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Testing and Experimentation Facilities under DEP

Agri-Food Workshop

21 June 2021

- ✓ Interaction via SLIDO
- ✓ Use the **chat** for technical issues only
- ✓ Please **mute** yourself when you are not talking

Housekeeping

- We will record the session for note-taking purposes and delete record after 1 month

- For **Member State officials**:

  - Please **indicate your name and Member State affiliation in Webex**

- Slido use during workshop:

  - Questions only here in SLIDO**, please don't use the webex chat**

  - Online survey: **EuSurvey**

  - Will stay **open after the meeting (1 day) to collect your additional questions**

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Agenda

1ST PART: Member States and Stakeholders	**9:15–9:30 – Participants dial-in**
	9:30–10:00 – EC presentation on TEF and past workshops
	10:00–10:15 – Short input by stakeholders on TEF vision
	• Stefan Stiene, DFKI
	• Raffaele Giaffreda, FBK
	• Kees Lokhardt, Wageningen University
	10:15 – 10:55 –Q&A discussion & Online poll
	10:55 – 11:00 – Break
2nd PART: Member States ONL	11:00 – 11:10 – 3 Speakers open for questions by MS representatives
	11:00 – 11:10 – EC introduction on discussion regarding needs and commitments
	11:10 – 11:30 – Member State tour de table
	11:30 – 12:00 – Open discussion

Testing and Experimentation Facilities: selection and governance (sectorial TEFs)

Cécile Huet, Deputy Head of Unit

Jan Hückmann, Policy Officer

DG Connect - Unit A1: "Robotics & Artificial Intelligence Innovation and Excellence"

Outline

- Objective of this meeting

- TEF Concept

- TEF's role in the EU ecosystem

- Applying for TEF funding

- Co-funding TEFs

- Agri-Food

- Open discussion

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Objective of this meeting

➜ **Gather inputs from stakeholders and Member States representatives to prepare the call for proposals**

TEF Concept

What is a TEF?

