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# Measures to integrate Research and Innovation (R&I) in EU projects

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- In recent years HEP has profited from many **EU funded** Research Infrastructures projects, involving Detectors, Electronics, Mechanics, Software, Accelerators and more
- These projects have supported Joint Research Activities (JRA), Networking Activities (NA) and TransNational Access (TNA)



- Several tens of European Academic Institutes have benefited from these projects
- Since a few years we try, harder and harder, to involve more Industries in R&I
- Co-creation and co-development between academia and industry have started in EU projects but should be continued and reinforced to improve the technology transfer

- In 2025 new EU calls (INFRA) for Research Infrastructures have been published and, once more, HEP has been active in submitting proposals
- EU calls tend to change scope and requirements frequently and, so far, we always had to adjust our proposals to the ever changing calls...
  - There might be a change in view in the near future and I will focus on this later
- All the submitted proposals have increased and improved their technology transfer objectives with Industry
- The biggest obstacle to overcome in Academia-Industry relations is the "**lack of communication**"
  - Academic Institutes tend to work only with the few companies they already know
    - Institutes don't know what other companies can offer
    - Companies don't know what Institute needs are

# STRENGTHENING COORDINATION FOR JOINT TECHNOLOGY DEVELOPMENT IN RESEARCH INFRASTRUCTURES



## EC INFRA

## Action Plan

### INFRA-DEV

Strengthening and aligning Europe's diverse research infrastructures into a coherent and sustainable European RI ecosystem

this presentation

### INFRA-EOSC

Enabling a trusted European Open Science Cloud that allows seamless access, sharing and reuse of research data and services across disciplines and borders

### INFRA-SERV

Providing transnational access to world-class facilities and services that support frontier research and address major societal challenges.

### INFRA-TECH

Advancing next-generation scientific instrumentation in co-creation with industry to continuously upgrade RI capabilities and support strategic initiatives.

JRA, NA

### INFRA-NET

Ensuring high-performance and secure network connectivity that seamlessly links researchers, data and computing resources across Europe and beyond



## INFRA-DEV – Action Plan

- is not just a set of calls, but rather the evolution of EU policy and practice to
- systematically build, integrate and future-proof Europe’s research infrastructure landscape, by
  - moving from project-by-project support to a coordinated, strategic EU-level ecosystem approach.

## INFRA-DEV – History

<b>Horizon 2020</b>	Early INFRA-DEV calls supporting design, sustainability and implementation of RI projects; building experience and mechanisms
<b>2021–2022</b>	Start of Horizon Europe: INFRA-DEV is structured as a destination within the new infrastructure programme
<b>2022–2024</b>	First formal INFRA-DEV calls focused on consolidation, concept development and strategic support.
<b>2025</b>	Continued emphasis on landscape consolidation and global leadership.
<b>2026–2027</b>	Expanded and integrated programme supporting lifecycle and synergies across the RI ecosystem.



**HORIZON-INFRA-2025-01-DEV-05**

“Consolidation and evolution of the European Research Infrastructure landscape”

**Coordination and Support Action (CSA) Total Budget 4,5 M€**

Preparatory actions exploring future frameworks for research infrastructures investment plans and funding streams, for integrated and sustained scheme for access and for joint technology development.

**Area 1 “Funding”**



Strengthening research infrastructures investment plans and diversifying funding streams

**Area 2 “Access”**



Preparatory action to explore a more integrated and sustainable scheme for access to research infrastructures

**Area 3 “RI Tech”**



Framework for joint research infrastructure technology developments

**Horizon INFRA-DEV-05**

**Area 2 (TNA)**

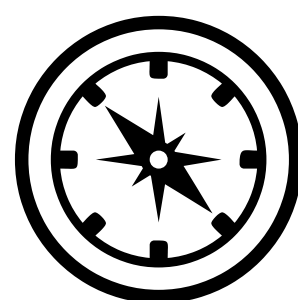
**Area 3 (JRA, NA)**

# COORDINATION INNOVATION

**STRENGTHENING COORDINATION FOR JOINT TECHNOLOGY  
DEVELOPMENT IN RESEARCH INFRASTRUCTURES**



## HORIZON-INFRA-2025-01-DEV-05 Area 3

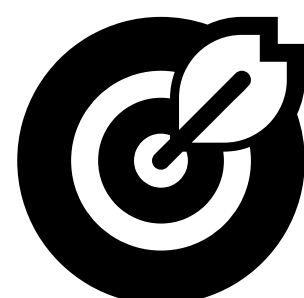


### EC View: Project Background and Motivation

Europe's long-term scientific ambitions depend on world-class, continuously upgraded research infrastructures.

