



No EU Tech, No EU Competitiveness

ANNUAL 20 CONFERENCE 25

NO EU TECH NO EU COMPETITIVENESS

> 1-3 APRIL 2025 VALENCIA

EARTO2025 REDIT2025 #EARTOAC2025

Welcome by

Jesús Valero President, EARTO











Welcome by

Fernando Saludes President, REDIT











Keynote Speech by

Marian Cano

Regional Minister of Innovation, Industry, Commerce and Tourism











Keynote Speech by

María José Catalá Valencia City Mayoress













Part 1 Case Studies of RTOs Supporting EU Competitiveness

Keynote Speech by

Teresa Riesgo

General Secretary of Innovation, Ministry of Science and Innovation





Presentations of 4 Case studies

MODERATOR:

François Jacq, CEO, CEA

SPEAKERS:

- Alexandre Pauchard, CEO, CSEM
- João Claro, President, INESC TEC
- Camilla Stoltenberg, CEO, NORCE
- Gonzalo Belenguer, Director, REDIT





Presentation by

Alexandre Pauchard CEO, CSEM







SUPPORTING EU COMPETITIVENESS

:: CSeM

HYPERTENSION – THE SILENT KILLER

Problem statement

- 7.5 million deaths annually (13% of all deaths)
- 30-40% of adults affected, 50% not knowing
- Global annual healthcare cost : \$370 billion
- Blood pressure measurement had not changed in over a century



Arterial catheter:

- Invasive
- Intrahospital only



Arm cuff:

- Disruptive
- Not continuous

Solution

- Optical measurement of arterial pulse wave using photoplethysmography (PPG)
- Patented PPG-based pulse wave analysis based on 15 years of R&D at CSEM



15+ YEARS OF DEVELOPMENT – TYPICAL DEEPTECH



Market for blood pressure monitoring devices \$2.4 billion in 2025, estimated to reach \$4.4 billion in 2035



VALORIZATION THROUGH TWO STARTUPS





AKTIIA

Blood pressure measured on wristband

CE approved class IIa medical device

BIOSPECTAL

Blood pressure measured on smartphone

CE approved class IIa medical device



AKTIIA – ON THE MARKET SINCE 2021, PROVIDING SOCIETAL IMPACT AND VALUE-ADDED JOBS

- World's first clinically-validated optical blood pressure technology (20+ clinical trials)
- CE approved class IIa medical device
- Over 300 million blood pressure measurement to date, largest blood pressure data set
- Available 250€, no subscription fees
- Over 80'000 customers
- 96% prefer bracelet over traditional cuff
- 800 measurements per month, day and night
- Over 60 employees and continuous expansion



BIOSPECTAL

- CE approved class IIa medical device
- Several collaborations with industry partners
- Grants from Bill & Melinda Gates foundation, Grand Challenges Canada and Innosuisse
- Android App available in US, UK, France, Germany, Spain and Switzerland



CONCLUSION – RESEARCH & DEVELOPMENT IN RTO, VALORIZATION THROUGH STARTUPS

- Deeptech 15 years to mature technology
- Valorization Priority given to local startups to maximize impact at EU level, in alignment with RTO's mission
- Impacts delivered Job creation, added value created in Europe, positive societal impact
- For patients suffering from hypertension – Easy-to-use solution for monitoring their condition



FACING THE CHALLENGES OF OUR TIME



#EARTOAC2025





Presentation by

João Claro

President, INESC TEC







SCIENCE

INSTITUTO DE ENGENHARIA DE SISTEMAS E COMPUTADORES, TECNOLOGIA E CIÊNCIA

Tech for Competitiveness

From a Shared Platform to Market-Driven Solutions in Health and Agri-Food

EARTO Annual Conference 2025

www.inesctec.pt -

A single platform, two missions

The innovation

Al-powered photonics platform developed at INESC TEC

A versatile sensing technology that generates digital fingerprints from biological or agricultural samples using light and artificial intelligence.

Non-invasive. Reagent-free. Portable. Accurate.

From disease biomarkers to cereal grains, this platform opens a new way to profile, stratify, and optimize — across domains.



Health

Clinical trials are slow, costly, and inefficient – 80% of screened patients are deemed ineligible after enrolment, causing delays and inflated costs.

A portable, reagent-free optical screening platform that uses light and AI to generate digital fingerprints from blood samples, enabling faster, painless, and more precise patient stratification in clinical trials – helping pharma accelerate drug development for diseases like Alzheimer's.



Half of all fruits and vegetables are wasted. The milling industry lacks real-time quality control tools, leading to inefficiencies, waste, and economic losses.

A compact grain screening device powered by AI and photonics that delivers real-time insights into cereal quality, boosting yield and reducing waste in milling operations – helping feed more people and enhance sustainability across the food supply chain.