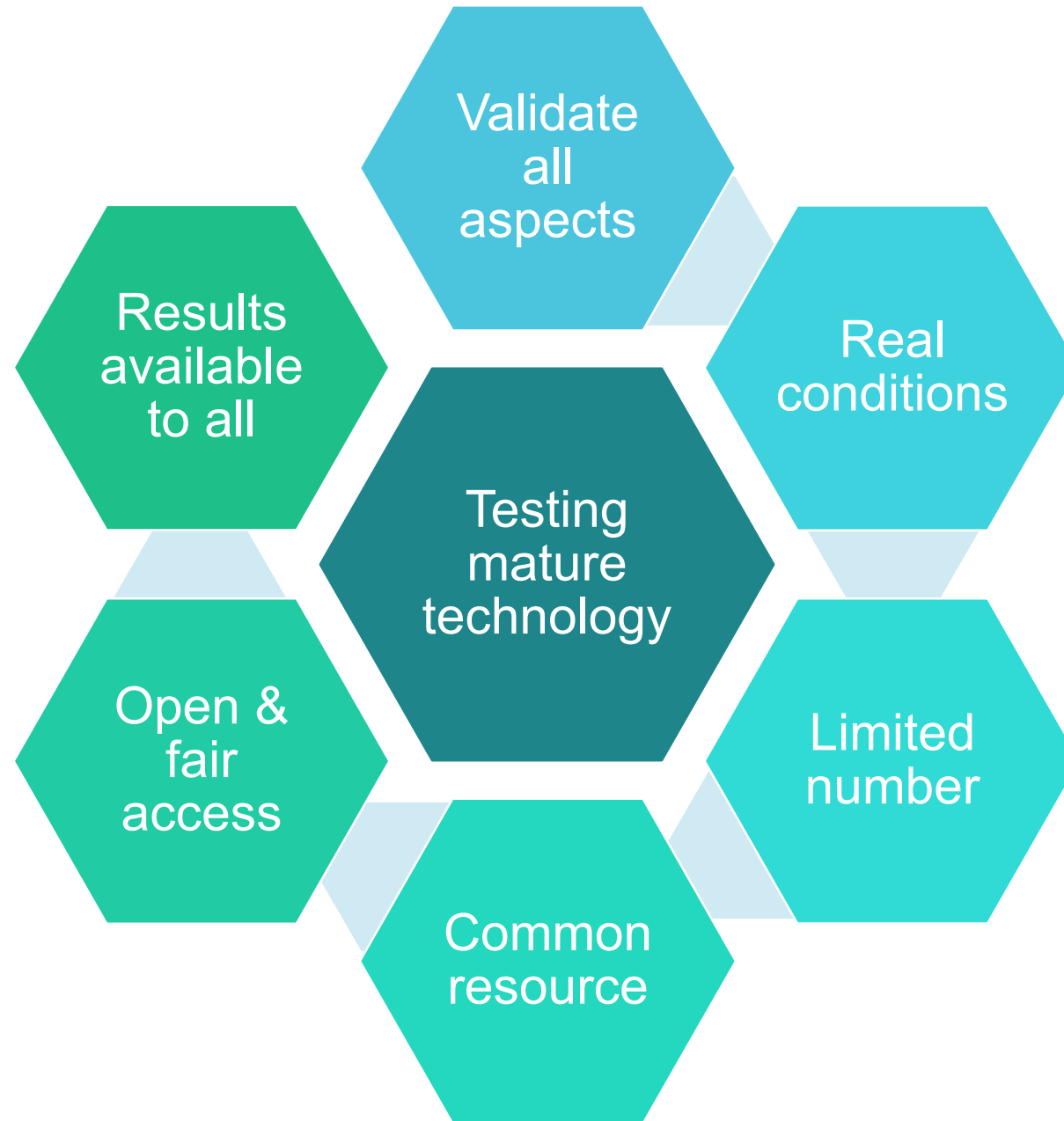WORLD CLASS REFERENCE SITES FOR EXPERIMENTATION AND TESTING AI
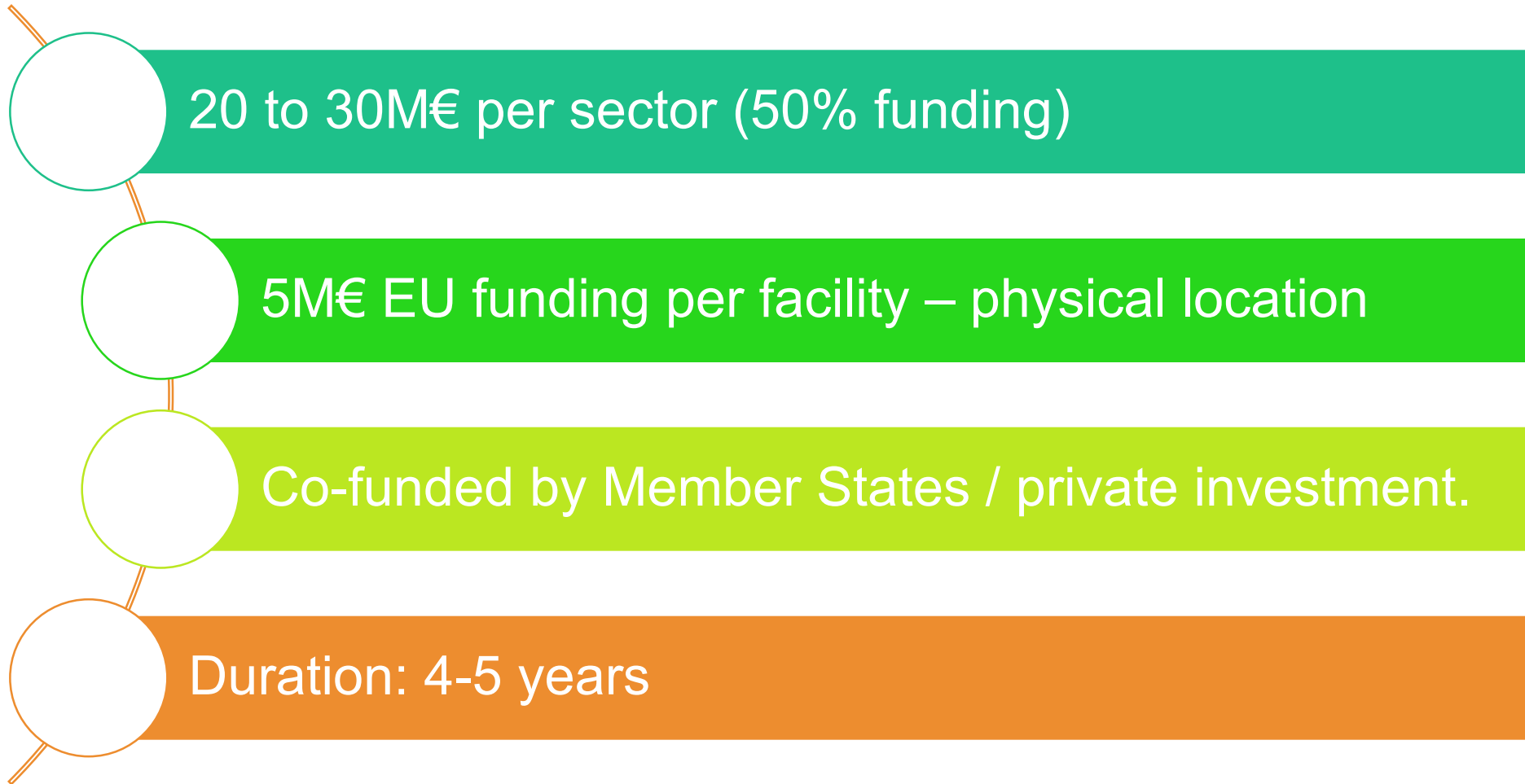
REAL SETTING

