# **INESC BRUSSELS HUB**

# **MONTHLY NEWSLETTER**

Number 4 / May 2020

# **RECOVERY PLAN**

Our institutes are preparing a "back to the future" return to the possible normalcy. This is part of our own "recovery plan" even though we all maintained a high-level of activity during this period. The EC will be publishing in early May, it's proposal for what Ursula von der Leyen called Europe's Marshall Plan. In total it is said that it will leverage 2000 billion euros! I will not write all the zeros, promise. It is also said that Horizon Europe will be reinforced as well as the focus on integration of the green and digital technologies. We'll get back to you on this.



"We can provide you with the lastest information to start building a deep understanding of the goals of the R&I area of your interest and also start reinforcing key collaborations to ensure the best possible results in the first calls of Horizon Europe"

### ANTICIPATION: THE BEST WAY TO BE PREPARED

The latest information coming from the virtual meetings held by the European Commission with the Strategic Programme Committee configurations (the official representatives of the 28 Member States) as well as what can be read on the draft documents and reports under preparation that we had a seak peak into mean that:

- Strategic Plan: the EC continues working towards the first Strategic Plan for Horizon Europe, based on the <u>legal basis</u>, the <u>six Commission priorities</u> and the most recent "<u>Orientations</u>" document. Key strategic orientations of the strategic plan are now being developed. They will focus on pillar II (Clusters) but also cover relevant activities in the other two pillars and the Widening participation and strengthening the European Research Area part, while also linked to the <u>EIT</u> and <u>JRC</u> programming activities. There are already 10 Key Strategic Orientations (KSO's) defined with impact across the whole Horizon Europe programme. A table of correspondance was developed. This is key to understand and provide context to the work programmes that will be published.
- Missions: all are progressing and final scoping papers will be submitted by the Mission Boards to the European Commission at the end of May. Most of the Missions make concrete reference to strong engagement of regional and city level governance structures.
- Partnerships: currently there are 30 partnerships that are likely to count with related topics in the first Work Porgramme. This does not count the 8 existing EIT-KICs whose activities are ongoing, and the launch of one on Cultural and Creative Industries. Along May, there will be meetings between partnership's management and EC Cluster representatives to define budget allocation.

We can provide you with the lastest information so that you can start building a deep understanding of the goals of the R&I area of your interest and also start reinforcing key collaborations to ensure the best possible results in the first calls of Horizon Europe.

# **NEWS FROM THE INESC UNIVERSE**

#### **HUB NEWS**

The INESC Brussels HUB website is in the making. An in-house production (meaning that we are programming it ourselves, but in an easy and simple way and using pre-made content management systems, not to worry!) will work as a portal where key information about the 5 organisations can be found. The site is expected to go live in May, so your feedback will be crucial by then.

### HUB Funding Workshop - LIFE Programme



The HUB delivered an online funding workshop about the LIFE Programme (LIFE is the EU funding programme for environment, nature and climate action). A not so frequently used programme by our research and innovation teams, but one that can be useful for up-scaling research and technology ideas to the market, in areas related to the environment. Every INESC institute was represented in the workshop, so please ask your HUB Focal point (check the list at the end of this newsletter) for the presentation. The training was provided by João Pedro Silva, an independent consultant with more than 25 years of experience with LIFE programme. Since 2006, he has been the Senior Nature and Biodiversity expert for the external LIFE programme monitoring an communications team providing support to

European Commission in the programme's implementation. Previously he coordinated LIFE projects. João is also guest lecturer on the International Master in European Studies on EU Environmental and Climate Action policy and funding (Institute of European Studies of the Université Catholique de Louvain). You can also contact him directly via email.

## HUB Policy Workshop – Synergies between European programmes and funds

INESC TEC administrator and former President of the National Innovation Agency, José Carlos Caldeira, made a presentation to the HUB Policy and Operations Board and other INESC Directors, with the goal of sharing his experience related with challenge of working towards de facto implementable synergies between european programmes and funds. The end result was a standing ovation (just kidding, couldn't really see if everyone was standing because camaras were off) and the willingness to work towards a joint understanding of this means for all INESCs, what are the regional, national and European level policies that are needed to make this goal a reality and what can we do to help. We are working on it and should be able to come back to this issue in the next newsletter, if not before.



#### Health technologies – Report on R&I capacity and matching with EU programmes and instruments

The Work Group on Health Technologies has developed a draft report that details the research and innovation capacity of each of the INESC institutes and initiated its matching with EU funding programmes and instruments such as Horizon Europe (brokendown into its main components – Missions, Clusters, Partnerships, Research Infrastructures), European Institute of Innovation and Technology (EIT), Digital Europe, among others. The next step is a wide, open and online consultation to the INESC community of researchers to fine-tune findings, go deeper and complement where needed. The report finishes with a proposed action plan of activities for the next 24 months.

