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ERA-LEARN Networking Event 2026

Bridging European Partnerships:

Connecting, Sharing, Growing

Tech Gate | Vienna

18 Nov. 2026

Parallel Workshops

A2: From Results to Deployment

Moving research results towards exploitation, deployment, scaling and long-term value

Welcome and Introduction

- The goals of the workshop will be to discuss:
  - specific approaches to deployment drawing on certain sectors air traffic management and aviation, energy, ocean and health.
  - the integration and/or use of certain instruments (innovation programmes, support mechanisms, EU-level roadmaps, EU Innovation Platform) to accelerate the translation of funded project results and the scaling of promising solutions.

- Set up: an introductory presentation by ERA-LEARN followed by partnership pitches and then open discussion split in two parts – a break in between and some Slido polls!

- Everybody is welcome to contribute to the session verbally !

ERA-LEARN Presentation

- From impact assessment to pathways to impact in selected sectors| **Dimitri Gagliardi, University of Manchester, ERA-LEARN**

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WS A2
From Inpact Assessment to Pathways to Impact

Dimitri Gagliardi

Manchester Institute of Innovation Research

AMBS – The University of Manchester

18/11/26

ERA LEARN

From Impact Assessment to Pathways to Impact

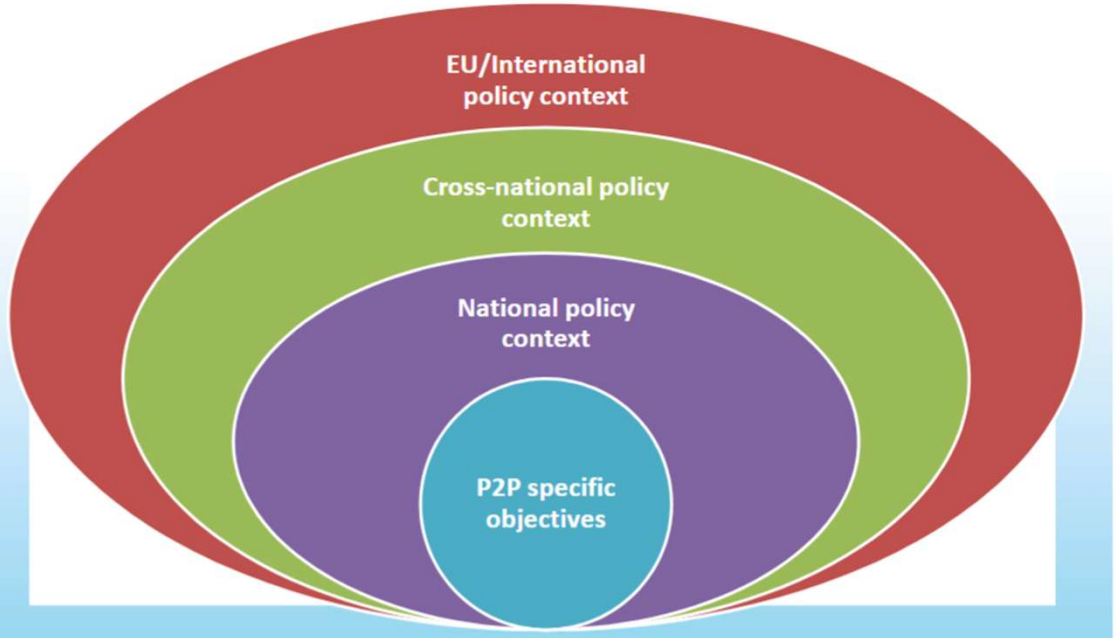
ERA LEARN has been investigating the Impact of Partnerships since inception at different levels and with different priorities.

Centralised Impact Assessment of EU Co-Funded Projects

Angus Hunter
Annual Joint Programming Conference 2016
22 November 2016 (Session 2)

By the middle of 2015, around 4500 transnational projects had been funded by the P2P networks' representing a combined investment of some Euro 5 billion. The 2016 ERA-LEARN Annual Report indicates that the volume has now increased to over 5000 projects. But what is the impact of this huge investment? The simple answer is that no one knows but the question is becoming increasingly important to the future sustainability of both national and EU funding for P2P actions

Challenges and objectives of P2Ps



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From Impact Assessment to Pathways to Impact

Deliverable D 3.2

Policy Brief on impact assessment of networks – 2015

Due date of deliverable: (M8)

Actual submission date: (M10)

Dissemination Level: PU

Organisation name of lead contractor for this deliverable: The University of Manchester (UNIMAN), United Kingdom

Deliverable D 3.5

Updated report on the impact of networks

Due date of deliverable: (M22)

Actual submission date: (M23)

Dissemination Level: PU

Organisation name of lead contractor for this deliverable: The University of Manchester (UNIMAN), United Kingdom

Key authors: Effie Amanatidou, Dimitri Gagliardi, Chiara Marzocchi

Surveys and logic diagrams



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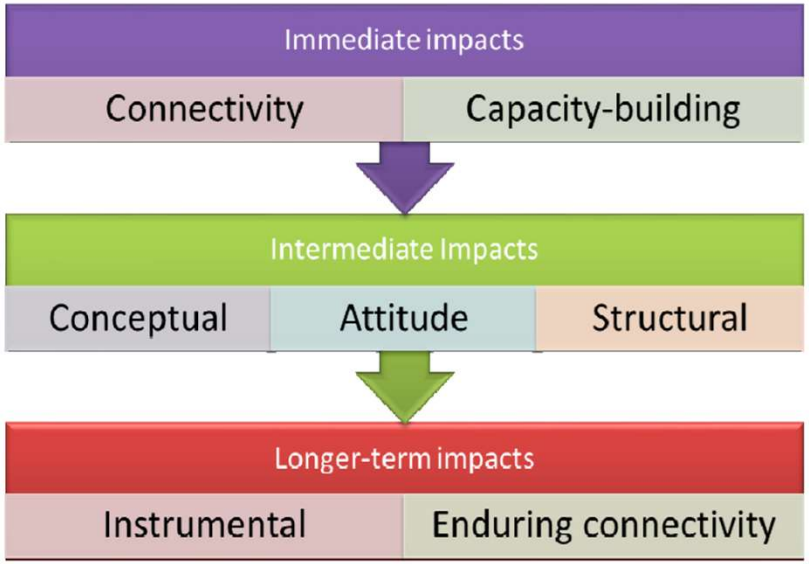
From Impact Assessment to Pathways to Impact

Figure 1: Perceived framework of reported JPI impacts



Impact generation

- Strengthening international collaboration among research communities
- Capacity building
- *science and technology capacities and skills*
- *international project management*
- *increased quality of research projects*
- Adopting interdisciplinary approaches in research
- Increasing awareness and visibility of specific research topics

Systemic effects

- Interdependence across certain types of impacts
- Achieving a critical mass of resources
- Durable cooperation among countries

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From Impact Assessment to Pathways to Impact



In "Impacts from three bioeconomy Partnerships" (2020)

Methods

Methodology (Mixed methods)

Findings (Output-Outcome-Impact)

- Multivariate analysis
  - **Survey** (N=88)
  - CORE Organic, ICT-AGRI, SUSFOOD
- **Interviews**
  - Motivation for participation
  - Expectation and Impact
  - Challenges

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From Impact Assessment to Pathways to Impact

In "Impacts from three bioeconomy Partnerships" (2020)

"*the nature of the networks themselves gave the perfect opportunity to engage in* ***interdisciplinary research*** *…*

output-oriented approach and the involvement of stakeholders *from industry and end-users improved both the research produced and the chance to achieve the expected results…*

At the same time:

"***impact beyond the boundaries of the organisation*** *is certainly achieved by transnational projects to a significant extent.*

Nonetheless, participants and interviewees perceive such ***impact mostly linked to network-based factors*** *such as project management and access to transnational resources,* ***rather than linked to broader factors*** *(e.g.: creation of innovative products/services, job creation or increased productivity).*"

Economics and Social Impact resides with End-users' involvement

But links with end-users are not always institutionalised

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From Impact Assessment to Pathways to Impact

From Traditional Approaches to a Systemic View

- **Policy brief on impacts from three bio-economy Partnerships**
- **A new ERA for Research and Innovation** - COM(2020) 628 final (30/09/2020),
- European Commission, DG for Research and Innovation: Research & innovation valorisation channels and tools : **boosting the transformation of knowledge into new sustainable solutions, Publications Office, 2020,**
- COUNCIL RECOMMENDATION on the **guiding principles for knowledge valorisation** COM(2022) 391 final

Research question:

- **How partnerships and their projects translate research into innovation?**
- The focus is on partnerships and their projects
- Dig deeper in understanding how partnerships and their projects bridge the research activities to progress towards innovation (bridge over the valley of death)
- Use a systemic approach to investigate ‘bridging’ activities (more in the methodology section)
- **What lessons can be learnt for policy?**

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From Impact Assessment to Pathways to Impact

Method development and application

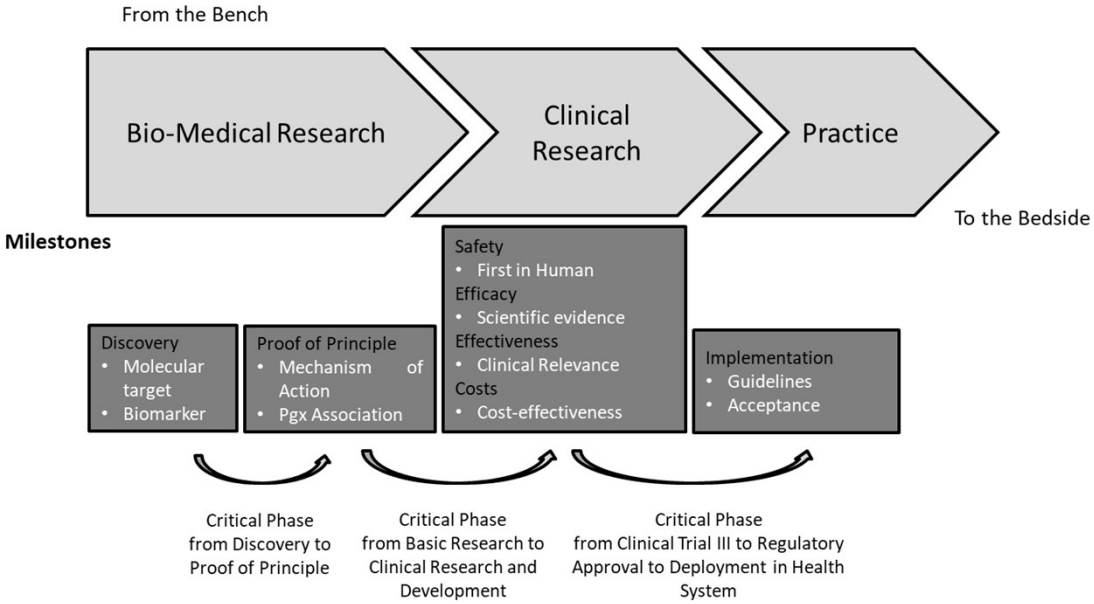
Moving beyond the ideas that:

Innovation is often seen as a progression:

knowledge is generated -> new technologies are devised and tested -> applied in a business or social setting.

Moving from one phase to the next means crossing the “valley of death” the critical phase requiring relevant investments, different capabilities and re-direction of objectives. (Frank et al, 1996; Hudson & Khazragui, 2013; Seyhan, 2019)

We used this framework because it resonates with our interviewees and provides a familiar map for discussion where informant can then articulate the complexities and links between their tasks and activities.



We focus on health-related European Partnerships where health R&I can be viewed as a process of cumulative and distributed learning spanning different communities (Metcalfe et al 2005; Consoli and Mina, 2009; Molas-Gallart et al, 2016; Calza et al, 2020).

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From Impact Assessment to Pathways to Impact

In "Translating Research into Innovation" (2023)

Areas of investigation:

- 1) Objectives and rationale;
- 2) Collaborations;
- 3) Infrastructure;
- 4) Specialist/Technical Knowledge;
- 5) Training and Capacity Building;
- 6) Market and Final Users;
- 7) Measures and factors of success
- 8) Challenges



Partnerships can build active and sustainable ecosystems within their areas of expertise

This facilitate wider uptake of scientific knowledge **AND** provide a platform for the development of new experimental methodologies and evidence-based advancement of transnational health policy.

Partnerships can be active policy partners and the governance and decision-making processes affect the R&I translational capabilities of the Union

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From Impact Assessment to Pathways to Impact

The impact-related observations are sector-specific

BUT

Impact issues are closely linked to competitiveness -> policy and policy priorities

Catch up competitors: Competitors (China/US) are operating 3–5x faster in some strategic sectors - clinical trials and aircraft production

Market issues: A lack of scale-up capital in the EU which causes companies to “fund-shopping” outside of Europe

Role of Regulation: Partnerships as active players both in proposing/advancing regulation and … of course, abide by them



There is a shift in understanding impact:

- Impact is no longer an "afterthought" or a final report; it is an inherent feature of partnership architecture.
- Beyond Technology: Shifting focus from Technology Readiness Levels (TRL) to Certification Readiness (CRL) and Market Deployment.
- The "Usage" Mandate: Results have to be adopted by the economy. Partnerships must provide "readiness building" not just capital.

