ATTRACT

COMPASS Technical Board Meeting

Johannes BERNHARD (EN-EA) 03.09.2018

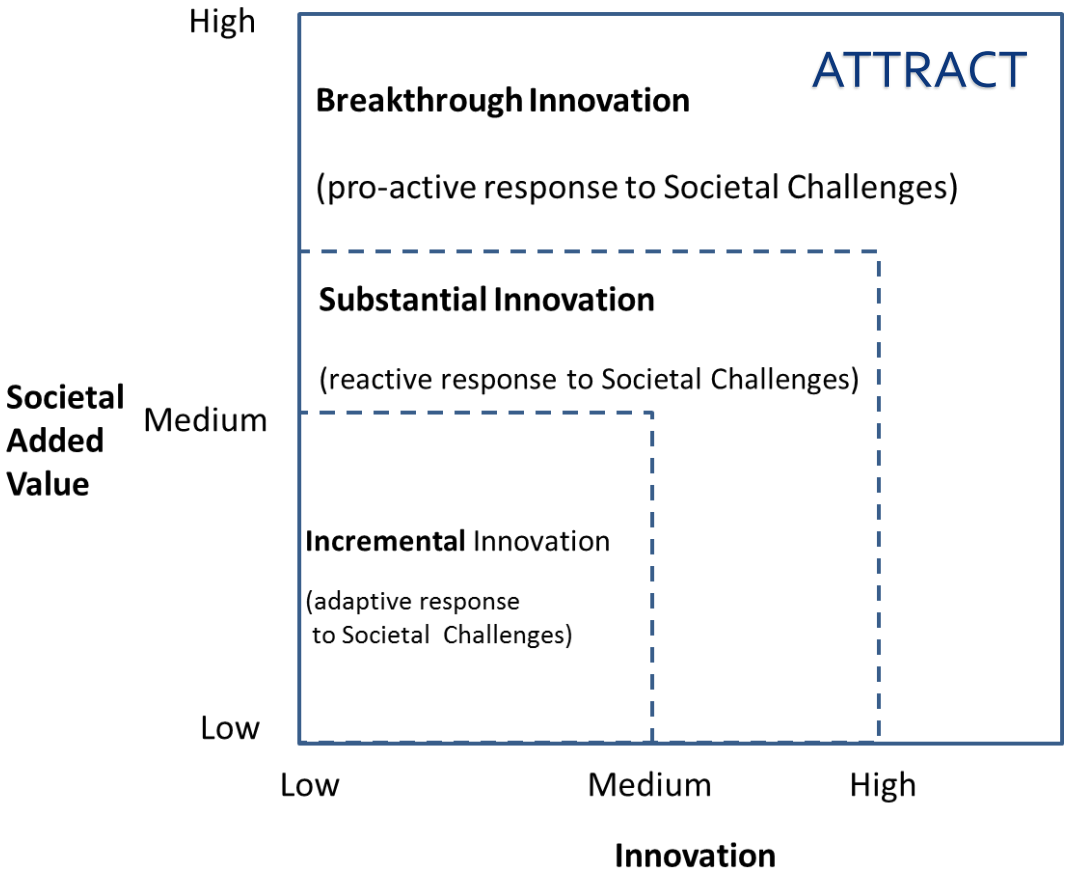
ENGINEERING DEPARTMENT

ATTRACT Fact Sheet

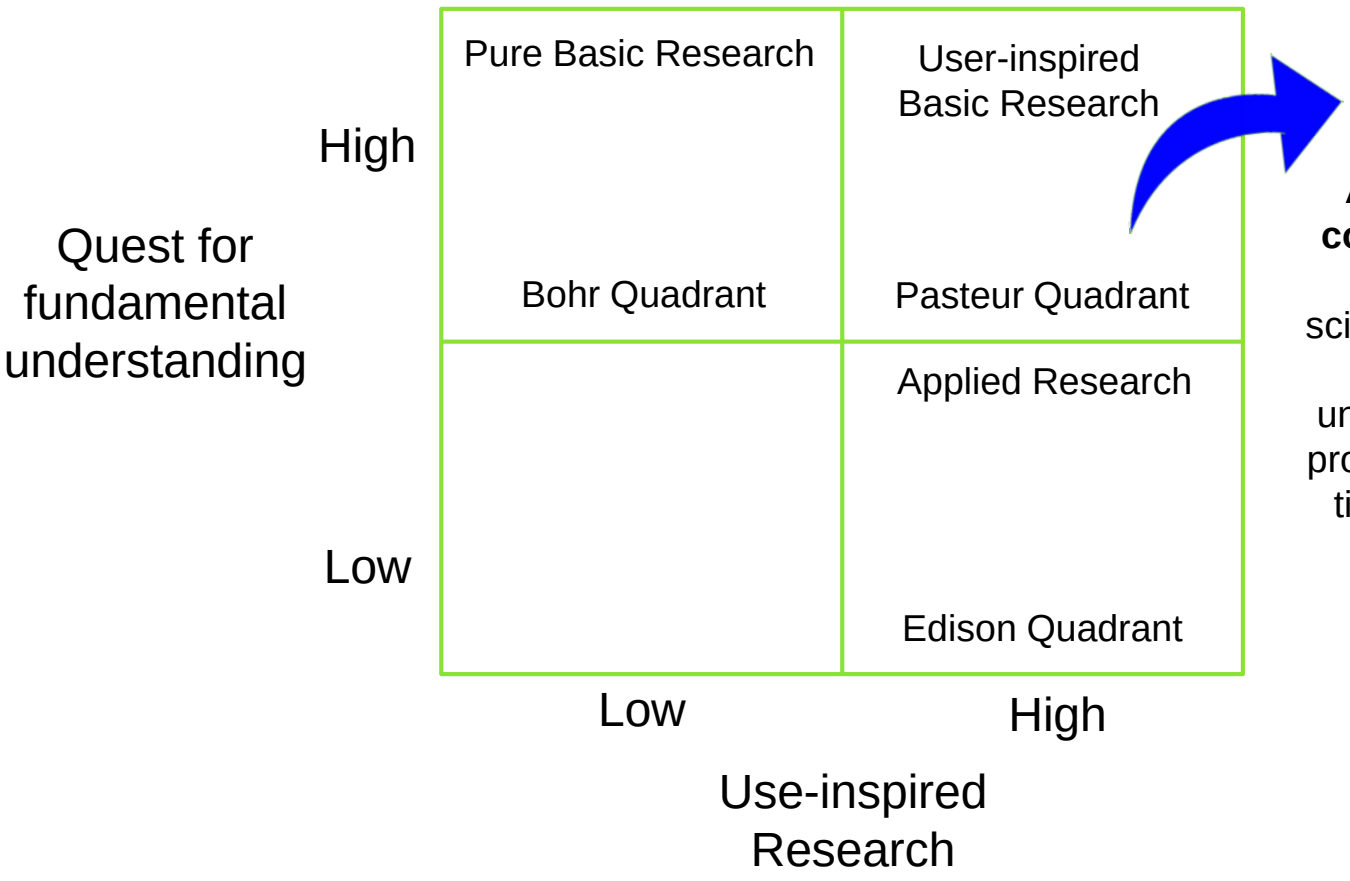
- Initiative using EC funding to promote early stage development of next generation detection and imaging technologies
- Phased approach: If approved, Consortium first funds 170 early-stage ideas in Phase-1 through its own Open Call
- CERN is eligible also to apply for this funding
- Selected projects then present their results a year later for further scale-funding as part of Phase-2
- Sequence repeated several times in so-called Maxi-ATTRACT as of FP9 in 2021+
- Focus is on new ideas or clever combination of existing technology, requiring a consortium of at least 2 from academia, institution, private sector
- Call is open in August with a deadline of 12th October 2018, decision by March 2019. If accepted, financing for one year
- CERN internal deadline: end of next week (if you would like a CERN group in your consortium)