ESSENTIAL SECTORS

CONNECTED TO THE NETWORK OF DIGITAL INNOVATION HUBS

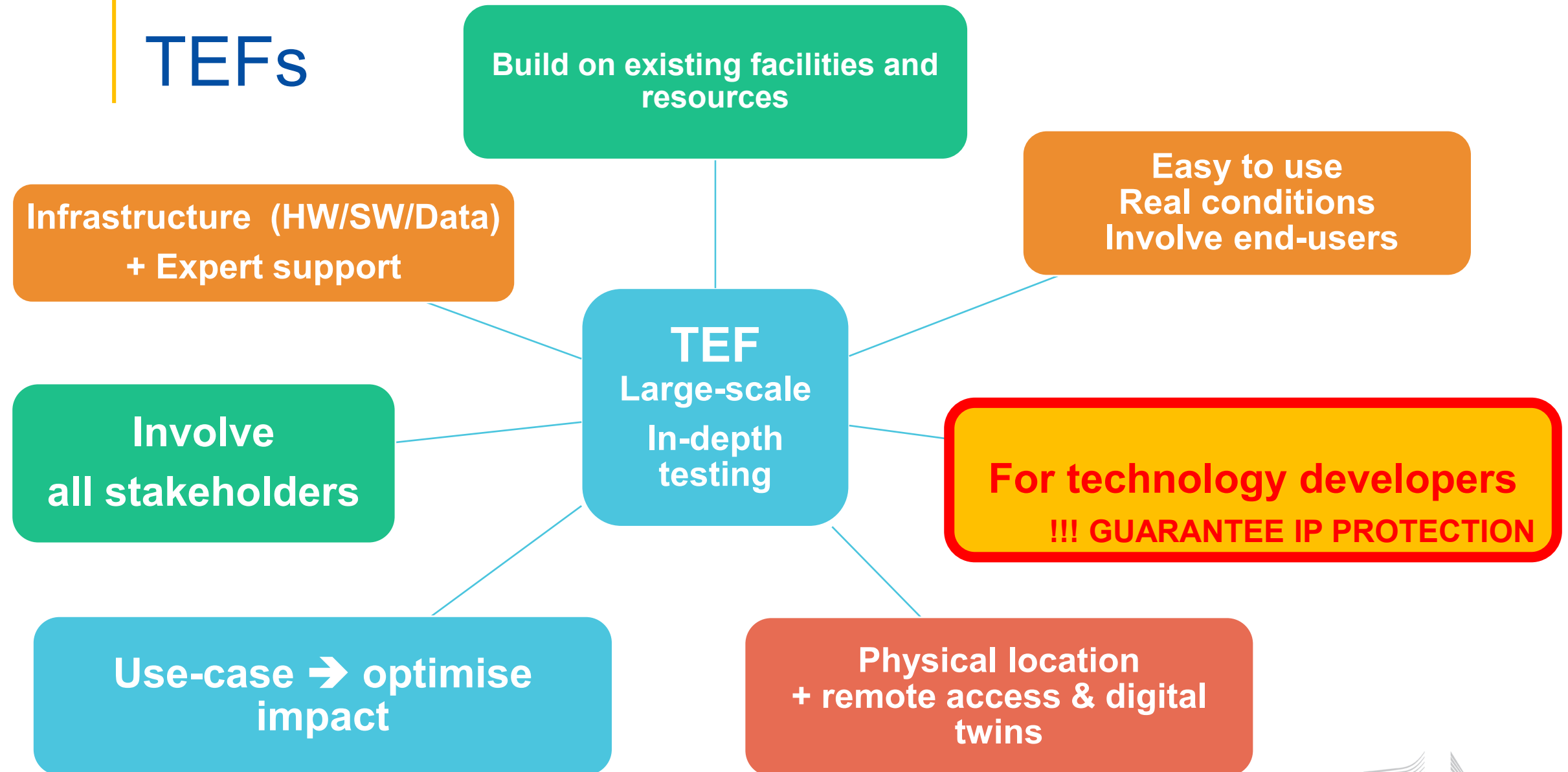EQUIPPED WITH INFRASTRUCTURE & LATEST AI + ACCESS TO CLOUD/DATA/HPC…

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Concept

- Validate all aspects
- Real conditions
- Limited number
- Common resource
- Open & fair access
- Results available to all
- Testing mature technology

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Sectorial TEFs in Numbers

20 to 30M€ per sector (50% funding)

5M€ EU funding per facility – physical location

Co-funded by Member States / private investment.

Duration: 4-5 years