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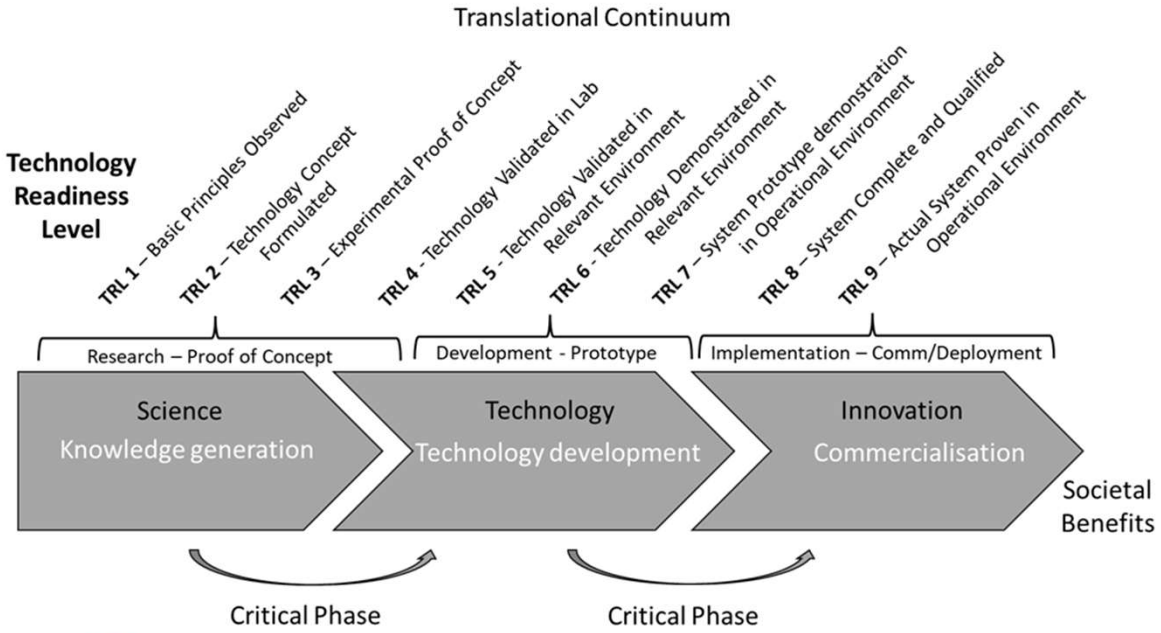
From Impact Assessment to Pathways to Impact

For the current IA, focus on critical tech area (Hydrogen) Re(de)fine STI in TRL – look at regional dimension

Method adaptation and its application



Focus on:

1) Research translation into innovation and impact pathways of the Clean Hydrogen JU
2) The regional dimension of Clean Hydrogen JU in fostering the hydrogen economy

Areas of investigation:

- 1) Objectives and rationale;
- 2) Collaborations;
- 3) Infrastructure;
- 4) Specialist/Technical Knowledge;
- 5) Training and Capacity Building;
- 6) Market and Final Users;
- 7) Measures and factors of success
- 8) Challenges

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From Impact Assessment to Pathways to Impact



1) Projects level Findings General & Technical	2) Policy & Governance Findings
Non-linear progression: Scaling is not a smooth climb up TRLs; **Micro-to-meso transition**: Shifts from lab-scale fundamental physics (TRL 2–3) to pilot/platform testing (TRL 4–6) expose structural disconnects. **High-TRL** environments introduce harsh physical variables absent in simulations (e.g., salt-air particulate degradation in maritime fuel cells; water-vapor corrosion and refractory lining cracks in hydrogen-retrofitted furnaces).	The Partnership framework bridge early research to operational demonstrations (TRL 2 to 7/8), but traditional linear TRL metrics fail to capture real-world friction. **Complementary assets** are very important (skills, infrastructure, links to markets) Ad-Hoc approaches are necessary
Project vs. market decoupling: Consortia achieve/exceed protected contractual TRL targets, yet mature technologies remain stranded at a commercial standstill.	**Demand-side policy**: Subsidising R&D and pilot demonstrations is insufficient if broader market conditions (power prices, infrastructure readiness, corporate risk aversion) are not actively de-risked. **… A ROLE FOR THE REGIONAL ECONOMIES**

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Thank you!

Dimitri.gagliardi@manchester.ac.uk

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Speakers



- Dr. María Cristina Nieto García. Head of the International Research Programmes Unit in the National Institute of Health Carlos III (ISCIII). Coordinator of ERA4Health European Partnership



- Beatriz Rubio, Project Manager at ISCIII, supporting the coordination and implementation of ERA4Health.



- Steinar Grynning. Special advisor in the Research Council of Norway, in charge of the Brussels office and stakeholder relations for the Sustainable Blue Economy Partnership.

Partnership pitches

- ERA4HEALTH: Mentoring programmes for health research and innovation, Cristina Nieto, Beatriz Rubio.
- SBEP: Training for funded projects with commercialization potential. The role of corporate data sharing in the OceanEye as enabler for competitiveness, Steinar Grynning.

Session A2: From Results to Deployment: Moving research results towards exploitation, deployment, scaling and long-term value

ERA4Health mentoring programmes for health research innovation



Cristina Nieto & Beatriz Rubio
(ERA4Health Coordination Unit)

ERA-LEARN meeting Nov 18th 2026, Viena

INSTITUTE OF HEALTH CARLOS III (ISCIII)

ERA4Health Partnership

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ERA4Health partnership (2022-2034)

- **ERA4Health: EU co-funded partnership** that fosters European collaborative research funding by joint programming in priority areas addressing European Public Health Needs.
- **47 Partners from 27 countries** (Funding organisations, European Infrastructures, Health Ministries, public and non-for-profit private entities)
- Coordinated by the **Institute of Health Carlos III**
- **SRIA:** cardiovascular diseases, prevention & public health, nanotechnologies, nutrition and lifestyle- related diseases and multi-country Investigator-Initiated Clinical Studies



Further information: https://era4health.eu/

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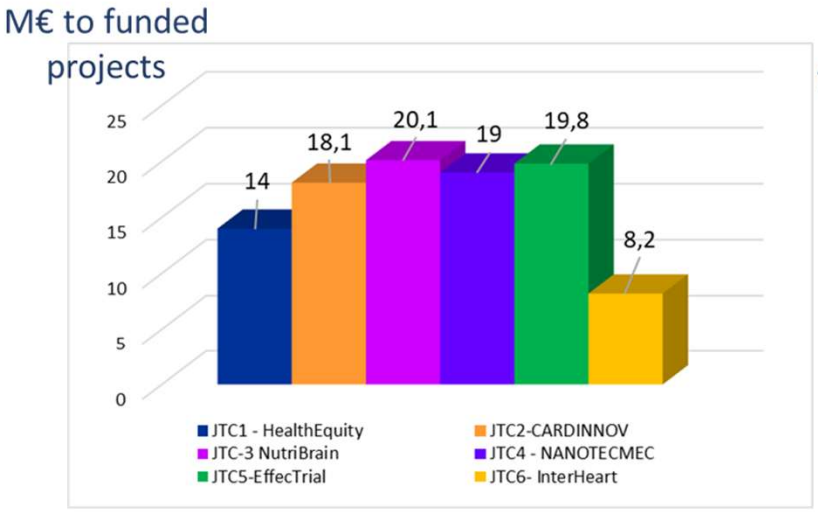
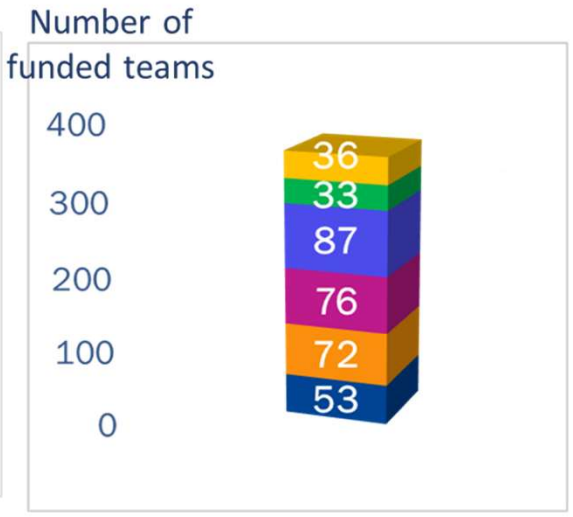
ERA4Health Funding results

2023	✓ **JTC1 - HealthEquity**: *"Increasing health equity through promoting healthy diets and physical activity"* ✓ **JTC2 - CARDINNOV**: *"Research targeting development of innovative therapeutic strategies in cardiovascular disease"*
2024	✓ **JTC3 - NutriBrain**: *"Modulation of Brain Ageing through Nutrition and Healthy Lifestyle"* ✓ **JTC4 - NANOTECMEC**: *"Nano and advanced technologies for disease prevention, diagnostic and therapy"*
2025	✓ **JTC5 - EffecTrial**: *"Fostering Pragmatic Comparative-Effectiveness Trials in Non-communicable Diseases"* ✓ **JTC6 - InterHeart**: *"Understanding the interactions between cardiovascular diseases and comorbidities and/or their therapeutic treatments"*





A total of 99,2 M€ distributed to 357 research teams in 76 co-funded projects

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PROGRAMME 1:
The HealthTech Translation Advisory Board

Healthtech TAB
Healthtech Translation Advisory Board

By ETPN

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What is the HealthTech TAB? Translation Advisory Board

- A custom mentoring service for **selected HealthTech innovators** in Europe.
- Driven by a **core team of industry experts & entrepreneurs** with a broad range of complementary backgrounds & skills.
- Which has **delivered proven value** for 8+ years

Why is it unique? The HealthTech TAB has built a unique culture of mentoring

- Peer-selection/ Advice by a **complementary team** of experts
- Strong experience **of custom mentoring** and long-term partnership
- Continuos improvement of the methodology
- Focus on Key Emerging Medical Technologies **for Unmet clinical needs**
- **Granted feedback** for beneficiaries
- **Open to all** innovators: academia, start-up, SMEs, industry, clinicians

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HealthTech TAB

Make innovators ask themselves the right questions!

«Are we addressing real unmet clinical needs?»

«Did we choose the best application for our technology?»

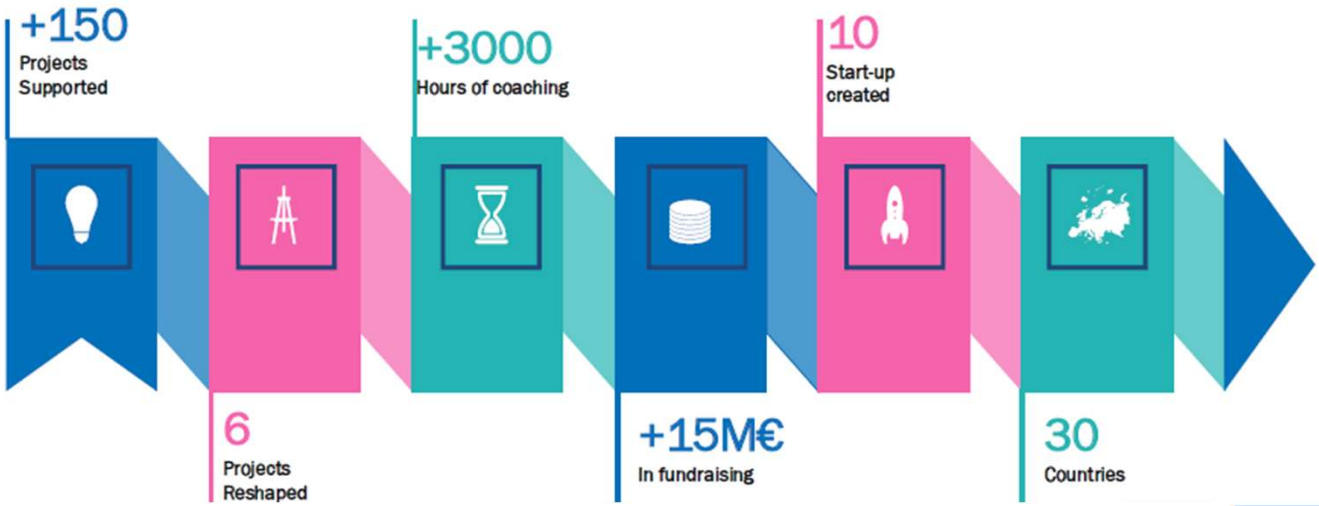
«Is there a market to commercialise this application?»

«Do I have full freedom to operate on the patents?»

«Have we anticipated regulatory requirements in our design?»

«Who are my real competitors?» , «Is my team prepared for these challenges?»

