

AIDAinnova

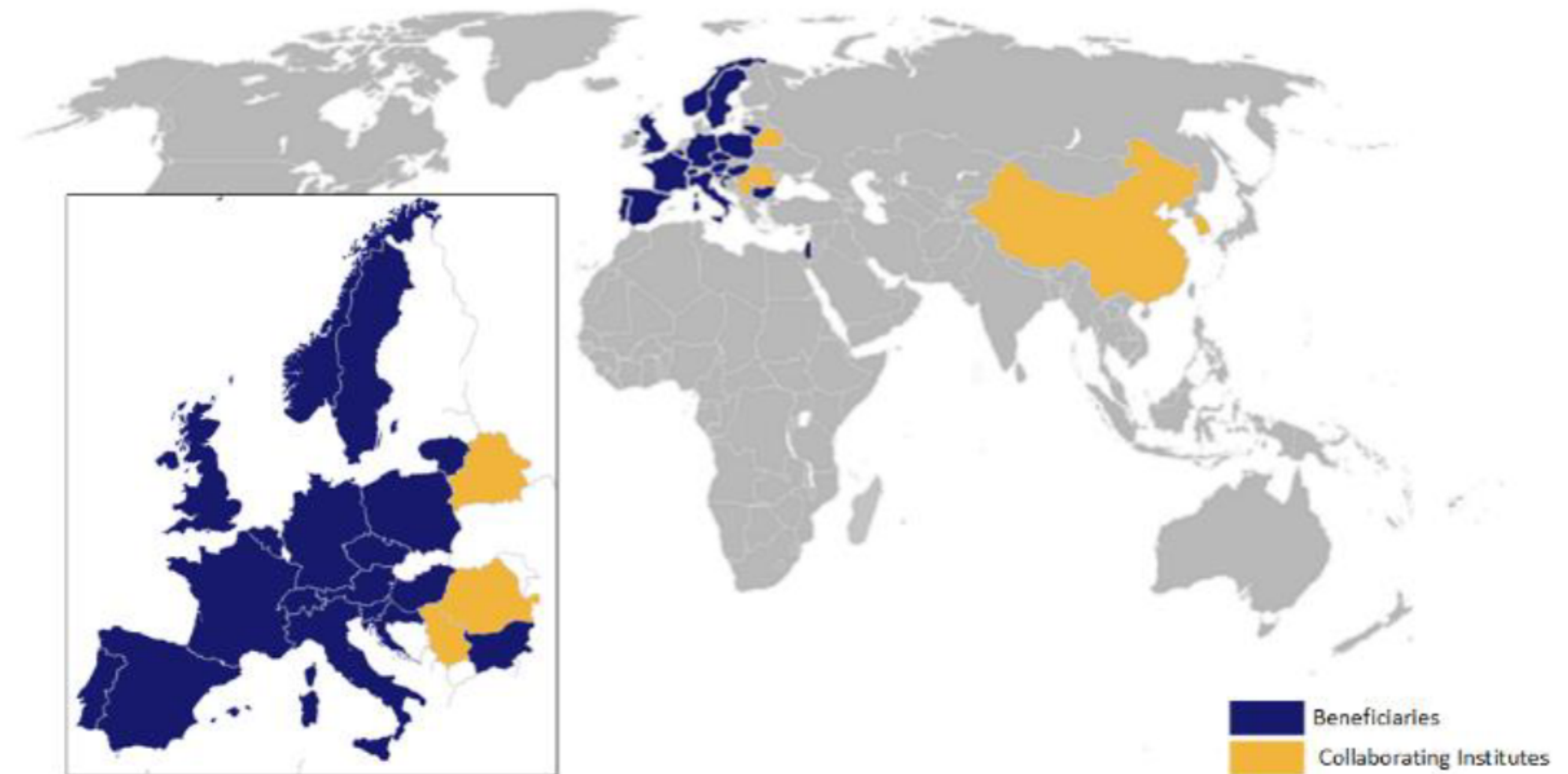
a short overview

P. Giacomelli (INFN Bologna) – Scientific coordinator



AIDAInnova is the **largest** European program on R&D for detectors for High Energy Physics (HEP)

- Collaborative framework
- Infrastructure: common interest
- 15 countries
- **45** beneficiaries
 - 34 academic + 11 industrial and RTOs
 - + 10 associated partners
- Coordinated by CERN
- EC contribution **10.0 M€**
- Total budget **~24 M€** (co-funding of **~14 M€**)
- Activities:
 - Joint Research & Networks
- Website: <https://aidainnova.web.cern.ch>



Participants bring in complementary competences and a balanced coverage of projects.

