Organization of H2020 training events 2

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1. Summary

Blockchain and Distributed Ledger Technologies (DLT) are transformative and bring about a potential for improvement in European citizenship and economic growth - enabling decentralised, trusted, transparent, user-centric digital services, stimulating new and improved business models, and promoting decentralised social innovations. For this purpose, the EC is considering these technologies strategic for the next decades, promoting a holistic approach to their deployment in multiple application domains: from medical data to smart homes and grids, citizenship and democratic decision making, transport, creative industries and digital social media. While many of the challenges related to blockchain technologies may be perceived as exclusively technical, or deeply infrastructural, these technologies have the potential to profoundly impact business and human experience and values. Effective deployments of blockchain will require bringing together in a synergistic way the technical expertise and a design innovation perspective based on the principles of design thinking, which focus on a deep understanding of human needs to produce strong case studies in different domains through an iterative process of ideation and real-world testing.

The following general impacts in terms of innovation can be expected:

- **Improving existing blockchain products and services** in the key application domains of LARSyS and INESC-ID, most notably mobility and logistics, energy and climate action, urban systems and ocean exploration, and exploitation in close collaboration with existing and future industry partners;
- **Developing new business segments and applications** in ICT, emerging from ongoing research and not necessarily confined to the above domains. The project will develop components, systems, applications and also services that could be exploited by system integrators, application developers and other industry stakeholders to integrate new data-based technologies into their offerings thereby creating new valuable business opportunities;
- **Developing traditional (local) businesses**, in particular for the **Energy, Tourism and Creative Industries** sectors that can integrate new ICT technologies into their systems by becoming more flexible, responsive, innovative and competitive.

A significant part of BIG aims to help improve INESC-ID and LARSyS in obtaining competitive funding, namely in the context of the EU Framework Programs (H2020 and ESIF). The GA (pg. 20) clearly states that "*Measure 5 – Introduce structural changes to increase performance: relates to the incorporation in INESCID and LARSyS management of best practices and standards developed in the context of the ERA Chair project, thereby strengthening the structure of the research centres but also of Técnico - Lisbon as a whole*". For this, the GA of BIG proposes several structural actions (pg. 8): increasing critical mass and focusing the research topics on blockchain innovation technologies and design innovation and twinning with international partners to "improve the participation of its associated labs ICT research labs LARSyS and INESC-ID in the Horizon 2020 and ESIF programmes".

It is important to restate what the GA of BIG defines as structural changes and goals related to Blockchain technologies and design Innovation for Social Good (BIG) developing a campus-wide initiative in the

premier engineering school in Portugal which includes more than 885 faculty members and 23 research units including both INESC-ID and ITI/LARSyS. BIG is not about blockchain technologies per se (in fact INESC-ID already includes several world-class researchers working on many technical aspects of blockchain - including co-PI Rodrigo Rodrigues, a previous recipient of an ERC grant "Dependable Cloud"). The concept of BIG was to bridge the existing technical expertise at INESC-ID with the design innovation perspective focused on the deep understanding of human needs to produce strong case studies in different domains for real-world testing which is the expertise of ITI/LARSyS. As stated in the GA (pg. 5): "*BIG will dedicate resources to design and other creativity-enhancing practices for exploration of innovative solutions for blockchain and distributed ledger technologies via design studios, developing unexpected uses of technology, testing of unusual application domain solutions, and working on social innovation/acceptance*."

The Deliverable 3.1 "Organization of Horizon 2020 Training Events" is a report on the training events in the scope of the BIG project in the first 12 months of the project.

WP3, Task 3.1. Acquiring Horizon 2020 funding development expertise (M6-M24).

"This task will include the training of the ERA Chair team and the current staff and Faculty of LARSyS and INESC-ID in Horizon 2020 project management and EC funding development. This task will guarantee that we create the local expertise in EU research funding that will allow us to be more effective in accessing Horizon 2020 funds and creating know-how for the management of future projects, knowledge protection and entrepreneurship. This will include attending specialized training courses for the ERA Chair Support team, LARSyS and INESC-ID project managers: two training courses dedicated to H2020 applications (4 people x 2 training courses), plus one training course in-house for all LARSyS and INESC-ID researchers by an invited external expert (1 person x 1 training course). "

This deliverable was required to be revised with the following information:

- Detailed information on the collaboration of the BIG Research Team with other stakeholders on the preparation and submission of H2020 proposals, including the following: Horizon Europe topic, consortium, the title of proposal, link and relevance to the BIG project strategic areas;
- The added value of the prepared and submitted proposals to the BIG project activities;
- Status of the proposal's evaluation.

The deliverable is now divided into two parts. Part 1 responds directly to this request. Part 2 concerns EU funding training up until the current date, as a response to the following comment in the report "The activities for the training of the BIG ERA Team members during the 1st Reporting Period are only a few (attendance to two training events, 1 participation to EU R&I Days). The beneficiary needs to provide a more concrete plan of how the team members will gain sufficient expertise to prepare and submit high-quality proposals for funding at national and European levels."

2. Objectives

LARSyS and INESC-ID are two Portuguese research units evaluated in 2018 by FCT – Fundação para a Ciência e a Tecnologia, as Excellent. The items under evaluation were: quality, merit, relevance and internationalization of the R&D activities.

Although the evaluation was the best we could expect, these 2 R&D units face some difficulties obtaining EU funding. We lack support and management staff with experience in managing EU grant proposals and reaching out to entities in the European Research Area. We also lack highly experienced senior researchers with a track record of successful EU grant proposals that can train and support younger Faculty. Our younger team members must learn to better project their results within the European Research Area's innovation networks.

The main objective of this deliverable is to overcome the needs mentioned above by training critical members of LARSyS and INESC-ID to prepare applications for H2020 and ESIF funds, which should increase the chances of getting projects approved.