Proven value



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The HealthTech TAB for ERA4Health

Flexible and inclusive mentoring model, adaptable to a **wide range of health technologies.**

Proven track record and aligned with **ERA4Health's goals**

TAB-1

FIRST SCREENING « TRIAGE SESSION »

- Short intake: **live review by 2 complementary experts**
- **Immediate feedback** + prioritized next steps
- **=>Gate:** Go/No-Go to TAB-2 based on fit & readiness

TAB-2

DEFINING A CLEAR ROADMAP

- Targeted discussion (science, pre/clinical, IP, market, manufacturability)
- **2h workshop** with PI& document review & WP leads and 2 complementary experts
- **=> Risk register + roadmap** (owners, milestones, KPIs)

TAB-3

BUILDING A LONG TERM PARTNERSHIP

- **Check-ins** to de-risk critical paths (regulatory/clinical, CMC, IP/BD, funding)
- **Exploitation plan** + referral map to EU infrastructures & partners
- **=> Outcome:** Ready for clinical/regulatory steps and/or follow-on funding

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First TAB sessions pilot within ERA4Health

Pilot implementation (CARDINNOV)

- First HealthTech TAB pilot integrated into ERA4Health
- Cardiovascular innovation projects at mid-term milestone (**mid-term meeting** - Paris, Oct 2025)
- 6 projects reviewed through mini-TAB mentoring sessions
- 2 experts per project and confidential strategic discussions

Key lessons learned

- **High portfolio diversity** (devices, diagnostics, biomarkers, digital tools, therapeutics) -> different innovation pathways require different support approaches.
- **Early translational decisions matter** → key choices can strongly influence future impact and market uptake.
- **No one-size-fits-all mentoring** → support should be tailored to the maturity and needs of each project.



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PROGRAMME 2:
EATRIS Mentoring Service



eatris

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WP 19 - Enhancing ERA4Health ecosystems

EATRIS Mentoring Programme for ERA4Health JTC full proposal applicants

(Lead: EATRIS)

MENTORING CALLS

Provided to shortlisted proposals preparing for Phase 2 JTCs

INNOVATION MANAGEMENT TOOLBOX

Access to EATRIS resources and practical tools

TRAINING SESSIONS

Targeted support to strengthen translation and innovation

Mentoring Timelines – JTC 2026 Application & Mentoring



It allows researchers to receive expert advice at a critical moment, to improve the design, strategy and translational aspects of their proposals

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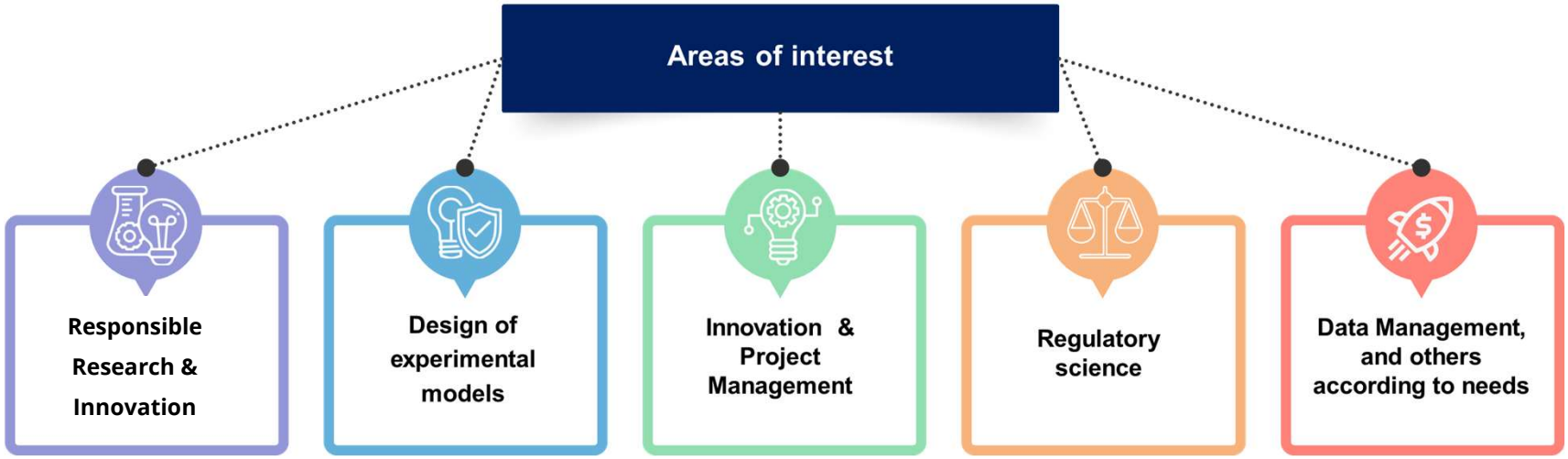
Execution of the Mentoring service

- **To Whom:** Shortlisted JTC's proposals
- **When:** During 1st stage to prepare the final proposal
- **Format:** Webinar and 1-on1 meetings with expert mentors who provide advise on specific areas
- **Cost:** Free of charge, full confidentiality (signed Letter of engagement/CDA)



Mentoring organization

EXAMPLE: JTC 2026 call_ Understanding and Preventing Overweight and Obesity (prevent-OO)

Kick-off webinar	Mentoring request form	Onboarding call	Open discussion	Follow-up
provide general guidance to all shortlisted applicants. Covers common challenges; no confidential information shared	Captures essential project information and supports triaging **(researchers outline their needs and goals)**	**Individual meeting**: PI presents the project (5–7 slides) and reviewers' feedback + LOQ	General guidance on RRI, translational feasibility, stakeholder engagement, project and data management, intellectual property (IP), and other aspects specific to the call topic	Useful resources and meeting minutes shared; additional expert meeting or email follow-up if needed

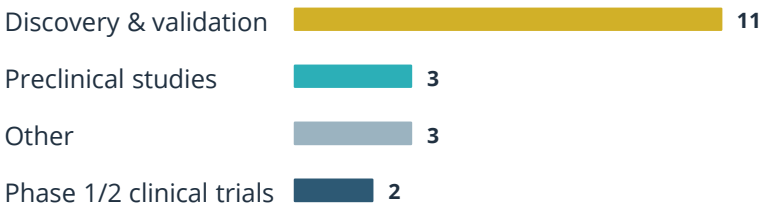
Tracking projects and collecting metrics

Mentoring programme JTC 2026

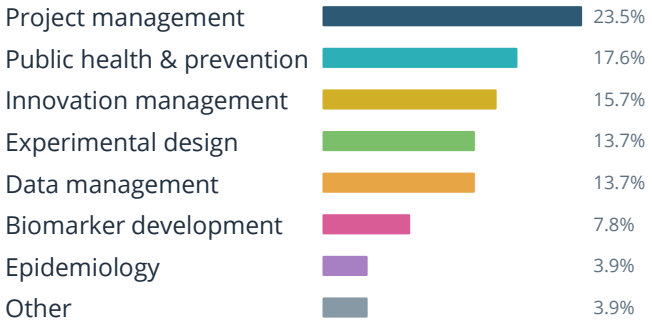
19 Projects

288 Mentoring Hours

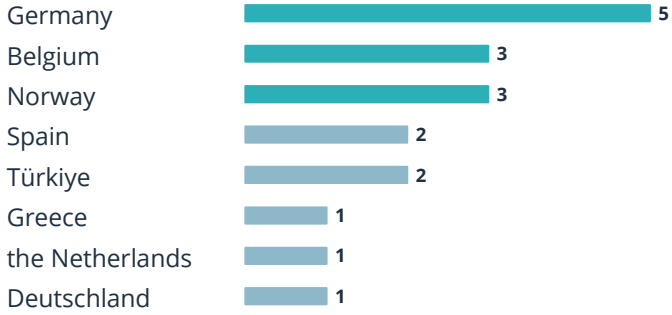
Development stage



Supported areas



Country of the coordinating institution



Good Overview of the projects supported, the type of guidance provided and the main areas

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Feedback on the mentoring provided

Attended the mentoring webinar



Was it helpful?



Requested individual mentoring?



"The **comments** and suggestions during mentoring meeting are very **useful** and insightful."

"The experts had read the project in details and all of them brought very useful comments and suggestions, that have been implemented in the new version of the project"

"Very nice atmosphere and good advice, allowed us to focus on the areas that needed improvement"

"The team was very helpful trying to find the weak part in our proposal and give us a lot of **advices** in how to improve it"

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Thank you

Cristina Nieto & Beatriz Rubio

Trials4Health

Triasl4health@isciii.es

Institute of Health Carlos III (ISCIII) - Spain

ERA4Health Partnership

Co-funded by the European Union

Sustainable Blue Economy Partnership

Partnership in a Changing World



Co-funded Partnership (Horizon Europe)
EUR 450m

5 Targeted Sea-basins



Open discussion

Speakers



- Àngels Orduña, A.SPIRE Executive Director, representing the private side in the Processes4Planet Public Private Partnership.



- Gauthier Grousset, Planning & Reporting Officer at the SESAR 3 Joint Undertaking, the European partnership driving research and innovation to make Europe the most efficient and environmentally friendly sky to fly in the world.



- Bruno Mastantuono, Head of the Governance Unit of the Clean Aviation Joint Undertaking, the largest European programme for Aviation R&I.

Partnership pitches

- Processes4Planet: The commercially viable electrification of industrial processes, integrating renewable and other low-carbon energy sources, Àngels Orduña.
- SESAR3 JU: From research to deployment: managing the full ATM innovation journey, Gauthier Grousset.
- Clean Aviation JU: Integrated EU-level roadmap and leverage effect of public investment, Bruno Mastantuono.

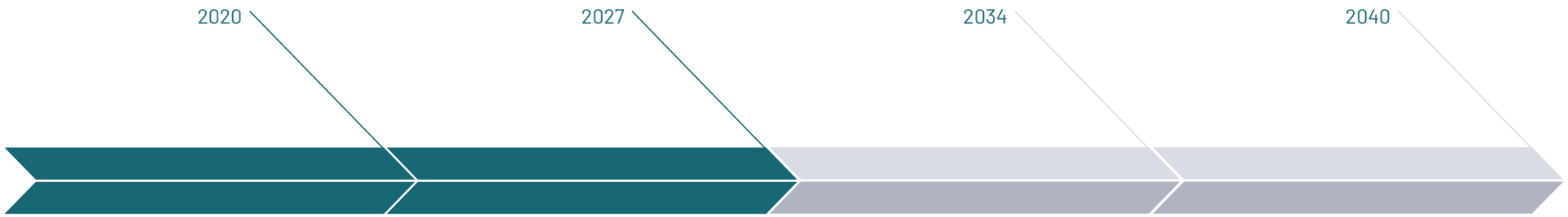
Processes4Planet: from Innovation to Deployment
The pathway of commercially viable electrification of industrial processes

ERA-LEARN Networking Event 2026 - Bridging European Partnerships: Connecting, Sharing Growing

Session A2: From Results to Deployment

Vienna, 18 November 2026

Paving the way for industrial transformation



SPIRE PPP Roadmap 2030

Cross-sector R&I for energy and resources efficiency

Processes4Planet SRIA 2050

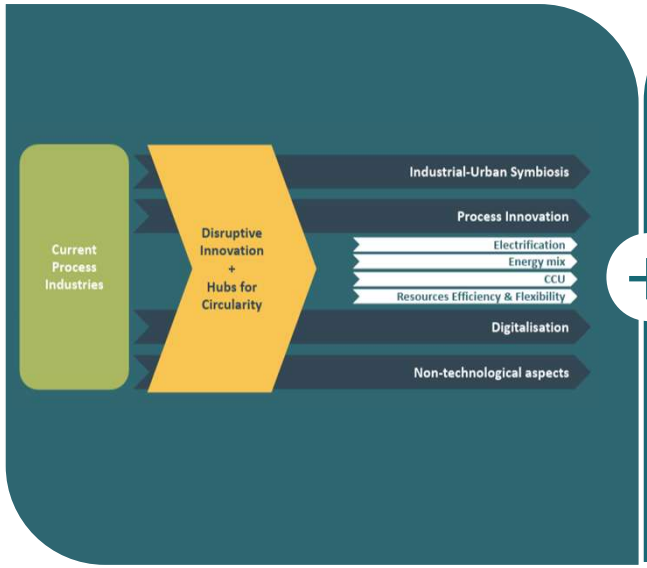
Systemic perspective through cross-sector innovation for climate neutral, circular,and competitive EIIs

EIIs Partnership ⟷ **Innovation4Competitiveness Vision & SRIDA 2040**

Innovation-driven, competitive net-zero & circular solutions scaled & deployed in Europe, anchoring value chains

Global industrial competitiveness
Strategic autonomy of European value chains
Innovation-driven sustainability

PROCESSES4PLANET pathways to climate neutrality, circularity and competitiveness



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Progress up until milestone year[1]

Innovation area	2024	2030	2040	2050
Renewable energy integration				
Heat reuse				
Electrification of thermal processes				
Electrically-driven processes				
Hydrogen integration				
CO_2 capture for utilisation				
CO_2 utilisation in minerals				
CO_2 & CO utilisation in chemicals and fuels				
Energy and resource efficiency				
Circularity of materials				
Industrial-Urban symbiosis				
Circular regions				
Digitalisation				
Non-technological aspects				

[1] Progress is depicted here as % of total TRL9 projects programmed in each area, and for circular regions, digitalisation, and non-technological aspects % of total investment needs until 2050

+

Integrating innovations at TRL 8-9

- **First-of-a-kind (FOAK) Large scale plants in operation,**
- **or FOAK units within existing plants:**

- Combine one or several P4Planet Innovations
- Acting as Hubs of bulk amounts of resources from industry and the municipalities
- Key for breakthrough decarbonization solutions