From science to first spinoff launch...



Public support: EU EIT Health PT FCT, P2020, N2020 "At iLoF we use advanced photonics and artificial intelligence to transform screening for diseases such as Alzheimer's, making it faster and more accessible, intending to directly impact early detection and improving patient care in the future."

> Luís Valente Co-Founder and CEO of iLOF

... to market deployment and cross-fertilisation



Public support: EU EIC Grant (2023) EU RRF / NextGenEU EU EIT Health PT FCT, P2020, N2020 "Seedsight's technology provides accurate, online, and real-time monitoring of critical quality, productivity, and food safety parameters, enhancing efficiency along the cereal value chain."

Gonçalo Ramos

Co-Founder and Chief Commercial Officer of Seedsight

Two spinoffs, one platform, real-world impact **iL**_**F**

	SEEDSIGHT
2019	2024
Health – Clinical trials, precision medicine	Agri-food – Grain quality, safety, and traceability
AI + photonics identify biomarkers via digital fingerprints	AI + photonics assess cereal quality via spectral profiling
Stratifying patients for Alzheimer's trials	Improving flour extraction, safety, and efficiency in milling
Up to 40% reduction in trial costs, 70% faster screening, 1500+ patients profiled	3% yield boost in high-volume mills; waste and procurement time reduced
€500B global personalised medicine market	€34B global market
Pilots with 12+ hospitals; partnerships with Roche and Janssen	Pilots running; 6 more in pipeline; validated by leading European milling companies
Value-based model with pharma partners	Subscription-based SaaS with bundled hardware
EARTO Innovation Award 2024 (Impact Expected)	Finalist – Nature Spinoff Award 2024
€14M in funding; backed by EIT Health & EIC Accelerator	Techstars backing
Portugal (R&D), UK, US, Japan (partnership with Hamamatsu)	Portugal (R&D), US
31 FTE	5 FTE

Challenges from deep tech to competitiveness

- Lack of dedicated and adequate proof-of-concept funding, requiring teams to adapt to ill-suited calls limited availability at European level (e.g., EIC Pathfinder) and virtually absent at national level.
- Limited access to state-of-the-art environments for development and testing, due to underinvestment in modern Technological Infrastructures and Testbeds.
- Public support is committed but often lacks the experience and flexibility required to match today's competitive deep-tech dynamics
 - with difficulties adjusting to rapid technological shifts and their specificities.
- US funding for deep-tech ventures is more accessible, faster-moving, and risk-tolerant, offering stronger early-stage support.
- Entrepreneurial ecosystems in the US and UK exert a natural pull, with greater maturity, scale, and integration across funding, talent, and industrial partners.

For a more competitive and sovereign Europe

• To maintain leadership in **deep tech** and technologies with **societal impact**, Europe must

urgently address the persistent gap in transition instruments – from research to market.

- This requires a renewed political commitment in the next Multiannual Financial
 Framework, with funding that is more dedicated, agile, and outcome-oriented.
- Most critically, public support must be designed to crowd in private investment at scale, ensuring it can truly deliver on Europe's strategic autonomy and competitiveness.

WE ARE SCIENCE. WE ARE TECHNOLOGY. WE ARE INNOVATION. WE ARE INESCIEC.









Presentation by

Camilla Stoltenberg CEO, NORCE





NRCE

Case studies of RTOs supporting EU competitiveness

Camilla Stoltenberg CEO NORCE

Three different cases supporting EU competitiveness



1 NLIVE
2 GEXCON
3 SAILBUOY



1 NLIVE

NLIVE - High-performance visualization system





<u>The technology</u>: NLIVE is a high-performance visualization system developed by NORCE. This visualization engine is highly extensible and adaptable, and it allows us to do efficient visualization of very large scale geospatial datasets.





Increased collaboration with industry & future applications such as surveillance, defense.



#2 GEXCON

GEXCON - Safety & risk management





GEXCON provides advanced safety engineering software, consulting and testing services.

GEXCON is today a **world-leading company** in the field of **safety and risk management** and advanced **dispersion**, **explosion and fire modelling and simulations**.



The **markets / sectors** that GEXCON works in are mainly: Liquefied Natural Gas (LNG), Hydrogen safety solutions, Pharmaceutical, Dust in process industries, Chemical, Renewables, Energy, Food & Beverage, Automotive & aerospace, Mechanical equipment manufacturing, and Oil & Gas.
GEXCON - Safety & risk management



In 2020, revenue of NOK 180 million, employing 150 employees.



3 SAILBUOY

SAILBUOY - Long - endurance unmanned surface vessel (USV)





<u>The technology</u>: The SailBuoy is an Unmanned Surface Vessel (USV), gathering oceanographic and meteorological data in an eco-friendly manner, using wind power for propulsion.

