

AIDAinnova

an Overview

P. Giacomelli (INFN Bologna)

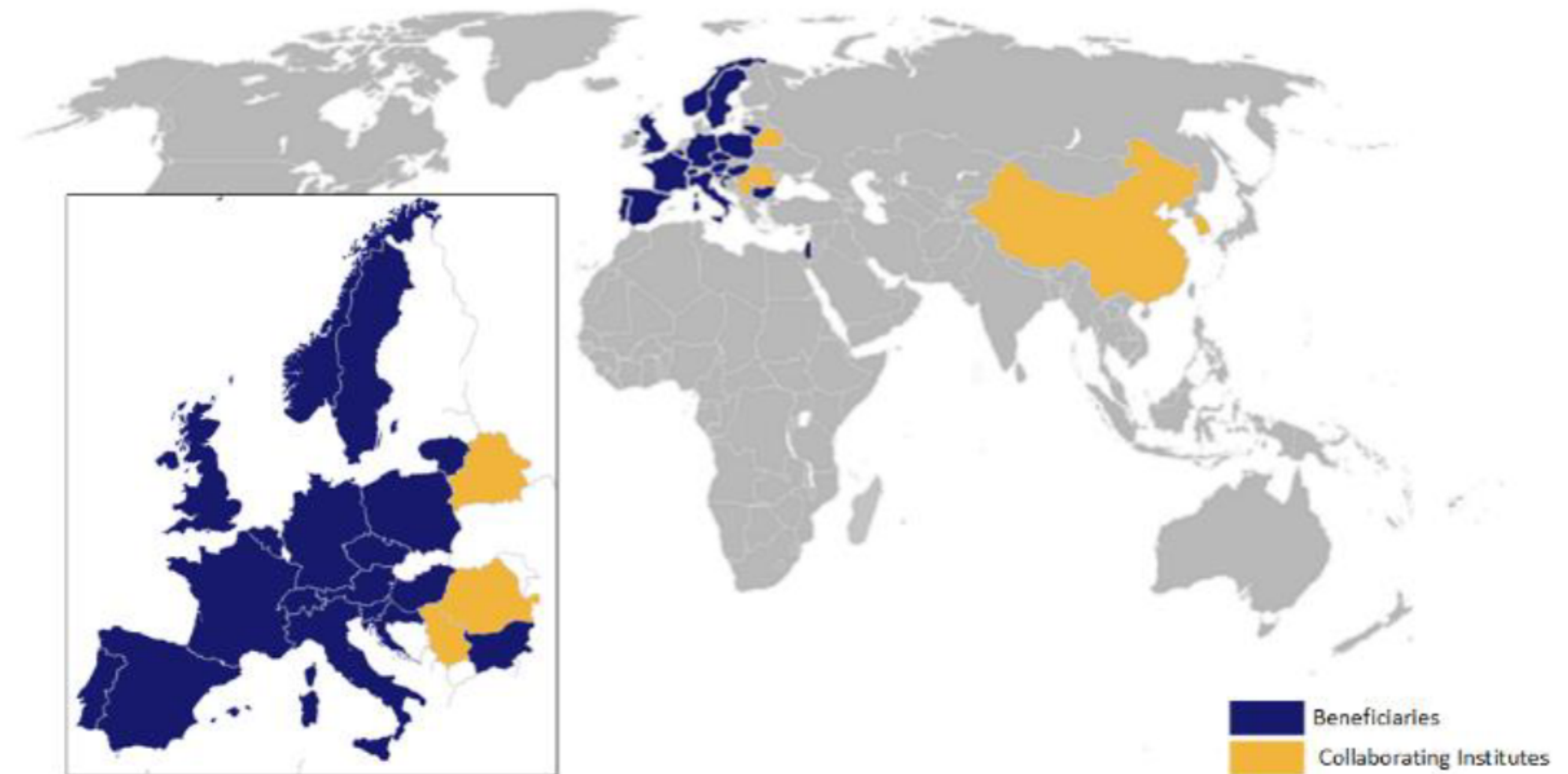
INFN Bologna

AIDAinnova 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
- **46** beneficiaries
 - 35 academic + 11 industrial and RTOs
 - + 10 associated partners
- Duration: 01/04/2021 - 30/03/2025
- Coordinating institute: CERN
- Scientific coordinator: F. Sefkow (DESY) (first year), Paolo Giacomelli (INFN)
- EC contribution **10.0 M€**
- Total budget **~26 M€** (co-funding of **~16 M€**)
- Activities:
 - Joint Research & Networking activity
- 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