RESEARCH
Develop & combine new solutions

PILOT
Validate performance and integration

INDUSTRIAL DEMO
Operate in real industrial conditions

FOAK
Derisk large scale replication

DEPLOYMENT
Scale across plant, regions, and value chains

Demonstrating Impact through FOAKs – some examples

Sector	Description	Demo timing	Large-scale budget	Large-scale timing
Refining	**Electric heaters (small-medium)**	2023-2025	**M€ 30**	**2025-2030**
Chemicals	**Electrified Cracking**	2023-2027	**M€ 200-300**	**2027-2031**
Aluminium	**Enabling the use of renewable electricity**	2020-2025	**M€ 50+**	**2025-2030**
Ceramics	**Renewable electricity for drying process**	2030-2050	**tbc**	**2030-2050**
Steel	**Alternative high-power heating**	2021-2025	**M€ 2x270-320**	**2024-2030**
…	…	…	…	…

~100 FOAKS

Identified in P4Planet SRIA 2050

TRL7

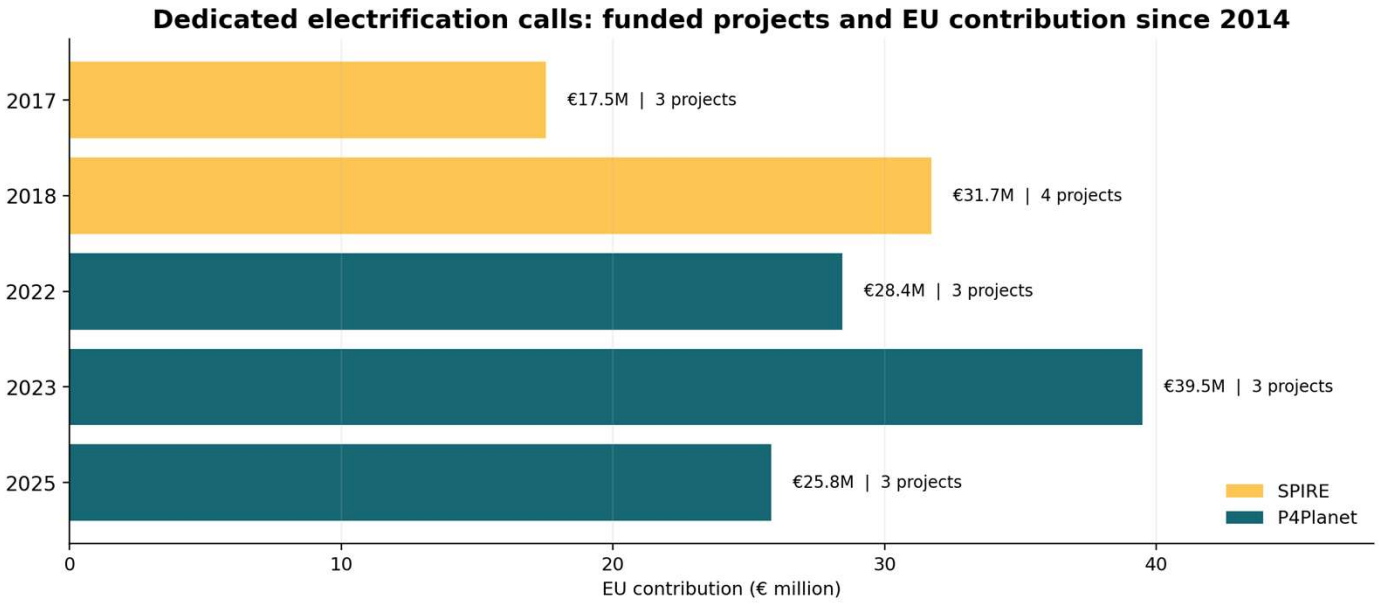
Innovations need to reach TRL7 in time to realise large-scale units

€800 billion

Estimated as needed for deployment investments in EIIs

What SPIRE / P4Planet is already doing on electrification

How the energy focus continues to evolve



SPIRE 7 Projects
P4Planet 9 projects
Total 16 projects

€143M total EU funding

2017 – SPIRE
OCEAN, SIDERWIN & CO2EXIDE

2018 – SPIRE
SIMPLIFY, PERFORM, LIBERATE & DESTINY

2022 – P4Planet
HYPER, FIREFLY & Power2Hype

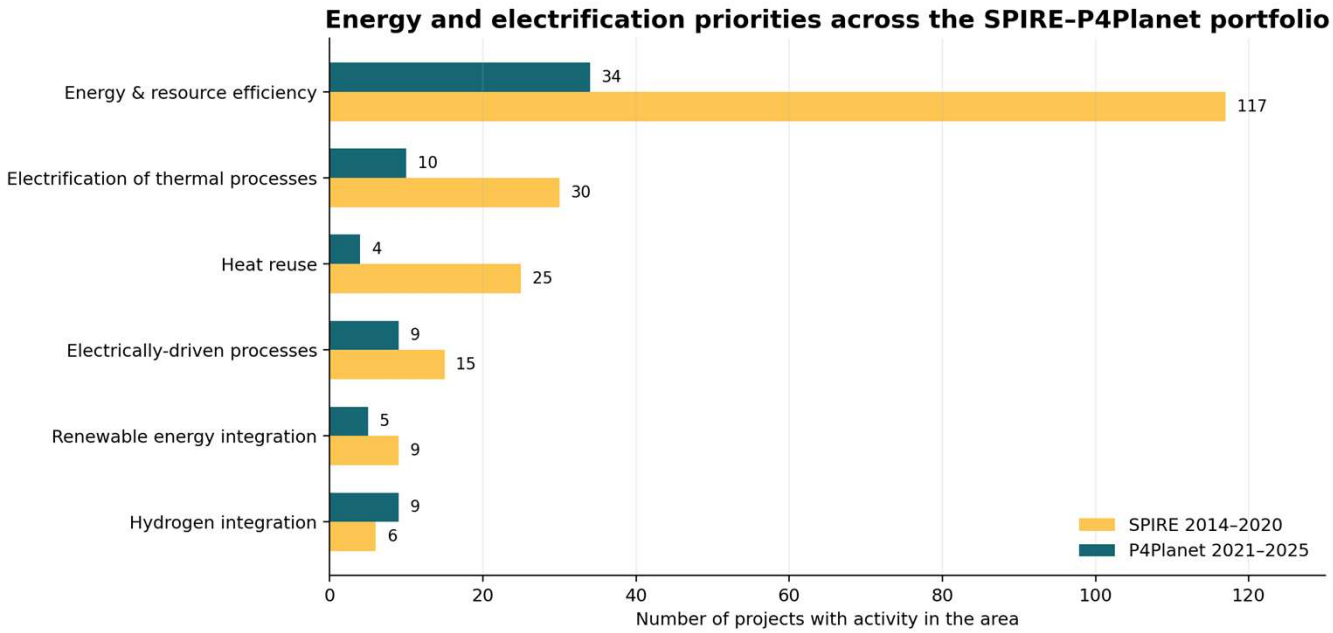
2023 – P4Planet
ELECTRA, ELITHE & CITADEL

2025 – P4Planet
ELEKTRA, REGENIOUS & EMPowerMet

Electrification has evolved from isolated technology development into a recurring strategic R&I pathway across successive programme generations.

Electrification across the wider SPIRE-P4Planet portfolio

Energy and electrification priorities across the portfolio



Portfolio scale

- 215 Projects
- 141 SPIRE + 74 PRPlanet
- ~€1,76bn total

Energy efficiency is the foundation: 151 project contributions across the portfolio address energy & resources efficiency.

Electrification is now a distinct pathway: 40 project contributions address thermal-process electrification and 24 electrically-driven processes.

The dedicated electrification projects are only part of the story: electrification is increasingly embedded across a much wider portfolio of energy-efficiency, renewable-energy, hydrogen and process-innovation activities.

P4PLANET actions to identify the paths to deployment

Portfolio Analysis

Two rounds: in 2024 and 2026

Projects included: H2020, HEU projects with EIIs, Innovation Fund, FOAKs, IPCEI, Additional Activities, etc.

P4Planet Impact Panels

Dialogue with public investors beyond HEU

4 Impact Panel meetings organised in 2021-2023

Clean Industrial Deal Call

Supports innovations up to TRL8

This type of call is highly endorsed by the industry

Other reports

DG RTD report

INCITE initiative by JRC

CSAs to support access to IF

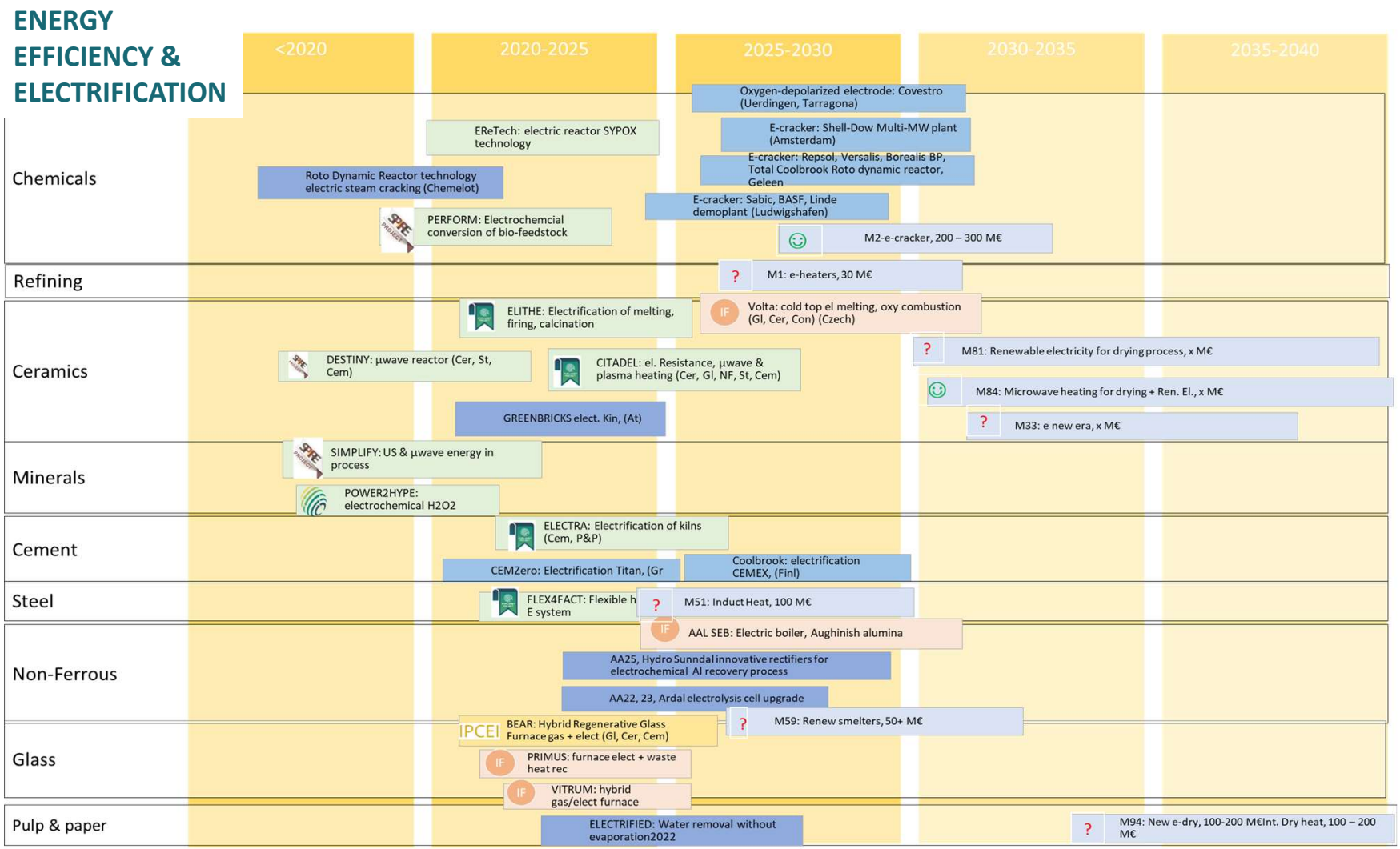
LEADS

2DPLOY

Portfolio Analysis v1: an overview of projects contributing to electrification

Portfolio Analysis

- Analysed by different areas and per sector
- Projects included: H2020, HEU projects with EIIs, Innovation Fund, FOAKs, IPCEI, Additional Activities, national funding (when known) etc.