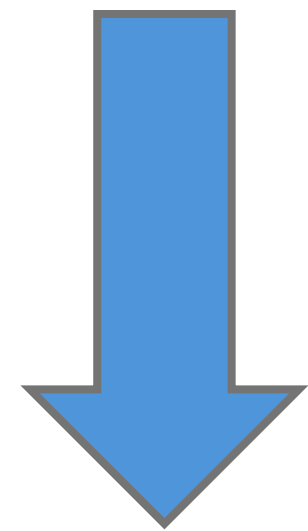
- **Shared technology building blocks** applicable across multiple infrastructures and domains, increase the efficiency and impact of public investments.
- **Standardisation and cross-domain synergies** further enhance efficiency and reduce duplication.
- **Robust innovation ecosystems** for research-infrastructure technologies, involving operators, users, industry and SMEs, based on long-term joint technology planning and implementation.
- **Research-infrastructure technologies** including instrumentation, sample environments, support facilities and software.
- **Broad community buy-in** ensured through active involvement of research infrastructures, users and key industrial players, with mechanisms for wider endorsement beyond the core consortium.

## HORIZON-INFRA-2025-01-DEV-05 Area 3

**EC Expectation: The CSA Project should identify**

- **technology overlaps or building blocks** relevant for multiple domains and infrastructure types.
- **further technology roadmapping needs**, covering both transversal needs and domain-specific needs.
- **standardisation** and interoperability **needs**.
- **possible training and coordination needs**, from technical to management staff.
- **funding mechanisms**, best adapted to the needs of different research infrastructure technology innovation ecosystems.
- **optimal interaction modes** between research infrastructures and industry, including SMEs, depending on the research infrastructure technology innovation ecosystem.

HORIZON-INFRA-2025-01-DEV-05 Area 3



The























Consortium

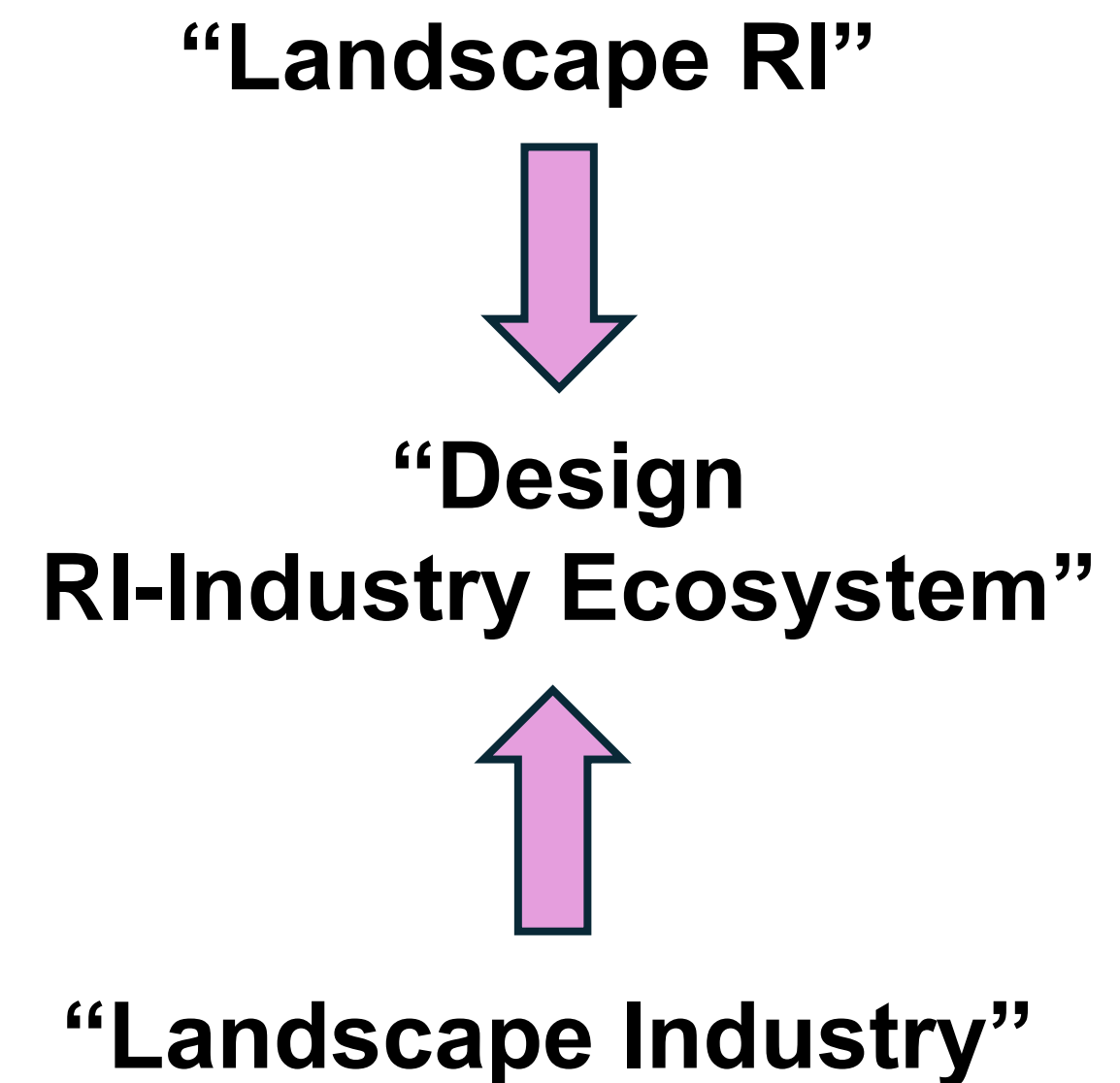
has taken up this challenge.



