The ATTRACT Project:

from Open Science to Open Innovation

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ATTRACT

www.attract-eu.org

European Research Infrastructures or Research Infrastructures in Europe?

- A rich scenario of Global, European and National RI's
- A great asset for Europe
- Is it used optimally?

From Open Science to Open Innovation

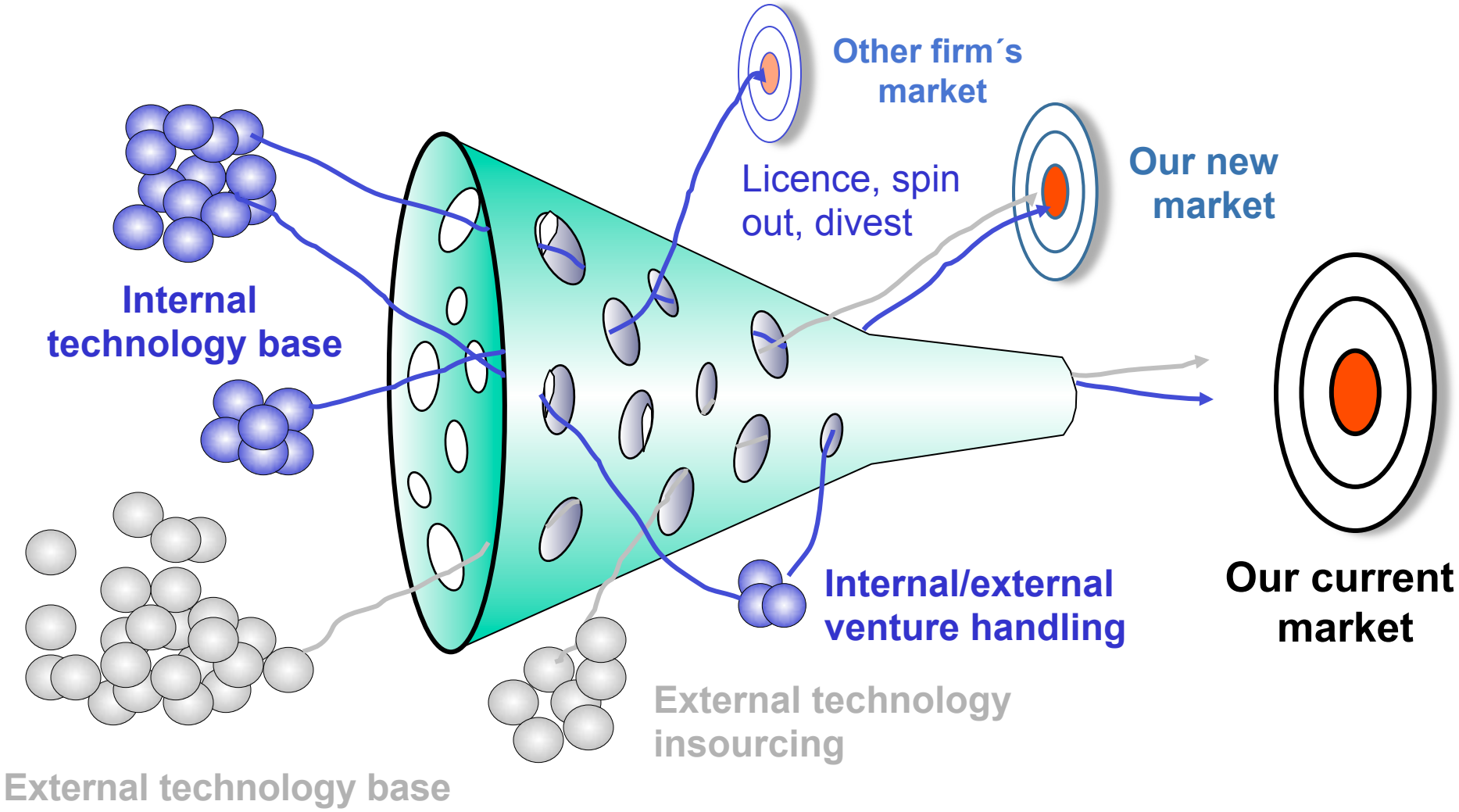
- European RIs have succeeded in establishing the paradigm of **Open Science**, establishing an extended **ecosystem,** where the research communities are fostering a **culture of mutual trust,** balancing **competition and collaboration**.
- Their potential to generate innovation is **largely untapped**, due to the lack of a corresponding **ecosystem at the European scale**, which needs to include also the **private sector (industry, investors, entrepreneurs)**.
- The lack of such an eco-system impairs the development of policies of adequate scale, and it is one of the main causes of the **declining competitiveness of Europe in innovation**.