Wide variety of ocean applications: Measuring ocean and atmospheric parameters, tracking oil spills or acting as a communication relay station for subsea instrumentation, among others.

100% emission free

Significantly reduces human risk

Autonomous ocean navigation

Collects data at a fraction of the **cost** compared to traditional methods.





1st Atlantic crossing by an unmanned surface vehicle

SAILBUOY - Long - endurance unmanned surface vessel (USV)



The SailBuoy has been used in polar regions, Europe, Australia and the Americas.

Areas of application are towards research, climate, mapping, surveillance, marine/maritime, fish and biomass, and military. The company plans to expand further towards offshore and military applications.



One last slide to show the importance of collaborative research ...

ROBINSON - The power of a «standard» collaborative EU project





Horizon 2020 project

ROBINSON aims to develop an integrated energy system to help decarbonise islands.

ROBINSON provided the installation of a 1 megawatt hydrogen plant in Eigerøy, south of Norway.

To fund NOK 206 million in 2024 to expand this plant from 1 to 21 megawatt.

This will allow to deliver 2 700 tons of hydrogen annually.

"These are pioneers leading the way for hydrogen and securing supply along the Norwegian coast."

Nils Kristian Nakstad, CEO of Enova

"No ROBINSON - No hydrogen plant! A big thank you to those who saw the ROBINSON project as an opportunity."

> Arild Stapnes Johnsen, Technical and **Innovation leader at Dalane Energi** company.





Thank you. Takk. Aerci. Gracias. Obrigado.

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Presentation by

Gonzalo Belenguer Director, REDIT







No EU Tech, No EU Competitiveness...

without RTOs add value solutions



What is our individual, real and tangible contribution to Europe's competitiveness?







What is our 'triple bottom line', in our region?



How do we contribute to the competitiveness of our industry?





Social/Environmental??



Economic

- **775.5 M €**, Income contributed to regional GDP
- 662.7 M€ sales (customers)
- 16,047 direct and indirect jobs
- **346.2 M€** of public revenue (tax impact)
- More than 608 M€ returned to Valencia, from European and national programmes in last 5 years; 80% of which has gone directly to the companies we work with.

• ...







- It is currently the most widely used method internationally to measure social impact and the only one that allows you to arrive at an economic return on investment figure.
- It provides a very detailed description of the process of value creation process which is captured in a logical sequence called Impact Map where all the stakeholders that participate in some way in the project.
- The SROI makes it possible to **quantify in monetary terms the social value created by a project**. It allows the calculation of the cost-benefit ratio.





www.esimpact.org



Monitoring, quantification and visualisation of the social impact of all the activities carried out by REDIT and the 11 technology institutes.





SROI- 1:11,63

SROI by stakeholder

For every euro invested in REDIT RTOs activities, a social returned of 11,63 €

With a total investment of 333,979,120.62 €, a total investment of current social impact value of **3,883,672,547.71**€

Society	34%	
Clients	57%	
Institutions	5%	
People	4%	

Impact on SUSTAINABLE DEVELOPMENT GOALS

1,141,793,981.91 €

Social impact value in relation to the Sustainable Development Goals derived from all REDIT RTOS





	2021	2022	2023	PERIOD 2021-2023
Investment	209,524,846.38€	241,439,212.29€	333,979,120.62 =	€ ↑ 60%
Social Impact Value	2,264,694,649.99€	3,495,081,536.84 €	3,883,672,547.71€	† 71%

From 2021 to 2023, investment by REDIT RTOs increased by 60% while our social impact surged by 71%

Thinking in future...





How does **REDIT** contribute to

the future of industry?



REDIT INNOVATION NETWORK

14.000 clients
5,800 associated members
1,300 R&D projects
157 M€ returned



In 2022 REDIT • • • Ventures





Specialized vehicle promoted by the Technology Institutes associated with REDIT to promote the transfer of technology to the industrial sector.

Independently managed and professionalised, it assumes the dual role of Venture Builder and Venture Capital.

RESOURCES



- 1.65 million € contribution from partners
- Co-financing through participative loans from the Valencian Institute of Finance (IVF).
- Co-investment of the industrial fabric through the Investment Club.



RI MEDICAL	LOFITH COMPOSITES	[]Fıbtray	HoneyTex	
Medical Device	Advance Materials	Advance Materials	Advance Materials	Test&Measurement
Patent	Trade Secret	Patent	Patent	Patent
Device for prostate cancer screening	LFT composite manufacturing	Manufacture of recyclable food packaging	Manufacture of Honeycomb structures	Manufacture of inspection equipment
Healthtech	Aeronautics Automotive	Packaging Food	Aerospace Automotive	Ceramics

IS IT ENOUGH TO BUILD A NEW TECHNOLOGY-BASED INDUSTRIAL SECTOR?