## Agro-Food and Forestry initial interaction and characterisation of capacity

Due to conitnued and increased interest across INESC insitutes, a group of representatives of each organisation got together to start evaluating interest in the creation of a HUB thematic work group on Agriculture, Food and Forestry. With clear interest and potential synergies found among institutes and drawing on the experience of the 2 thematic work groups already at work, they have imediately assembled a first characterisation of the existing research and innovation capacity at INESC in this thematic domain and are now starting the work to match capacity with Horizon Europe and other programmes.

# Aggregate institutional indicators for all 5 INESCs

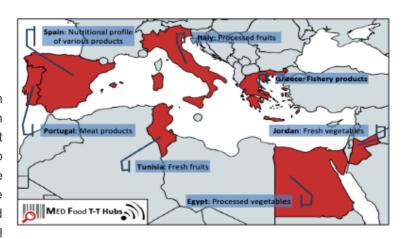
In a period when annual reports are being finalised many indicators are developed across the INESC universe, concerning all types of activities. Nevertheless, not only these indicators are differently conceived across INESC institutes, their depth and detail is also very diverse and this does not allow us to present the full strength of INESC to the outer world. The HUB Policy and Operations Board is now developing an harmonised battery of indicators, which will be presented in June to the HUB Management Committee and serve as the basis for future INESC institutes presentation, negotiation and lobby demonstrating its full potential, in the light of the experience of similar international research and technology organisations.

## Institutional presentation for use in European competitive applications

Also inspired by the experience of Fraunhofer, Tecnalia and, in fact, all other similar Research and Technology Organisations similar to INESC around Europe, the HUB Work Group Funding has developed a template to be used in European project applications in the institutional presentation section, presenting an overall capacity description and aggregate data for all 5 INESC institutes. This description is detailed and can be used in its entirety or just selected parts as pertinent for the application being developed. It is another step to reinforce the image and capacity of INESC as a whole.

# INOV PARTICIPATES IN PROJECT FOCUSING ON BLOCKCHAIN TECHNOLOGY FOR THE FOOD INDUSTRY

The Med Food TTHubs project started in April with the aim of supporting the food industry through the implementation and operation of a transnational network of Trace & Trust Hubs for Mediterranean food products. The project aims to support the industry by sharing information throughout the entire supply chain, up to the consumer, on a single electronic platform, allowing product traceability and verification of authenticity, certification and quality control processes. In the project, INOV leads the software design of the electronic platform, carrying out the analysis of



Countries of the pilot operation of 7 Trace & Trust Hubs

requirements as well as the design and development of an integrated structure, with focus on blockchain technologies.

#### INOV STRENGTHENS INTERNATIONAL TECHNICAL AND SCIENTIFIC COOPERATION

As part of its internationalisation strategy, INOV cooperates with the Federal University of Bahia (UFBA), the Chung-Ang University (CAU) and the Federal University of Pernambuco (UFPE) and Federal Rural University of Pernambuco (UFRPE) to enhance and transform knowledge into innovative technological solutions. The organisations collaborate in the fields of Enterprise Computing, Intelligent Systems, Digital Transformation, ICT Governance and Management, Project Management and Enterprise engineering.

#### PODCAST THE INSIDER - FIRST FOUR EPISODES PUBLISHED

The first 4 episodes of the HUB's podcast, The Insider, are published. We have reached a substantial number of downloads in our first month, spread all over Europe and beyond. We also have a renewed logo and banner on the dedicated podcast page, thanks to Pedro Regadas, the INESC TEC designer. Check the <a href="https://docs.org/linear.com/">The Insider page</a> with all episodes or access them one by one clicking on the links below:

- Ep.1. <u>José Carlos Caldeira</u>, administrator of INESC TEC: a story of consistent effort in R&I in Europe and its results
- Ep.2. <u>Muriel Attané, Secretary General of EARTO: Research and Technology</u> Organisations as key actors for the future of Europe
- Ep.3. <u>Inês Lynce</u>, <u>President of INESC ID</u>: 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

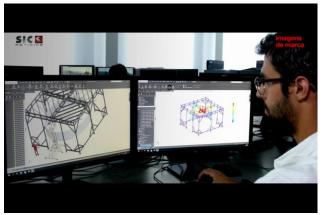


A new epidsode will be published each week, every Wednesday. Don't forget to subscribe here! Please help disseminate the hosting page and contribute to reinforce the branding and the message of INESC across the world. If you have any suggestions of people to interview (or any other comments!) please send them via email to <a href="mailto:ricardo.migueis@inesc.pt">ricardo.migueis@inesc.pt</a>



Science related podcasts are growing and one of the most established ones is the UK based "<u>The Naked Scientists</u>". It is based at Cambridge University's Institute of Continuing Education and produced by a team of scientists, doctors and communicators whose passion is to help the general public to understand and engage with the worlds of science, technology and medicine. It was created in 2001 and is working with international broadcasters such as the BBC and many others.