- **FP6: EUDET: 2006-2010**

- Detector development for linear collider

- **FP7: AIDA: 2011-2014**

- Detector development for LHC upgrades and linear colliders
- Project-specific work packages

- **FP8: AIDA-2020: 2015-2020**

- Common LC and LHC work packages
- New communities: large cryogenic neutrino experiments, new topics
- New innovation measures, with industry

All had a strong leverage on matching funds from national sources, typically a factor of 3

Increasing level
of integration



Consultation with the community

- Call for Expressions of Interest in May 2019
- Overwhelming response: 162 Eols

Structuring the Input: Topic Convenors*

- Reports at 1st Open Meeting September 4, 2019

Proposal Structure, Work Package definition

- Presented at 2nd Open Meeting October 23, 2019

Deadline March 17, 2020 (postponed to May 14)

- proposal was submitted within deadline, and resubmitted with minor improvements

Approval November 3, 2020

- Prepare Grant Agreement, Consortium Agreement

Start: April 1, 2021

CERN-EU Office:

Livia Lapadatescu

Sabrina El Jacoubi

Coralie Hunsicker

Laëtitia Veyrat

**Hard and intense work
by many people!**

Proposal Preparation Team:

Felix Sefkow (DESY)

AIDA-2020 Scientific Coordinator

Daniela Bortoletto (U Oxford)

AIDA-2020 Deputy Coordinator

Giovanni Calderini (LPNHE Paris)

AIDA-2020 Governance Board Chair

Paolo Giacomelli (INFN Bologna)

AIDA-2020 Deputy Coordinator

Svetlomidir Stavrev (CERN)

AIDA-2020 Administrative Coord.

Anne Dabrowski (CERN)

CERN representative in the PPT

Thomas Bergauer (HEPHY Vienna)

Lucie Linssen (CERN)

Ivan Vila Alvarez (CSIC Santander)