COORDINA-INNOV Work Packages and Tasks are addressing the Challenges.

Work Package	Task
<b>WP1</b> <span style="float: right;"><b>DESY/CIEMAT</b></span> Overall Management & Coordination Co-Innovation – Training	T1.1. Project Management/ Communication  
	T1.2. Co-Innovation Training  
<b>WP2</b> <span style="float: right;"><b>ILL/EMBL</b></span> Co-Innovation – Technologies	T.2.1. Taxonomy Big Science RI  
	T2.2. Analysis of the role of actors  
	T2.3. Identification of „Technology Domains“  
<b>WP3</b> <span style="float: right;"><b>CIEMAT/DESY</b></span> Co-Innovation – Organisation & Funding	T3.1. Internal Organisation of Communities  
	T3.2. Models for inter-community organisation  
	T3.3. Exploration of Funding Needs and Formats  
<b>WP4</b> <span style="float: right;"><b>NIKHEF/PSI</b></span> Co-Innovation – Market	T4.1. Market Analysis  
	T4.2. Co-Innovation with Industry  

**Consortium Strategy:**



## Workpackage 1 “Overall Management and Coordination”



### Task 1.1

#### Project Management Communication



Coordinate CSA operations, reporting, GDPR-compliant data management, stakeholder communication, workshops, forums, and dissemination to maximize visibility and policy impact.

### Task 1.2

#### Co-Innovation Training

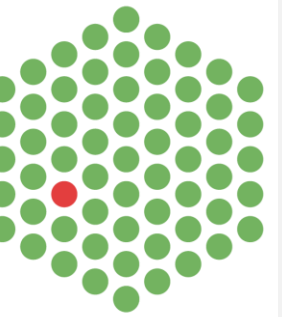


Survey and assess RI and industry training needs, develop coordinated strategy, and deliver recommendations for efficient, impactful training provision.

## Workpackage 2 “Co-Innovation Technologies”



EMBL



### Task 2.1

Taxonomy Technology Development  
at Big Science RI

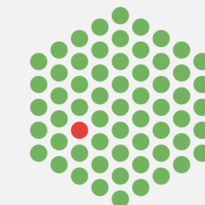


Develop a cross-ESFRI taxonomy of RI technology development, mapping roadmaps, stakeholders, maturity, and synergies to support inter-community coordination.

