

# INESC BRUSSELS HUB

## MONTHLY NEWSLETTER

Number 5 / June-July 2020

### ENGAGEMENT

“engagement (with somebody/something) (*formal*) being involved with someone or something in an attempt to understand them/it – Oxford Dictionary.

Citizen engagement - this is what the European Commission has just promoted to “core priority” across policy areas. The EC Joint Research Centre Science HUB called it “a cultural change” In search of validation of pre-made ideas? Maybe in some cases. A deeper view would point to a genuine search for direction in an unprecedented historical period.



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“our problem is that we don’t seem to be able to see beyond the incremental”

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### WE MUST GO BEYOND BUSINESS AS USUAL

As the EU debates the approval of its next budget with a decisive meeting in mid-July, expectations about a second-wave of COVID19 threaten the opening of the economy and the so-called “de-confinement phase” across Europe and the world and INESC celebrates 40 years, the perspective that we have just lived/are living a moment that will be signalled in history books seems to take shape before our eyes with a confounding speed. The narrative we are offered in the form of grand-vision to contextualise our contribution to the world through research and innovation is not exactly new. It highlights the need of a greener society and economy, it rides the wave of digitalisation and revitalisation of a European Research Area, where mobility and increased collaboration are cornerstone.

We must know how to fit, how to respond to the political priorities that will soon be translated into calls and specific topics in the new Horizon Europe programme. We must do this in the most adequate and informed way and the HUB is here to help, but we must also go beyond business as usual. The political world, as well as the economy, industry and society in general, are starving for direction, for innovative responses and the role of science and technology has never been perceived as important as it is today.

Calls and topics, will in general be more open, describing impacts instead of very detailed deliverables. They will ALL be framed by wider social and economic goals turned political. YOU, as a researcher will find bottom-up instruments that have had extra funding through the NextGenerationEU programme (pay close attention to the name given to the 750 billion euros package the EC is proposing...), such as the ERC and the EIC. You will have Clusters and Partnerships that have never been so interlinked. An officer at the EC told me in a coffee-table conversation before the lockdown: *our problem is that we don’t seem to be able to see beyond the incremental.*

Not only a deeper understanding of policies and the context of your research and innovation activities will give you a competitive edge and bring more financial resources and stronger networks, it will contribute to writing history. Maybe a little piece of the wider historical puzzle, but a crucial one.

## NEWS FROM THE INESC UNIVERSE

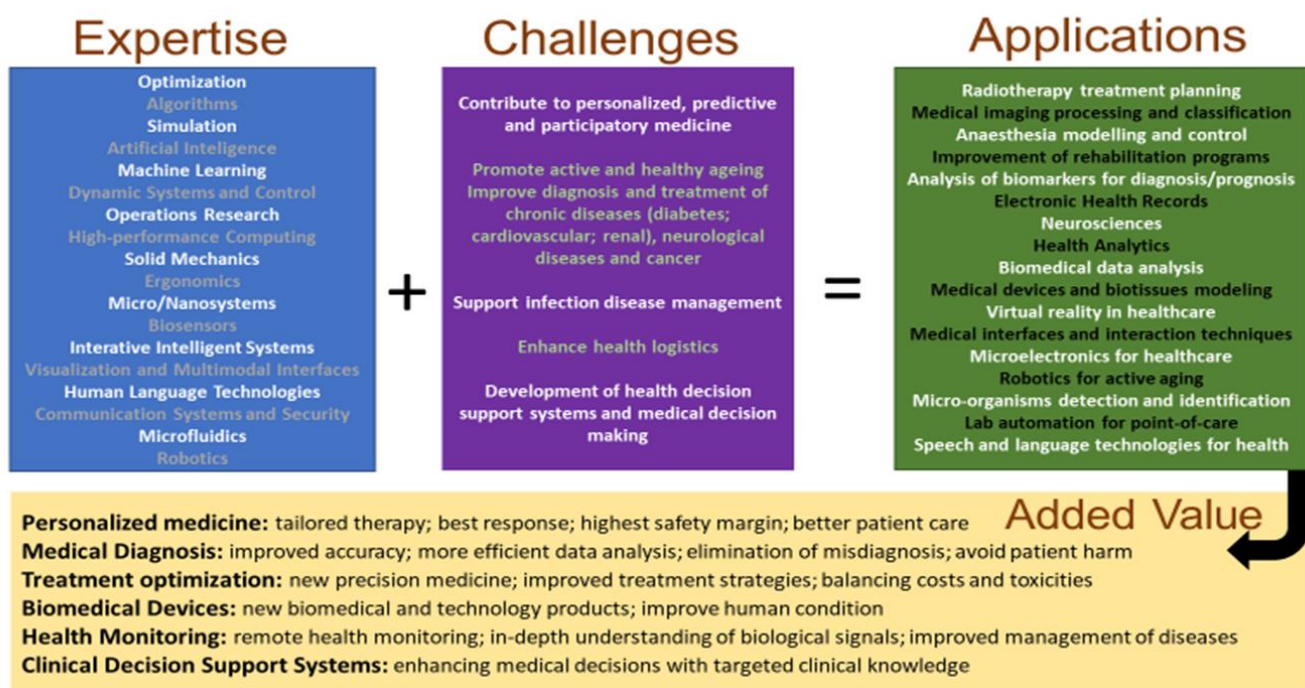
### “EXCELLENCE NEEDS EFFECTIVE SYNERGIES” – FIRST JOINT POSITION PAPER PUBLISHED AND DISSEMINATED TO KEY POLICY MAKERS AND STAKEHOLDERS