H2020 Proposals prepared and submitted by BIG Research Team with other stakeholders:

Title of proposal: **Bauhaus of the Seas Sails - BoSS**

H2020 call: CSA / HORIZON-MISS-2021-NEB-01

ERA Chair Members involved: Nuno Nunes, Mariana Pestana

Horizon Europe topic: New European Bauhaus

Consortium: Associação do Instituto Superior Técnico para a Investigação e Desenvolvimento, Magellan, TBA21–Academy, Ca' Foscari University of Venice, University of Malmø, Genoa Municipality, Het Nieuwe Instituut, Delft University of Technology, Marine Education Center / Naturum Öresund, North Adriatic Sea Port Authority, Venice Municipality, IUAV University, Fondazione Istituto Italiano di Tecnologia, Gulbenkian Foundation, Oeiras Municipality, Lisbon Municipality, EGTS Linieland van Waas en Hulst, The New Institute

Link and relevance to the BIG project strategic areas:

Goal #9 in project proposal: Define a traceable, rigorous, and innovative impact evaluation methodology based on blockchain technologies and DAOs. 2) The project intended to research the role of digital technologies (blockchain, DAOs) as decarbonization technologies for ocean / coastal renewable energy and proposed leveraging digital (e.g., circular, and regenerative) and decentralised technologies (e.g., blockchain and decentralised autonomous organisations - DAOs) to deploy innovative forms of adaptation and behaviour change in relevant domains such as tourism, cultural heritage and food chains.

The added value of the prepared and submitted proposals to the BIG project activities:

D-Central lab was intended to use the BoSS as a pilot. IST-ID would provide expertise in distributed digital technologies through the collaboration of Catherine Mulligan (ERAChair holder in blockchain for social good).

Status of the proposal's evaluation: Funded

Title of proposal: **CULTURE CHAIN - Cultural BlockChain and Artificial Intelligence for the Protection and Preservation of Digital Cultural Heritage**

H2020 call: HORIZON-CL2-2021-HERITAGE-01

Type of action: HORIZON-RIA

ERA Chair Members involved: Valentina Nisi, Nuno Nunes

Horizon Europe topic: Heritage

Consortium: Fondazione Istituto Italiano Di Tecnologia, Associacao Do Instituto Superior Tecnico Para A Investigacao E Desenvolvimento, Ey Advisory Spa, University Of Surrey, Noho Limited, Eccom Centro Europeo Per L'organizzazione E Il Management Culturale -European Centre For Cultural Organisation And Management Associazione, Kea European Affairs, Withers Llp, Artivive Gmbh, Muzej Novejse Zgodovine Slovenije, Instituto Marques De Valle Flor

Link and relevance to the BIG project strategic areas: CULTURE CHAIN promotes the preservation of digital tangible and intangible cultural heritage by providing tools for the re-use of assets enabling traceability, acknowledgement, licensing, endorsement, and access. The driving principle of the project is to co-design with relevant stakeholders groundbreaking BlockChain (BC) and Artificial Intelligence (AI) technology that protect CH digital assets, while being invisible to the users, intending to safely ease and democratise access to culture. To bring technology tailored to the stakeholders, the project implements new actions for user-centered design to: understand the NEEDS of artists and creators, and co-design interfaces to suit their needs; DEVELOP the audience through participation strategies; during and after the current pandemic crisis. The fruition of this will be achieved through novel ICT tools to handle ACKnowledgment through (semi-) automatic referencing methods by identifying where and how a piece has been influenced or derived from prior art; PROTECT using Blockchain and embed Non-Fungible Tokens (NFT) support by a Knowledge Graph to handle authenticity, the endorsement of use and the remuneration; ACCESS to create a general-purpose platform for smooth deployment of content using polyvocal storytelling, AR and VR visualization of digital CH and Art.

Added value of the prepared and submitted proposals to the BIG project activities: CULTURE CHAIN will be deployed and demonstrated on three pilots with unique stakeholders and case studies. First, a community of AR Artists, which need greater safe access to digital content and new methods for remuneration. Secondly, managing digital exhibitions in small-medium size museums promoting the re-use of digital assets across Europe with a limited budget. Finally, CULTURE CHAIN will expose polyvocal stories of the inhabitants of Lisbon intermixing tangible and intangible heritage and assets of the locals into guided tours through the city.
Status of the proposal's evaluation: Not funded (12.5/15, threshold 10)

Title of proposal: **iNtima: Enabling New Relationships with Intimate Data**

H2020 call: ERC Starting Grant

ERA Chair Members involved: Teresa Almeida

Horizon Europe topic: ERC Starting Grant

Consortium: n/a

Link and relevance to the BIG project strategic areas: This project studies digital technologies for reproductive health (FemTech) from the perspective that they have helped revolutionise reproductive health in women. Yet, counter the logic of female empowerment, the powerful inferences of digital technologies can also be used to marginalize or discriminate against the vulnerable or underrepresented, to the detriment of their reproductive freedom. Indeed, intimate data can be powerful and disruptive, so much so that it threatens not only the privacy of individuals and communities but also their human rights. Recognising the universalising tendencies that frame design and development within such technologies around an abstract or generic user that therefore deem some

more vulnerable than others, this project (1) studies reproductive health technologies concerning ICTs, including notions of intimate data; (2) develops and evaluates a methodological toolkit that supports intimate data care; (3) studies how notions of justice can be designed into future technologies, including co-designing with women and other vulnerable groups. To these ends, this interdisciplinary project reviews notions of intimate data and evaluates current use(s) of FemTech, and combines a series of design-oriented studies to propose future technologies across the North-South divide. The project will be carried out by the applicant, one PhD student, two Postdocs, and research assistants, in collaboration with colleagues with long experience in technology design and user experience research.

The added value of the prepared and submitted proposals to the BIG project activities:

Status of the proposal's evaluation: Not funded

Title of proposal: **LEAPCulture - Locative Engagement, Access, and Preservation of Cultural Heritage**

H2020 call: HORIZON-CL2-2021-HERITAGE-01, HORIZON-RIA

ERA Chair Members involved: Valentina Nisi

Horizon Europe topic: Locative Engagement, Access, and Preservation of Cultural Heritage,

Consortium: U. Southampton, Bournemouth U., IST-ID, Trinity College, CMFunchal, IPNatureza, National Trust

Link and relevance to the BIG project strategic areas: Locative Narratives and Games are in the process of entering the mainstream, in cultural heritage they can improve access by offering alternative experiences and widening audiences, they can aid in preservation by managing footfall and focusing digital assets, and they can increase engagement and allow visitors to see their heritage in new ways. However, existing design approaches and infrastructures for locative heritage are bespoke and poorly integrated with existing visitor structures. There is also a lack of guidelines on what is ethically desirable in these digitally mediated spaces, and how designers might mitigate against unintended consequences or abuses. This is a barrier to the widespread adoption of locative heritage applications and means that more complex experiences are currently not sustainable in the wider sector. LEAPCulture will change this by bringing together the leaders in digital locative experiences, in collaboration with some of Europe's most significant cultural institutions, to enable a new generation of locative cultural heritage applications through widely drawn design guidance, validated ethical frameworks, and an open, extensible, and reusable set of technologies.