Envisioning future technology-based industrial sectors

- 100 assets identified
- 20 business cases under construction
- 7 investments approved
- 5 companies incorporated
- 1.9 million € investment committed







WHAT WOULD BE THE GLOBAL IMPACT OF RTOS?

**









Coffee Break until 11.15









Part 2

The Challenges of Linking EU Industrial & RDI Policies in the Next EU Multi-annual Financial Framework (MFF)

Next MFF/STEP by

Davide Lombardo

DG BUDGET, European Commission





Example of Aeronautics by

Andrea Gentili

Deputy Head of Unit Aeronautics DG R&I, European Commission







EARTO Annual Conference – Valencia, 3 April 2025

The Challenges of Linking EU Industrial & RDI Policies in the Next EU MFF: an example in aviation

Andrea GENTILI

EC - DG Research and Innovation Clean Planet Partnerships Manager and Deputy Head of Unit « Clean Transport Transitions »

EU Programmes for R&I in aviation: a fragmented landscape

> Horizon Europe:

- Pillar I: ERC (low TRLs), Infrastructures
- Pillar II: Cluster 4 "digital and manufacturing" and Cluster 5 "energy and mobility" (mid-high TRLs, demonstrators)
 - + Clean Aviation JU (Zero-emissions Aircraft)

European

- + SESAR3 JU (Air Traffic Management)
- Pillar III: EIC (all TRLs, Start-Ups)
- IF: aircraft/engine manufacturers (high TRLs, deployment)
- CEF: airports, cross-modal hubs for transport (high TRLs, deployment)
- > Digital Europe, European Defence Fund, InvestEU, etc...

Research & Innovation in Aviation: Breakthrough Technologies & Future Needs




Research & Technology Infrastructures in Aviation: a European Asset

- Key to developing the next generation of environmentally friendly aircraft
- Opening new frontiers in technology and scientific excellence
- Meet future safety/environmental needs
- Support innovation capacity and competitiveness of EU industry
- Instrumental for the testing/validation/certification of new innovative technologies with positive impact on safety/environment/competitiveness





The RINGO Project

- EU-funded Project (2017-2020): Research Infrastructures Needs, Gaps and Overlaps (RINGO)
- From the total of 45 Research and Infrastructure Needs classified as high importance/urgent, 9 require new facilities and 15 can be filled by upgrade of an existing facility.
- A large increase of investments into R&T aviation infrastructures is required for the EU to remain competitive with respect to other countries such as USA and China.
- Additional funding is also required to be used for enhanced collaboration and providing access to existing facilities.
- Regarding operational and business models, better synchronization between different roadmaps is required and novel financing schemes such as a "voucher system" need to be implemented.

EREA-RTD-Report on future needs of aviation RTIs

- New Technologies require **new and updated** infrastructures.
- DG RTD has launched a "ERA pilot action" for aviation research & technology infrastructures
- 16 needs for RTIs are identified & prioritized (10 physical + 6 digital) and documented in published document (Oct 2024)
- Possible funding instruments for the "ERA Pilot on aviation RTIs" in Horizon Europe:
 - Pillar I: Part 3 "Research Infrastructures"
 - Pillar II: Cluster 4 "Digital, Industry and Space" and
 - Cluster 5 "Climate, Energy and Mobility"



ERA pilot initiative on European aviation research & technology infrastructures - Publications Office of the EU (Oct. 2024) European Commission



6

ARIS – Towards a EU Strategy for Aviation R&I

- Inputs from Clean Aviation and SESAR3 JU stakeholders (e.g. aviation industry, SMEs, RTOs, Academia), with the support of RTD and MOVE
- Non-traditional aviation stakeholders are also involved (e.g. in areas such hydrogen, materials, electrification)
- ARIS underpins that "robust research infrastructure is vital for advancing energy vectors, engines, materials, and aerodynamics."
- Digital and physical facilities will be crucial to "bridge the gap between concept and application"
- RTIs represent a cornerstone to bridge the innovation





gap

Way forward

- EC Comm on EU strategy on RTIs planned before the summer
- Adoption of the second ERA Policy Agenda 2025-27 by the Council is expected in May, with RIs being an ERA structural policy
- "A common strategic research and innovation agenda for the aviation sector, bringing together member states and industry, and covering the entire innovation chain." (Commissioner Zaharieva at the Clean Aviation Annual Forum,18 March 2025)





EARTO paper on EU Partnerships in FP10: How to boost future EU Public-Private Partnerships?

EARTO recommendations on the future EU Public-Private Partnerships



EARTO Paper on EU Partnerships in FP10: How to boost Future EU Public-Private Partnerships?