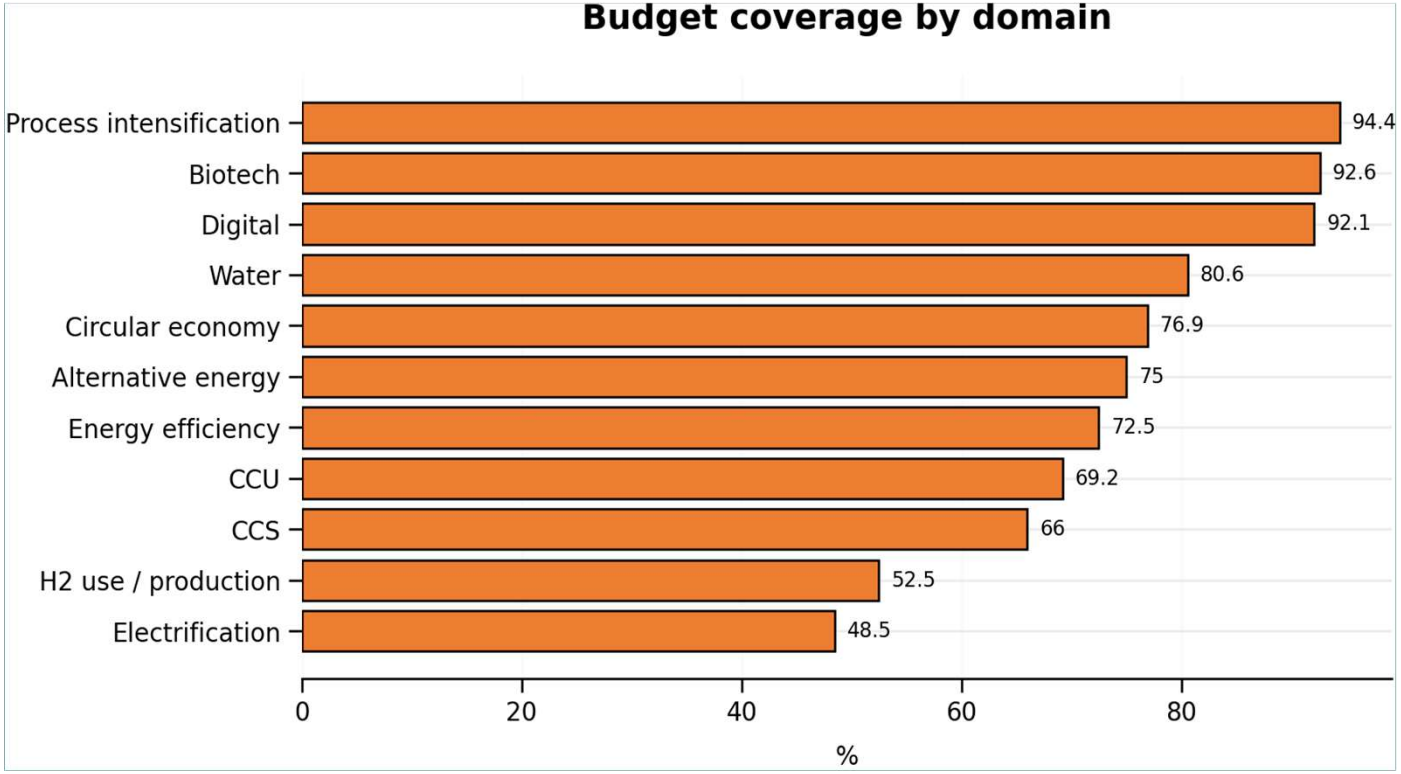
Portfolio 2.0 analysis: work in progress

Unique projects
932 nearly all going to TRL6

Budget coverage
637 / 932

Known budget
€70.66bn

Barrier coverage
81 / 932 (only P4P)



- Coverage stronger for Process Intensification, Biotech and Digital.
- Hydrogen and Electrification have had materially lower coverage so far.

P4PLANET Impact Panel meetings

Objective: to accelerate the P4Planet innovations and facilitate investments contributing to reach P4Planet's three ambitions and generate impact in the real economy, society and the planet.

October 2021

- Four P4Planet projects: Macbeth, Demeto, Fudipo, Bamboo
- Participation of EC, EIB Climate Bank, representatives from Innovation Fund, Member States (Spain, France, Belgium, Sweden)

June 2022

- New developments under LIFE and IF
- Developing selection criteria for H2020 projects

November 2022

- Focus on climate neutrality
- Real cases: hurdles and bottlenecks found to reach full impact – OCEAN, SIDERWIN,
- InvestEU analysis

November 2023, Chemelot Campus

- During the Transition Financing 2023 Event
- Focus on success stories to deployment and beyond - Circularity and Climate Neutrality
- Case studies of Inspire Water, Dryficiency, Macbeth, Siderwin

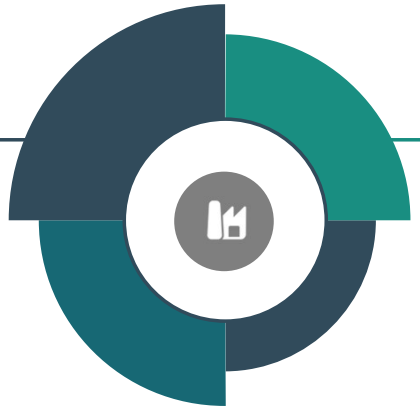
P4Planet innovations: the barriers towards deployment

Industry-leadership is key to deliver innovations



- High CAPEX and insufficient risk sharing
- Difficult transition from FOAK to replication
- Uncompetitive early OPEX

- Incomplete value chains
- Weak or uncertain business cases
- Missing enabling infrastructure



- Price competitiveness
- Lack of market demand
- Insufficient engineering and pre-investment support

- Integration into existing industrial plants
- Fragmented and complex funding pathways
- Regulatory uncertainty
- Permitting, regulation and standards

Many innovations developed under the Horizon programmes remain at TRL7 without routes to derisk further.

CSAs to support access to IF

2DPLOY

INNOVATION **IN LOW-EMISSION TECHNOLOGIES**

2 out of 3 supported projects progressed towards EU Innovation Fund funding. VITO engaged the three companies and guided them through the project pipeline.

ECOSTRUCT PANELS

RC Panels BV · Netherlands

EU Innovation Fund – IF25 Call, Small-scale projects

Prefabricated façade system combining high thermal performance and fire resistance with reduced material use – lightweight, customised, low-carbon construction.

OFFICIAL STATUS
Invited to grant agreement preparation

Reprocover5.0

Reprocover · Belgium

EU Innovation Fund – IF24 Call, Small-scale projects

Industrial-scale facility recycling thermoset and thermoplastic waste into high-performance composite products, advancing circularity and decarbonisation.

EU Innovation Fund contribution: €4.101 million

OFFICIAL STATUS
Grant signed

Other CSAs:
H2IF
REALIZE
Diamonds4IF

LEADS

A PIPELINE OF H2020 PROJECTS FOR THE INNOVATION FUND **ON CCUS**

Create a pipeline of H2020/HEU projects to apply to IF

Assess and select most suitable projects

Build capacity, supporting CCUS project owners to overcome residual bottlenecks, prepare for IF investment decision and enable them to apply to IF

Foster synergies between H2020 and IF, as well as other EU funding programmes.

Create and make available to stakeholders a set of IF tools and materials to support them in various forms

Reach a sound impact of performed activities by involving relevant CCUS stakeholders to increase the "deal-flow" from H2020 to IF.

Unlock the full carbon reduction potential of H2020 R&D results

- ~~Innovation Fund Guidelines~~
- Innovation Fund Self-Check Questionnaire
- End of project: June 2027
- **LEADS is supporting several cases: Fledged, Initiate, RECO2DE, FReSME, REDWINE, OCEAN.**

Clean Industrial Deal: Three decarbonisation routes

HORIZON-CID-2027-01-01 • Innovation Action, up to TRL 8 • Processes4Planet and Clean Steel

Industry-led innovations

Deployment readiness

Industrial demonstrators to TRL8

1 Managing the carbon cycle

- CO_2 / CO capture, utilisation or storage
- Optimise and demonstrate solutions
- Commercial potential and life-cycle impacts of decarbonised products

30% less capture energy per tonne of CO_2 / CO: target relative to available technologies*

2 Clean energy in production

- Process electrification and clean energy carriers, including hydrogen
- On-site renewable energy storage
- Waste-heat utilisation and upgrading

Major improvements in clean energy use towards 2035

3 Circularity and efficiency

- More efficient use of materials, energy and water
- Side-streams and end-of-use waste as feedstocks
- Positive overall life-cycle assessment and commercial viability

30% improvement ambition by 2035 against current industrial values

A Strategic EII Research, Innovation and Deployment Agenda

Innovation drives competitiveness. Competitiveness enables deployment

Sustainability ambitions need competitive production and viable business cases

01 INNOVATION

Demand-driven innovation and industrial pull

Priorities shaped by the EII transformation needs and downstream markets

New business opportunities and led markets

Innovate in Europe

02 COMPETITIVENESS

Precondition for deployment

Competitive production
Viable business cases
Lead markets for low-carbon materials and products

Scale in Europe

03 DEPLOYMENT

Industrial transformation at scale

Net-zero, circular value networks

European strategic autonomy

Positive impact for citizens and the planet

Deploy in Europe

DOUBLE SPEED PURPOSE

1. Creating a pipeline of innovation ready to scale up
2. Accelerating scalability for seamless investment journeys

What is needed to make industrial electrification commercially viable?

The next challenge is deployment at scale.

Electrification is no longer only a decarbonisation pathway — it is becoming a condition for industrial competitiveness in Europe.

01 Affordable clean electricity

Electricity cost is **a decisive factor for competitiveness** and the feasibility of electrification.

02 Grid & infrastructure

Around 70% of relevant **industrial processes are not yet electrified;** scaling up requires generation, transmission and distribution capacity.

03 Flexibility & power electronics

Storage, variable-speed drives, converters and **energy management** are essential to control when and how energy is used.

04 Investment & regulation

Permitting delays, regulatory uncertainty and **deployment risk** still slow down TRL 8 technologies from reaching industrial operation.

IJ1 Commercially viable direct & indirect electrification of industrial processes

ASPIRE

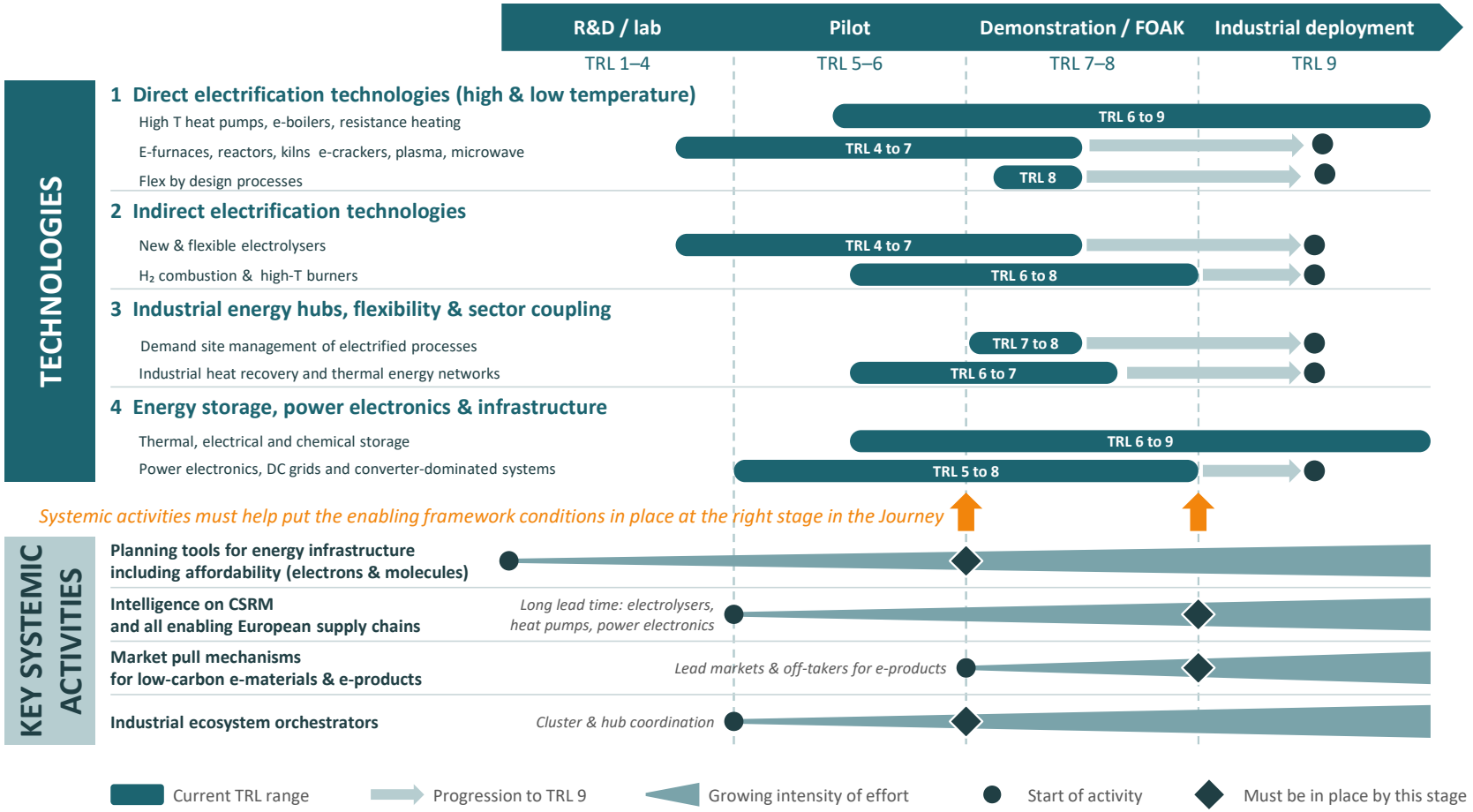
SECOND DRAFT

MISSION

Integrate renewable energy and other low-carbon energy sources in a commercially viable way across EII through electrification (direct: electrons/ indirect: molecules)

SECTORS & VALUE CHAINS

Sectors: all EII
Enabling value chains: energy suppliers and equipment suppliers



EXPECTED OUTPUTS

Efficient, sustainable, competitive and autonomous energy supply for European EII

enabling the production of high quality and high-performance materials and products, including from variable feedstocks

IMPACT KPIs

Industrial electrification rate: from 30% to
≥ 45% by 2030
≥ 65% by 2034

Levelized cost of useful heat vs fossil reference (€/MWh of useful heat)

Reduction in direct CO_2 emissions
– target to be defined

Industrial flexibility load activated (% electricity load)
– target to be defined

NB: TRL ranges are indicative (state of play 2026), to be confirmed. This IJ is still a draft version, which might significantly evolve over next few months.