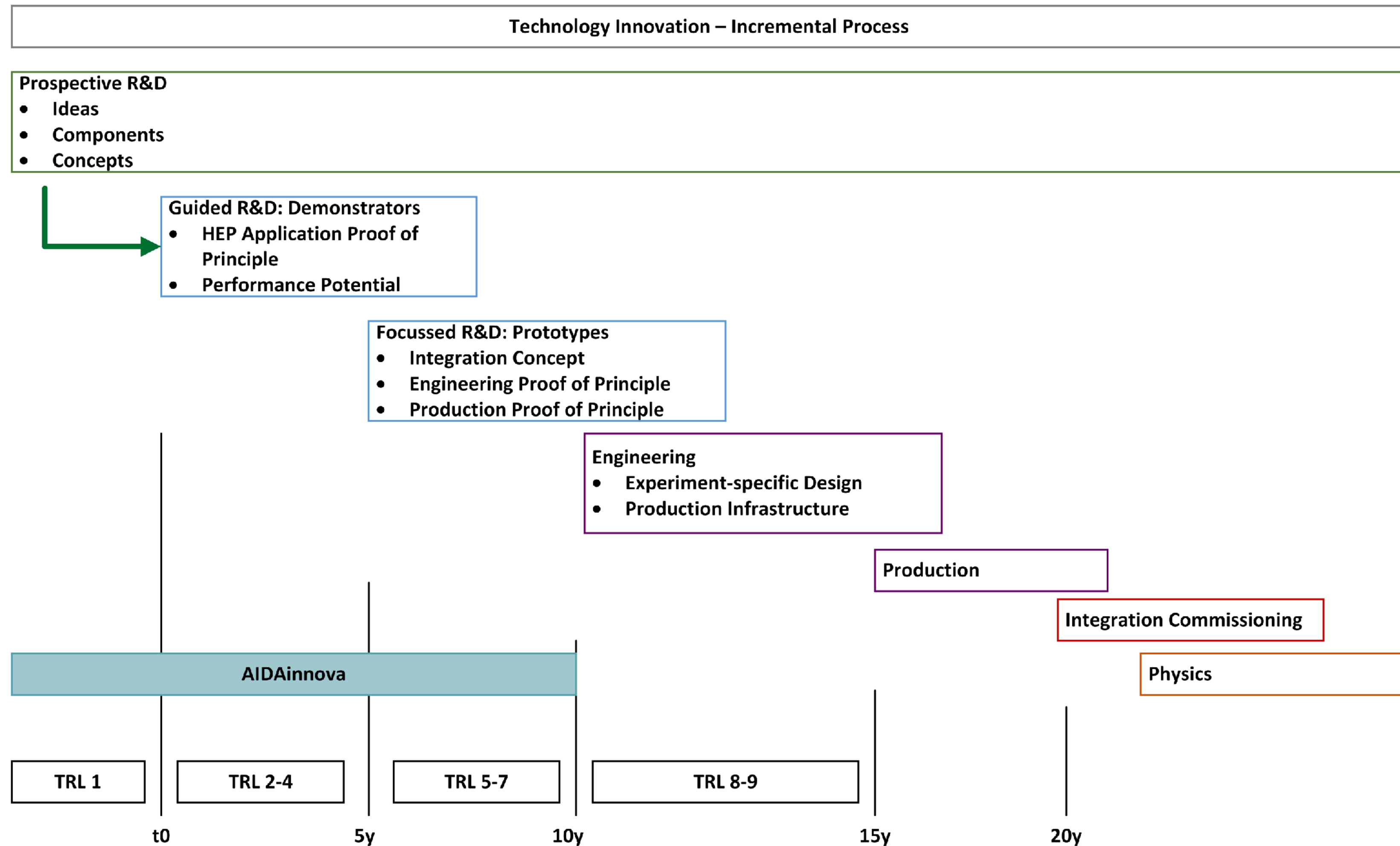


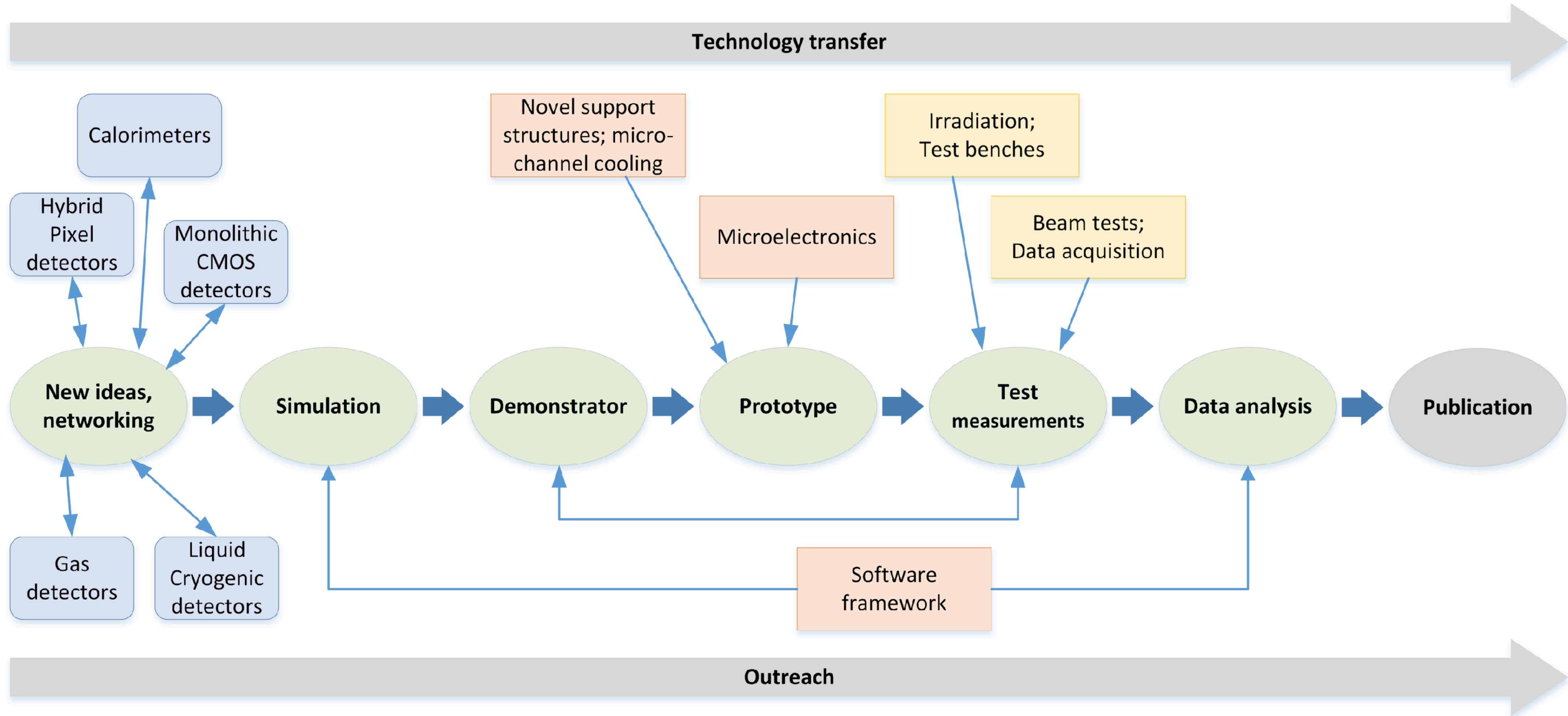
AIDAInnova focuses on Strategic R&D in the pre-TDR phase