The first joint position paper developed and approved by the 5 INESCs was published in May 2020. It's surely the first of many to come. It has originated formal responses from the European Commission's services, such as the Directorate General for Cohesion and Reforms (DG Regio) and the Joint Research Centre (JRC), as well as diverse national authorities.

“Excellence needs effective synergies” is an INESC position paper on synergies between European, national and regional funds and programmes for Research, Development and Innovation. With the goal of contributing to the EU programming process of the 2021-2027 period, the 5 institutes that integrate INESC – Institute for Systems and Computing Engineering developed a joint position paper with contributions and recommendations, in a crucial period of the European budget negotiation process and anticipating the bilateral negotiations with each country and region for their specific partnership agreement. Read full position paper [here](#).

### WORK GROUP HEALTH TECHNOLOGIES PUBLISHED ITS “CHARACTERISATION AND MATHCING” REPORT

This report results from a request by the Management Committee to the HUB, with the main goal of providing a clear perspective of what was the research and innovation (R&I) capacity in health technologies (HT) across the 5 INESC institutes and matching it with the prospective opportunities in Horizon Europe and other relevant European programmes and funds. The report contains detailed information per INESC institute and about the most important health funding programmes. The figure below provides a summary of the capacity of R&I characterisation across the 5 INESCs. A similar exercise and visual representation of how to match this capacity with EU funds is available in the WG HT report. The report was distributed to the INESC community for comments until 17 July. Please contact your HUB focal point for further information.



## NEW HUB WORK GROUP ON AGRO-FOOD & FORESTRY

A new Work Group on Agro-Food and Forestry was approved by the HUB Management Committee. The 5 INESCs already identified and nominated its representatives and we are now in the process of choosing its Chair and Vice-Chair and kick-start the activity. Stay tuned!

## COLLABORATION OF INESC BRUSSELS HUB WITH INESC P&D BRASIL

[INESC P&D Brasil](#) is already a success story of internationalisation of INESC outside Europe, namely in Latin America. INESC P&D Brasil already mobilises the research and innovation capacity of 8 of the best universities in Brasil and has state-of-the-art laboratories in several regions, making it a preferential partner for European initiatives in collaboration with Latin America. The HUB held a meeting with INESC P&D Brasil to kick-start a deeper collaboration dynamic and submitted the issue to the HUB Management Committee. Further information on this collaboration should be available in the near future.

## INOV IS A FOUNDING MEMBER OF EACTDA – EUROPEAN ANTI-CYBERCRIME TECHNOLOGY DEVELOPMENT ASSOCIATION

[INOV is a founding member of the newly created European Anti-Cybercrime Technology Development Association](#) (EACTDA) created for the development of technological solutions for European Authority Agencies and Forensic Institutes in the fight against crime. INOV will make the technology developed in the ASGARD project available to European security forces, to be used to fight crime using information systems.