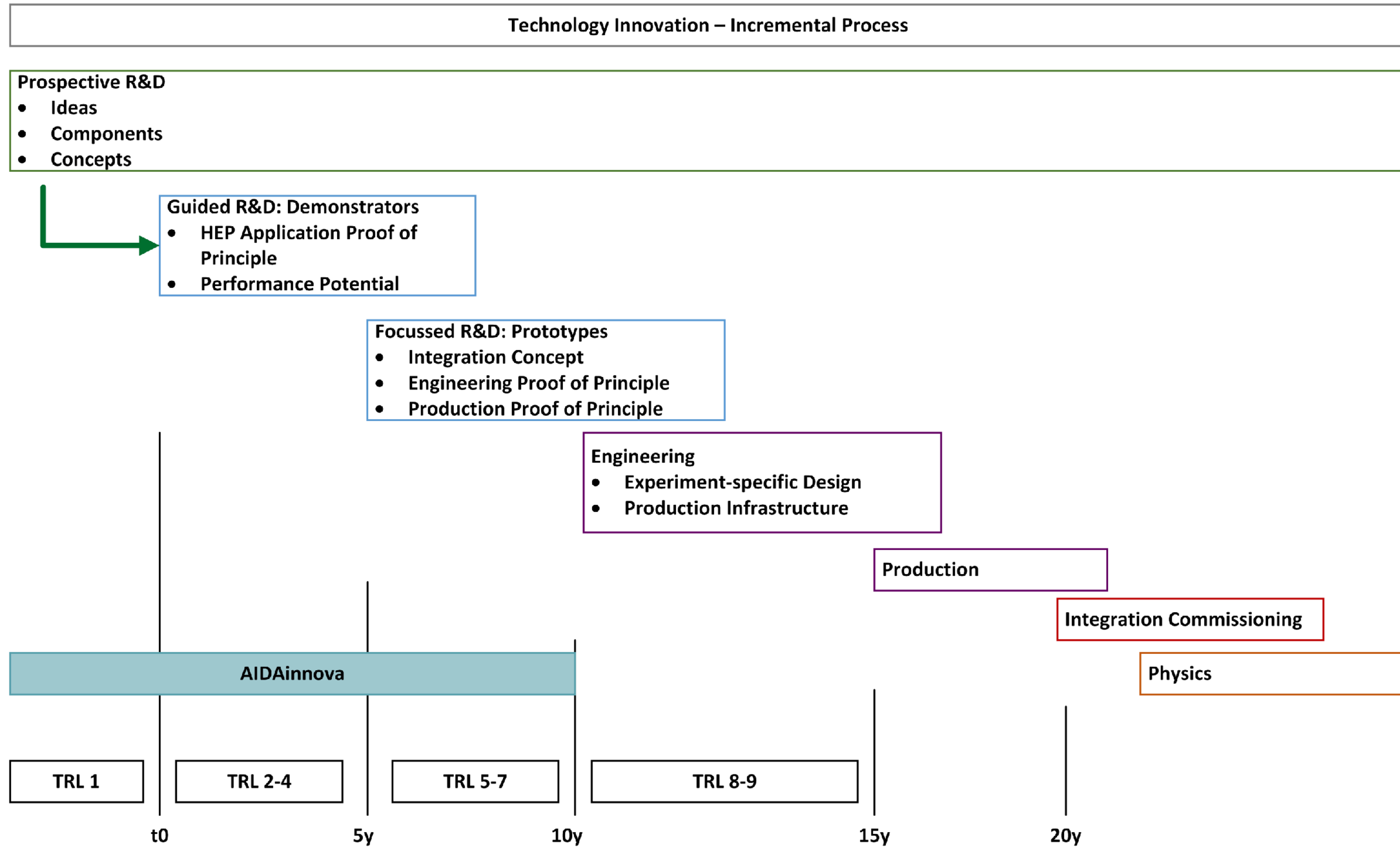
Morgan Wascko (IC London)