- 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

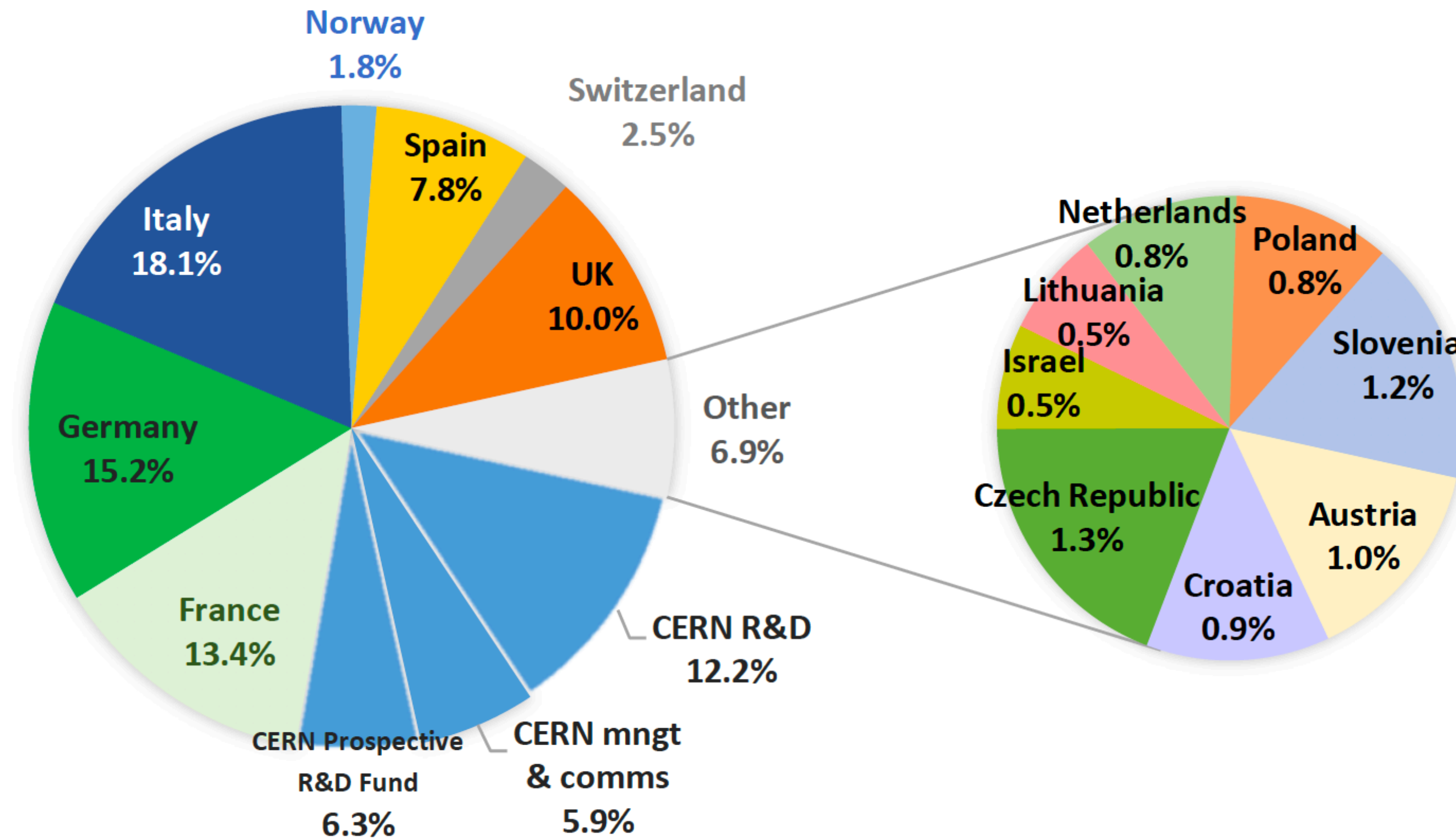
- **13 Work Packages (WPs)**
 - 2 Administration WPs
 - 10 Scientific WPs
 - 1 “Blue-sky” WP
- **2 coordinators/WP**
- **Scientific and Industrial Advisory Panel**
 - **I. Ionak-Auer (AMS AG)**
 - **D. Fournier (LAL)**
 - **M. Kasemann (DESY)**
 - **P.S. Marrocchesi (Univ. Siena)**
 - **P. Merkel (FNAL)**
 - **J. Strait (LBNL)**
- **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