## INESC MN AND INESC ID IN COLLABORATIVE PROJECT TO DEVELOP COVID-19 TEST CHIP



INESC MN has secured funding on the second edition of Research 4 COVID-19, the special funding scheme of Fundação para a Ciência e Tecnologia - FCT. The project “SARSChip - On-chip testing of SARS-CoV-2”, coordinated by the researcher Verónica Martins Romão, proposes to apply a bioanalytical portable device to support the screening, diagnosis and monitoring of COVID-19 through molecular and antibody tests, both using the same device at the point-of-care. The project will be developed in collaboration with INESC-ID, STABVIDA, UTAD (Department of Genetics and Biotechnology), INL and the clinical pathology services of

Centro Hospitalar de Trás os Montes e Alto Douro (CHTMAD) and Centro Hospitalar Cova da Beira (CHUCB).

## DO YOU KNOW MONICAP – MONITORING SYSTEM FOR FISHING ACTIVITY?

MONICAP™ originated from a pilot project launched in 1988, whose results have revolutionised worldwide the fishing surveillance techniques. MONICAP is a monitoring system for the fishing activity inspection that uses Global Positioning System (GPS) for the vessel location and Inmarsat-C technology for the satellite communications between ships and a terrestrial control centre. MONICAP has been successfully introduced in the market and is currently installed

or being installed in about 800 fishing ships operating under control of Portugal, Spain, France, Ireland and Angola. For each of these countries, several Control Centres, which visualise the ships on the geographical map and monitor all their movements and activities, have also been developed and supplied. [More information in the site INESC INOV.](#)



## PODCAST “THE INSIDER”

Did you have the chance to check the latest episodes of The Insider podcast?

Ep.1. [José Carlos Caldeira, administrator of INESC TEC: a story of consistent effort in R&I in Europe and its results](#)

Ep.2. [Muriel Attané, Secretary General of EARTO: Research and Technology Organisations as key actors for the future of Europe](#)

Ep.3. [Inês Lynce, President of INESC ID: from empowering minority groups in S&T to research response to societal challenges](#)

Ep.4. [Fernando Moreira, President of INESC INOV Inovação: on knowledge-based entrepreneurship and what it means to be the interface between academia and industry](#)

Ep.5. [Paulo Freitas, President of INESC MN: pioneering materials research](#)

Ep.6. [Pia Sandvik, CEO of RISE Research Institutes of Sweden: on post-Corona competitiveness, sustainability and a future beyond the expected](#)



**METROLOGY FOR DRUG DELIVERY MeDD II**

COVID-19 Crisis & Emergency Practices - Infusion Pumps used in the ICU  
THE ROLE OF METROLOGY

**Challenges**

The unprecedented conditions Public Health Institutions experience due to COVID-19 pandemic crisis have forced Hospital Administrations to use procedures outside the normal work practices.<sup>1,2</sup>

- reduce exposure of health care staff to COVID-19
- preserve personal protective equipment (PPE)
- manage shortages of equipment
- manage wastage of critical drugs or substances
- manage staff shortages and reorientation of staff to areas outside their usual expertise

**Extraordinary measures include:**

- using the drug delivery devices
  - outside the patients' room
  - Outside manufacturer specifications
- postponing maintenance and calibration of equipment for patient critical use

**can lead to large dosing errors**

**ADVERSE INCIDENTS, MORBIDITY & MORTALITY**

**How can metrology help?**

**RECOMMENDATIONS**

**On using the drug delivery devices outside the patients' room:**

The accuracy of the device may change due to the setup modification and the pump will not perform according to the specifications of the manufacturer

- Test the flow rate and volume delivered while using extension lines, especially at low flow rates

**On using the drug delivery devices with associated clinical risks and lower accuracy:**

- Volumetric infusion pumps can regulate syringe pumps at a flow rate greater than 15 mL/h

Any other variation to manufacturer specification should be validated by performance tests done by qualified laboratories to assure accuracy

**For delaying maintenance and calibration of equipment for patient-critical use:**

Provide information on the metrological performance and maintenance status of the drug delivery device and justify extending the verification deadline

- A quick check of the pump dosing error can be performed by internal personnel using a measuring injector and a syringe

This method has 2% uncertainty and can be executed in 10 minutes.

**Metrology laboratories can advance the understanding of how drug delivery devices perform. To tackle COVID-19 is extraordinary, non-typical conditions, testing with the actual fields used for patient infusions can help identify errors and quantify device uncertainties. These strategies enable the development of best practices and methodologies to use drug delivery devices in challenging conditions.**

**EMPIR** **EUROPEAN UNION**

The EMPIR initiative is co-funded by the European Union's Horizon 2020 research and innovation programme and the EMPIR Participating States

## INESC MN RESEARCHERS IN THE FIGHT AGAINST COVID-19

Researcher [Vania Silverio](#) is involved in the improvement of dosing accuracy and traceable measurement of volume flow and pressure in existing drug delivery devices and in-line sensors at very low flow rates ([18HLT08 MeDD II](#) – Metrology for Drug Delivery).