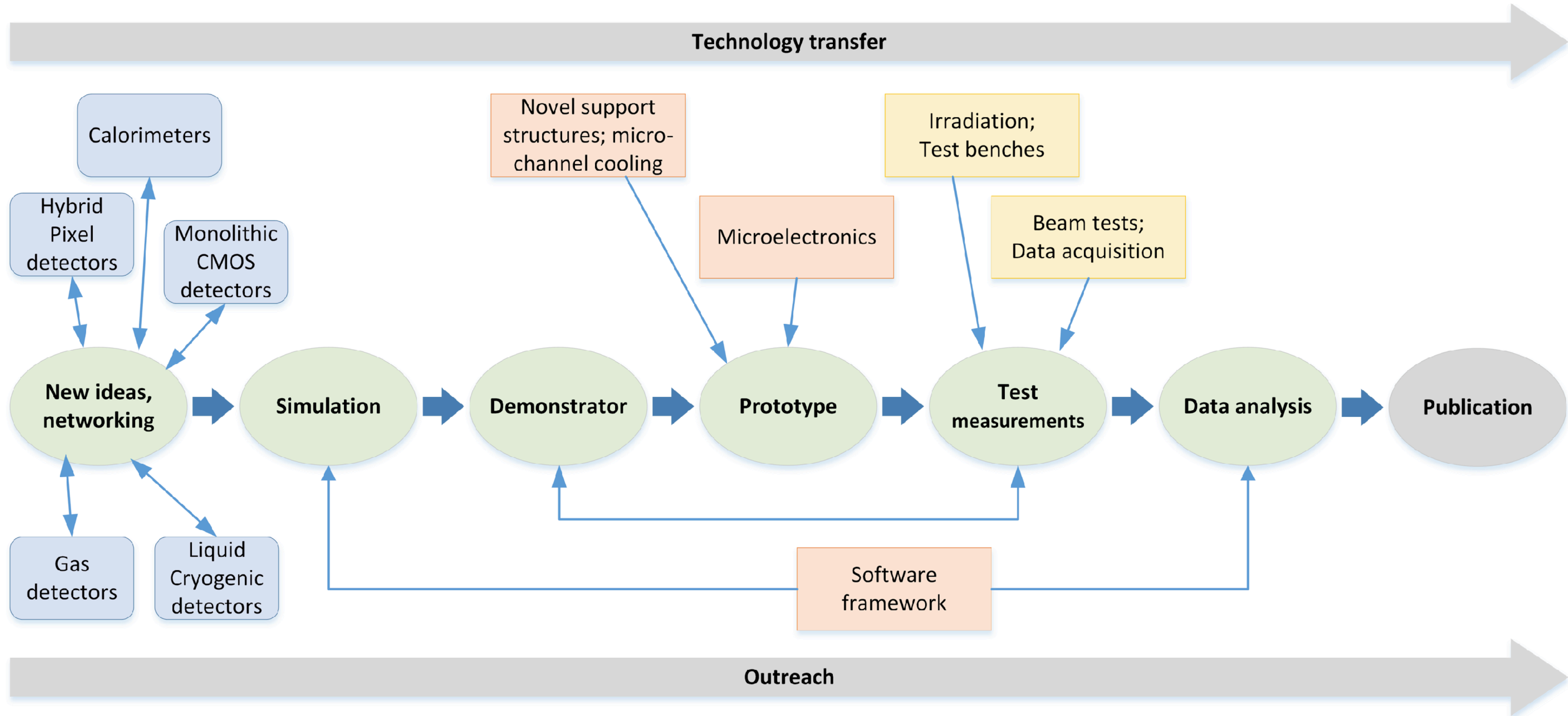
AIDAInnova focuses on Strategic R&D in the pre-TDR phase