All the administrative and financial aspects of the project are handled with great competence by the CERN EU office: **S. Stavrev**, **S. El Yacoubi** and **C. Levointurier-Vajda**



**Paolo
Giacomelli**
(INFN Bologna)
Scientific
Coordinator



**Daniela
Bortoletto**
(Univ. of Oxford)
Deputy Scientific
Coordinator

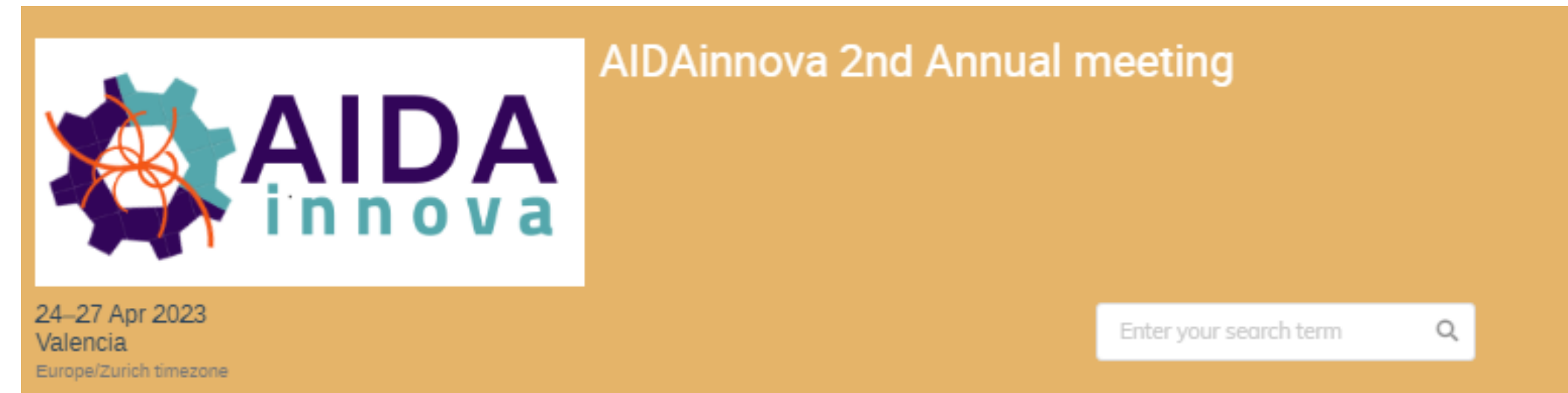


**Giovanni
Calderini**
(CNRS, LPNHE)
Deputy Scientific
Coordinator

CSIC, Valencia, Spain
24-27 April 2023

- 108 participants

- Content:
 - WP meetings
 - Academic lectures
 - Hackathon
 - Plenary meeting
 - Governing Board meeting



- Overview
- Timetable
- Registration
- Participant List
- Videoconference
- How to get to ADEIT
- Social Events
- Accommodation
- WIFI
- Pictures
- Academia meets Industry
- Privacy Information
- Contact
- ✉ AIDA innova-Organizing-...

The **AIDA innova** second annual meeting will take place in ADEIT and CSIC, Valencia from **24th to 27th April 2023**. The event will assemble the **45 beneficiaries** and numerous associate partners to discuss the **scientific and technical achievements** since the 1st Annual meeting on March 2022, as well as the plans for the third year of the project.