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TEFs

Build on existing facilities and resources

Infrastructure (HW/SW/Data) + Expert support

Easy to use
Real conditions
Involve end-users

TEF
Large-scale
In-depth testing

Involve all stakeholders

For technology developers
!!! GUARANTEE IP PROTECTION

Use-case ➔ optimise impact

Physical location + remote access & digital twins

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TEF's role in EU innovation ecosystem

TEFs vs [E]DIHs

CENTRAL vs LOCAL
Test scale
Users: Developers vs Users
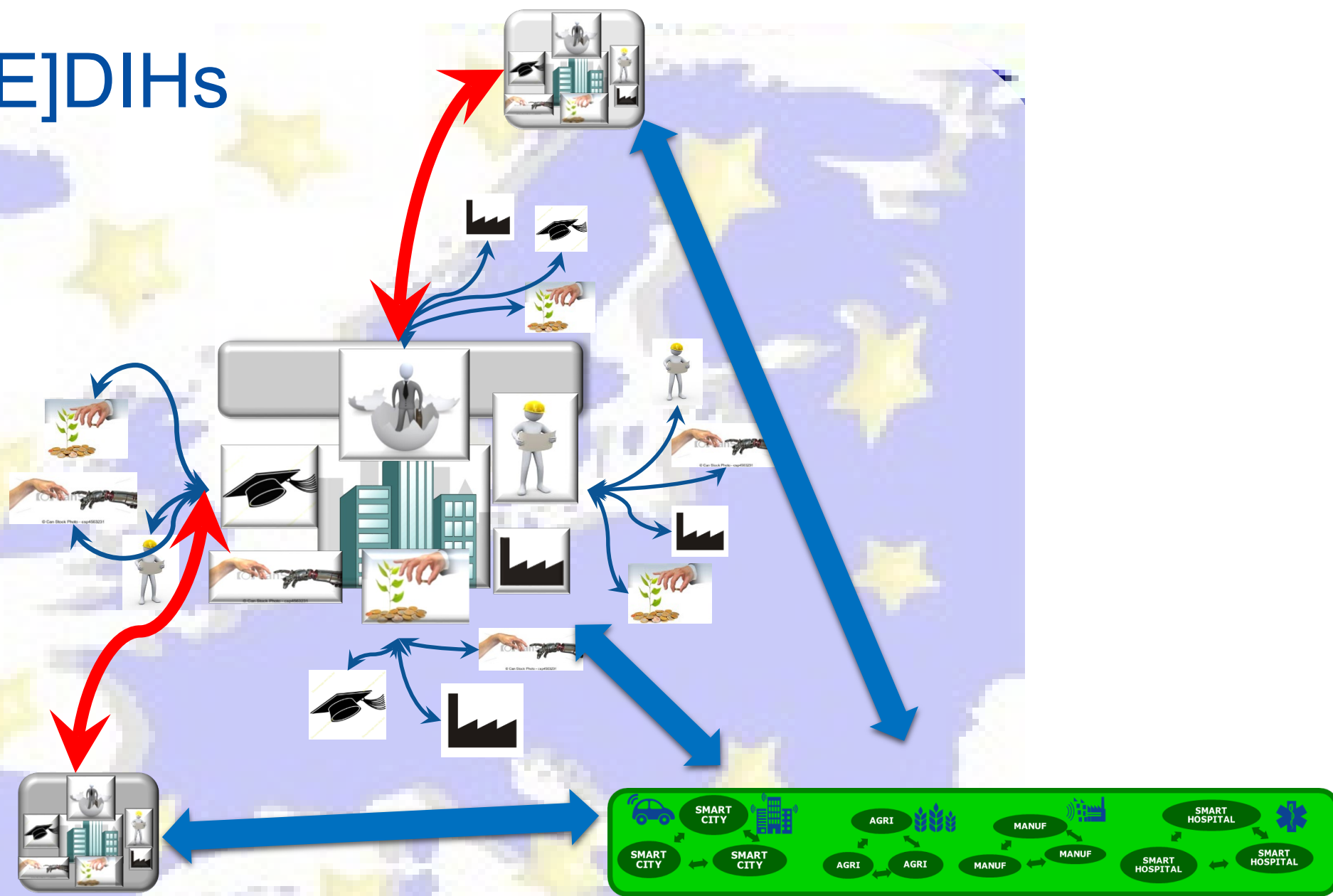
REFERENCE TESTING AND EXPERIMENTATION FACILITIES
CENTRAL SHARED FACILITY