NINE INNOVATION TO INVESTMENT JOURNEYS

Accelerating the scalability of innovations towards first deployment requires seamless investment journeys

IJ1 **Commercially viable electrification of industrial processes (direct and indirect)** *Renewable and low-carbon energy integration, electrification and flexibility.*	**IJ2** **Commercially viable CCS and CCU integrated chains** *CO_2 abatement, carbon circularity, CCU products and integrated infrastructure.*	**IJ3** **Enhanced supply of secondary, critical and strategic raw materials (CSRM)** *Industrial-grade secondary resources, resilient supply and strategic autonomy.*
IJ4 **Digital solutions and Industrial AI for process excellence and industrial leadership** *AI-enabled productivity, efficiency, optimisation and material development.*	**IJ5** **Next-generation mining and mineral processing in Europe** *European resources, circular mining, resilient supply and resource efficiency.*	**IJ6** **Renewable carbon feedstocks for Process Industries' circular value chains** Sustainable biomass and biogenic waste feedstocks, circularity and industrial scale-up.
IJ7 **Reformulating Materials and Products for Safe and Sustainable Functionalities** *Substitution of substances of concern and safe-and-sustainable-by-design intermediate materials.*	**IJ8** **Advanced production for high value materials & products** *Advanced production, qualification, high-value products and faster market uptake.*	**IJ9** **Water-smart process industries: zero liquid discharge and destruction of persistent pollutants** *Water efficiency, water circularity and pollution prevention; detailed scope under development.*

Future flagship initiatives: Building blocks for our journey to Vision 2040

ASPIRE

Competitive Low-Carbon Energy for EIIs

Affordable & low-carbon energy at scale, integrated at highest efficiency by Process Industries. *Joint initiative with energy providers.*



High-Value Materials & Products

Solutions best tailored to the needs of European value chains. Cost competitive, differentiated solutions creating greater value for end users.

Clean Industrial Deal Demonstrators

Multiply large-scale industrial demonstrators to scale-up innovations to TRL 8 and first industrial deployment.

Circular Value Chains

Recover and valorise strategic and critical materials through industrial-urban symbiosis. *Joint initiative with waste management sector.*

Carbon Circularity

Develop CO_2 valorisation pathways in Process Industries and related value chains. Close carbon loops and decarbonise European value chains.

Thank You!



Àngels Orduña

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Clean Aviation JU: Integrated EU-level roadmap and leverage effect of public investment

ERA-LEARN networking event on PPPs
Session A2: From Results to Deployment
Moving research results towards exploitation, deployment, scaling and long-term value

Bruno Mastantuono
Head of Governance Unit - CAJU

Vien, 18 November 2026

How does aviation create impact for Europe?



13.5 million jobs

4.4% of EU GDP



58% market share of new civil aircraft

47% of global order book

70% of global airspace managed with European ATM technology



Strengthens European **trade** and **strategic autonomy**

Advanced technology driven

Security of European airspace



Enables **mobility**, **education** & **research**

Connects regions, supporting EU integration & cohesion

The EU position is fragile without bold investments in aviation innovation, due to fierce global competition (e.g. US, China)

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JU model evolution: from technology to impact

Clean Sky

Clean Sky 2

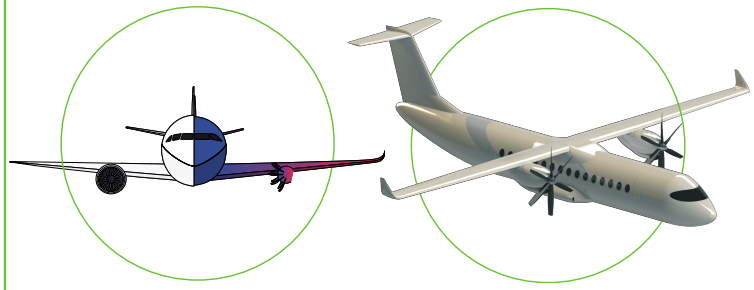
CLEAN AVIATION











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Clean Aviation JU: an impact-driven programme [2021–2030]

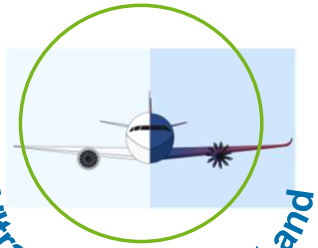


Achieve **-30%** GHG reduction

-90% CO_2 incl. **SAF**

Support Entry-into-Service of new aircraft by **2035**

Enable **75%** fleet replacement by 2050



Ultra-efficient Short and Medium Range aircraft



Ultra-efficient **Regional** aircraft



Hydrogen powered aircraft

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Performance objectives** and **maturity of critical technologies demonstrated by 2030

Clean Aviation Joint Undertaking in a nutshell

Clean Aviation JU is contributing to EU competitiveness, sustainability and technological sovereignty objectives by:

- Focusing on **disruptive technologies for next generation aicraft** with entry into service by 2035: -30% GHG versus 2020's best-in-class aircraft
- Establishing an **EU integrated roadmap (Strategic R&I Agenda) developed by 59 private members & the European Commission:** prioritising technology innovation **to develop** new aircraft concepts
- Relying on **a total budget of 4.1 EUR billion** in the current MFF (EUR 1.7 billion EU funding from Horizon Europe and >EUR 2.4 billion in-kind contributions from private members), securing a **large Leverage Effect** >1.5**,** and **demonstrating private commitment** to JU objectives
- Implementing **75 large-size projects** with a wide aviation ecosystem across **the full value chain** with 319 participating entities (16% SMEs, 51% industry, 12% research centres, 19% universities, 2% other)
- Ensuring the contribution of the **European Aviation Safety Agency (EASA) to accelerate the technology certification path** via strategic cooperation







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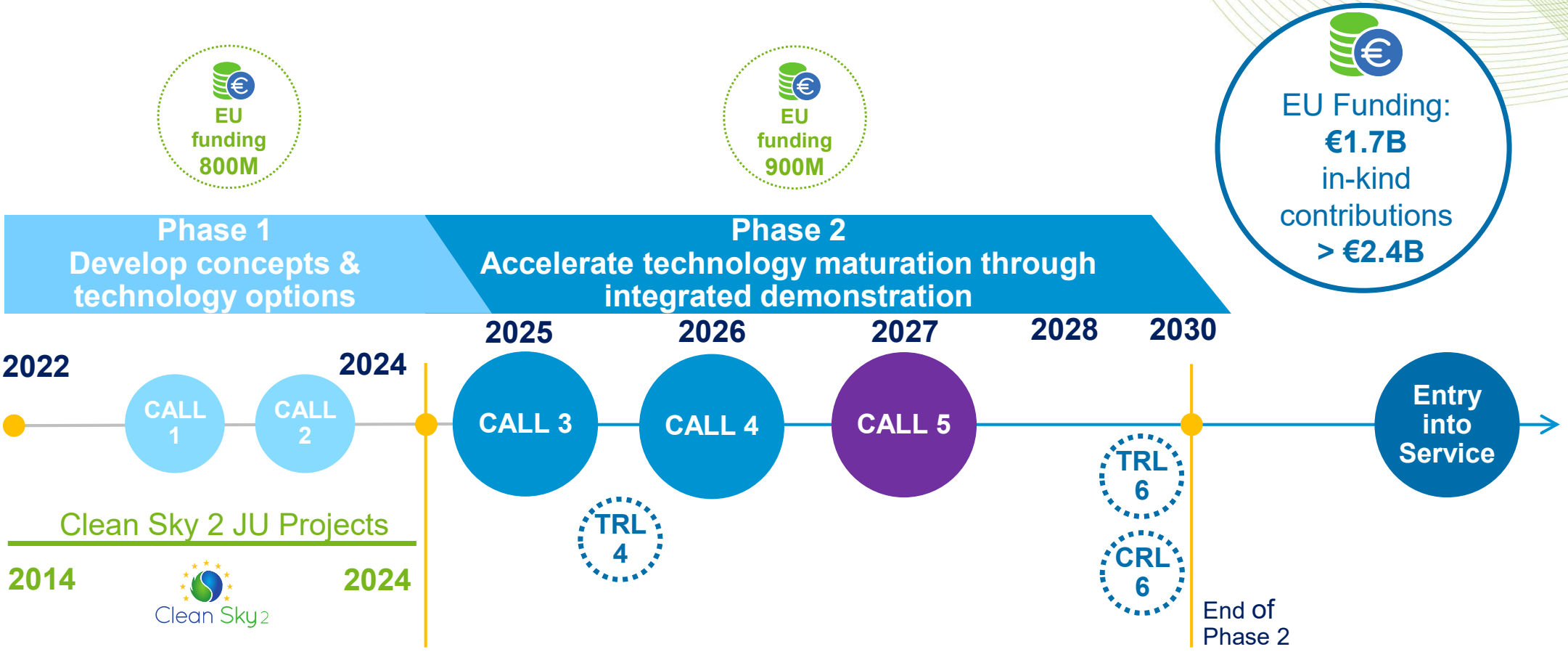
Accelerating maturation & demonstration via the JU



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Europe's collective effort towards climate-neutral aircraft

EU Cohesion Policy
(ERDF, Just Transition)

Clean Hydrogen Partnership

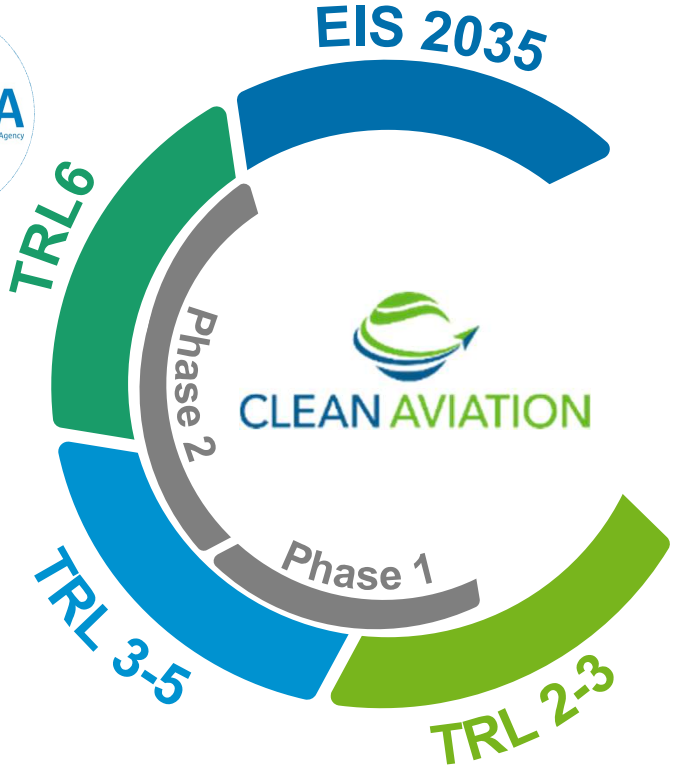
sesar JOINT UNDERTAKING

EASA European Aviation Safety Agency

BATT4EU Batteries European Partnership

Innovation Fund

Horizon Europe C5 Collab. Research



National Programmes

Federal Ministry for Economic Affairs and Climate Action

CORAC

AEROSPACE TECHNOLOGY INSTITUTE

CDTI

Regions & Member States (7 MoCs)

Junta de Andalucía

La Région Occitanie Pyrénées · Méditerranée

REGIONE CAMPANIA

REGIONE PIEMONTE

HAMBURG

LAND BRANDENBURG

Freistaat SACHSEN

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Collaboration model with Andalucia setting standards for region-JU cooperation with impact

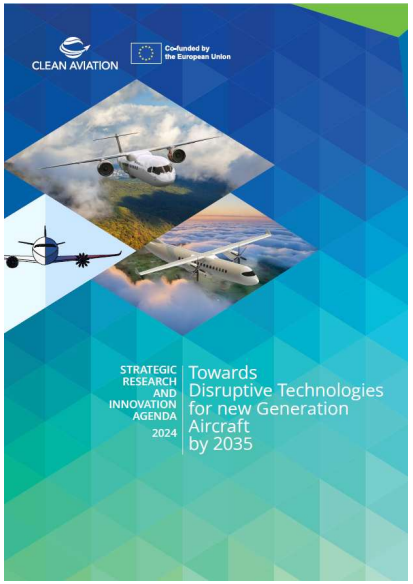
Clean Aviation JU Roadmap for Synergies with European, National and Regional initiatives

Synergies at the *core* of the Clean Aviation JU strategic objectives

Objectives:

1. **Fill gaps** of the Clean Aviation Technical Roadmap
2. **Pull additional** capabilities & resources
3. **Enlarge ecosystem** contributing to Clean Aviation
   - leveraging on disrupting innovators from beyond traditional aeronautics
   - connecting “local” level with “European” level
   - foster supply chain competitiveness (incl. SMEs)
4. **Increase socio-economic impact** (jobs, skills)