The Second annual meeting will consist of parallel meetings of Work Packages, plenary sessions, a Steering Committee and a Governing Board meeting.



For questions or further information on the AIDA innova 2nd Annual meeting please contact the [Local Organizing Committee](#).

CSIC, Valencia, Spain

27 April 2023

- 52 participants

- Content:
 - Invited talks
 - Flash talks
 - Networking



AIDA innova - Academia meets Industry - Advanced Mechanics

27 April 2023
ADEIT
Europe/Paris timezone

Event description
Timetable
Registration
Participant List
Meeting Poster
How to get to ADEIT
Accommodation
Cocktail Reception
AIDA innova 2nd Annual Meeting
Support
AIDA innova-info@cem.ch

The AIDA innova Industry Academia event aims at fostering synergies between detector R&D programmes of AIDA innova members and the Industry, by creating awareness of strategic R&D topics in academia and of strategic industry needs for which industry-academia collaborations could be envisaged.

The first AIDA innova Academia meets Industry will focus on **Advanced Mechanics**, and will consist of technical talks by industry and academic partners, industrial exhibition for industrial partners and a Network Cocktail Reception.

The event will be hosted by IFIC (UV/CSIC) at ADEIT in Valencia on Thursday, 27 April 2023.



**ACADEMIA MEETS INDUSTRY
ADVANCED MECHANICS**

THURSDAY, APRIL 27TH
VALENCIA, SPAIN

CSIC

UV

AIDA innova

IFIC

ADEIT

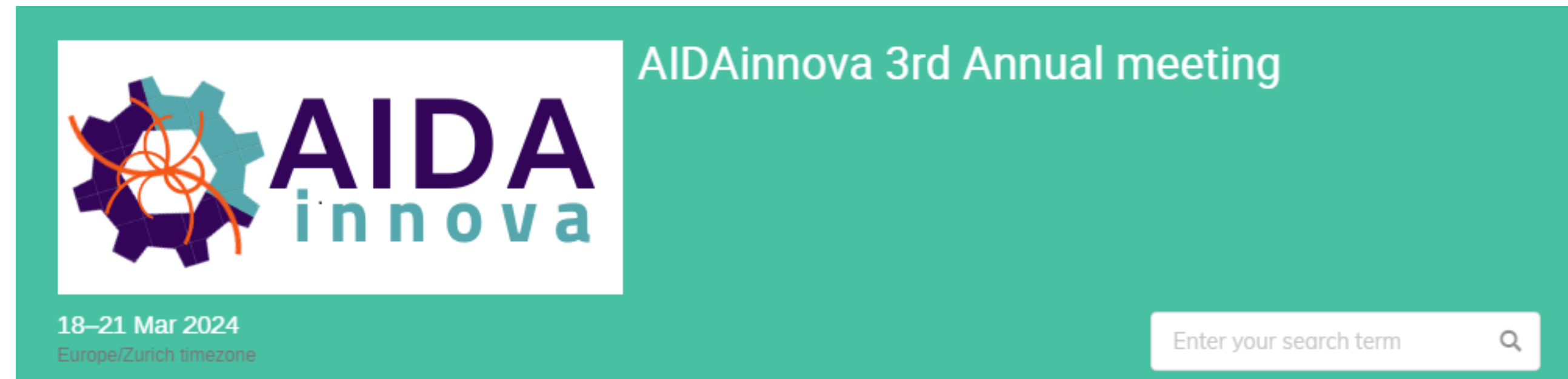
info@cem.ch/event/2023/2023

The project has received funding from the European Union's Horizon 2020 Research and Innovation programme under the Marie Skłodowska Curie Grant Agreement No. 101019717.

Catania, Italy

18-21 March 2024

- 90 participants
- Content:
 - WP meetings
 - Hackathon
 - Plenary meeting
 - Governing Board meeting



- Overview
- Timetable
- Registration
- Participant List
- Videoconference
- How to get to Catania
- The venue
- Accommodation in Catania
- Restaurants and local bars
- Social Events
- Pictures
- Contact
- ✉ AIDA innova-Organizing-...