5 December 2024

EARTO welcomes the new European Commission's priority to enhance Europe's industrial competitiveness by realising a European Prosperity Plan that places Research, Development and Innovation (RD&I) at the core of the economy (<u>Political Guidelines for the next European Commission</u> 2024–2029).

Especially, EARTO appreciates the following key aspects of this priority laid down in the European Commission President's guidelines:

- . Increase funding towards strategic areas,
- Position Europe at the cutting edge between emerging science, tech and industry to speed up and enhance the tech revolution,
 Foster a thriving research environment by providing advanced infrastructure and laboratories
- Foster a thriving research environment by providing advanced infrastructure and laboratories through new Public-Private Partnerships, such as joint undertakings.

Research & Technology Organisations (RTOs) are crucial innovators for Europe's twin transition. They contribute to the next production revolution, cheaper and cleaner energy, transformation processes in manufacturing and services, digital transformation and novel solutions to social and environmental challenges. RTOs are instrumental within the European RDSI ecosystem and innovation-driven strategic value chains, pioneering EU technological leadership to boost EU competitiveness and driving pan-European excellent and impactful applied research.

As noted by President von der Leyen, the European Public-Private Partnerships (PPPs) within the PPs are crucial for promoting industrial competitiveness as they attract co-investments from both public and private sectors, with the highest financial leverage. EARTO and 115 European industrial associations recently highlighted the importance of coordinated and substantial investments in collaborative research, development and innovation thanks to EU PPS (See our <u>Jains Statement</u>). European PPPs offer pan-European collaborativn reducing fragmentation of the European R&I landscape building on national and regional public investments.

In this context, RTOs are important actors crucial for bridging to industry and in reducing risk for industry via pre-competitive activities as demonstrated through EARTO <u>analysis of EC eCORDA</u> data. EARTO members' participation in Horizon Europe (June 2024) showed that the average industrial involvement in Horizon Europe projects, especially in Horizon Europe Pillar 2, increases to 33% when EARTO members are involved in the project from 23% when they are not part of the consortium.

Building on its members' vast experience, EARTO offers a practical perspective to refine and boost the use of European PPPs in the upcoming Framework Programme for RD&I (FP10) to make this policy instrument more effective and impactful.

European Partnerships are a set of heterogeneous funding instruments with <u>3 types of European RD&I</u> <u>Partnerships defined by the European Commission</u>, Therefore, any recommendations should consider the specificities of the three types of EU Partnerships¹.

Co-programmed and Institutionalised Partnerships: THE instruments linking EU RD&I Policy & EU Industrial Strategy

EARTO Members have noted that the Co-programmed and Institutionalised Partnerships facilitate industrial commitment and leverage private RD&I investments in their respective industrial sectors. Industry Focus more strategically on the set of co-programmed and institutionalised partnerships for EU industrial competitiveness

- In FP10, co-programmed and institutionalised partnerships should prioritise EU industrial competitiveness to maximise the impact of joint public & private RD&I investments
- The focus on the implementation of new EU Partnerships must be co-designed with related industries & RTOs from their early conception

Develop a better portfolio approach and strategic coordinating process to reduce duplication and foster synergies between the Partnerships for greater impact

- Adopting a new portfolio approach is critical to reducing duplication and scattered activities
- Leverage synergies across different EU Partnerships
- Address the partial duplication arising from the overlap of missions and objectives between the Horizon Europe partnerships and other EU initiatives

Reinforce the strategic policy advisory role of Co-programmed and institutionalised partnerships for the whole FP

The co-creation channels of these PPPs should extend beyond co-programming to support the development of EU policies more effectively

Simplify the Rules for participation to lower administrative burden

Simplifying participation rules (e.g. monitoring and reporting) and guaranteeing feasible financing mechanisms (e.g. in-kind additional activities, cash contributions)

Address the challenges faced by the co-funded Partnerships

- Create a simplified and easily accessible structure, streamline the application and implementation process of projects
- Involve future beneficiaries and stakeholders in a structured dialogue
- Foster synergies between EU Partnerships
- · Harmonise participation rules within the same call



¹ Co-Programmed Partnerships: Partnerships between the EC and mostly private and public partners, based on a memorandum of understanding. This document outlines the objectives, the commitments and the governance structure of this cooperation. Institutionalised Partnerships: Partnerships between the EC, Member States, Associated Countries and industry, based on a Council Regulation (<u>Article 182</u>) or a Decision by the European Parliament and Council (<u>Article 185</u>). They are implemented by decised structures. Co-Funded Partnerships: Parlientships involving UL Member States Associated Countries and on an Pic or-fund action.



EARTO joint statement on a stronger Europe through research & innovation

A stronger Europe through research & innovation joint statement



The undersigned organisations issue this joint statement and stand ready to collaborate with the European Commission, the Council, and the Parliament to ensure that research, development and innovation remain central to Europe's strategic priorities. We invite other organisations to endorse and join this effort.