- Technology Readiness Levels 2-7
- Not yet experiment-specific: potential to unfold synergies
- **Include some prospective R&D**
- Competitive call at start of project
- “Blue Sky”, quantum sensors,...

Targeted applications

- Higgs Factories
- ALICE LS3, LHCb LS4 pre-TDR, ATLAS & CMS LS4
- Accelerator-based neutrino experiments
- and others...





- Technology transfer to and from industrial partners happens throughout the development cycle
- Same is true for outreach

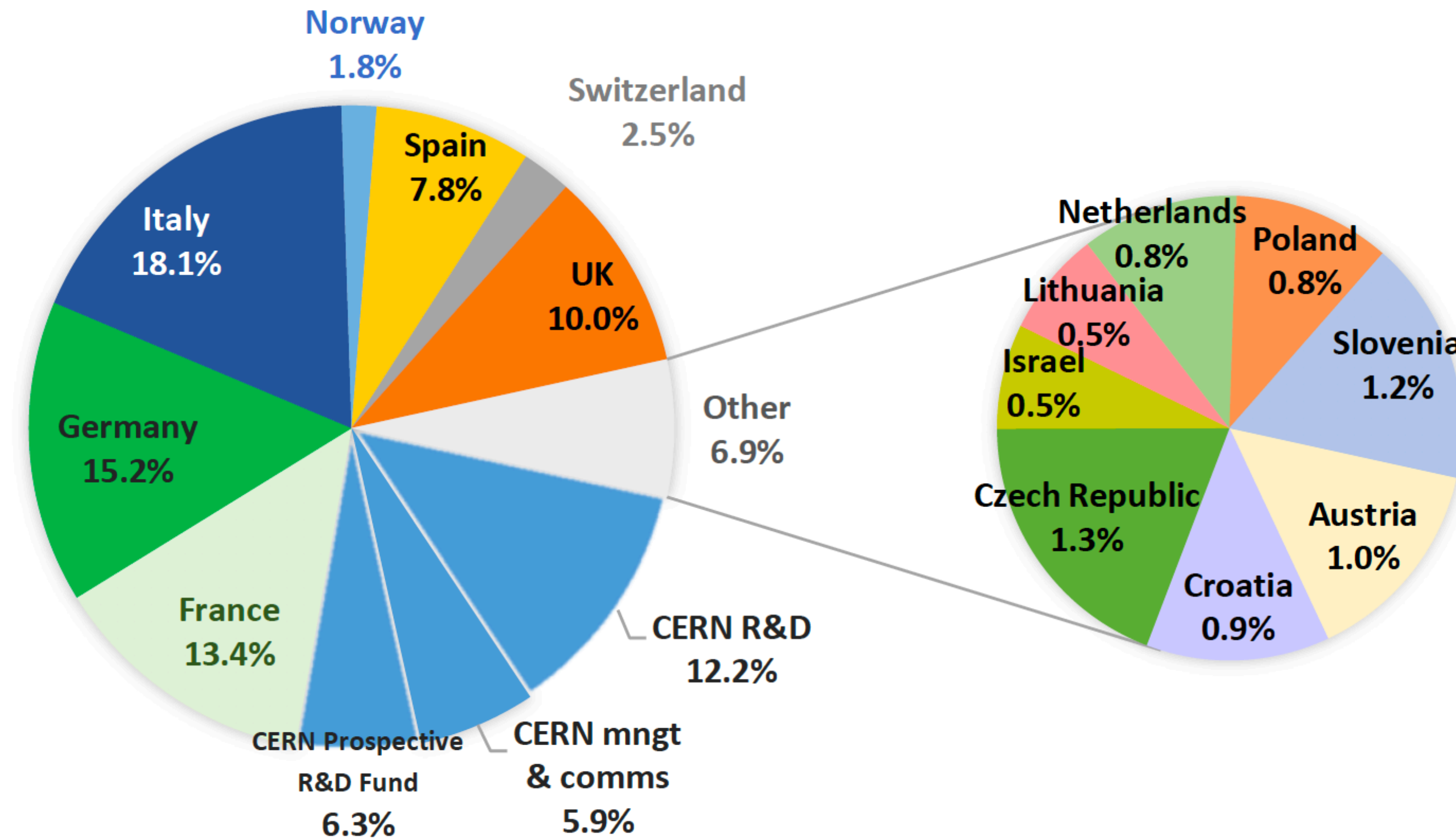
- **13 Work Packages (WPs)**
 - **2 Administration WPs**
 - **10 Scientific WPs**
 - **1 “Blue-sky” WP**
 - **2 coordinators/WP**
- **WP1: Project management and coordination**
- **WP2: Communication, Education and Innovation**
- **WP3: Test beam and infrastructure**
- **WP4: Upgrade of Irradiation and Characterization Facilities**
- **WP5: Depleted Monolithic Active Pixel Sensors**
- **WP6: Hybrid pixels sensors for 4D Tracking and Interconnection Technologies**
- **WP7: Gaseous detectors for frontier science**
- **WP8: Calorimeters and Particle Identification detectors**
- **WP9: Cryogenic neutrino detectors**
- **WP10: Advanced mechanics for tracking and vertex detectors**
- **WP11: Microelectronics**
- **WP12: Software**
- **WP13: Prospective and Technology-driven Detector R&D**

- **Advanced R&D and infrastructure** for detectors at future colliders
 - Lepton colliders
 - Circular
 - Linear
 - Hadron colliders
- **Novel detector technologies** for large-scale particle physics experiments
- **Innovative software** solutions (ML, etc.) for future detectors
 - Triggering
 - Tracking
 - Calorimetry
- Extended neutrino WP with also short baseline neutrino detectors
- **Joint R&D** programmes with **industrial beneficiaries**
- “Blue sky” R&D (competitive allocation after start of project) higher risk projects