The **AIDA innova** third annual meeting will take place in Hotel Principe, Catania, Italia from **18th to 21th March 2024**. The event will assemble the **45 beneficiaries** and numerous associate partners to discuss the **scientific and technical achievements** since the 2nd Annual meeting on April 2023, as well as the plans for the last year of the project.

The Second annual meeting will consist of parallel meetings of Work Packages, plenary sessions, a Steering Committee and a Governing Board meeting.



TIPP2023 conference
4-8 September 2023

M. Caccia, P. Giacomelli, C. de la Taille and M. Titov organising session on Academia and Industry issues (IP, Technology Transfer, etc.).

Asking for input from all around the world.

AIDAinnova and I.FAST are among the projects that provided feedback.

TIPP2023

TECHNOLOGY IN INSTRUMENTATION & PARTICLE PHYSICS CONFERENCE

4 - 8 SEPTEMBER 2023

Topics

Accelerator-based particle physics
Non-accelerator particle physics and particle astrophysics
Experiments with synchrotron radiation and neutrons
Nuclear physics
Cosmology
Instrumentation and monitoring of particle and photon beams
Applications in photon science, biology, medicine, and engineering

The conference aims to provide a stimulating atmosphere for science and engineering for future experiments and social applications.

International Advisory Committee

Elisabetta Barberio	Manfred Krammer
Ties Behnke	Gobinda Majumder
Sara Bolognesi	Ana Amelia Machado
Shikma Bressler	Petra Merkel
Florencia Canelli	Joachim Mnich
Cinzia Da Via	Nadia Pastrone
Marcel Demarteau	Fabrice Retiere
Maria Teresa Dova	Yuri Tikhonov
Latifa Elouadrhiri	Maksym Titov
Antonio Ferrer	Grigorii Trubnikov
Francesco Forti	Niels van Bakel
Ingrid-Maria Gregor	Zebulon Vilakazi
Borys Grynyov	Jianchun Wang
Kazunori Hanagaki	Yifang Wang
Karl Jakobs	Marc Winter
Antoine Kouchner	

Local Organizing Committee

Shimaa AbuZeid	Oscar Kureba
Imane Azzouzi	Bruce Mellado (Chair)
Raja Cherkaoui El Moursli	Peane Maleka
Serigne Bira Gueye	Amr Radi
Peter Jones	Yahya Tayalati
Naima El Khayati	Michelle Bark
Betty Kibirige	Sahal Yacoob



- We have excellent collaboration with the other two INFRA-INNOV projects: I.FAST and LEAPS-INNOV
- Organised together several workshops, among which
 - TIP2023 conference, Capetown, September 2023
 - LEAPS-INNOV Industry opportunities in light source infrastructures, ALBA Synchrotron, Barcelona, December 1st, 2023
 - Industry Workshop on Cryogenics in Big Science, Paris, April 16-17, 2024
 - Big Science Business Forum (BSBF 2024), Trieste, October 1-4, 2024

- AIDAInnova started on April 1st, 2021 a time still heavily affected by COVID
 - Difficulty of finding and buying materials, tools and equipment
 - Difficulty of employing new personnel and researchers
- Many tasks of the project effectively started after several weeks from the beginning of the project as the COVID pandemic finally started to decrease and activities could ramp up
 - These tasks could not benefit from the full 48 months duration of the project
 - In most cases we managed to get back up to speed and most deliverables will be met, but some tasks and WPs would definitely benefit from a possible extension, of the order of 6 month at no extra cost.