From Open Science to Open Innovation

Use the lesson learned from the **Open Science** environment to translate the **theoretical models of Open Innovation** (e.g. Henry Chesbrough "*Open Innovation: The New Imperative for Creating and Profiting from Technology." HBS Press. 2003.* ISBN 978-1422102831) into the European specific environment, **proposing realistic models** of Open Access and IPR protection, fit to follow innovation from the early stage of Technical Readiness Level (TRL) all the way to market.

This is a fundamental point for the creation of trust necessary to the establishment of a European innovation ecosystem.

Open innovation



Henry Chesbrough, 2003

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Built on a consortium of ERIs & industrial partners interested and specialized in sensor and imaging technology

The consortium proposes to be mandated by EU in the framework of H2020 (initially) to:

- *Organize open calls*
- *Monitor and peer review their execution*
- *Promote a strong training program on innovation*
- *Develop evaluation tools for quantitative impact assessment*

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A proposal for a dedicated, interdisciplinary program within H2020 and beyond to **co-develop with RIs and industry breakthrough sensor & imaging technologies**

*The purpose is to address demanding challenges in **both** science and societal needs (e.g. health, sustainable materials and information and communication technologies)*

It involves the detector R&D community from many fields including e.g. biology, physics, astronomy, space exploration, nuclear engineering, medical sensing and imaging, related computing (ICT) and others

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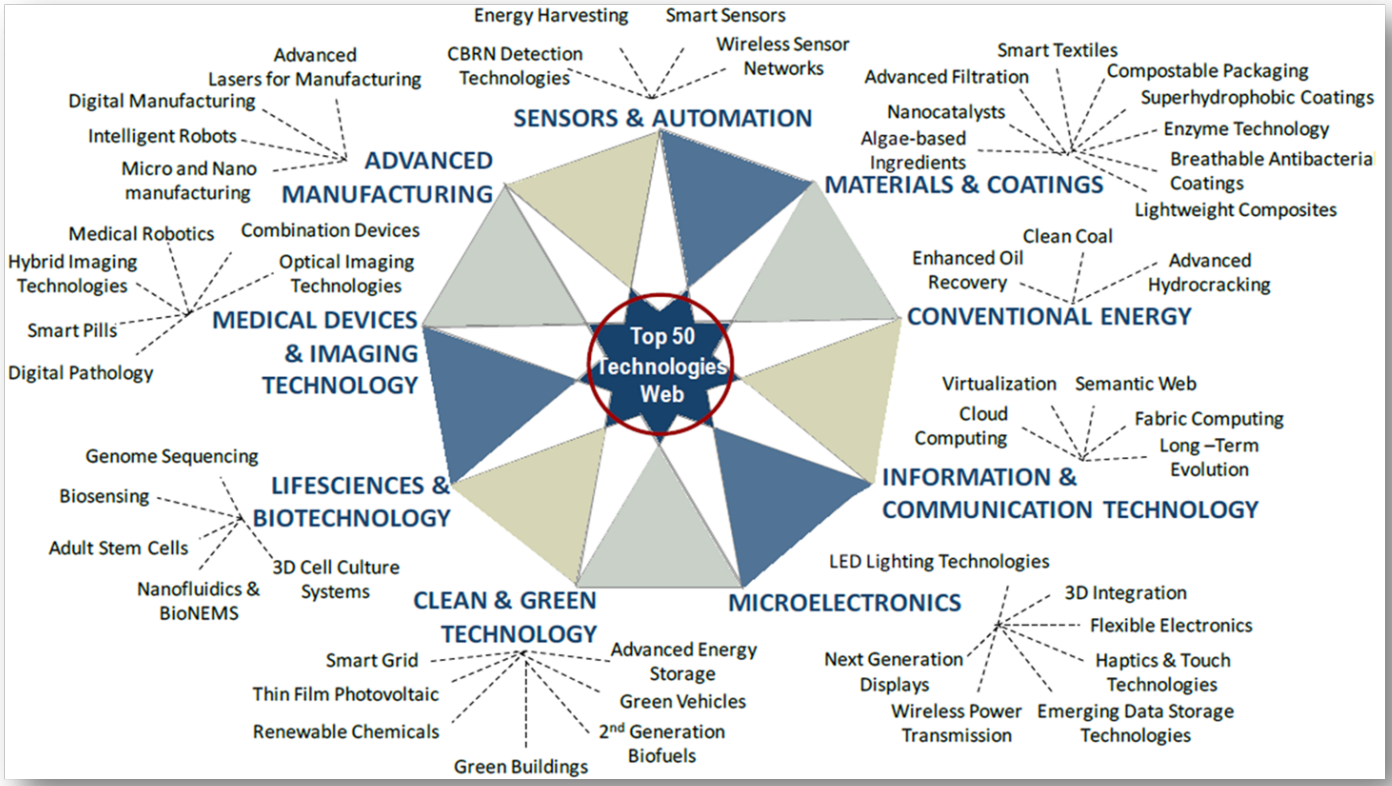
From Open Science to Open Innovation: balancing collaboration and competition