AIDAInnova budget

Full costs budget AIDAInnova = ~ 24 M€
 EC contribution = 10 M€

EC FUNDING PER COUNTRY





**Paolo
Giacomelli**
Scientific
Coordinator



**Daniela
Bortoletto**
Deputy Scientific
Coordinator



**Giovanni
Calderini**
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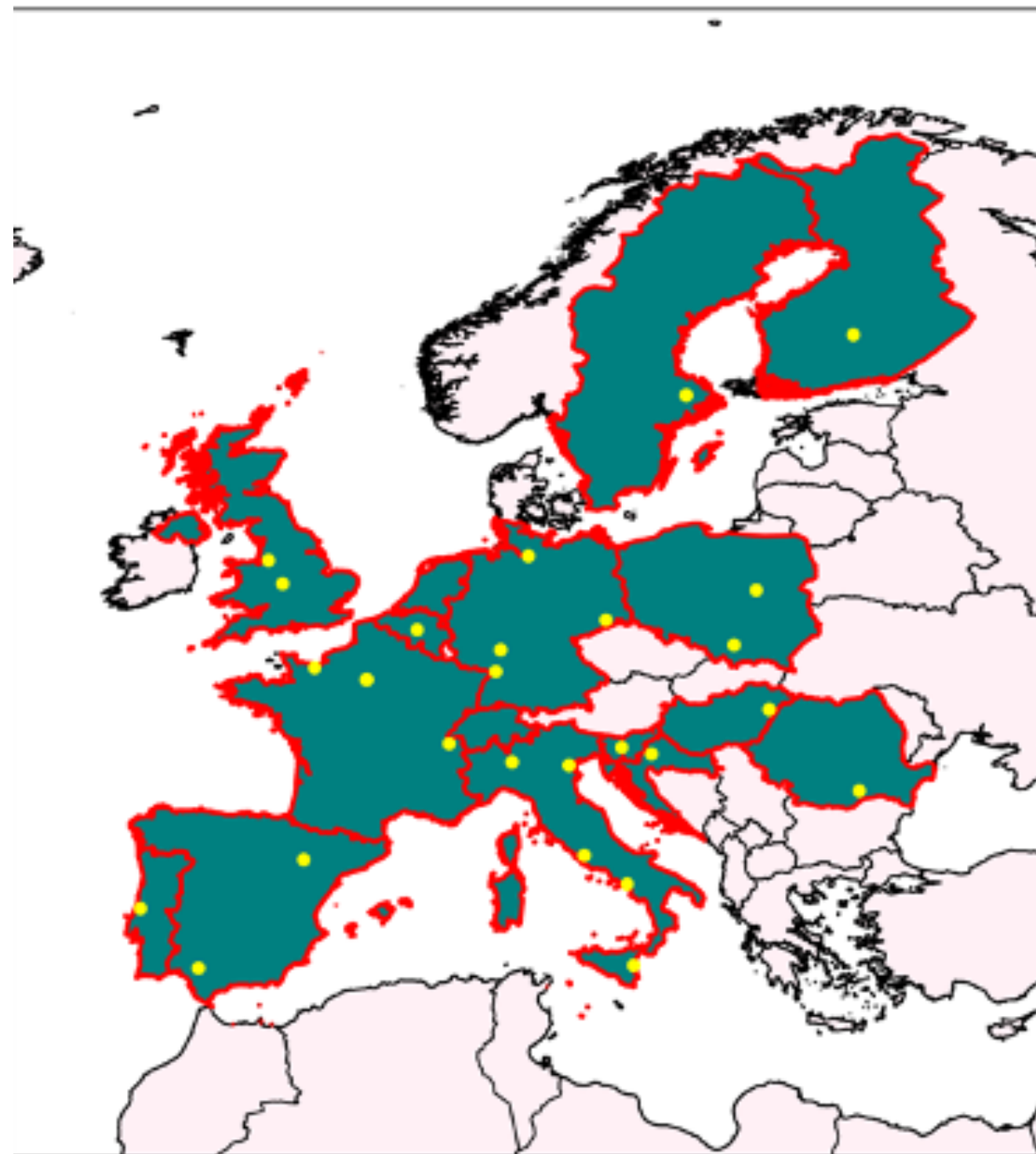
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 - In the future we would consider participating to joint meetings or workshops