- EC-funded detector initiatives are a **unique forum** to exchange knowhow, unfold synergies and enhance coherence in European detector R&D

- EC-funded detector initiatives are a **unique forum** to exchange knowhow, unfold synergies and enhance coherence in European detector R&D
- AIDAinnova started on April 1, 2021: **10 M€** of EU contribution, total budget of **24 M€** (4 years)

- EC-funded detector initiatives are a **unique forum** to exchange knowhow, unfold synergies and enhance coherence in European detector R&D
- AIDAinnova started on April 1, 2021: **10 M€** of EU contribution, total budget of **24 M€** (4 years)
- Targeted applications in line with **European Strategy Update**

- EC-funded detector initiatives are a **unique forum** to exchange knowhow, unfold synergies and enhance coherence in European detector R&D
- AIDAinnova started on April 1, 2021: **10 M€** of EU contribution, total budget of **24 M€** (4 years)
- Targeted applications in line with **European Strategy Update**
- Future large e^+e^- colliders (FCC-ee, CEPC, ILC), EIC, pre-TDR fixed target experiments

- EC-funded detector initiatives are a **unique forum** to exchange knowhow, unfold synergies and enhance coherence in European detector R&D
- AIDAInnova started on April 1, 2021: **10 M€** of EU contribution, total budget of **24 M€** (4 years)
- Targeted applications in line with **European Strategy Update**
- Future large e^+e^- colliders (FCC-ee, CEPC, ILC), EIC, pre-TDR fixed target experiments
 - Pre-TDR LHC upgrades (ALICE LS3, LHCb LS4)

- EC-funded detector initiatives are a **unique forum** to exchange knowhow, unfold synergies and enhance coherence in European detector R&D
- AIDAInnova started on April 1, 2021: **10 M€** of EU contribution, total budget of **24 M€** (4 years)
- Targeted applications in line with **European Strategy** Update
- Future large e^+e^- colliders (FCC-ee, CEPC, ILC), EIC, pre-TDR fixed target experiments
 - Pre-TDR LHC upgrades (ALICE LS3, LHCb LS4)
 - Accelerator-based neutrino experiments (DUNE)

- EC-funded detector initiatives are a **unique forum** to exchange knowhow, unfold synergies and enhance coherence in European detector R&D
- AIDAinnova started on April 1, 2021: **10 M€** of EU contribution, total budget of **24 M€** (4 years)
- Targeted applications in line with **European Strategy** Update
- Future large e^+e^- colliders (FCC-ee, CEPC, ILC), EIC, pre-TDR fixed target experiments
 - Pre-TDR LHC upgrades (ALICE LS3, LHCb LS4)
 - Accelerator-based neutrino experiments (DUNE)
- Increased focus on integration with **industrial partners**

- EC-funded detector initiatives are a **unique forum** to exchange knowhow, unfold synergies and enhance coherence in European detector R&D
- AIDAinnova started on April 1, 2021: **10 M€** of EU contribution, total budget of **24 M€** (4 years)
- Targeted applications in line with **European Strategy** Update
- Future large e^+e^- colliders (FCC-ee, CEPC, ILC), EIC, pre-TDR fixed target experiments
 - Pre-TDR LHC upgrades (ALICE LS3, LHCb LS4)
 - Accelerator-based neutrino experiments (DUNE)
- Increased focus on integration with **industrial partners**
- Very good collaboration with the other INFRA-INNOV projects, LEAPS-INNOV and I.FAST

- EC-funded detector initiatives are a **unique forum** to exchange knowhow, unfold synergies and enhance coherence in European detector R&D
- AIDAinnova started on April 1, 2021: **10 M€** of EU contribution, total budget of **24 M€** (4 years)
- Targeted applications in line with **European Strategy** Update
- Future large e^+e^- colliders (FCC-ee, CEPC, ILC), EIC, pre-TDR fixed target experiments
 - Pre-TDR LHC upgrades (ALICE LS3, LHCb LS4)
 - Accelerator-based neutrino experiments (DUNE)
- Increased focus on integration with **industrial partners**
- Very good collaboration with the other INFRA-INNOV projects, LEAPS-INNOV and I.FAST
 - Had many meetings and organised together 2-3 workshops and events (Lund 2022, Valencia 2023 and Paris 2024)

Backup