Added value of the prepared and submitted proposals to the BIG project activities: According to the GA (pg. 5) the goal of BIG is to look at Blockchain and design innovation for social good in multiple application domains (from medical data to smart homes and grids, citizenship and democratic decision making, transport, creative industries and digital social media). This proposal enhances the application domains of BIG to cultural heritage (including cultural creative industries) as defined in the S3 priorities of Lisbon (see Figure 3 of the GA, pg. 22). In particular this project will look at the area of digital locative experiences, games, and open collaboration with a consortium of partners looking at novel digital technologies in the cultural and creative sector.

Status of the proposal's evaluation: Rejected within threshold (13/15, threshold 10)

Title of proposal: **WILD – Into the Wild**

H2020 call: H2020-FETPROACT-2020-2, RIA

ERA Chair Members involved: Valentina Nisi, Nuno Nunes

Horizon Europe topic: Future and Emerging Technologies

Consortium: IIT, ITI/LARSyS, U. C. Sacro Cuore, U. College London, Noho

Link and relevance to the BIG project strategic areas: Society is changing; more people where holidays, commuting or generally being outdoors, are changing be it due to a pandemic or the environmental implications, travel across the world is being impacted. Therefore, there is a need for new spaces to augment social presence and extend the range of social interaction possibilities among human beings. Such spaces need to be more than just meeting places but places of collaboration, self-expression and exploration.
We propose to use storytelling as a vehicle to promote social inclusion where we transport disjoint people into a physical (or digital copy) of reality to collaboratively experience stories where blockchain technologies can be employed. We rely on the full range of XR (from Real to VR), overcoming the need for an artist to meticulously create visual assets as, is common in VR, our real world provides the context where AI weaves together compelling stories into a coherent narrative around the target area, transforming the environment to reflect the narrative of the story and the interactions of the users. Set in the natural environment of the islands of Madeira for its stunning scenery, heritage and diversity; the Into the WILD project, truly encapsulates its name in both reality and the depths of the imagination. When reading a story, we imagine the fantasy world differently, guided by experiences and our emotional state.

The added value of the prepared and submitted proposals to the BIG project activities: WILD is based on data which can be stored in DLTs and blockchains such as cues from social media, interactions and biometric information of the users to guide the transformation of reality creating a relatable and immersive experience to the users and building an element of implicit codesign and uniqueness to the experience. WILD employs ethically considerate AI and privacy-preserving to create layers around the users focusing on demonstrated interaction to guide the experience beyond the simple friend and follower relationship.

Status of the proposal's evaluation: Not funded 2.70 (Threshold: 0)

Title of proposal: **3D CULT Design and Digital manufacturing for the Diffused Mediterranean**

H2020 call: HORIZON-CL2-2022-HERITAGE-01

ERA Chair Members involved: Valentina Nisi, Nuno Nunes

Horizon Europe topic: Cultural Heritage, Creative Industries

Consortium: U. Sapienza, ECCOM, Laba, Noho, IST-ID, U. Cat. Valparadiso, D6 Culture EU, KRITI

Link and relevance to the BIG project strategic areas: The combination of creativity, art, design and technology offers enormous possibilities for the discovery, representation and interpretation of heritage. New technologies have greatly enhanced the different ways of accessing and experiencing cultural heritage: the user is no longer a passive subject, but rather interacts with technology to discover and construct meanings through numerous sensory and cognitive modalities. 3D CULT seeks to explore the potential of 3D printing, combined with rapidly growing innovative technologies, arts and creativity, to contribute to the preservation, reproduction, promotion and creative re-interpretation of European cultural heritage (CH) and values, as well as a deeper comprehension of the environmental risks threatening cultural and natural heritage and of the possible solutions to mitigate them. Bringing together partners from technological, social and cultural sectors, the project aims at engaging creatives and artists, together with technology-savvy partners, in the production of new scenarios, ideas and concepts through Rapid Manufacturing models and prototypes, including 3D printing technologies. The concepts will be inspired by five sites of natural and cultural relevance situated along the coast of the Mediterranean, in an endangered status due to lack of preservation and climate change-related issues. In the second stage, the Rapid Manufactured models resulting from the artists' and creatives' participation will be re-interpreted in connection with local communities through the use of digital technologies such as Digital Storytelling, Augmented and Extended realities. This re-interpretation of the models will result in new artworks connecting the sites and communities that live closely in and with it, extending the reach of CH and providing new meanings and critical points of view of the legacy that such sites stand for.

The added value of the prepared and submitted proposals to the BIG project activities: According to the GA (pg. 5) the goal of BIG is to look at Blockchain and design innovation for social good in multiple application domains (from medical data to smart homes and grids, citizenship and democratic decision making, transport, creative

industries and digital social media). This proposal enhances the application domains of BIG to cultural heritage (including cultural creative industries) as defined in the S3 priorities of Lisbon (see Figure 3 of the GA, pg. 22). In particular this project will look at the area of 3D printing and open collaboration with a consortium of partners looking at novel digital technologies in the cultural and creative sector.