### Task 2.2

Role of Ecosystem Actors

EMBL



Analyse roles of RI, TI, RTO, academia and industry actors across R&D chains, identifying pushers, pullers, enablers, gaps and opportunities.

### Task 2.3

Identification of Technology  
Domains



Define and test methodologies to identify cross-ESFRI technology domains using matrix and SWOT analyses, enabling synergies, optimal granularity, and industry interaction.

## Workpackage 3 “Co-Innovation Organisation and Funding”

**Ciemat**

Centro de Investigaciones  
Energéticas, Medioambientales  
y Tecnológicas



### Task 3.1

Internal Organisation of Communities

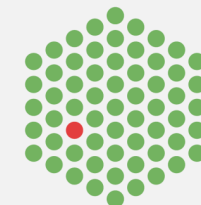


Define internal organization, roadmaps, and R&D&I strategies for technology developer communities across ESFRI domains, enabling coordination and prioritization.

### Task 3.2

Models for inter-community organization

EMBL



Foster inter-RI-community collaboration via networking, digital tools, and legal frameworks, establishing a Coordination Board for strategic engagement.

### Task 3.3

Exploration of Funding Needs and Formats



Analyze and design innovative funding models for next-generation technology development, engaging funders, industry, and policymakers for strategic recommendations.

## Workpackage 4 “Co-Innovation Market”



### Task 4.1

#### Market Approach



Assess RI-relevant technology maturity, identify industrial suppliers and risks, benchmark globally, and evaluate European procurement frameworks.

### Task 4.2

#### Co-Innovation with Industry

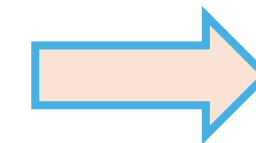


Establish Industry Board, survey companies, and develop improved, standardized RI-industry collaboration modes for European co-innovation and its best-practice implementation.

**Conferences and Workshops**

Amsterdam – Brussels – Grenoble - Hamburg

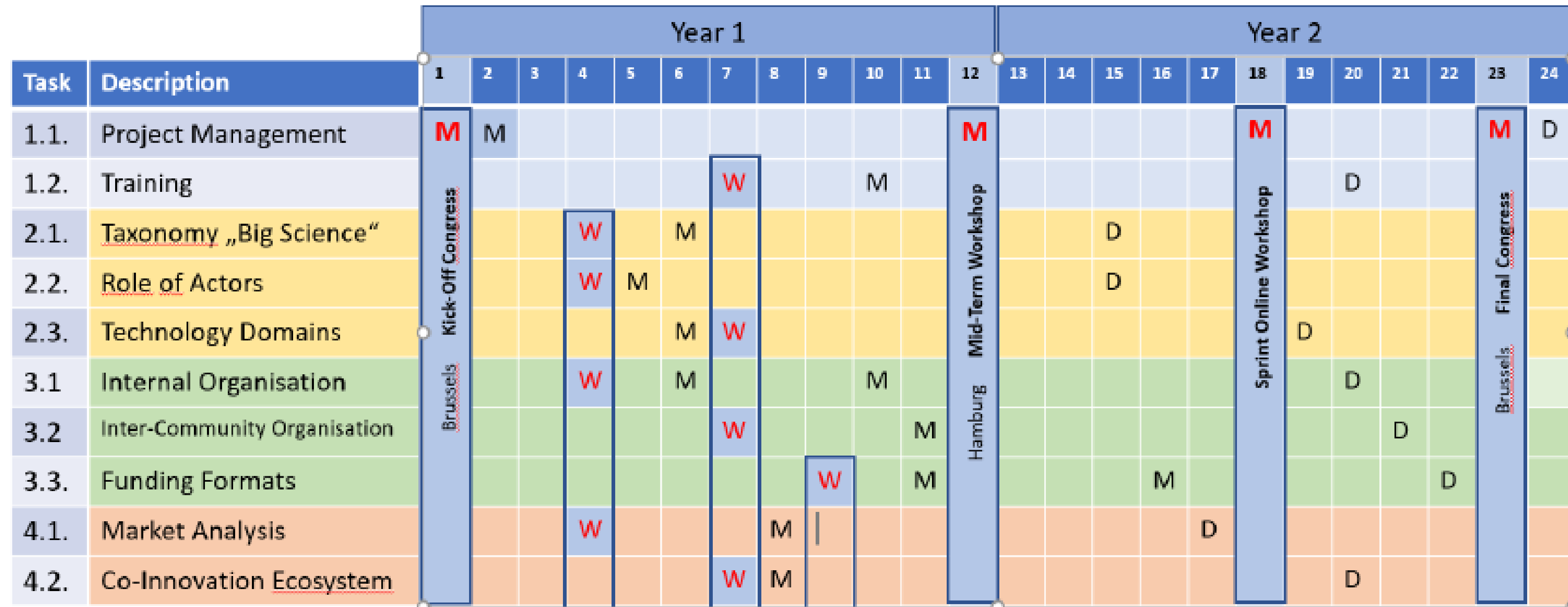
<p><b>Thematic Workshop 1</b> “Landscape Analysis of the Future Co-Innovation Ecosystem (SO-1)” WP 2, T2.1, T2.2, T3.1, T4.1 <b>Grenoble, M4</b></p>	<p><b>Taxonomy of Big Science RI “Science to Tech”</b> Analysis of the role of actors Market and landscape analysis Organisation of communities</p>
<p><b>Thematic Workshop 2</b> “Design of Coordination Formats for the Future Co-Innovation Ecosystem (SO-2)” WP 4, T2.3, T3.2, T4.2, T1.2 <b>Amsterdam, M7</b></p>	<p><b>Governance and coordination models</b> Models for inter-community organisation Identification of technology domains Co-innovation with industry Training aspects for co-innovation</p>
<p><b>Thematic Workshop 3</b> “Funding Formats for the Future Co-Innovation Ecosystem (SO-3)” WP 3, T3.3 <b>Brussels, M9</b></p>	<p><b>Analysis of funding needs</b> Exploration of funding models (EU, national, private) and Cooperation opportunities with industry &amp; SMEs</p>