- **ATTRACT is poised to connect Open Science to Open Innovation .**
- **It proposes a new *co-innovation* paradigm between Industry, Business, Investors, Innovation Specialists and European Research Infrastructures.**
- ***Co-innovation* seeks a strong and open cooperation from the beginning of the innovation value chain on identified breakthrough and win-win technology and business opportunities.**

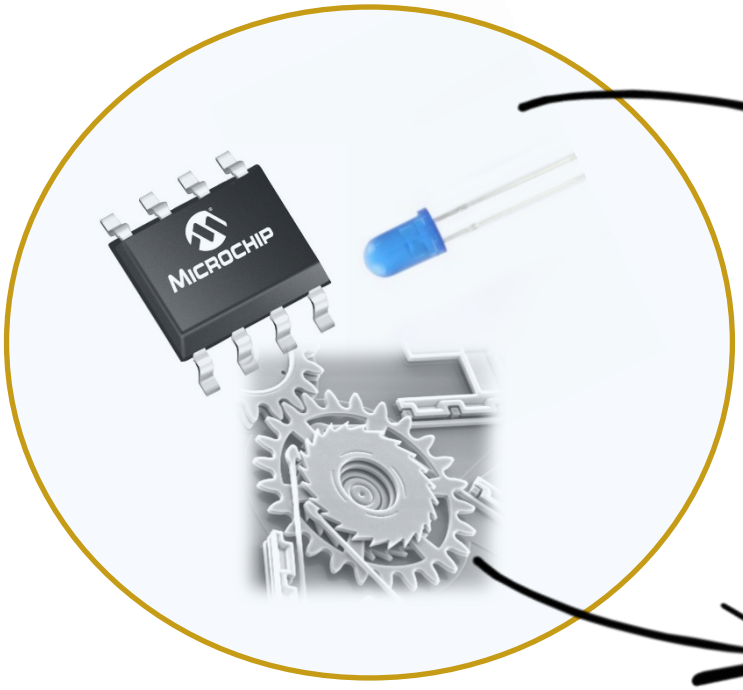
ATTRACT Focus: Detection and Imaging Technologies WHY?