Status of the proposal's evaluation: Not funded, 9.0 (Threshold: 10)

Title of proposal: **DCitizens: Fostering Digital Civics Research and Innovation in Lisbon**

H2020 call: Twinning - Widening

ERA Chair Members involved: Horizon Europe topic: Hugo Nicolau

Consortium: IST-ID, IIT, U. Siegen, U. Northumbria

Link and relevance to the BIG project strategic areas: While governments act as transactional providers of uniform and static services, the challenges of contemporary society require different models of service design and delivery that are built on long-term engagement, participation, and co-creation with local communities and citizens. Digital Civics posits the use of technology in the provision of relational models of public services by empowering citizens and non-state actors to co- create, take an active role in shaping agendas, making decisions about service provision, and making such provisions sustainable and resilient. DCitizens builds on those principles to achieve 5 main objectives: O1) Enhance ITI research profile and innovation competence in Digital Civics; O2) Provide training to Staff and Early Stage Researchers to build critical mass at the interface of research, local government, and the private/third sectors; O3) Establish a leading pole of excellence in Digital Civics; O4) Strengthen and expand the collaborative network between the Twinning partners; and O5) Establish a Digital Civics Research and Innovation Agenda in line with the SMART Specialization Strategy for Lisbon. We identified four interconnected Strategic Areas in Digital Civics to be strengthened with the Twinning partners' support that provide solid ground to establish the methodology and action plan to reach these objectives. The Strategic Areas are: 1) Community-based Research Methods, 2) Emerging Technologies, 3) Design Justice, and 4) Civics, Policy, and Economic Models. Based on these areas, the project's work plan includes a staff-exchange programme, organisation of joint scientific/training events, activities to enhance the profile of young researchers, training of research management staff, and a small citizen-led research project. The consortium includes partners from one widening country (ITI - Portugal), and three leading institutions in the field: IIT (Italy), University of Siegen (Germany), and University of Northumbria (UK).

Added value of the prepared and submitted proposals to the BIG project activities: According to the GA (pg. 5) the goal of BIG is to look at Blockchain and design innovation for social good in multiple application domains (from medical data to smart homes and grids, citizenship and democratic decision making, transport, creative industries and digital social media). This proposal enhances the application domains of BIG to cultural heritage (including cultural creative industries) as defined in the S3 priorities of Lisbon (see Figure 3 of the GA, pg. 22). In particular this project will look at the area of digital civics and open collaboration with a consortium of partners looking at novel digital technologies in the cultural and creative sector.

Status of the proposal evaluation: Funded

Title of proposal: **Qualichain**: **Decentralised Qualifications' Verification and Management for Learner Empowerment, Education, Reengineering and Public Sector Transformation**

H2020 call: DT-TRANSFORMATIONS-02-2018-2019-2020

ERA Chair Members involved: Miguel Correia

Horizon Europe topic: Socioeconomic and Cultural Transformations In The Context Of The Fourth Industrial Revolution

Consortium: NTU, Atos, Fraunhofer, Knowledgebiz Consulting, The Open University, Technische Informationsbi bliothek, INESC_ID, Supreme Council, Agência Modernização, INA.
Link and relevance to the BIG project strategic areas: This project targets the creation, piloting and evaluation of a decentralised platform for storing, sharing and verifying education and employment qualifications and focuses on the assessment of the potential of blockchain technology, algorithmic techniques and computational intelligence for disrupting the domain of public education, as well as its interfaces with private education, the labour market, public sector administrative procedures and the wider socio-economic developments.

The added value of the prepared and submitted proposals to the BIG project activities: The project focuses more specifically on the assessment of the implications (technical, political, socio-economic, legal and cultural) as well as the impact - in terms of benefits and risks - of the prescribed solution's utilisation, whose disruptive potential lies both in the exploitation of the innovative features of the aforementioned individual technologies, as well as in their unique combination in a new territory for the provision of a set of baseline services (Awards'/ Qualifications' Archiving; Awards'/ Qualifications' Verification; Qualifications' Portfolio Management) and several value-adding services (Career Counselling and Intelligent Profiling and Competency Management including Recruitment; Competencies' Evaluation and Development; Consulting and Decision Support). The proposed solution will be piloted through four representative scenarios, including: (i) cross-university degree equivalence verification; (ii) smart curriculum design; (iii) staffing the public sector; (iv) providing HR consultancy and competency management services.

Status of the proposals evaluation: Funded (EU H2020 grant agreement No 822404)

Title of proposal: **TRUSTyFOOD: Stakeholders-driven pathways for blockchain implementation in the agri-food sector**

H2020 call: HORIZON-CL6-2021-FARM2FORK-01-07

ERA Chair Members involved: Miguel Correia

Horizon Europe topic: Fair, healthy and environmentally-friendly food systems from primary production to consumption
Consortium: Tecnoalimenti, Ethniko, Fraunhofer, U. Koblenz, INESC-ID, Stitching, Udruga, Compellio, OMDA,
Link and relevance to the BIG project strategic areas:13 participants from 7 EU and 1 third countries join forces for supporting the Strategic Research Agenda of the future joint research program on the subject of Blockchain by shedding light on the current partial and fragmented picture of BCT applications in the agri-food domain and by clarifying the benefits and opportunities which BCT can concretely to stakeholders throughout the food chain offer. The project intends to prepare the way for R&I activities in the decade to come, basing its assumptions on systematic monitoring and reviews of national, European and international R&I pilots/use cases, experiences and best practices on consolidated and balanced stakeholder views. The active involvement of users is required from the very beginning for the identification of needs and use cases, which will be subsequently translated into operational requirements for services. The goal of the proposal is to understand why communities, i.e. users, accept/reject blockchain-based projects, the mistakes done by others for not repeating them, and the best and innovative practices in blockchain development in the agri-food sector (considering its complexity) for arriving to shape different possible futures for BC application.

The added value of the prepared and submitted proposals to the BIG project activities: The project will investigate and discuss both technical aspects as well as non-technical barriers to BCTs deployment, but also other issues fostering BCTs deployment, such as interoperability, innovative business models, standardisation and regulatory issues and will be at the base of White Papers addressed to EC. At the same time, the proposal intends to provide to users some a framework of services (and guidelines) for empowering them in future BC technology implementation.

Status of the proposal evaluation: Not funded

Title of proposal: **DRAIS - Designing Responsible Human-Centred AI Systems**

H2020 call: COST Action - OC-2021-1-25513

ERA Chair Members involved: Augusto Esteves

Horizon Europe topic: COST

Consortium:

Link and relevance to the BIG project strategic areas: Computing is impacting everyday live. Work environments are complex pervasive computing systems. Mobile computing technologies are intertwined with our personal lives. Communication and entertainment is computer mediated. We expect that over the next decade many of these computing systems, that are ubiquitous in our lives, are engineered to become intelligent systems. With artificial intelligence (Al) and machine learning, we can add new qualities to computing systems, bringing benefits to the individual as well as to our society as a whole. With advances in machine learning (ML) systems can perceive their environment (e.g. computer vision for vehicles) and make decisions.

