not already established or necessary)
- > Exchange with TT units: **best practices, available programs, facilitate access to services** provided by I.FAST participating RIs: What is offered by the RIs, what are the access models?
- > **Repeated survey** to see development within I.FAST
- > Development of a **business case** for (1-2) I.FAST R&D activities/sectors in collaboration with industry
 - > Possibly also from I.FAST Internal Innovation Fund!

Joint RI-INNOV KTT Activities



RI-INNOV KTT Network -

KT and TT experts of consortia beneficiaries

Tasks:

- Exchange knowledge and experience relating to collaboration with industry
- Discuss common strategies of communication with industry, standardisation and training, to manage interfaces and overlaps
- **First activities: Sharing KTT related trainings to all three projects**



- LEAPS-INNOV IPR Workshop: May 31st 2022 (9:00-11:00h CEST, digital)
„Bastian July from GoodIP will be talking about IPR in relation to software with focus on copyright law.“
- Next IPR Webinar planned for Sept./Oct. 2022 (digital):
„Introduction to reading and understanding inventions and patents“
- Ideas from I.FAST?



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