CESAER	EARTO	ERT	EUA
LERU	Science Europe	The Guild	

A robust and dedicated European framework for research, development and innovation

- Support the full research innovation continuum
- Promote cross-sectoral, cross-disciplinary collaboration and cross-continental collaboration and the continuous development of the European research area and innovation ecosystem

Develop a substantially increased budget reserved for research, development and innovation

Ensuring that more than €200 billion is allocated to research, development and innovation under the EU's 2028–2034 long-term budget

Simplifying for beneficiaries and ensuring an attractive programme

Improve regulatory frameworks and processes to reduce transaction costs, enhance collaboration, and empower researchers and innovators





EARTO reaction on EC Communication on a Competitiveness Compass for the EU

EARTO recommendations on EC Communication on a Competitiveness Compass for the EU



EARTO Reaction to the EC Communication on A Competitiveness Compass for the EU

17 February 2025

EARTO shares the understanding that Europe needs to prioritise, coordinate and simplify for its competitiveness and productivity growth at national and EU levels (See EARTO Recommendations). However, only the inherent integration of Research, Development and Innovation (RD&1) efforts by design into the <u>EU Connetitiveness Connass</u> will enable and ensure that Europe is at the forefront of key advanced technologies, groundbreaking innovations, and novel products and services. For many of the proposed EU Flagship Actions, European Research & Technology Organisations (RTOs)' support will be essential to transform existing industries and create new business models based on ew technologies, and scale up new industrial sectors, products and services. Based on our members' experience in facilitating the development of the EU Chips Act & European Defence Fund, we recommend to:

- Insert RD&I Pillars <u>by design</u> in each planned EU Flagship Action targeting specific technologies or strategic industrial sectors,
- 2. Create a Simplified Financial Toolbox for EU priorities.

This will ensure that the proposed EU Flagship Actions and attached horizontal enablers are implemented effectively, that they complement national policies and attached investments and effectively boost the collaborative efforts of industries (large & small) and RTOs to scale up key strategic technologies.

Recommendation 1: Insert by design RD&I Pillars in each EU Flagship Action targeting specific technologies or strategic industrial sectors

EARTO welcomes the proposed European Research Area Act with the Research & Development (R&D) investment goal of 3% GDP target (See example of Finnish R&D Act¹). To do so, the ERA Act should develop an effective monitoring system via a new EU RØBI Semester attached to an agenda of national reforms to support Member States in developing further their RO&I capabilities. In addition, EARTO welcomes the reference to research and technology infrastructures in the forthcoming European Innovation Act. EARTO supports the **development of a strong EU strategy on Technology Infrastructures (IIE**), covering access, networking and support to investment as described in the <u>recently published ECE GReport</u> on TIs. TIs must be an integral part of the EU Flagship Actions which are targeting strategic technologies.

Both the ERA Act and the European Innovation Act need to complement the technology & manufacturing strategies and their attached joint EU-National investments to be developed under the other proposed EU flagship Actions. The interlinking of EU Industrial & RD&I policies should be the key target of the Competitiveness Fund. RD&I efforts cannot be viewed in isolation but are interlinked processes that are the basis for EU competitiveness.

Two recent EU strategies have successfully used the approach proposed in the EU Competitiveness Compass:

- The European Defence Fund (EDF): it regroups a research pillar with a clear target of 30% of the programme's funding, followed by deployment & manufacturing investments/strategy and complemented by joint EU public procurement/buying. The EDF is the first trial of a combined set of instruments under one roof within EC services which led to the creation of DG DEFIS.
- The EU Chips Act: it has a clear RD&I Pillar (Pillar 1) aiming to support EU tech maturation capabilities via pilot lines supported by an EUR RD&I partnership. This RD&I pillar covers the whole RD&I value chain. The EU Chips Act has a clear strategy on how to boods scale-up and deployment by the EU industry with clear public and private EU/national joint funding within the pilot lines as well as the use of the IPCEI instrument to support the industry manufacturing capabilities in EU (i.e. activities subject to state aid and needing SAR exemption).