The added value of the prepared and submitted proposals to the BIG project activities: There is a growing understanding of the potential benefits and risks of this type of technology including its integration with DLTs. The expected advantage of using Al is to create systems that can perform tasks and actions with little human involvement, making systems easier to use, more efficient, and requiring less attention. In our project, we investigate how to put humans at the centre of the development of intelligent systems. The key aspect is to understand and develop processes and tools for designing and developing a responsible human-centred Al system. Methodologies, techniques, and tools, able to support system designers to build responsible human-centred Al, are still lacking. The main goal of this proposal is to create a group of discussions in Europe, to advance the field of Human-Centered Al by promoting research that can overcome the current lacks.

Status of the proposal's evaluation: Not funded

Title of proposal: **BauMar ERAChair: aligning the research and innovation potential of Técnico with the New European Bauhaus through the Bauhaus of the Seas**

H2020 call: HORIZON-WIDERA-2022-TALENTS-01

ERA Chair Members involved: Nuno Nunes

Horizon Europe topic: New European Bauhaus

Consortium: IST-ID

Link and relevance to the BIG project strategic areas: The "New European Bauhaus" (NEB) aims at raising a movement towards implementing the Green Deal based on sustainability, social inclusion, and beauty. This means realising regenerative approaches inspired by nature that enrich our experiences through creativity, art, and culture, embracing diversity to promote inclusive, accessible spaces where the dialogue between diverse cultures, disciplines, genders, ethnicities, and ages becomes an opportunity to imagine a better future for all. The climate crisis is a global, complex hyperobject emerging from human exceptionalism of generations schooled in the dichotomy of humans vs nature. Only an interdisciplinary, movement that addresses the sheer complexity and scale of the problem will allow us to enact meaningful change. In response to this challenge, through the Bauhaus of the Seas, Técnico – Lisbon is leading a NEB mobilisation around the most definitive global natural space and the most critical shared space in the EU and the world: seas, ocean and water bodies and the coastal areas. The overall goal of this proposal is to seek funding in order to expand the research and innovation potential of Técnico – Lisbon contributing to foster the vision of the Bauhaus of the Seas through the hiring

of an ERA Chair aiming at developing a critical mass of interdisciplinary research in deploying and testing solutions that promote BauMar literally the "the sea as a space for creation and entrepreneurship". The BauMar ERA Chair aims at unlocking the full potential of interdisciplinary research in the leading engineering and architecture school of Portugal while strengthening innovation and knowledge transfer activities in close collaboration with local and global industrial partners and contributing to the smart specialization strategy of the Lisbon Region in stimulating the uptake of the NEB towards implementing the Green Deal based on the triangle of sustainability, social inclusion and beauty.

The added value of the prepared and submitted proposals to the BIG project activities: BauMar brings together two research units (ITI and CITUA) of Portugal hosted in Técnico. The project involves a portfolio of NEB demonstrator pilots of the Bauhaus of the Seas consortium: the Atlantic Tagus River Estuary (Lisbon/Oeiras), the Lagoon in the Adriatic (Venice) and the Gulf of Genoa (Genoa), the Atlantic Rhine–Scheldt Delta (Rotterdam) and the Öresund Strait (Malmö) and the North Sea / Elbe River (Hamburg). All sites have committed to the BoS, including large-scale initiatives (funded by EU structural and recovery funds) that span significant coastal areas of the city/region, capable of adapting and scaling up the Horizon Europe missions' activities, creating a much-needed interconnection between the cities, rivers, seas and the oceans. These cities/regions have committed their ambitious development plans to the BoS, including a clear leadership commitment. to reinforce the role of coastal cities and their broader ecosystem in terms of regenerative approaches inspired by natural cycles that replenish resources and protect biodiversity: reducing pollution (e.g. plastic/chemicals), regenerating aquatic ecosystems (including in rivers/estuaries, seas, and ocean), which leverages digital (e.g., circular and regenerative) and decentralised technologies (e.g., blockchain and decentralised autonomous organisations - DAOs) deploying innovative forms of adaptation and behaviour change in relevant domains such as tourism, cultural heritage and food chains.

Status of the proposal's evaluation: Not funded, 9.5 threshold 10

Title of proposal: **GLAMURE - A Glocal, IncLusive, DigitAl ecosysteM for the crafts of the fUtuRE**

H2020 call: HORIZON-CL2-2022-HERITAGE-01-04

ERA Chair Members involved: Valentina Nisi, Nuno Nunes

Horizon Europe topic: Cultural Heritage

Consortium:U. Torino, U. Roma, IST-ID, Martel, Masterbuga, Fratelli Piacenza, Megla Rozsa, Earthster, IADA, ACROSSLIMITS, FINCONS

Link and relevance to the BIG project strategic areas: Local artisans and SMEs are valued as they keep alive their heritage know-how, inscribe manufacturing in our history and our culture, and involve a human dimension in products. It is then important to protect and enhance local production and craftsmanship by empowering people with making and permitting emerging ideas to become real and valuable for the market. These goals underline some challenges: - How will local designers and manufacturers manage contributions in co-production environments? - will work environments deal with environmental-related and process sustainability issues? - How will traditional craftsmanship, part of European and Global heritage and cultural identity be preserved and revived for future markets? - How will artisans and SMEs of the future compete with major digital platforms, able to turn data and interaction from users into trends? - How will local production raise awareness to obtain impact at the global level? GLAMURE aims to face these challenges with the creation of an ecosystem where a community of artisans, designers, entrepreneurs, and researchers work together mediated by an innovative, highly integrated AI-driven platform comprising an inspirational component, to foster

creative thought, a sustainable processes component, to make production processes in line with sustainability and green manufacturing, a co-working space, that is, an environment to e-meet collaborators where each contributor to a project is formally acknowledged, a glocal marketplace, i.e., a global window to showcase local heritage-based crafts, and an inclusive e-learning space to support anyone interested in preservation and enhancement of heritage crafts and techniques. GLAMURE will validate results through two pilots in two domains, Textile/Fashion and Food, with a perspective, from the scientific and technological point of view as well as the economical and societal directions, of future upscaling in other fields.