- …are and will be fundamental for ourselves and our society.
- …are at the core of industrial competitiveness.
- …translate into direct economic and wealth value.



Source: Frost & Sullivan, Megatrends in Technology Convergence

Co-Innovation: combinatorial technology evolution



Detection and imaging technologies become the building blocks of different and evolving more complex technologies.

W. Brian Arthur, ***The Nature of Technology: What it is and How it Evolves,*** **Free Press, Simon & Schuster, August 2009.**

The ’16-’17 H2020 Work Program

The EC-RTD has published its H2020 Work Programme for 2016 – 2017.
http://ec.europa.eu/rearch/participants/data/ref/h2020/wp/2016_2017/main/h2020-wp1617-infrastructures_en.pdf

It includes a call:
“Future Detection and Imaging Technologies” (INFRAINNOV-1-2017), which is up to 20 M Euros and with a deadline on 29/03/2017.

The description of this call is very much in line with the description and plans of ATTRACT (see the ATTRACT “White Paper” on the web site (www.attract-eu.org).

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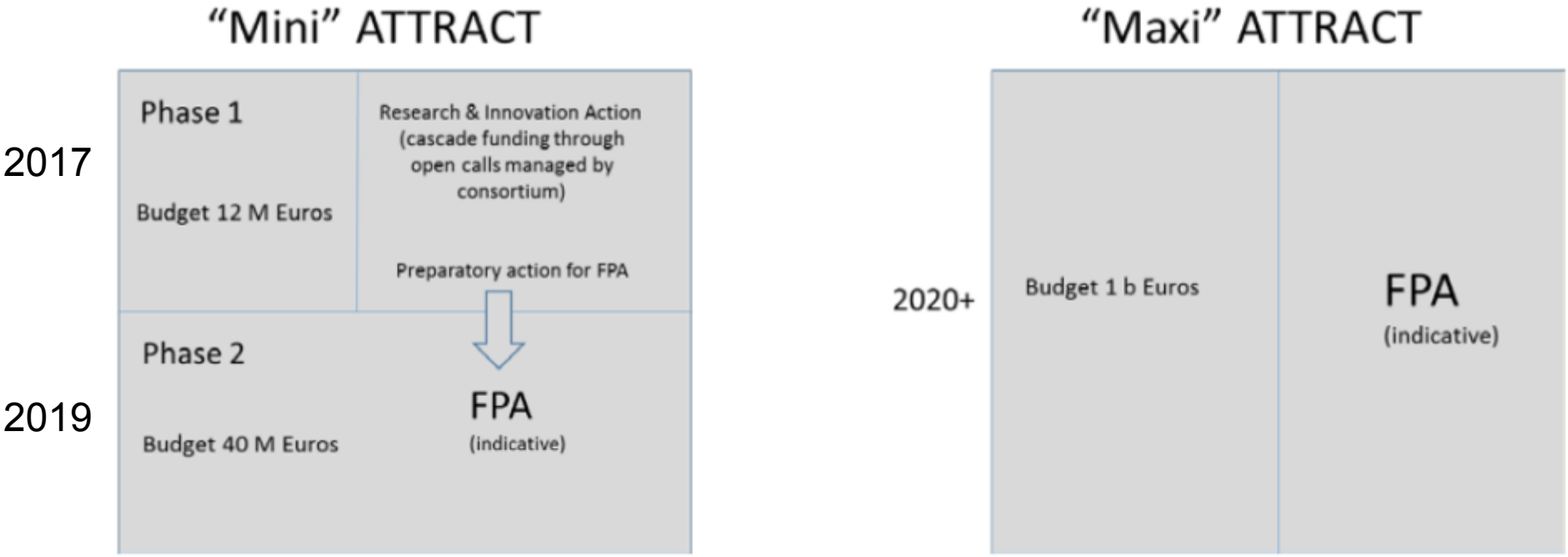
ATTRACT : an evolutionary approach