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Regulatory Sandboxes

- TEFs may offer regulatory sandboxes test

- Holistic approach possible, but must include AI testing

- Regulatory sandbox under proposed AI Act:

    - Established by **competent authorities**

    - **No derogation** from the AI requirements, but **special regime** for certain further personal **data** processing (article 54)

    - Flexibility: modalities and conditions of the **operation** (eligibility criteria, procedure for application, selection, rights and obligations of the participants, etc.) to be set out in **implementing acts**

Applying for TEF funding

Tentative timing for TEF calls under DEP

Tentative Timing

CALLS & EVALUATION YEAR(S)	2ND CALL (2021-22) SECTORIAL TEFs
Call Opening	Q4 - 2021
Deadline for submission	Q2 - 2022
Signature of contracts	Q4 - 2022

Next steps for Sectorial TEFs from EC perspective:
- Now: stakeholder consultations to fine-tune call text
- Late summer: draft call text
- Q4 2021: matchmaking exercises organised by EC

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How to apply as a network of TEFs

- **Set-up of TEF network**

- A network of 6 TEFs (approx. 5M€/TEF) would:

    - Be in 6 MS (ideally – good geographical coverage)

    - Receive 30 EU funding (and 60 overall)

1 PROJECT = 1 Consortium of TEFS

TEF1
TEF2
TEF3
...