Another very interesting podcast series, dedicated to the challenges of career and life balance in academia and research in general is developed by David Mendes, it's called <a href="Papa PhD">Papa PhD</a> and has outstanding and very interesting quests. It's worth a visit!



# INESC MN: REWORKING OF AN EXISTING BIOSENSING TECHNOLOGY TO SERVE THE DIAGNOSIS OF COVID-19

The fight against Coronavirus is taking many forms and involving all possible means. Research centers, laboratories, clinical entities and industry partners are allying efforts to find solutions and the way out of this pandemic. <a href="INESC MN">INESC MN</a> is not an exception, being involved in the reworking of an existing biosensing technology to serve the diagnosis of Covid-19. The main idea and the differentiating point sit in the combination of an infection diagnosis with an immunity

assessment. In the same analytical tool, the molecular test based on viral RNA can be parallelly performed with the serological test for the interrogation of the immune system (anti-virus antibodies). A consortium with STABVIDA, UTAD, INESC ID, INL and Portuguese hospital centers from the SNS is in place and searching for funding to support the development of the presented technological solution. A glance of this initiative is presented in the TV show, Imagens de Marca, an initiative of SIC-Notícias in collaboration with ANI (Agência Nacional de Inovação).



# INESC TEC DEVELOPS LOW-COST, ALTERNATIVE VENTILATOR TO SUPPORT PORTUGUESE HOSPITALS IN RESPONSE TO COVID19

PNEUMA is an add-on device that automates the self-inflating bag, thus presenting itself as a last resort solution to ventilate patients having difficulty breathing. This field ventilator includes and enhances the main benefits of the self-inflating bag, recognised by healthcare professionals. The device is used regularly in the clinical context, but is now being adapted to deal with the COVID-19 pandemic.

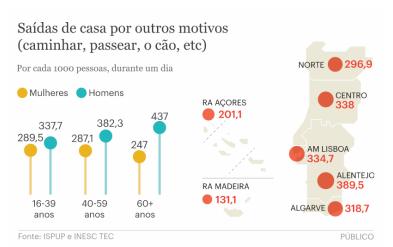
The main goal of this alternative ventilator is relieving conventional ventilators that are necessary for critical cases, thus providing support to second and third-line hospitals and patients awaiting transfer to central hospitals. This technology acts as an alternative to transient invasive ventilation, namely in patients with acute respiratory failure requiring volume and respiratory rate control. PNEUMA is also a valid solution in a scenario of critical shortage of ventilators. The work carried out by Rice University (E.U.A.) was the main source of inspiration for this device – a system of automatic compression and decompression of self-inflating bags (e.g. AMBU®) that mimics the manual use of said bag.

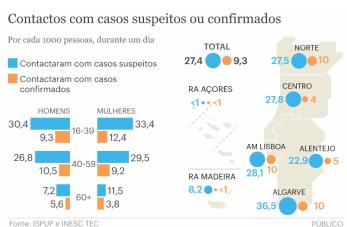
Detailed information can be found here: site of the PNEUMA project

#### "DIARIES OF A PANDEMIC": THE FIRST RESULTS ARE ALREADY AVAILABLE

The newspaper PÚBLICO released the results of the first week of the "Diaries of a Pandemic". Between March 23 and 30, researchers from INESC TEC and the Institute of Public Health of the University of Porto (ISPUP) analysed 23,254 questionnaires, completed by 6,791 people. The participants provided information about how they act according to a set of situations that may influence the course of the epidemic in Portugal.

INESC TEC and ISPUP, in partnership with the newspaper PÚBLICO, launched the initiative "Diaries of a Pandemic" to understand the dynamics of citizens' adaptation to the COVID-19 pandemic in Portugal. This study began on March 23, and citizens are invited to answer a set of question on a daily basis, which will help understanding the evolution in the lives of Portuguese people during the COVID-19 pandemic. The results cover four dimensions: test, diagnosis and symptoms; use of healthcare services and search for information; risky interactions and day-to-day activities.