Strategic **R**esearch **I**nnovation **A**genda



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Clean Aviation JU: lessons learnt

Positive/Strengths:

- **Integrated R&I roadmap at EU level supported by the entire aeronautic ecosystem** (industry, SMEs, start-ups, universities, RTOs)
- **Integrated demonstrators** (TRL 6) of aircraft components/systems for future aircraft concepts achieved in Clean Sky / Clean Aviation JU
- **Administratively lean and flexible instrument** to translate a SRIA and execute R&I projects in support of industry and research community with clear targets
- **High leverage effect** (>1.5) of public investments



Racer Demonstrator



Multi Functional Fuselage Demonstrator

Negative/ Weaknesses:

- **Lack of a coordinated framework** to steer implementation **across the full innovation pipeline:**
  - Upstream research is within a separate HE “Collaborative Research” work programme
  - Lack of a dedicated funding instrument in Clean Aviation for large-scale demonstration & support to market uptake (TRL6+) - “valley of death” . ECF in the next MFF a key “opportunity” to cover such a gap
- **Lack of a framework for defining, coordinating & implementing synergies** between EU MFF and national/regional programmes. A more integrated approach suggested in the next MFF

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Strategic outlook within the framework of the upcoming European MFF 2028–2034

Aviation R&I Strategy - ARIS

1. **Aviation is vital to Europe's economy and sovereignty**
2. **Europe's aviation sector faces fierce global competition and geopolitical shifts**
3. **Increased investment in R&I needed to stay competitive and meet climate goals**
4. **Three key areas for investment (full innovation cycle from research to market uptake):**
   a. Aircraft: up to 19-seater, 50-250-seater, 250+-seater
   b. ATM: establishing the Digital European Sky
   c. Transforming enablers: industrialisation, supply chain, maintenance, digitalisation, workforce upskilling
5. **Collaboration between Europe's key public and private actors is essential (EU, Member States, regions, private sector)**
6. **A focused investment of €66 billion needed in the next MFF – of which €22.5 billion at EU level**



In EUR billion	Total investment	Estimated EU support
R&I (2028-34) TRL 0-6	**18**	**6**
Aircraft technologies	*16*	5.3
ATM	*2*	*0.7*
Deployment (2028-34) TRL 6+	**48**	**16.5**
Aircraft technologies	*45*	*15*
ATM	*3*	*1.5*
ARIS total funding	**66**	**22.5**

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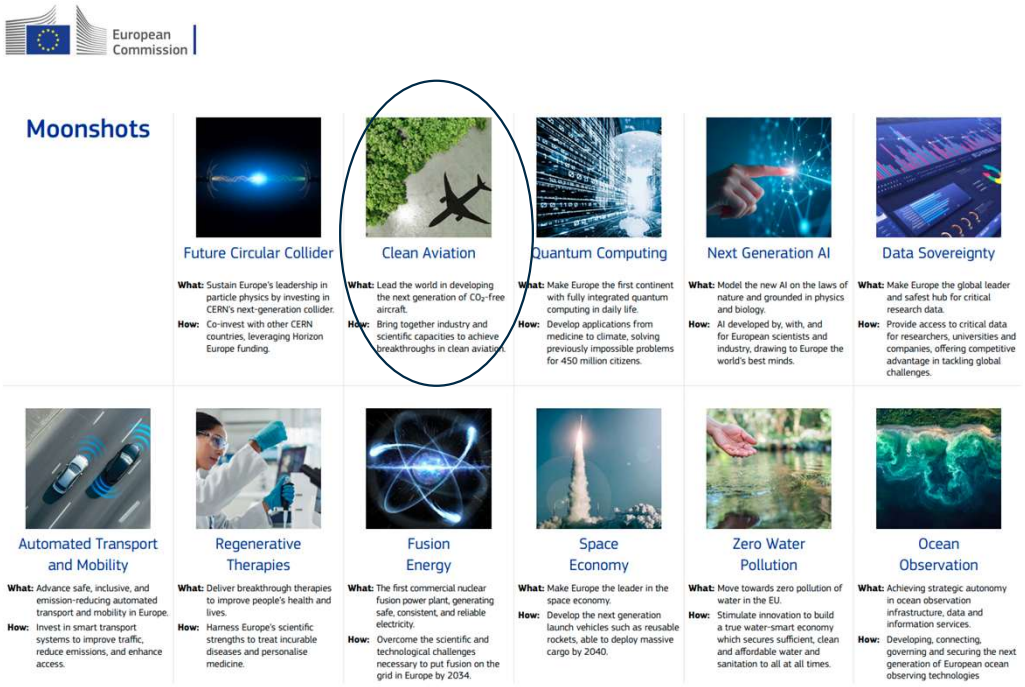
sesar JOINT UNDERTAKING

Horizon Europe proposal in EU MFF 2028-2034

Horizon Europe, a standalone programme with strong links with the European Competitiveness Fund



- **Clean Aviation is one of 11 "moonshots":** "Developing Smart and Clean Aviation and European leadership in the next generation CO2-free aircraft and automated air traffic management"

- "It will require a **partnership with industry**, together with a strong scientific and engineering capacity, supported by Horizon Europe, but also a **robust industrial deployment component from the Competitiveness Fund**"

- **EC recognises the added value of Joint Undertakings** as a specific form of partnerships

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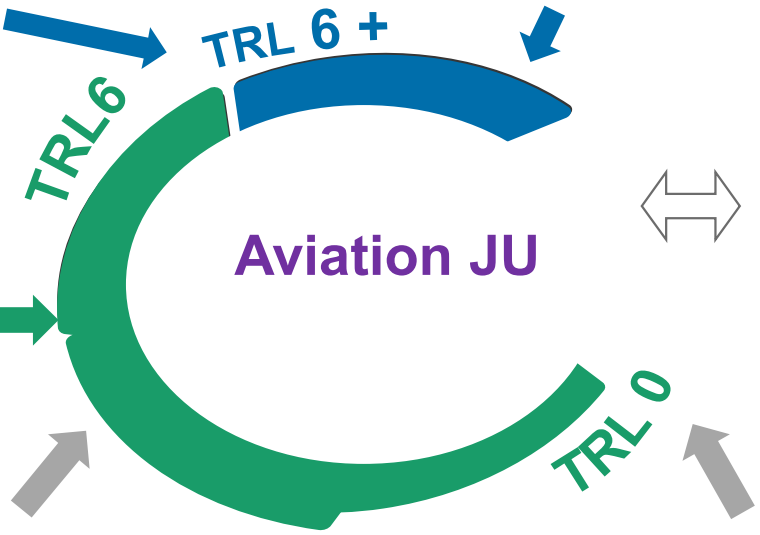
Possible MFF integrated architecture of the future Aviation JU

Aviation "Strategic Agenda" (Aircraft and ATM) **definition and execution** across the full innovation pipeline

ECF - 234 BEUR
- I. Industrial decarbonization - 26.2 BEUR
- III. Digital leadership – 51.5 BEUR
- IV. Defense industry – 125 BEUR

Innovation Fund (IF)
CEF – 81.4 BEUR

HE - 175 BEUR
- Pillar II Competitiveness – 75.8 BEUR
- Pillar III – EIC aviation calls - 38.7 BEUR
- Pillar IV aviation tech. infrastructures - 16.2 BEUR



Aviation "Strategic Agenda" **alignment** (common roadmaps)

Other MFF instruments

(EU Defence Fund)

National & regional programmes & funding

Industry and private partners' contributions and high leverage of investments

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* Commission proposal structure and budget proposal: subject to political agreement on the MFF and on the HE and ECVF legislative proposals

Recommendations of cross-cutting nature for PPPs

1. A **lean and effective governance framework** providing directionality but also speed and agility (predictability of investments vs MFF flexibility…)
2. A shared **SRIDA** and **integrated roadmap** and its implementation across the **full innovation pipeline** from upstream research (TRL0) to market update/deployment (TRL6+) **to bridge the "valley of death"** for EU-made products (translate technologies to market)
3. **Public-Private Partnership(s) collaboration across the whole European aviation ecosystem** (industry, SMEs, start-ups, research organizations, universities). Public Authorities (MS) involvement to be considered depending on the area of intervention/industrial sector and level of integration of the European supply chain
4. An **efficient execution framework of MFF funding instruments via Partnership(s):** between HE (TRL0-6) and ECF (TRL6+). For future JUs financed by both HE and ECF with a clear articulation, delegation and governance in the next JUs Single Basic Act to ensure an integrated HE-ECF architecture via the JU
5. **EU investment volume to be** matched by **private investments, including in-kind contributions (also beyond projects co-financing)** with **a high leverage effect for MFF programmes**
6. **Upstream identification of synergies and expected "technical contributions/DLV" from one PPP to another. Follow a clear "intervention logic"** and not "opportunistic' or driven by the simple need to show synergies
7. An **efficient framework for synergies** with National/Regional programmes (strategic alignment and coordination) and civil-military coordination (dual use) where appropriate

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Thank You

www.clean-aviation.eu

From Research to Deployment: Managing the full ATM Innovation Journey

Gauthier Grousset,
SESAR JU

Vienna, 18 November 2026

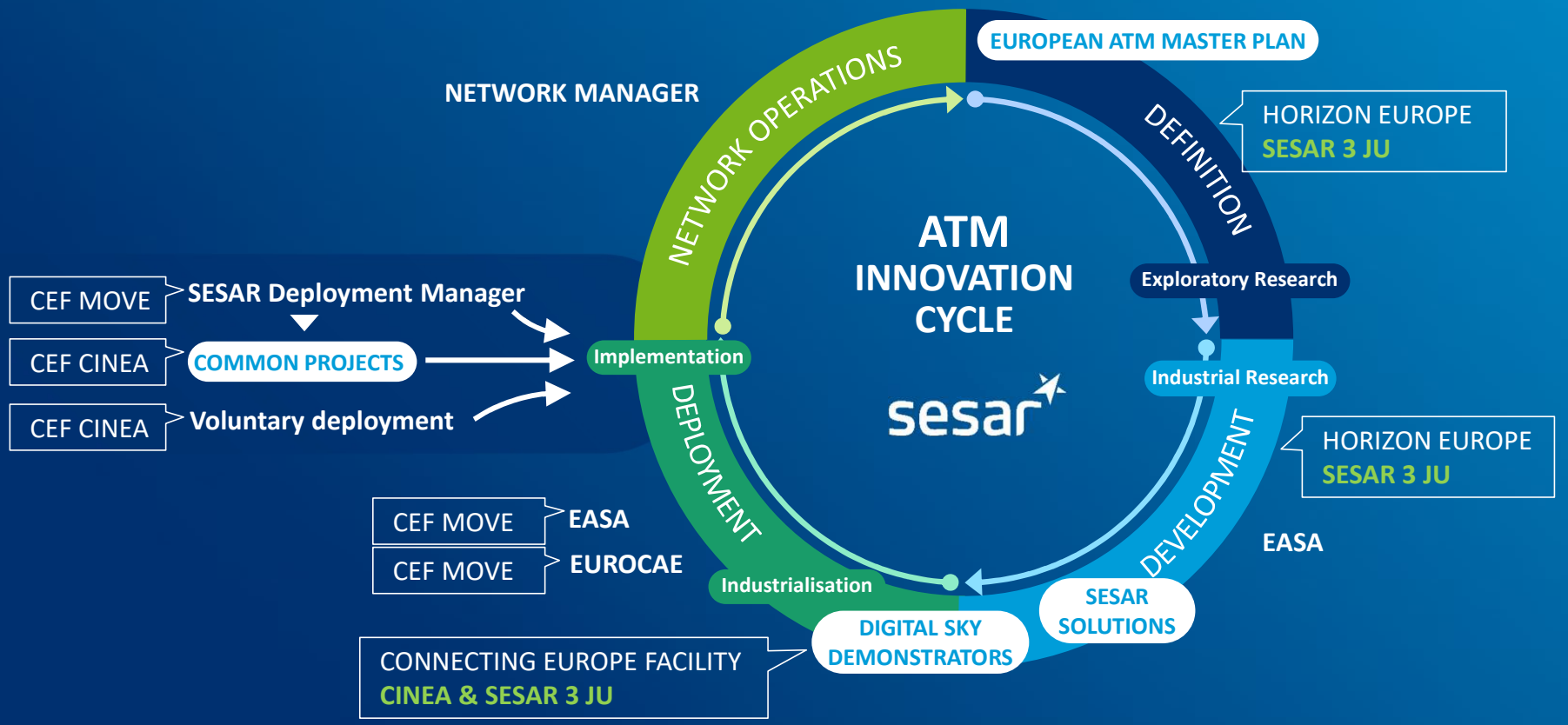
Co-funded by the European Union

A strategic roadmap : Performance-driven rather than technology-driven innovation

- Content: Vision, roll-out, **deployment** priorities, development priorities, benefits and investment needs
- Adopted in December 2024 after preparation / consultation with all European stakeholders
- Endorsed by the European Commission, Member States and Industry
- Time horizon 2045