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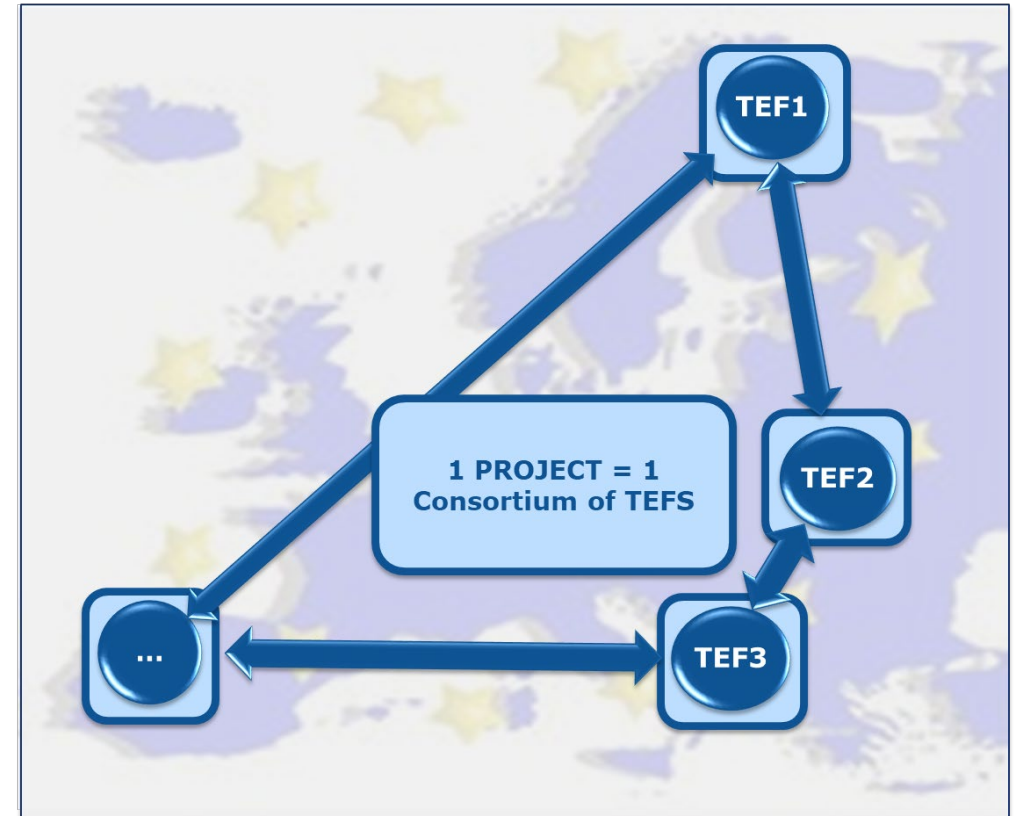
Preferred option: a network of TEFs

- **Consortium:**

  - - More challenging to build a proposal

  - + EU added value

  - + Greater impact

  - + A single access point spread throughout Europe

  - + Networking built in

  - + Complementarities built-in to maximise the offer and impact

  - + Economies of scale

  - + Contraints to maximise the impact can be imposed up-front (e.g.: diversity, representativity, access, geographical distribution etc.)

Individual TEFs:

+ More flexible (easier to build a proposal)

- Challenging Selection process (how to compare? How to assess the "full offer? Ensure complementarity, etc)

- Lack of "harmonisation" (for the users of the TEFs (each with its individual mechanism)

- Networking imposed after the facts

- A set of national TEFs rather than a truly European offer

Preferred option – How to make it happen? Your suggestions welcome

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Consortium Building

Proposers:

Build a consortium

Each member contact their MS representative:

- discuss conditions to receive MS co-investment (e.g. categories of eligible costs, etc.)

- get commitment in the proposal

How could EC help?

- Organise brokerage events:

  - Stakeholders & MS: facilitate consortium building and link to MS

Member State Co-funding

Illustrative example (fictive)

MS.	SECTOR			
🇫🇷	🏢	🏭		⚕
🇸🇪	🏢		🌾	⚕
🇩🇪		🏭	🌾	
🇩🇰	🏢	🏭	🌾	⚕
🇱🇹		🏭	🌾	⚕
🇱🇺	🏢			⚕
🇨🇿		🏭		⚕
🇵🇹	🏢		🌾	
……				

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Member State Co-funding

Illustrative example (fictive)

In this case there is an issue to include a PT member in a consortium, as there will be no MS support for that sector

Projects selection

STEP1: Proposers **build a consortium & secure funding commitment from their Member State**

- by relevant authority in Member State (before the DEP Call Deadline)

STEP2:

DEP Evaluation & Selection

- Check co-funding commitment (eligibility)
- DEP process selects the TEF network ➔ prioritised ranking list

!!! MIGHT BE RESTRICTION OF PARTICIPATION in DEP (MS/ Associated countries only / !companies headquarted in third countries!)

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ADDED VALUE TO LEAD A TEF

FOR MEMBER STATES & FACILITY

- Valorise previous investment & scale-up:

  - National ➜ European facility & substantial EU financial support

- Become part of THE reference network for testing and experimentation

  - Reference as a leader in the field:

    - Leading edge in the technology and deployment,

    - Including regulatory aspects (e.g: certification, standardisation, "code of conduct", etc.)

  - Will become a major actor in the European AI ecosystem

  - Lot of spin-offs expected

Co-funding TEFs

Member State Co-funding

EU funding is 50% - Co-funding is expected by Member States*

How to implement it in practice?

- Assumption: 5M€ per physical TEF (i.e. in 1 country)

- Co-funding might be of different nature, in-kind/in-cash, or already based on earlier commitments, or include private funding.