¹ As in Filaded, the Act on Research and Development Funding entered into force on 1 January 2023 aiming for a significant increase in generating the Bab budget between 2024 and 2020. The Finish Intrainant has committed that the commission few of private and public RAS commonly will reach 4% of CDP by 2030. However, this requires private sector RAD spending to account for at least two-thrists of table RAD spending, including and invited that the common few of private RAS of the CDP by 2030. However, this requires private sector RAD spending to account for at least two-thrists of table RAD spending, including and invited must be reached to the heart of the implementation of the Finish RAD. Act to act the target of one-were public RAD inform (accounging the virus) more RAD in the rest of one-were public RAD inform (accounging the virus) more RAD information. Insert by design RD&I pillars in each EU flagship action targeting specific technologies or

strategic industrial sectors

- The ERA Act should develop an effective monitoring system via a new EU R&DI semester to help
 Member States to develop an RD&I capabilities
- The future EU Flagship Actions' RD&I pillars should be designed with: 1. A clear target of EU funding for RD&I activities. 2. A RD&I strategy covering RD&I value chain up from research and technology maturation up to deployment. 3. A simplified version of the EU RD&I public-private partnerships. 4. Managed by one lead EC DG (not delegated to agencies)

Create a simplified financial toolbox for EU priorities

- There are too many EU parallel funding programmes with their attached programming processes
- EU RD&I Grants: Based on the model grant agreement EU Framework programme
- Member States & EU Co-funding Instrument: One set of simplified rules to allow MS additional co-

funding for activities exempt from state-aids issues

- IPCEIs+ to coordinate public & private investments
- Public procurement to coordinate public & private investments



Mission Letter: Commissioner Ekaterina Zaharieva

Europe's competitiveness - and its position in the race to a clean and digital economy - will require putting research and innovation, **science and technology at the centre of our economy**.

This will entail more investment and cooperation, the right conditions for researchers to thrive and develop new skills, and a clearer focus on the most important and disruptive innovation needed for our competitiveness, security and sustainability goals.

You will play a critical role in this ambition, driving the EU's scientific and technological progress, from basic research to applied innovation. Research and innovation must become an evergreater part of our competitive edge in today's global economy.





Conclusions

- R&I is key for contributing to the Sustainable Global Competitiveness of the EU (Letta's, Draghi's and Heitor's reports)
- Policy alignment: joint roadmap for decarbonisation and competitiveness, EU to reignite its innovation engine (Innovation Gap), reducing dependencies and increasing EU security, strategic autonomy and technology sovereignty
- Potential new public-private partnerships beyond Horizon Europe :
 - Focus on crucial industrial ecosystems for the EU
 - Align/coordinate with national/regional relevant initiatives
 - Encompass all TRLs spectrum
 - Make sure to produce accelerated results with positive impact to market, environment and EU citizens



Thank you



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Part 2

The Challenges of Linking EU Industrial & RDI Policies in the Next EU Multi-annual Financial Framework (MFF)

Moderated by Mathias Rauch, Chief Representative for the EU, Fraunhofer-Gesellschaft

Anne Van den Bosch

Vice President Public R&D Policies & Programmes, IMEC





Erik Drop

Director of Knowledge Programmes and Government Relations, TNO





Michel Viktorovitch European Advisor to the President of IFPEN, IFPEN





Joan Guash

Director International Development & RD&I Policies, EURECAT





Panel Discussion

MODERATOR:

Mathias Rauch, Chief Representative for the EU, Fraunhofer-Gesellschaft

SPEAKERS:

- Anne Van den Bosch, Vice President Public R&D Policies & Programmes, IMEC
- Erik Drop, Director of Knowledge Programmes and Government Relations, TNO
- Michel Viktorovitch, Advisor to the President for European Affairs, IFPEN
- Joan Guash, Director International Development & RD&I Policies, EURECAT





Networking Lunch until 13.40





Keynote Speech by

Diana Morant Ministry of Science and Innovation









Part 3

Ensuring Industry Access to Critical Technologies, The Role of RTOs: The Case of Spain

Keynote Speech by

José Moisés Martín Carretero General Director, CDTI







#innovacion
#ayudascdti
#asesoramiento
#internacionalizacion

Ensuring Industry Access to critical technologies, the Role of RTO: the case of Spain José Moisés Martín Carretero DG @CDTI_innovacion

Centro para el Desarrollo Tecnológico y la Innovación

Sputnik Moment for Europe?

Breakdown of international rules

Technological and raw material dependency

Productivity differential

Strategic threats

General Framework

Letta Report on the Single Market

Draghi Report on Competitiveness

Competitiveness Compass

European Green Deal

STEP Platform for Critical Technologies

Elements to Understand the Evolution of Productivity in Spain Investment in human capital

Physical investments and tangible assets

Investment in intangibles

Challenges of Our Innovation System (Shared with the European Union) Intermediate technology trap: Our main technological sectors are those of intermediate technologies, but with relatively low intensity in disruptive technologies.

Technology and knowledge transfer: Spain is among the top 15 countries in scientific production, but only ranks 29th in patent registration.

Scaling of technology companies: We are one of the most dynamic ecosystems in early-stage technological entrepreneurship, but we have very few unicorns.

Density of the innovative fabric is highly concentrated in medium and large companies.

Factors Affecting Companies' Innovation Capacity Market competition: Perfect competition inhibits innovation, as does excessive concentration.

Robust demand: Purchasing power affects incentives to innovate.