The added value of the prepared and submitted proposals to the BIG project activities: According to the GA (pg. 5) the goal of BIG is to look at Blockchain and design innovation for social good in multiple application domains (from medical data to smart homes and grids, citizenship and democratic decision making, transport, creative industries and digital social media). This proposal enhances the application domains of BIG to cultural heritage (including cultural creative industries) as defined in the S3 priorities of Lisbon (see Figure 3 of the GA, pg. 22). In particular this project will look at the area of crafts and open collaboration with a consortium of partners looking at novel digital technologies in the cultural and creative sector that can track chains.

Status of the proposal's evaluation: Not funded, 12.0 threshold 10.0

Title of proposal: **LOGACULTURE: Locative Games for Cultural Heritage**

H2020 call: HORIZON-CL2-2022-HERITAGE-01-09

ERA Chair Members involved: Valentina Nisi, Nuno Nunes

Horizon Europe topic: Heritage

Consortium: U. Southampton, IST-ID, Bournemouth U., Trinity College, CMFunchal, IPNatureza, National Trust

Link and relevance to the BIG project strategic areas: Locative Games are in the process of entering the mainstream, in cultural heritage they can improve access by offering alternative experiences and widening audiences, they can aid in preservation by managing footfall and focusing digital assets, and they can increase engagement and allow visitors to see their heritage in new ways. However, existing design approaches and infrastructures for locative heritage are bespoke and poorly integrated with existing visitor structures. There is also a lack of guidelines on what is ethically desirable in these digitally mediated spaces, and how designers might mitigate against unintended consequences or abuses. This is a barrier to the widespread adoption of locative heritage applications and means that more complex experiences are currently not sustainable in the wider sector. LoGaCulture will change this by bringing together the leaders in digital locative games, in collaboration with some of Europe's most significant cultural institutions, to enable a new generation of locative cultural heritage games through proposals for design guidance, validated ethical frameworks, and an open, extensible, and reusable set of technologies.

The added value of the prepared and submitted proposals to the BIG project activities: According to the GA (pg. 5) the goal of BIG is to look at Blockchain and design innovation for social good in multiple application domains (from medical data to smart homes and grids, citizenship and democratic decision making, transport, creative industries and digital social media). This proposal enhances the application domains of BIG to cultural heritage (including cultural creative industries) as defined in the S3

priorities of Lisbon (see Figure 3 of the GA, pg. 22). In particular this project will look at the area of locative experiences, gaming and open collaboration with a consortium of partners looking at novel digital technologies in the cultural and creative sector. Through a set of five interlinked case studies across four countries the project will: gather evidence from the heritage design space for interactivity, narratives, and play; look at how augmented reality and soundscapes can affect visitors' immersion; explore the place of locative heritage in the wider visitor journey through transmedia and social visiting, and explore how the barrier to authoring and deploying such systems might be lowered. The goal is to create a step change in knowledge in how to design, deploy, and maintain locative heritage games, and lay the groundwork for their mass adoption by cultural institutions by allowing them to treat locative experiences that offer new forms of access and engagement as an integrated part of their existing cultural heritage work.

Status of the proposal's evaluation: Funded

Title of the proposal: **eGamesLab:** A Game Changer

Call: PRR - Agendas Mobilizadoras

ERA Chair Members involved: Nuno Nunes, Valentina Nisi, Hugo Nicolau, Augusto Esteves

Consortium: The eGames Lab is a unique egames development and creative industries cluster in Portugal, bringing together 14 companies, R&D centres and public & private entities to leverage the competitiveness of the sector and positioning itself globally. The eGames Lab is a national cluster established in Portugal (Madeira, Azores, Lisbon, and Évora) with close ties and cooperation with Carnegie-Mellon University in Pittsburgh (USA), and AmazonWebServices (AWS) GameTech in London (UK) as well as with industry players and consultants from games hub in Copenhagen (Denmark). The consortium has formal support from major industry leaders, such as Sony Playstation, Dell's Alienware and Singapore's EnjinStarter Launchpad. The consortium will also work with the prestigious University of Canterbury (New Zealand) and the famous HitLab (one of the best Virtual Reality in the world labs).

Link and relevance to the BIG project strategic areas: The eGames Lab PRR Agenda includes a Blockchain-Based Games for Social Good track to help develop the eGames Lab framework focusing on research that combines blockchain technologies for social good. Distributed Ledger Technologies (DLT) are transformative and bring about a potential for improvement in citizenship and economic growth - enabling decentralised, trusted, transparent, user-centric digital services and stimulating new and improved business models and promoting decentralised social innovations. One particular area of adoption is Non-fungible Tokens (NFTs) and digital games since they fulfil perfectly the goal of creators and game players: the items they create and own in the digital work are non-fungible, exchangeable, and ideally independent of the service providers.

The added value of the prepared and submitted proposals to the BIG project activities: The blockchain-based games for social good will drive the potential of digital games to promote applications targeting social good (e.g. rule transparency, collective ownership and asset reusability) thus pushing DLTs on their potential to profoundly impact business and human experience and values. Through gaming for social good, this track will therefore contribute also to nontechnical aspects, which can be equally as detrimental to the widespread adoption of blockchain preventing the principled, effective, and adequate use of this technology.

Status of the proposal's evaluation: Funded

Horizon Europe Training

In addition to the activities stated in the 18-month report (included below), the ERA Chair Team has attended the following training courses up until the current date:

EU Funding Session	Cathy Mulligan, Mariana Pestana, Kevin Gallagher, Teresa Almeida, Alfio Puglisi	Pre Award Officer Marta Candeias (IST)	1) Pre award office - what it is and how it can help you	10th May 2022
EU Funding Session	Cathy Mulligan, Mariana Pestana, Kevin Gallagher, Teresa Almeida, Alfio Puglisi	Pre Award Officer Marta Candeias (IST)	1) Practical session covering proposal writing of collaborative projects of part B with examples; path finder and widening 2) Networking 3) Political Landscape	22nd and 23rd June 2022
ERC Beyond	Mariana Pestana, Kevin Gallagher	Enspire Science Academy	ERC Grants	16th June 2022 - 8th July 2022
Grant Writing Bootcamp	Mariana Pestana, Kevin Gallagher	IST /"Make Time Count" (MTC)	ERC Grants	7-16 Sept 2022

Information included in 18 month report, here resubmitted:

In this first year of the project, the staff and faculty acquired H2020 expertise through local training and online webinars lectured by the European Commission. One member of the support team from LARSyS, Alexandra Mendes, attended the training course “Horizon Europa and the preparation of applications for European projects” organized in the scope of the Horizon2020 project – FORWARD. The training course focused on the Pillars and topics of the Horizon Europa Program. The first session addressed the Participant Portal and all the information inherent and necessary to submit a proposal. On the second day, the theme was Pillar I and the types of projects and proposals for the Marie Skłodowska-Curie Actions. In the third session, the focus was on Pillar II- Widening and filling out the sections of the forms. In the fourth and final training, Pillar III was addressed and its types of projects and the European Innovation Council (EIC).