#### **INESC-ID RECENT ACHIEVEMENTS IN H2020**

Researchers from <u>INESC-ID</u> have recently been successful in participating in four H2020 competitive projects: OLISSIPO leaded by Susana Vinga, BIG co-leaded by Rodrigo Rodrigues, TAILOR and HumainE-Al-Net with the participation of Ana Paiva.

<u>OLISSIPO</u> is a twinning project, i.e., an institutional network to strengthen a specific field of research. In OLISSIPO "Fostering Computational Biology Research and Innovation in Lisbon" the goal is to enhance the INESC-ID competences in the field of Computational Biology and developing it into an international centre of excellence in the area. Susana Vinga is the the coordinator of this widening action.



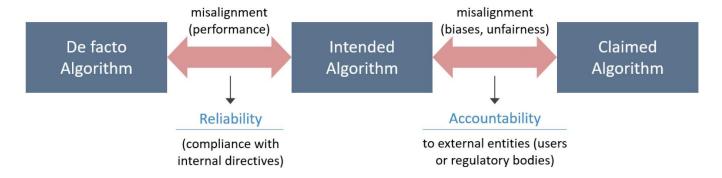
BIG is an ERA Chair "Blockchain technologies and design Innovation for social Good" that aims to enhance the full potential of the interdisciplinary research at Instituto Superior Técnico. Being research centres of IST, both Interactive Technologies Institute (ITI/ LARSyS) and INESC-ID are involved in BIG ERA Chair. While strengthening innovation and knowledge transfer activities to and with local and global industrial partners, BIG will contribute to the smart specialization strategy of the Lisbon region in stimulating the upcoming ecosystem of digital startups and their economic impact. Rodrigo Rodrigues and Nuno Nunes are the leading researchers of BIG.

<u>TAILOR</u> "Network of research centres for foundations of trustworthy AI" will create a network of research excellence centres on the foundations of trustworthy AI to meet the grand challenges in health, mobility and resource management. And finally, HumanE-AI-Net "Research on AI system that enhance human intelligence" aims to develop the scientific foundations and technological breakthroughs needed to build Artificial Intelligence systems that enhance human intelligence rather that replacing it. Ana Paiva participates in both TAILOR and HumanE-AI-Net.

These new projects will enhance contributions to both the scientific community through OLISSIPO and BIG, but also the social concerns around Artificial Intelligence, which is the focus of both research projects TAILOR and HumanE-Al-Net, through the participation of its researchers.

#### **INESC TEC COORDINATES TRUST-AI PROJECT**

To bridge the gap between the analytical expressions derived from theory and the numerical models obtained with Machine Learning, towards the development of a novel paradigm and the creation of a tool that aims to address setbacks in different sectors, thus contributing to an innovative ecosystem focused on said paradigm. These are the fundamental objectives of the European project TRUST-AI − Transparent, Reliable and Unbiased Smart Tool for Artificial Intelligence, which will start in October 2020, with a funding of approximately €4M.



# INESC MN AND PURDUE UNIVERSITY IN COLLABORATION ON SPINTRONIC MATERIALS AND DEVICES

"The Spintronics Group at INESC-MN (Mustafa Erkovan, Susana Freitas) recently entered into a new collaboration with Purdue University (Zubin Jacob lab) for device research with advanced thin film materials for magneto-optical switching. Also, spintronic devices will be used for random number generation towards quantum computing."

# POLICY, STRATEGY AND FUNDING

#### **EIC - EUROPEAN INNOVATION COUNCIL**

The network of National Contact Points for Innovation (network of NCPs responsible for disseminating information on the EIC) has organised an infoday webinar on the topic "European Innovation Council Pilot: How to succeed in the EIC Pathfinder and Accelerator 2020 calls", to present the novelties that have been introduced into the EIC Pilot Work Programme 2020 which reflect the new European Commission leadership priorities. The objective of the event was to provide up-to-date information on the content of the last Pathfinder and Accelerator calls under Horizon 2020 to potential applicants as well as information on support to the applicants available at the national and European levels. All presentations and videos of the meeting are available here.

#### THE 540 BILLION CORONA-PACKAGE

After several failed attempts, EU finance ministers on 9 April agreed a €540 billion package to support member states, companies and workers in the coronavirus crisis, after The Netherlands and Italy overcame their differences. The package sets up a massive safety net of €540 billion for member states via the <u>European Stability Mechanism (ESM)</u>, for companies through the European Investment Bank, and for workers via the <u>European Commission's new instrument Support to mitigate Unemployment Risk in an Emergency (SURE)</u>. A <u>full report on the comprehensive economic policy response to the COVID-19 pandemic is available here</u>.