The unprecedented conditions that Public Health Institutions are experiencing due to COVID-19 pandemic crisis has forced Hospital Administrations to take measures outside the usual work practices. To minimize dosing errors and consequently patient morbidity or mortality, the 18HLT08 MeDD II partners released the COVID-19 Crisis & Emergency Practices for Public Health Institutions ([here](#)), outlining potential dangers and recommending solutions to address them.

Read more about 18HLT08 MeDD II – Metrology for Drug Delivery [here](#).

## INESC TEC IS THE PORTUGUESE R&D INSTITUTION WITH THE MOST PATENT APPLICATIONS IN EUROPE

For the third consecutive year, INESC TEC is in the top five of national entities with the most patent applications submitted to the European Patent Office. According to [data announced by the EPO](#), INESC TEC submitted seven patent applications in 2019. [More information here](#).



## “DIARIES OF A PANDEMIC”: FOLLOW THE RESULTS

In order to understand the dynamics of citizens' adaptation to the COVID-19 pandemic in Portugal, the Institute of Public Health of the University of Porto (ISPUP) and the Institute for Systems and Computers Engineering, Technology and Science (INESC TEC) launched the initiative ["Diaries of a Pandemic"](#), in partnership with the newspaper PÚBLICO.

The study began on March 23, and citizens are invited to answer a set of questions on a daily basis, which will help understanding the evolution in the lives of the Portuguese people during the COVID-19 pandemic.

Results from May 1 to 18, 2020: From May 1 to May 18, 5.085 participants answered questions about the intention to do diagnostic tests (swab virus search) and immunity tests (antibody detection). You can consult detailed information about the results of this period of analysis in the report prepared by the researchers from ISPUP and INESC TEC ([HERE](#)) and/or read the news from the PÚBLICO newspaper ([HERE](#)).

## INESC TEC USES STATISTICAL AND PSYCHOLINGUISTIC INDICATORS TO DETECT FAKE NEWS

In early May, the European Commission registered more than 2.700 daily articles with fake news related to covid-19 on social networks, including false or misleading posts. Those responsible for said European body even considered misinformation the “disease of the century”. Considering this, INESC TEC’s Centre for Research in Advanced Computing Systems (CRACS) is developing the project “Detecting Fake News Automatically”. This project will support common users, namely journalists, in analysing and identifying information that’s most likely false, as well as filtering the most relevant content on social networks. [More information here.](#)



## HUB EVENTS

### WORKSHOP HEALTH TECHNOLOGIES – 18 SEPTEMBER, 9H30 – REGISTRATIONS OPEN

Following the publication of the Characterisation and Matching initial report and after processing all the feedback received via email from the INESC research and innovation community, the HUB Work Group on Health Technologies is organising an event to present and discuss the findings with INESC researchers from all areas of knowledge and from all INESC institutes. This workshop will take place virtually and access will be granted only to those who register.

Registrations are open until 11th September, just send an email to the Head of Brussels HUB, Ricardo Migueis (ricardo.migueis@inesc.pt) with “Registration HT” on the subject. No further text is needed.

### GENDER & DIVERSITY WEEK (8, 9 AND 11 SEPTEMBER) - SAVE THE DATE

Ensuring gender equality and diversity is a key societal challenge and a European Commission priority that is transversal to its policy goals and specific programmes, namely the research and innovation related ones. Research and Technology Organisations hold a major responsibility for contributing to achieve greater gender and diversity in research, but also in education, industry and across the very diverse societal actors with which it collaborates regularly.

As the example starts within and with the goal of promoting the debate, awareness and effective change, INESC Brussels HUB is organising a series called the “Gender & diversity breakfast webinars”. Beyond the crucial role of RTOs, we will discuss what would be the most effective activities and measures to implement through an R&I project addressing gender & diversity, as well as the key role of role models in promoting a more balanced participation in STEM (Science, Technology, Engineering and Mathematics) R&I. The draft programme, with the respective themes, hours and speakers is below:

#### 8 September, 8h30: Gender and Diversity in research and technology organisations in Europe

Inês Lynce, President, President, INESC ID, Muriel Attané, Secretary General, EARTO (TBC), Tomas Brage, Lund University (TBC)

#### 9 September, 8h30: If you had one million euros for a R&I project promoting gender and diversity, what activities would you implement?