Environment

Focus on detection and imaging technologies



Environment

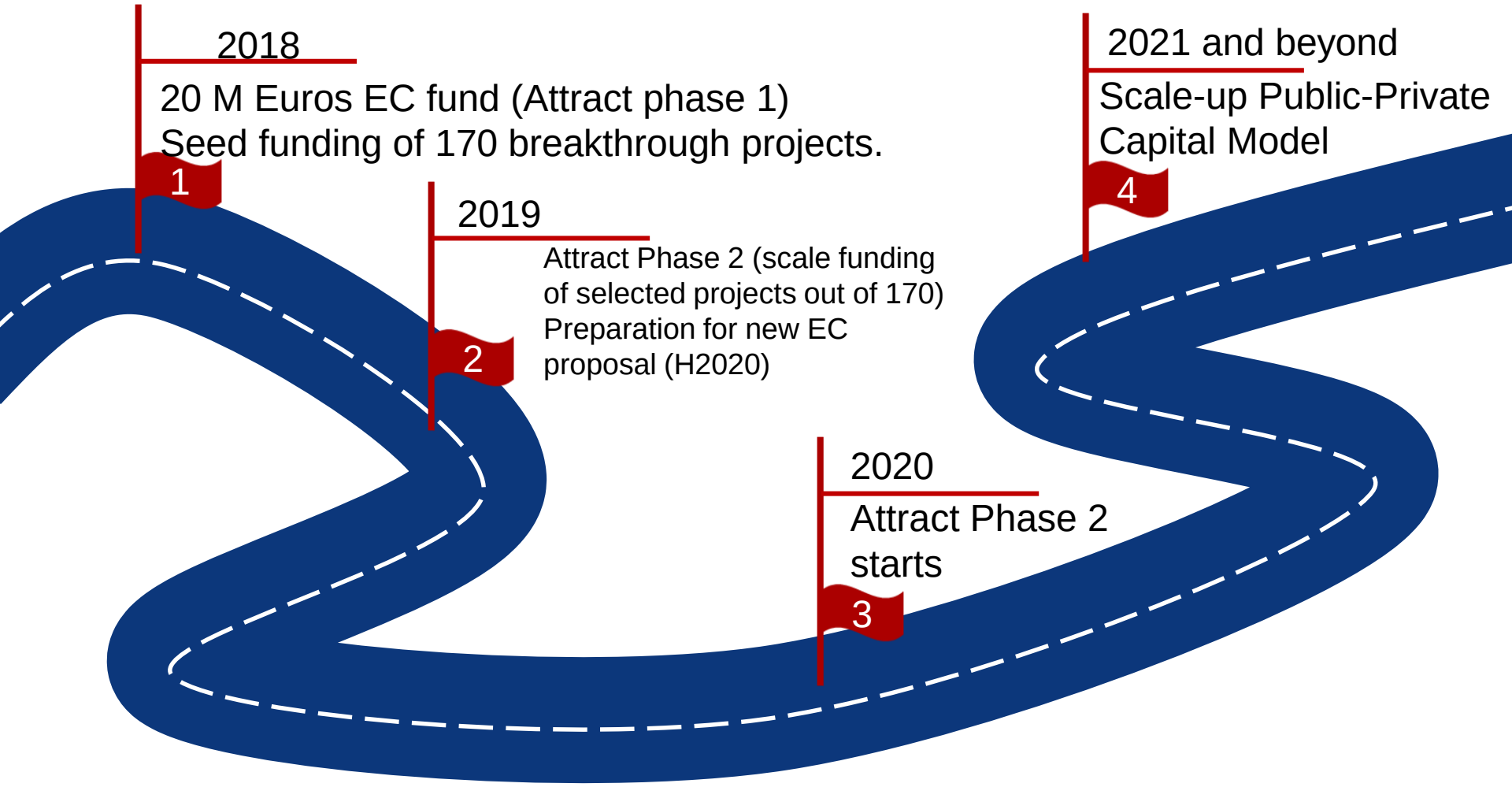


ATTRACT's quadrant co-innovation paradigm

scientific research that both seeks fundamental understanding of scientific problems, and, at the same time, benefits to society.

Sources: Donald E. Stokes, *Pasteur's Quadrant – Basic Science and Technological Innovation*, Brookings Institution Press, 1997.

Roadmap


2018
20 M Euros EC fund (Attract phase 1)
Seed funding of 170 breakthrough projects.
1
2019
Attract Phase 2 (scale funding of selected projects out of 170)
Preparation for new EC proposal (H2020)
2
2020
Attract Phase 2 starts
3
2021 and beyond
Scale-up Public-Private Capital Model
4

Some Examples

Industrial Sector	Examples of ATTRACT fields of contribution	ATTRACT Technological Examples
ICT	Optoelectronics, Communications, Computing, Micro-nano electronics, MEMs, Connectivity and Data Traffic, etc.	Radiation hard sensors and Systems. Big Data analysis and management hardware and software systems. Enhanced and virtual reality technologies. Cyber physical systems. Data Transmission and Encryption (Software and Hardware Systems). Data Traffic Algorithms. Computed Tomography. Advanced micro-nano materials and production processes. High Performance Computing. Etc.
Energy	Intelligent Energy Production and Management (Grid), Renewable Technologies, Real time Power Plant monitoring, etc.	
Process Industries	Process Control and Optimization, High Performance Materials, Water Management, Waste Management, etc.	
Manufacturing	Remote and automated control, Adaptive Manufacturing Systems, Digital-Virtual Factories, Resource Efficient manufacturing, etc.	
Aeronautics	Advanced Materials, Air Traffic Control, Structural Monitoring, etc.	
Medical	Medical Imaging, Radiation Therapy, Big Data Acquisition and Management, Dosimetry, Drug Discovery, Telemedicine, etc.	
Robotics	Industrial and civil robotics, human-robot interaction, Sensing, Perception, Cognition, etc.	
Space	Earth Observation, Big Data Acquisition and Analysis, Radiation Hard Systems and Equipment, Navigation Systems, etc.	
Transport	Intelligent and Connected Vehicles, Logistics, Vehicle-Infrastructure communication, etc.	

More information

- ATTRACT web page: https://attract-eu.com/
- Information session on ATTRACT: https://indico.cern.ch/event/728232/
- LinkedIn: https://www.linkedin.com/company/attract-eu

Disclaimer: Parts of this presentation were taken from M. Norberg's presentation on May 23rd.

Thank you!