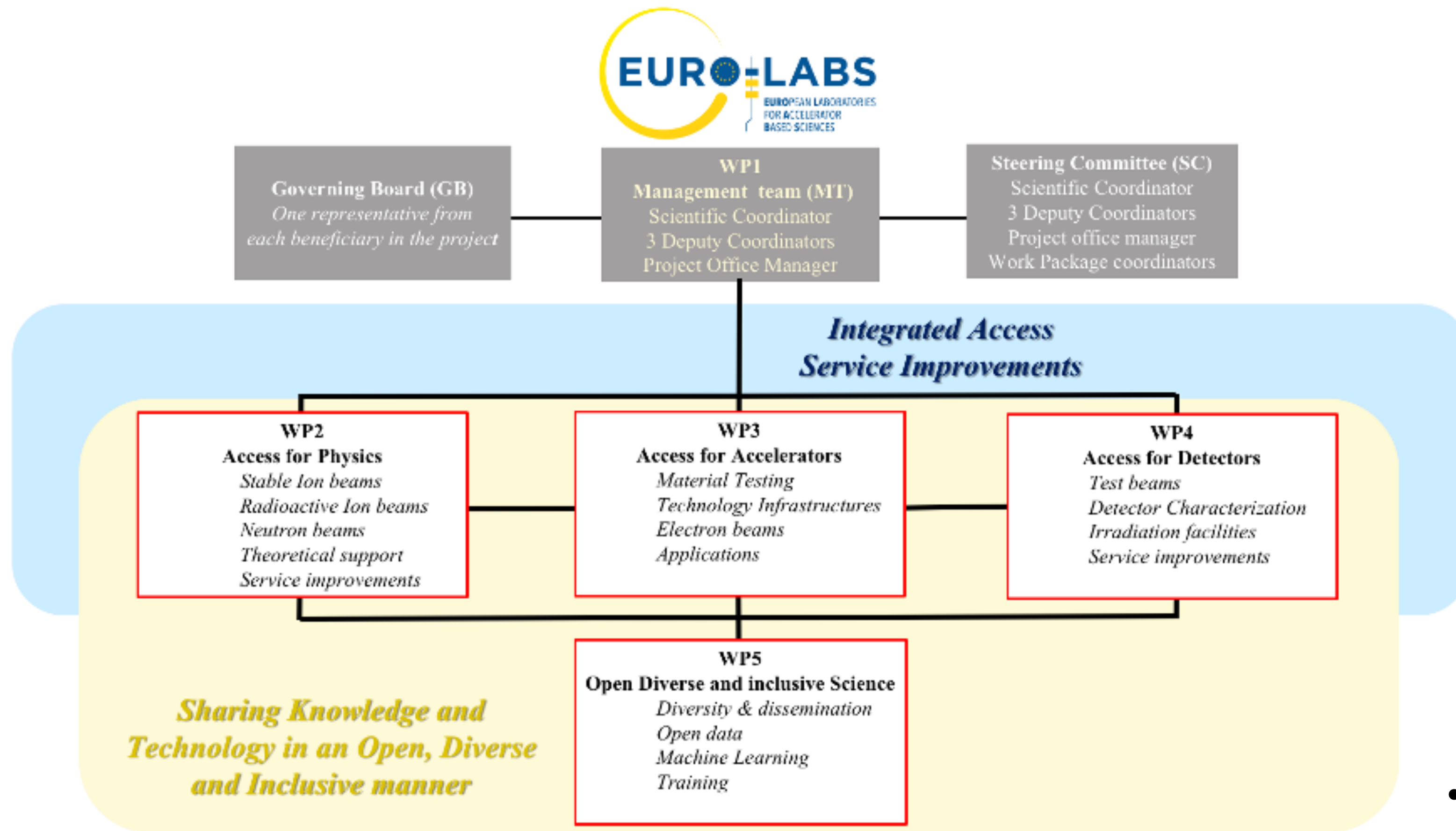


Horizon Europe call for Research Infrastructure (RI) services
HORIZON-INFRA-2021-SERV-01-07

EURO-LABS is a consortium of thirty-nine Research Infrastructures (RIs) from twelve countries in Europe

Finland in the north and Italy to south to Romania in the east and Portugal in the west

- **First joint EU proposal between Nuclear Physics, HEP accelerators and HEP detectors!**



EURO-LABS is a project that mostly provides funding for Transnational Access (TA) to Research Infrastructures (RI). For us this means test beams and irradiation facilities.

Total EURO-LABS EU funding:
14.5 M€

- **Start of the Project: 01/09/2022**
- **Duration: 01/09/2022 - 31/08/2026**

Budget for WP4: ~3.5 M€

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- Soon we will have another associated EU project, **EURO-LABS**, who will provide funds for **TA**