Mina Stareva, Head of Sector, Gender, DG Research and Innovation, European Commission, Helena Pereira, President, FCT (Portuguese National Research Council) (TBC), Marta Barbas, Senior Advisor to Administration, INESC TEC

#### 11 September, 8h30: The role of the role-models in gender and diversity in STEM research and technology

Susana Cardoso Freitas, Director, INESC MN, Maria da Graça Carvalho, Member of the European Parliament, Maryline Laurent, Professor, Institut des Mines, TELECOM Sud-Paris (TBC)

# POLICY, STRATEGY AND FUNDING

## EUROPEAN COMMISSION BUDGET PROPOSAL – KEY FIGURES FOR RD&I

Following the publication of the new European Commission (EC) proposal on the Multiannual Financial Framework for 2021-2027 (MFF) along with the [NextGenerationEU recovery plan](#), find below the key figures for all EU programmes with an RD&I dimension (in comparison with the initial EC proposal of 2018, the EP proposal of 2018 and the latest European Council President's proposal of February 2020). All figures are in 2018 prices:

### ✚ **Horizon Europe:** €94.4bn total MFF + NextGenerationEU

- €80.9bn under the MFF: same level as latest European Council proposal of February 2020 and lower than the initial EC (€83.5bn) and EP (€120bn) proposals
- +€13.5bn under NextGenerationEU (in grants) earmarked to fund research in health, resilience and the green and digital transitions

### ✚ **Digital Europe programme:** €8.194bn under the MFF: same level as the EC initial proposal in 2018 and higher than the European Council proposal (€6.8bn)

### ✚ **Space programme:** €13.196bn under the MFF: same level as European Council proposal and lower than the initial EC (€14.2bn) and EP (€15.0bn) proposals

### ✚ **European Defence fund:** €8.0bn under the MFF: higher than European Council proposal (€7.0) but lower than the initial EC and EP proposals (€11.5)

### ✚ **New standalone EU Health Programme:** €9.370bn to create a comprehensive framework for EU health crisis prevention, preparedness and response

- €1.670bn under the MFF
- €7.70bn under NextGenerationEU (in grants)

### ✚ **New Recovery & Resilience Facility:** €560.8bn to support investments and reforms improving the economic and social resilience of MS and to support the green and digital transitions (incl. RD&I)

- €310bn in grants + 250bn in loans under NextGenerationEU

**On the NextGenerationEU - EU recovery instrument:** temporary reinforcement to boost the EU budget with €750bn (€500bn in grants and €250bn in loans), funded by EU own resources (mainly new financing raised on financial markets).

### Next steps for the MFF:

✚ The Council will analyse and assess the EC MFF and NextGenerationEU proposal, which will be discussed at the European Council of 19 June. European Council's President Michel aims at reaching an agreement in the Council before the summer break.