<b>Name of Workshop org. by WP Venue, Month, duration duration</b>	<b>Topics adressed</b>
<p><b>Kick-off Conference</b> „COORDINA-INNOV Launch“ WP 1 <b>Brussels, M1</b></p>	<p><b>Official project launch</b> Mandating of work packages Engagement and support from industry &amp; EU</p>
<b>Thematic Workshops</b>	
<p><b>Midterm Workshop</b> „COORDINA-INNOV First recommendations“ WP 1 <b>Hamburg, M12</b></p>	<p><b>Review of interim results of all WPs</b> Consistency check and identification of gaps Planning for year 2: integration of recommendations</p>
<p><b>Final Congress</b> „COORDINA-INNOV The Co-Innovation Ecosystem“ WP 1 <b>Brussels, M23</b></p>	<p><b>Presentation of project results</b> Roundtable with EU, national funding agencies, industry, SMEs, RIs, technology communities</p>

# Gantt Chart

COORDINA-INNOV  
a 24 months effort !



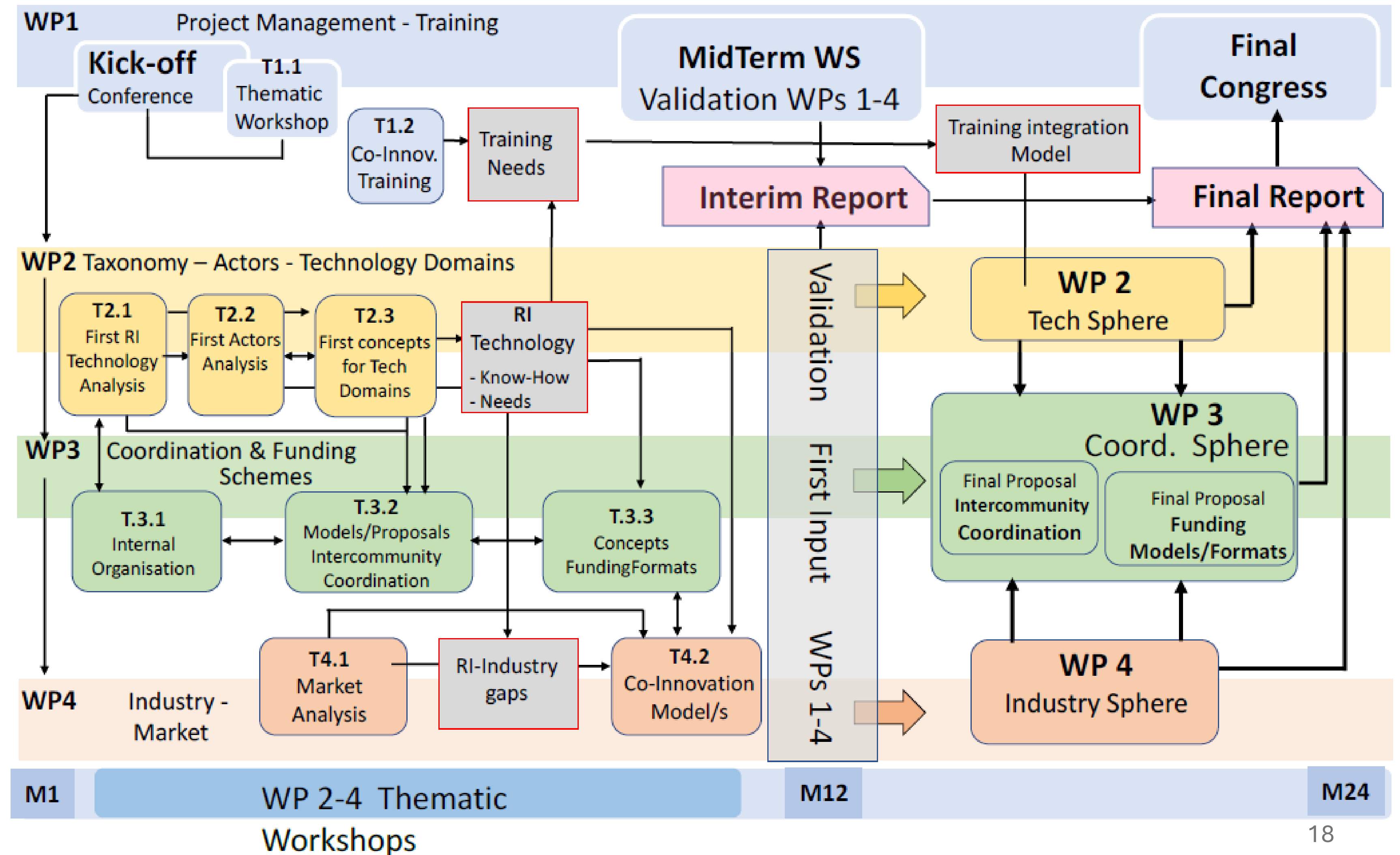
**Thematic COORDINA-INNOV Workshops**

- 1 „Landscape Analysis of the Future Co-Innovation Ecosystem“, Grenoble
- 2 „Designing the Governance of the Ecosystem“, NN
- 3 „Funding Formats of the Future Co-Innovation Ecosystem“, Brussels

“Forging the whole from its parts”