- CAN BE RRF funding

- ERFD ➜ UNDER DISCUSSION!!

* Private funding is also possible

State-Aid & TEFs – constraints & practical implementation

Discussion ongoing

EU funding is 50% - Co-funding is expected by Member States*

- The 50% provided by the MS is considered as State Aid

- The amount corresponding to the aid must be passed on to SMEs (i.e. 50% of the total TEF budget)

- Practical implementation under GBER* (**identical to EDIHs**):

  - Define a pricelist (e.g. cost for using the TEF per day, + some specific services)

  - SMEs Innovators gets the service for free (limited to 200k€ per organisation for a period of 3 years)

  - Larger companies innovators in AI willing to use the TEF will have to pay the costs, according to the pricelist.

*General block exemption Regulation

Important considerations

A selected TEF will be funded for 4 to 5 years.

But the TEF is s long term investment

There should be a business model to guarantee self-sustainability

Critical to

- select use-cases that will be attractive for innovators (all will have to eventually pay for it)

- fill a gap

- to acquire top reputation

To guarantee interest for/ and use of the TEF.

AGRI-FOOD TEF

Take-aways from 2020 Agri-Food workshop

- Need for the TEFs to cover the diversity of the sector in terms of biogeographic and climatic conditions across the EU and/or cropping cycles

- Need to make TEFs easy to use from the perspectives of cost, skill level, geographical distance and support offered.

- Conditions at TEFs should also be as close to real as possible.

- TEFs could play a role in providing certification/validation, thereby improving trust among farmers, consumers and intermediaries along the value chain in new technologies

Agri-Food TEF in draft WP: Funding scope

- Reference testing and experimentation facility/ies with a focus on full integration, testing, validation, demonstration, and where appropriate certification

- Advanced AI-based technologies, such as robotics

- Whole value chain of Agri-Food sector

- Open to any sub-sector

- End-user driven

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Agri-Food TEF in draft WP: TEF offering

- Physical and digital resources available to the facilities users for the testing and experimentation of their hardware and software solutions

- Professional services support

- Regulatory sandboxes are provided where relevant

- Provides links with relevant and complementary EU projects such as EDIHs, mission soil living labs & lighthouses as well as data-spaces in its sector

Agri-Food TEF in draft WP: Outcomes (I)

- **Industry-level**:

  - Increased food and nutrition security

  - Mitigation of the environmental impact of agricultural activity to soil, water and biodiversity through optimized use of resources, e.g. fertilizers, pesticides

  - Greater resource and cost efficiency and competitiveness in agri-food production,

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Agri-Food TEF in draft WP: Outcomes (II)

- **Technology-level**:

  - Validation in real conditions of next generation AI-powered agri-food robotics and AI-based decision making tools,

  - Boosting the adaption of digital technologies in agri-food

  - Affordable for smaller farms

  - Reaching long time robotics autonomy levels at faster pace,

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Agri-Food TEF in draft WP: outcomes (III)

- Contribution to AI innovation:

  - Boosting the competitiveness of the European industry, including SMEs in AI, a technology of high strategic relevance;

  - Contributing to boost European IP and products based on European technology;

  - Creation of world-class experimentation facilities in Europe, offering a comprehensive support combining the necessary expertise, meeting the needs of European innovators;

  - Contributing to European technology sovereignty and strategic autonomy in AI, and AI-enabled solutions;

Agri-Food TEF in draft WP: what we look for

- Applicants will need to propose a long term plan over 60+ months:

  - 1) to build up or upgrade facilities with a resources and service offering,

  - 2) offer and extend the use of facilities to promising future AI based solutions providers, and

  - 3) to achieve long-term financial sustainability after EU funding stops.

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Next steps

Tentative Timing

- End of summer 2021: drafting of call text

- Q3-Q4: Matchmaking workshop for stakeholders

- Q4 2021: launch of call

- Ongoing: discussion with Member States on co-funding

- Always: please contact us if you have any questions

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Open discussion

Main outstanding questions

- What direction should the AI testing and experimentation facilities for Agri-Food take?

- How to achieve one large network of TEFs?

- How to ensure financial sustainability through a sound business plan?

- What specifics to consider for the Agri-Food sector at hand?

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Thank you for participating in today's meeting!

Minutes of the meeting will be shared soon.

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