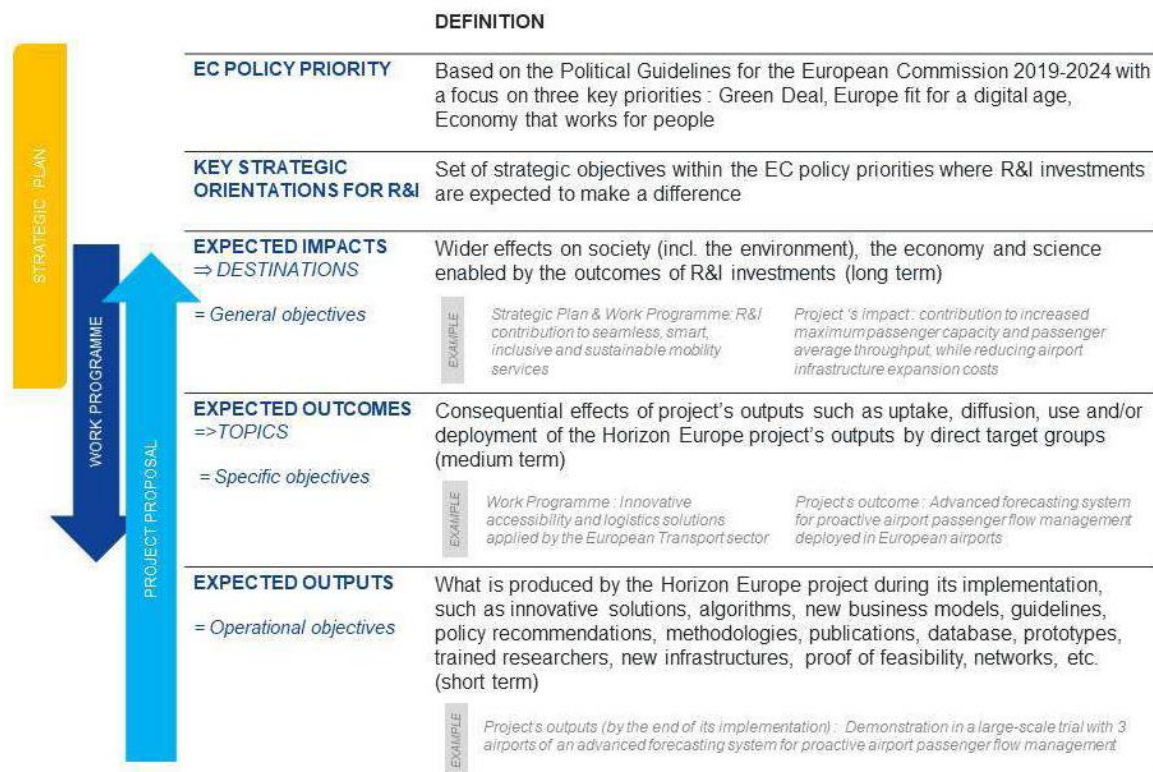
✚ The EP must then give its consent to the new MFF for it to be adopted. In the meantime, the EP is also requesting that the EC puts forward a contingency plan based on an extension of the 2020 budget to the year 2021 to eliminate a risk of discontinuity in case of no agreement on the new MFF before the end of the year.

## Background documents:

- ✚ **EC Communication on the Budget** “The EU budget powering the recovery plan for Europe”: [Communication](#) - [Annex](#) - [Factsheet](#)
- ✚ **EC Communication on the Recovery Plan** “Europe's moment: Repair and Prepare for the Next Generation”: [Communication](#) - [Factsheet on Recovery Instruments](#) - [Factsheet on Financing the Recovery Plan](#)
- ✚ **EC Staff Working Document on Identifying Recovery Needs** - [SWD on Recovery Needs](#) (incl. list of EU industrial ecosystems)
- ✚ **EC Adjusted Work Programme for 2020**: [Adjusted EC work programme](#) - [Annexes](#) - [Factsheet](#)
  - Communication on the Future of RD&I and the ERA - delayed to Q3 2020 (latest info from EC: plan to publish it on 8 July along with two Staff Working Documents – a Roadmap of actions and an Annex with evidence)
  - Communication on HE Missions - still planned for Q4 2020
- ✚ **EC Research and Innovation Performance report (SRIP)**: “Enabling Europe to lead the green and digital transition”: [Report](#) - [Press release](#) – [Infographic towards a sustainable & competitive Europe](#) - [Infographic top 10 facts & figures](#)

## STRUCTURE OF FUTURE WORK PROGRAMMES IN HORIZON EUROPE

It is known that the structure of future work programmes will focus on impacts, which determine the so-called “direction of travel” or, in other words, the general objectives of the specific call, the expected outcomes, which determine the concrete project impact and the specific objectives and, last but not least, the expected outputs, namely, what is produced by the project during its implementation. Don't forget that it is crucial to understand the departure point or what is at the origin of the call in the work programme and that is the political priority. Check the image below shared in the latest Strategic Committee meeting of Horizon Europe:







## THE HUB IS YOURS, WHO SHOULD YOU CONTACT

The HUB is yours. For any enquiries about services available, your main contact is your institutional contact point in the the HUB's Policy and Operations Board (POB). The list of institutional contact points per institution is:

- INESC Coimbra: [Luís Neves](#)
- INESC ID: [Filipa Borrego](#)
- INESC INOV: [Elisabete Carreira](#)
- INESC MN: [Virgínia Chu](#)
- INESC TEC: [Marta Barbas](#)

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## Are you a partner or coordinate a European project?

If yes, you can now be the host of your project's events in the heart of Europe, providing you and INESC with increased centrality and relevance. You have access to a free meeting room, equipped with state-of-the-art video-conferencing facilities, which holds meetings in "u" shape of up to 30 people. Bigger rooms are available in the same building for rent.