LARSyS (Alexandra Mendes, Senior Research Manager) support staff also participated in a meeting organized by Instituto Superior Técnico on June 16, 2021, to discuss the financial, administrative and technical aspects of HE applications, specifically for the thematic Collaborative Pillar 2 projects and for the Pathfinder Challenges (closing dates September/October/November), so that we can advise and support researchers in preparing their applications. Furthermore, Alexandra Mendes attended the Financial Management of Horizon 2020/EUROPE Projects, delivered by the European Fund Management Consulting (EFMC), specifically designed for project managers, finance services, EU post-award offices, which took place from the 19th-21st of February 2022 in Vienna (Austria).

Catherine Mulligan and Alexandra Mendes participated in the European Research and Innovation Days event, organized by the European Commission on June 23 and 24, 2021. This event covered topics such as Horizon Europe, the European Research Area, the European Innovation Ecosystems.

On the 24th of June 2021, we delivered deliverable 3.1 (Organization of Horizon training events), through an info session on the new Horizon Europe program for LARSyS and DCentral researchers, focused specifically on the upcoming project funding opportunities, delivered by IST´s Pre-award officer (Marta Candeias). Building on the success of the session, the information and calls under the new Horizon Europe program, and with the ERA Chair research team now in place, we have arranged a new meeting with IST´s Pre-award officer on the 5th of May 2022. This meeting aims to inform the ERA Chair Research team on the Horizon Europe funding opportunities, and potential partners' search, and identify the gaps of knowledge on the ERA Chair Research team to support with further training.
Furthermore, we are liaising with other Portuguese organizations supporting EU funding application, such as the national representatives and contact points at for example the Agência Nacional de Inovação (ANI, National Innovation Agency, João Ribau) and Fundação para a Ciência e a Tecnologia (FCT, Science and Technology Foundation, Rui Munhá). We will map the interests of the ERA Chair Research Team, LARSyS and INESC-ID to understand the gaps and organize sessions to support the researchers, in close collaboration with IST´s Pre-award officer, Marta Candeias.

At the European level, we have recruited a UK company with expertise in successfully obtaining EU funding, Make Time Count, to support our ERA Chair on funding applications. We are also considering further support from other companies such as EUMasterclass, an expert consultant for EU funding projects, to train the ERA Chair on successfully applying for EU funding. We expect to deliver this training by September 2022, as per the grant agreement (deliverable 3.2).

Date: June 14, 2021

Venue: Zoom

Participants: Alexandra Mendes, Cátia Jardim, Catherine Mulligan, Élvio Gouveia, Sabrina Scuri, Augusto Esteves, Mary Barreto, Ana Rodrigues, Vanessa Cesário, Sheikh Mostafa, Cintía França, João Prudente, Hélder Lopes

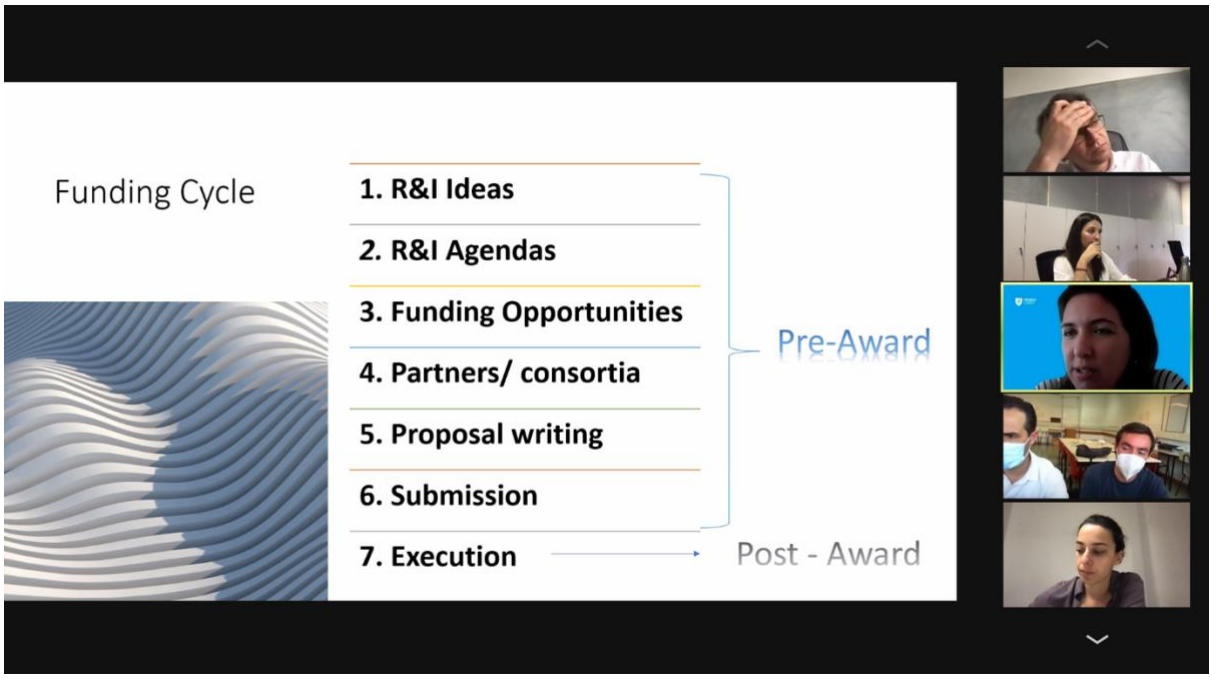

Figure 1- Info-Session Horizon Europe, June 14, 2021

Marta Candeias- Head of Research & Innovation Funding Support at IST-ID, conducted the info session (Figure 1). Marta has followed national and European policies to support research and innovation and the European Horizon Europa, H2020 and FP7 programs, and ensured national representation in Nanotechnologies, Materials, Production and Process Technologies, and Artificial Intelligence support activities for innovation in companies. She has experience as a trainer in courses on European funding opportunities and has provided advice and coaching in business development derived from research and innovation activities.