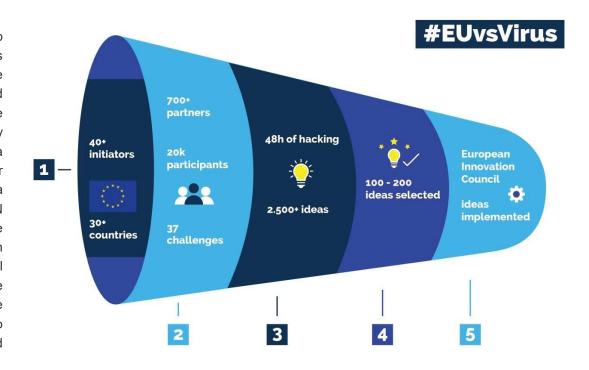
#### THE ERA VS CORONA ACTION PLAN

During an informal videoconference of 7 April 2020, Ministers responsible for research and innovation supported the first 10 priority actions of the first ERAvsCorona Action Plan which resulted from dialogues between the Commission services and the national ministries.1 It covers first short-term coordinated actions only. It sets out key measures the Commission services and the Member States are activating now to coordinate, share and jointly increase support for research & innovation, in line with the objectives and tools of the European Research Area. Coordination is also an important prerequisite for stepping up global cooperation, essential to tackle corona related issues. This first ERAvsCorona Action Plan will be updated regularly by the Commission services and national administrations with other R&I coordinated actions that can be taken in the short, medium and longer term.

#### We highlight:

- Action 3, referring reinforcement of funding for (1) Social and economic impacts of the outbreak response; (2)
   Medical technologies and ICT-applications; (3) Health systems preparedness (including manufacturing);
- Action 6, An "<u>ERA Corona platform</u>" will provide complete overview of all ongoing R&I funding initiatives on the Coronavirus:
- Actions 8 (access to research infrastructures) and 9 (creation of a data sharing platform);
- Action 10, a Pan-European hackathon to develop innovative solutions.

The HUB Work Group Health Technologies is actively engaged in the INESC response participation to these actions and we are happy that Verónica sav (Vice-Chair Romão WGHT)) and Sofia Martins, from INESC MN have participated in the pan-european hackathon initiative. Check the visual representation of process planned by the European Commission to take ideas to society and the market.



#### EIT HEALTH AND MCKINSEY & CO. RELEASE REPORT ON AI IN HEALTHCARE

'<u>Transforming healthcare with Al: The impact on the workforce and organisations</u>', a Europe-wide report published on 03 March 2020 explores the impact of Al on healthcare practitioners, as well as the implications and obstacles for scaling Al in healthcare organisations and systems. The report includes a survey of 175 people on the frontline of healthcare delivery, and interviews with 62 decision-makers, and is complemented by macroeconomic analyses from the work of the McKinsey Global Institute (MGI).

#### RESIGNATION OF MAURO FERRARI AS CHAIR OF THE EUROPEAN RESEARCH COUNCIL

Mauro Ferrari's resignation story was best described by Christian Ehler, the German European People's Party Member of Parliament that oversaw the (with Dan Nica, his Romanian counterpart from the Socialists) the negotiation of Horizon Europe specific programme and regulation proposal. Christian Ehler, called Ferrari's tenure, "A four-month glorious misunderstanding, from a brilliant scientist and entrepreneur, about what it takes to do the job of ERC president.".

Mauro Ferrari's letter to the Financial Times was just the tip of the iceberg in a relationship that was already very much strained, as the statement swiftly written by the European Research Council and signed by all its board members clearly shows. The main reason is very neatly pointed out in the letter: "complete lack of appreciation for the raison-d'être of the ERC". Furthermore, the letter of the ERC is really an attempt to make clear to everyone that doesn't know that the ERC is part of a wider ecosystem of institutions with a very specific culture and way of working. It really illustrates, at the highest level of EU research and innovation governance, how misunderstandings are easy and common and the importance of working hard to avoid them. Helga Nowotny, who was president of the ERC from 2010 to 2013 said: "He thought his role was like that of chair of a board. He wanted to bring some of the entrepreneurial spirit of the US but he failed to understand what the EU and ERC is all about." It is expected that one of the three Vice-Chairs will take up the interim role of Chair while the formal search process for a new Chair takes place.



# 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 HUB's Policy and Operations Board (POB). The list of institutional contact points per institution is:

INESC Coimbra: <u>Luís Neves</u>INESC ID: Filipa Borrego

- INESC INOV: Elisabete Carreira

INESC MN: <u>Virgínia Chu</u>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.