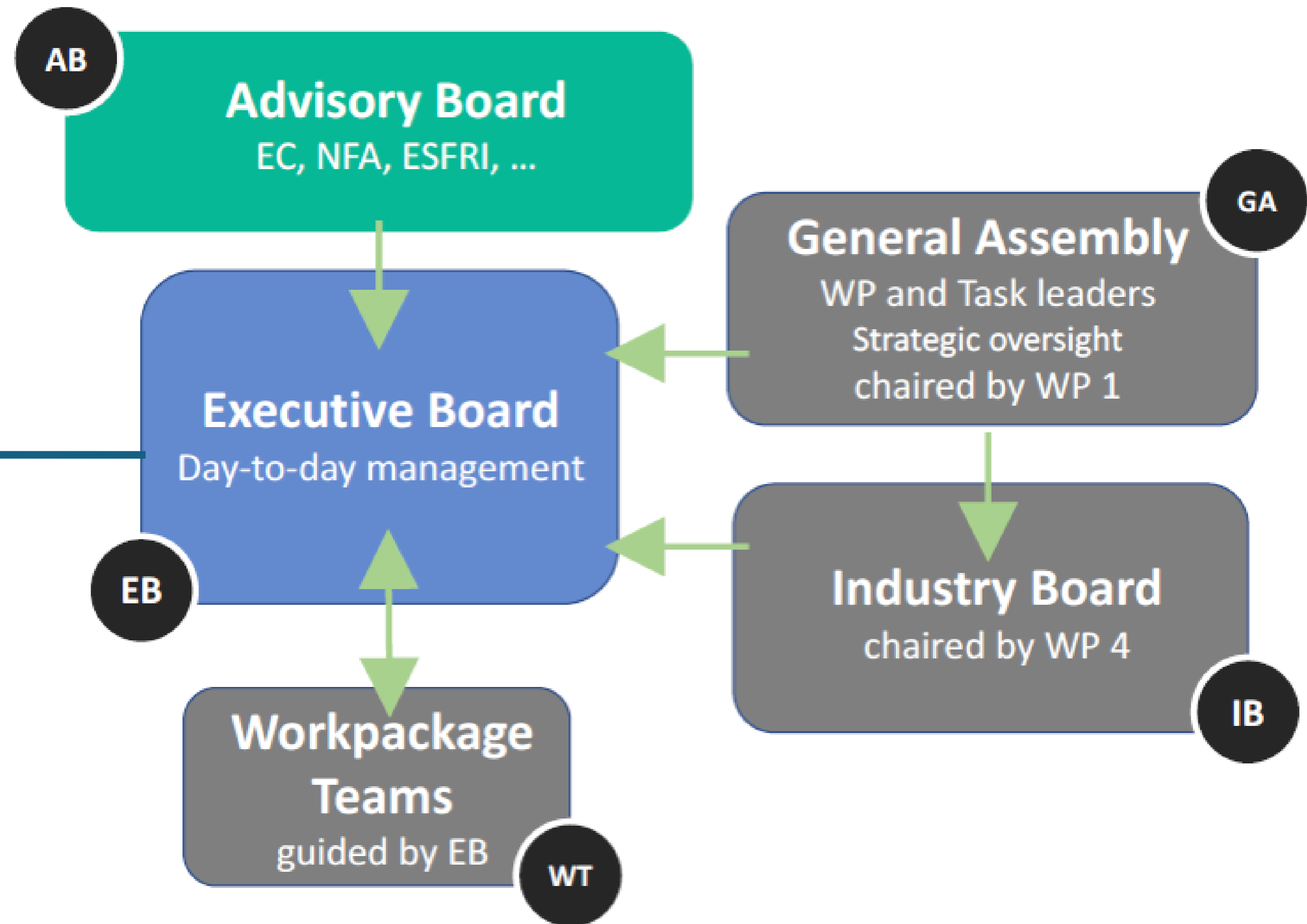
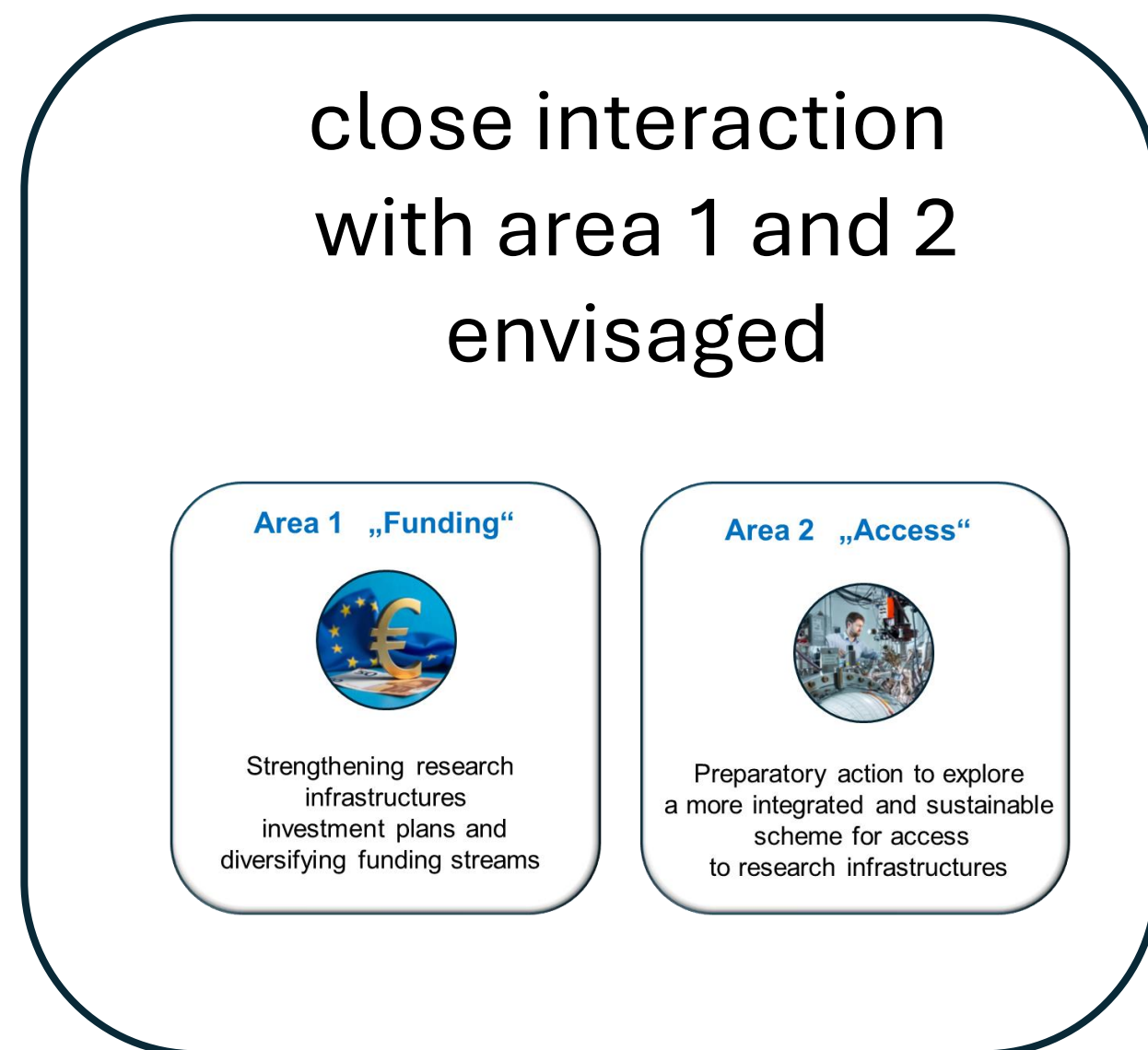
**STRENGTHENING COORDINATION FOR JOINT TECHNOLOGY  
DEVELOPMENT IN RESEARCH INFRASTRUCTURES**