Openness to international trade: Greater openness to international trade leads to more innovation.

Mechanisms for protecting industrial property: Greater protection leads to more innovation in frontier companies and less innovation in follower companies.

Development of financial systems: Greater sophistication and depth lead to more business innovation.

Factors Affecting Companies' Innovation Capacity (continued) Access to knowledge and specialized human capital: Availability of skilled researchers and technicians, access to universities and research centers.

Cultural aspects related to risk perception and failure: Social sanction and narratives related to innovation.

Existence of networks and support systems: Consulting networks, advanced advisory services, technology centers, peer networks, access to technological infrastructures. Which Societies Are the Most Innovative? Basic and regulatory infrastructures: Financial system, human capital, regulatory environment.

Importance of the innovation ecosystem: Plurality of actors, interrelation between them, intangible aspects (openness to cooperation, diversity, trust among actors, motivations...).

Political economy aspects: Absence of distributive conflicts, social cohesion against third-party threats.



Two principles



The whole is much more than the sum of the parts:

Innovation processes generate emergent processes that are much more than the sum of business innovations.

Technology transfer is not a linear process:

The process from basic research to market is complex, involving many pull and push factors from the market and innovation infrastructures.

In other words...

• If we want a vibrant basic research and a strong startup industry, we need to renew the role played by european ecosystems!

General Approach for a Business Innovation Strategy in Spain Overcoming the vision of innovation only "from the supply side" (classic approach) or "only from the demand side" (mission-oriented approach).

Neo-structuralist/evolutionist approach: Addressing coordination failures in the innovation ecosystem and promoting a bottom-up approach.

Addressing the intangible elements of the innovation process (trust, participation, transparency...).

Responding to the social and geopolitical demands of the moment.

Spanish Strategic Framework

Leveraging the momentum of Next Generation EU.

Record funding for RCD: €22 billion in 2023.

Reform of the Science and Innovation Law.

Spanish Strategy for Science, Technology, and Innovation.

CDTI Strategic Plan

Deep-Tech Strategy

Industry and Strategic Autonomy Law
What is the role of RTO?





They enable the transfer of basic research results to the market.

They offer intellectual, scientific, and technological capabilities to the business ecosystem.



They connect agents and develop cooperation spaces.



They generate essential intangibles: trust, cooperation, shared knowledge, innovation culture They are critical in order to promote the European dimension of firm innovation

Cooperation Policies with RTO

32% of projects funded by CDTI involve collaboration with research centers.

Cervera Centers Program: Support for the technological capabilities of centers:

€112 million in the last 5 years

Innovation ecosystems and complementary transfer plans: Funding for intangibles and cooperation spaces:

€8.3 million in 2024, €79 million in 2025-2028.

Cervera Projects: Funding for RCD projects that involve contracting centers:

€188 million from 2014-2025.

Additionally: Participation in advisory councils of the Ministry of Science and CDTI.

Conclusions

Part of the evolution of our productivity is explained by the relatively low technological intensity of our economy.

Investment in technology is not enough if it is not accompanied by other investments in intangibles.

Productivity, innovation, and technology are concentrated in a relatively small group of companies. We need more innovative companies.

Financing is not everything: We need a complete vision of our innovative and technological system.

Innovation and technology policy must address both "soft" aspects (human capital, relational, intangibles) and "hard" aspects (investments, technology acquisition).

Technology Centers are essential for the development of active innovation policies: both in Spain and the European Union.





Part 3

Ensuring Industry Access to Critical Technologies, The Role of RTOs: The Case of Spain

Moderated by Muriel Attané, Secretary General, EARTO

David Rosa

Innovation Director of Las Naves, Innovation Department of Valencia's City Council





José Vicente Morata

Vice President of the Chamber of Commerce of Spain and President of the Council of Chambers of Commerce of the Valencian Community





Laura Olcina President, FEDIT





Jesús Valero President, EARTO





Elisa Rivera

General Director of Planning, Coordination & Knowledge Transfer, Ministry of Science and Innovation





Panel Discussion

MODERATOR:

Muriel Attané, Secretary General, EARTO

SPEAKERS:

- David Rosa, Innovation Director of Las Naves/Innovation Department of Valencia's City Council
- José Vicente Morata, Vice-President of the Chamber of Commerce of Spain and President of the Council of Chambers of Commerce of the Valencian Community
- Laura Olcina, President, FEDIT
- Jesús Valero, President, EARTO
- Elisa Rivera, General Director of Planning, Coordination & Knowledge Transfer, Ministry of Science and Innovation





Closing by

Jesús Valero President, EARTO







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Innovation Capital

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- SAVE THE DATE -

EARTO Innovation Awards & EARTO 25 Years Celebration -14 October 2025 in Brussels,



Belgium











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