FPA : EU Framework Partnership Agreements

“Mini” ATTRACT : 2 phases

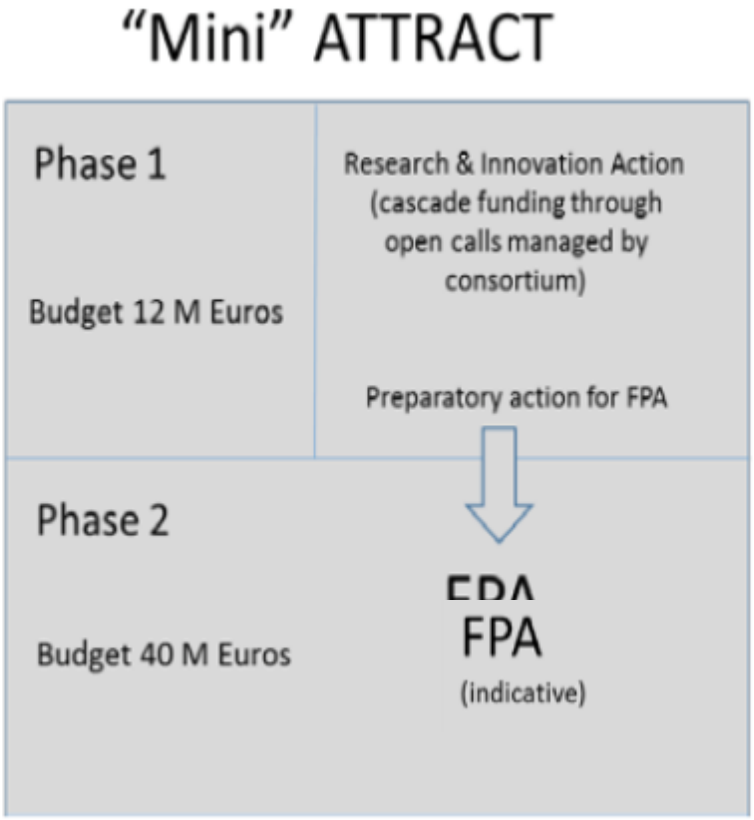
Select and finance ~200 potential breaking through proposals for a quick potential evaluation via an open call:

- feasibility demonstrators
- at least one SME and one ERI involved

2017

- Select and finance ~10 of the best Phase 1 selected projects:
- 3-4 years of execution
- monitor performances
- define an optimal model for “maxi” ATTRACT

2019



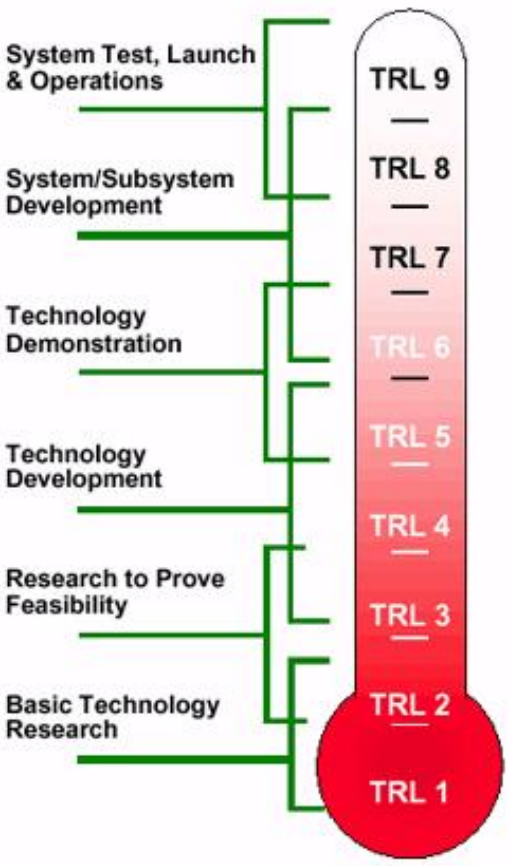
“Mini-ATTRACT” phases 1 and 2: targeted results