A look on the  
**Interdependences  
of  
Workpackages  
and Tasks**



**STRENGTHENING COORDINATION FOR JOINT TECHNOLOGY  
DEVELOPMENT IN RESEARCH INFRASTRUCTURES**

**Lean  
Organisation**



## Vision

**Europe's Research Infrastructures are global leaders in science and technology.**

- They drive innovation through in-house R&D, high-tech collaborations, and cross-border signature research projects.
- Pilot projects (**LEAPS-INNOV, AIDAinnova, I.FAST**) demonstrate that collaboration across RIs and with industry pools expertise and fosters new companies.

### **COORDINA-INNOV Goal**

Long-term, coordinated EU-level technology development with sustainable co-innovation partnerships.

#### **Benefits**

- Maintaining leadership of European research infrastructures
- Strengthened Europe's technological sovereignty
- More effective translation of RIs into industry and SME competitiveness
- Creation of robust, cross-cutting innovation ecosystems

### **COORDINA-INNOV Core Message**

“Europe secures its leadership in research through sustainable joint technology development and close co-innovation with industry.”

- HEP projects and experiments need ever more complex and sophisticated sensors, detectors, electronics, mechanics and services
  - These cannot be developed only by academic institutes as it was often done in the past
  - R&I performed in close connection through the complete cycle of creation, development, engineering and production (maybe also installation) is the perfect technology transfer
  - EU calls are favouring this process
  - Co-development with Industry is essential
  - New INFRA-DEV calls have been issued in 2025 to give voice to our needs and requirements and produce the suggested guidelines for the future Research Infrastructure calls in EU Framework Programme 10
    - **The aim is to obtain future EU calls that follow our needs and technology roadmaps**