The info session focused on the following key points:

A. Horizon Europe Program

B. Funding Instruments along the Innovation cycle

C. What's New on Horizon Europe?

D. Rules for Participation

E. Horizon Europe Proposals: Key Points

Horizon Europe Programme

Marta started the info session by giving an overview of the Horizon Europe Program. The main goals of this program are to support the creation and diffusion of high-quality knowledge; Strengthen the impact of R&I in supporting EU policies and foster all forms of innovation and strengthen market deployment. We were better able to understand that the main programme focus is to help build a greener and more sustainable future.

Funding Instruments along the Innovation cycle

Marta presented to the group all the funding opportunities available (Figure 2), considering each individual's goals. There was a key focus on some specific actions, considering the researcher's requests since some were applying for these calls.

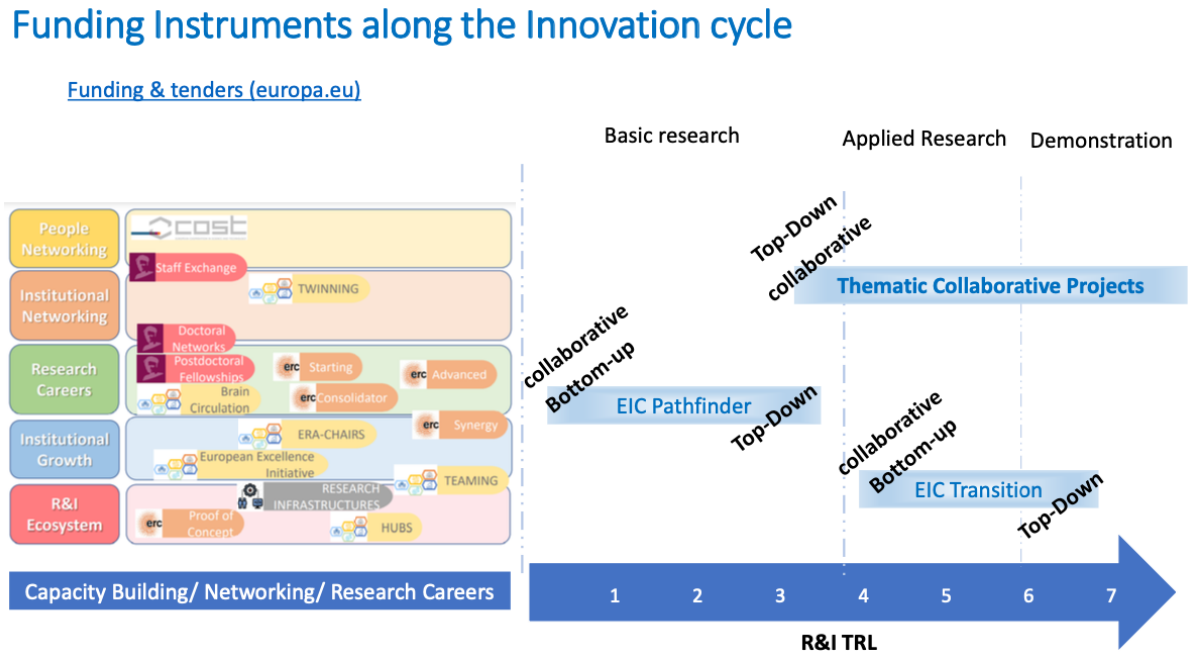

Figure 2 - Presentation slide - Funding Instruments

Cost actions are the perfect funding opportunity for young researchers. These networks are dedicated to scientific collaboration and allow recent PhD holders to establish themselves in the scientific world while connecting with different researchers.

ERC projects aim to fund researchers who wish to execute their projects in any European Country. These grants allow researchers, especially young ones, to pursue their research goals independently.

What's New on Horizon Europe?

The European Innovation Council	Will bring the most promising ideas from lab to real-world application and support the most innovative start-ups and companies
EU-wide R&I missions:	Research and innovation missions to increase the effectiveness of funding by pursuing clearly defined targets
Open Science	The obligation of Beneficiaries to exploit their R&I Results

Simpler rules	Reduced administrative burden for beneficiaries and programme administrators.

Rules for Participation

Conditions of participation

- At least three independent legal entities from 3 different Member State and Associated Countries
- Public bodies, research organizations or higher education establishments must have a gender equality plan.
- Include a plan for the exploitation and dissemination of results

Page Limits:

- Research and Innovation Actions – 45 Pages
- Innovation Actions – 45 pages
- Coordination & Support Actions – 30 Pages

Evaluation Criteria:

- Excellence
- Impact
- Quality & Efficiency of Implementation

Horizon Europe Proposals: Key Points

The researchers were advised to do the following when planning to write a Horizon Europe Proposal:

- Contact the Science & Technology Manager to discuss their proposal idea and discuss its relevance to the Call or ask for help on identifying a call that they may contribute to and how
- Prepare a Proposal Summary
- Approach Potential Partners
- Attend Relevant Webinars and Info-Days
- Register in the EU Experts Database- because the best way of learning is by doing

Once all the steps mentioned above are accomplished, the researchers should focus on the proposal writing, keeping in mind the proposal size and the number of pages.

The project objectives should be well-aligned with the topic description, and the researchers should be clear when quantifying the expected impacts of the project and its relation to the work programme.

The budget breakdown should be well-justified and presented in the proposal. The communication and dissemination measures should be coherent and broadly described.

3. Conclusion

A number of H2020 projects were submitted by the ERA Chair research team. It is expected that the continued training will lead to a substantial increase in grant preparations and submissions.