Phase 1

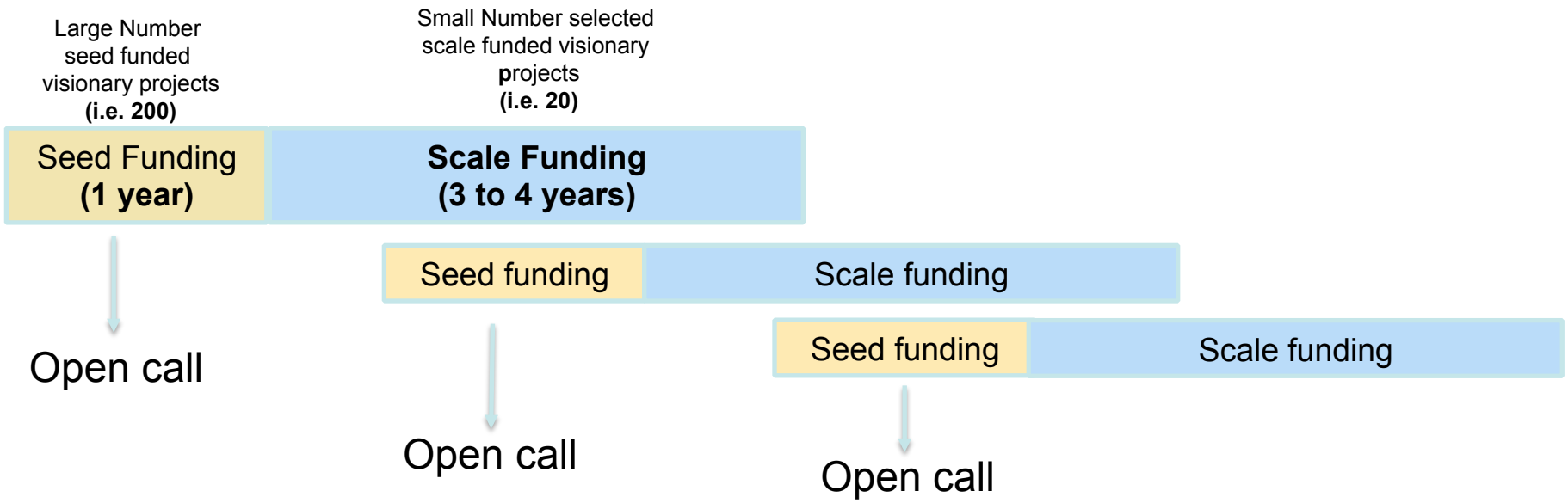
- A wide scope of technologies with breakthrough potential (TRL 2 to 4).
- Selection process based on industrial scalability and social added value.

Phase 2

- Scalability of phase 1-selected technologies towards industrial deployment (TRL 5 to 9).
- Construction and establishment of a self-sustained initiative (“Maxi” ATTRACT).



ATTRACT: How it might look like



Creating an ecosystem of trust

Technologies
from ATTRACT
projects (public funding)

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The “ATTRACT Store of Innovation” (iStore)

- Repository for ATTRACT-funded technologies.
- Loose IP governing regulation (i.e. open source regime).
- Available of course to the ATTRACT community but open to others, too…
- Whoever takes something…must give something back…
- “Free riders” are detected by the user community.
- Possibility to further develop “in-house” technologies outside the iStore and protect them.
- Open source platforms have demonstrated to be generators of new business opportunities.
- Aligned with the EC Policy of openness for public funding.
- Technologies constantly improved by the user community.

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In summary…

"Mini" ATTRACT phases 1 and 2 represent a new funding instrument that will help Horizon 2020 to deliver innovation.

They are designed to streamline the value chain from the development of technologies towards their market application.

Furthermore, ATTRACT incorporates the fundamental value of co-innovation through collaboration and competition which is essential for exploiting the untapped potential of ERIs-SMEs-Large corporations.

Public funding is used for ramping-up the ATTRACT initiative and to contribute to the creation of an European ecosystem of trust for innovation.

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Thank you