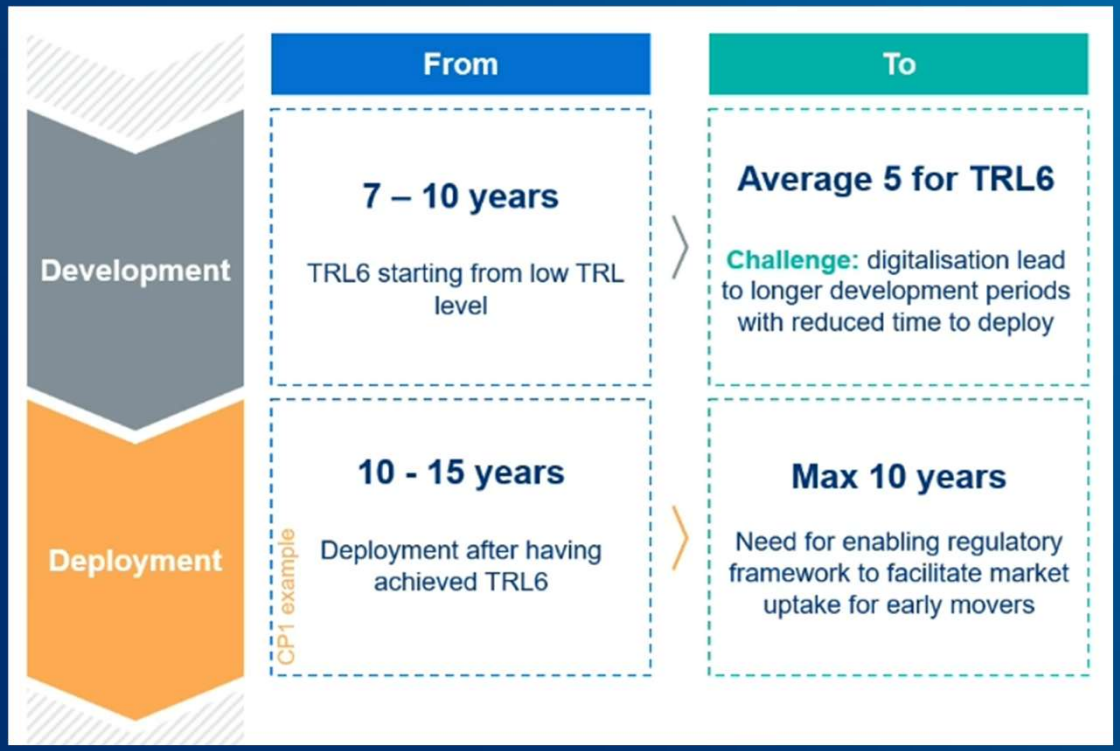


ATM Innovation Cycle



Market uptake of ATM technologies is a challenge

Time to market for development and deployment



- **Significant industrialisation challenges:** of the 139 SESAR Solutions developed at TRL6, around 40% still require significant industrialisation before implementation can begin.
- Innovation takes place in a **highly regulated environment** with **monopolistic** national structures (**one** air navigation service provider per country).
- ATM is safety- and security-critical infrastructure, requiring **high certification standards** and **global interoperability**.

Market uptake & Link to deployment

- Coordination activities with EASA and standardisation bodies to facilitating an accelerated market uptake of SESAR solutions
- Digital Sky Demonstrators projects to bring solution from TRL6 to TRL8
- Funded through the Connecting Europe Facility (CEF) programme



Demonstrators with early movers



Shortening time to market

EASA European Aviation Safety Agency

Early identification of regulatory needs
Close collaboration with EASA to secure the evolution of the regulatory framework at an early stage

EUROCAE

Early identification of standardisation needs and coordination with EUROCAE and other standardisation bodies

SESAR 3 JU shapes future regulations to facilitate market uptake: the Common Projects (CP)

Common Projects are **Implementing Regulations** by the Commission

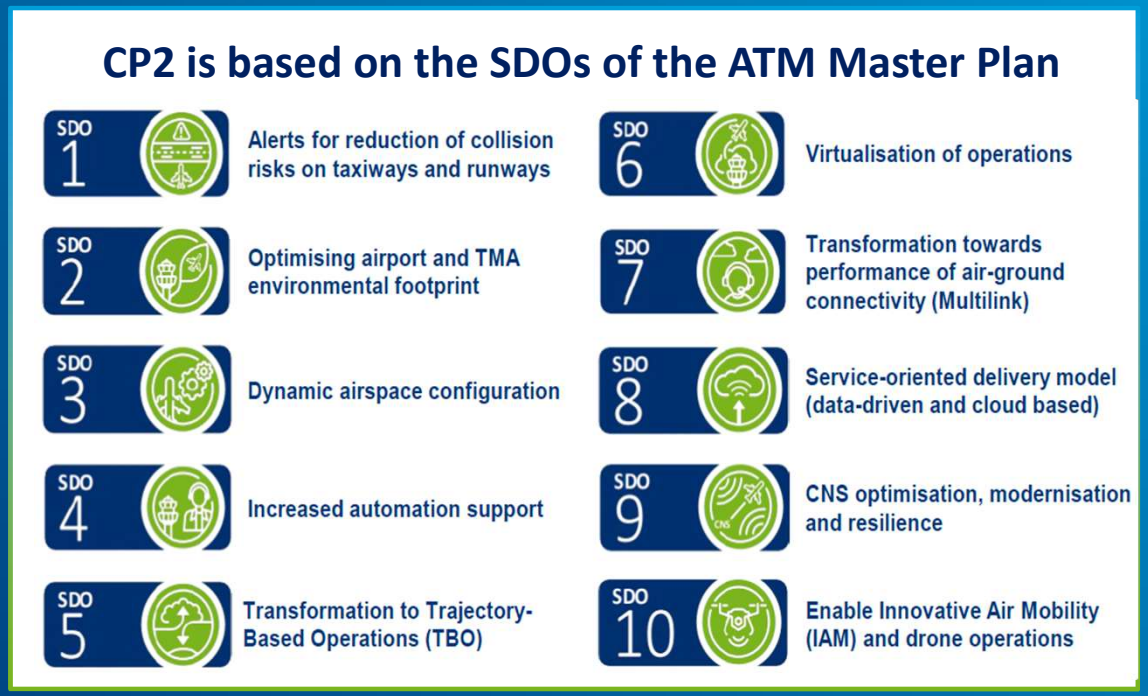
- **Draft** elaborated by the SESAR 3 JU
- Makes Strategic Deployment Objectives (from the Master Plan) **mandatory** under EU law for a given scope of stakeholders and by a given deadline

Elaboration of **CP2 is completed from the SJU side**, after a Pilot CP (in 2014) and CP1 (in 2021).

Need to involve all relevant stakeholders, including **regulatory** (EASA) and **standardisation** (EUROCAE)

Deployment supported by EU funding through the CEF (**50% of EU co-funding**)

Implemented by operational stakeholders (ANSPs, airports, airlines, etc.) with the support of the **SESAR Deployment Manager**



Deployment phase – Common Project

Example 1: Cross-border free route airspace

Concept of Free route airspace: airspace users may freely plan a route between defined entry and exit points (without using waypoints in a route network)

Who is concerned: the Network Manager, different Air Navigation Service Providers, the Airspace Users

Scope: "FRA must be provided and operated in the entire Single European Sky airspace at least above flight level 305."

Deadlines:

- Initial FRA by the implementation target date of 31 December 2022
- Final FRA, including cross-border FRA with at least one neighbouring state and FRA connectivity with TMAs, by the implementation target date of 31 December 2025



Deployment phase – Common Project

Example 2: Extended Arrival management

Concept: Arrival management (AMAN) extended to en-route airspace to a minimum of 180 nautical miles from the arrival airport. Traffic sequencing/metering must be conducted in en-route before top-of-descent in order to improve predictability and to smoothen the flow of traffic.

Who is concerned: the Network Manager and different Air Navigation Service Providers

Scope: 20 major airports of the EU (listed in the Regulation)

Deadlines: 31/12/2024

Implementation status: implemented in 7 airports,
implementation ongoing in 7 airports,
planning not yet completed in 6 airports.



Common Project 1

EVERY

€1

INVESTED **IN CP1 MODERNISATION**

= 4.3 kg CO_2 SAVED

Synchronising & coordinating deployment of Air Traffic Management modernisation projects in Europe:

95%

of the Common Project One (CP1) deployment completed or in progress

359

ATM modernisation projects spread over 6 ATM functionalities:
- 343* completed
- 16 ongoing

3.1 bn

Total investment in euro, consisting of:
- 1.4 billion euro of grants
- 1.7 billion euro of industry investment

BENEFITS by 2040

343

projects out of 359 are in operation bringing benefits to passengers*

On passengers' time WE SAVE:

428.6 m
minutes

19.1 bn
euro

On the environment WE SAVE:

6.7 m
tons of fuel

21.1 m
tons of CO_2

8.7 bn
euro

Common Project 2 takes into account the main CP1 lessons learned

The lesson from CP1 is not to lower ambition, but to industrialise and sequence ambition better.

- Standards availability
- Availability of products in the market
- …



Implementation obligation

R&D outcomes

CP1



Implementation obligation

Industrialisation notice

Industrialisation with early mover commitments

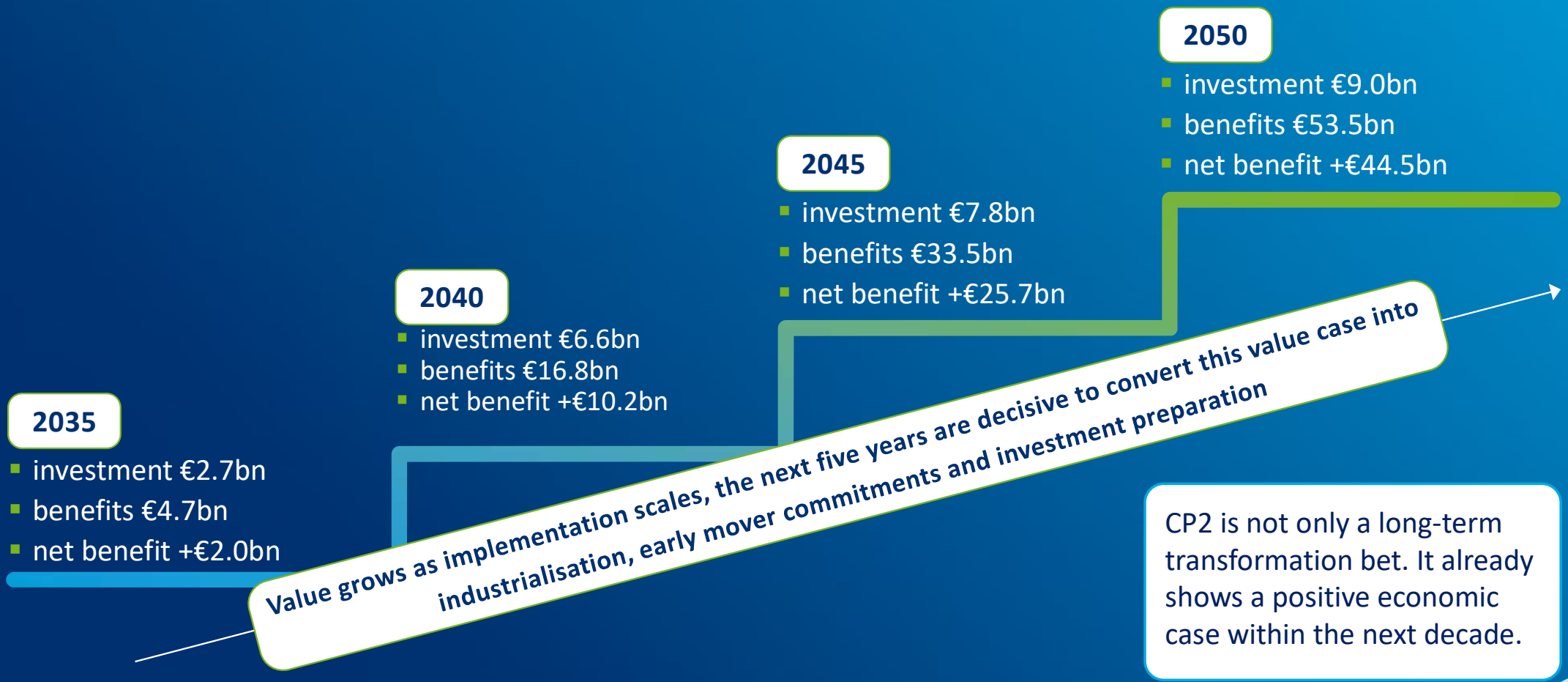
SESAR Solutions

Standards

EASA actions

CP2 design response, a staged launch system

CP2 carries a robust European value case: benefits exceed costs already by 2035 and grow strongly over time



CP2 is not only a long-term transformation bet. It already shows a positive economic case within the next decade.

From strategic vision to coordinated synchronised deployment

Strategic vision

ONE COMMON AMBITION AND ROADMAP

The **European ATM Master Plan 2025** connects Europe's ATM ambitions with research, innovation and deployment priorities.

Collective delivery

COORDINATION MAKES THE DIFFERENCE

CP1 demonstrates the value of synchronised implementation and joint investment across Europe.

Preparing the future

CP2 TAKES THE NEXT STEP

CP2 builds on CP1 to propose a targeted package to industrialise and implement the next generation of ATM innovations

From a common vision → to coordinated investment → to deployment across Europe

Open discussion

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18 Nov. 2026

Thank you!