



#### Communication & Dissemination Plan

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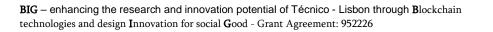
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## Executive Summary

BIG ERA Chair Project's main goal is to expand the research and innovation potential of Instituto Superior Técnico, through INESC-ID and LARSyS (two Portuguese research units/centres) to foster a digital ecosystem, taking advantage of Blockchain technologies and design Innovation for Social Good.

By exploring the potential of Blockchain, Distributed Computing, Cryptography, Artificial Intelligence, Machine Learning, Big Data, Cloud Computing in different fields, such as health, energy, digital citizenship, transport, tourism, blue economy and creative industries among others, the project aims to research and market solutions that could have a positive impact in societal challenges and contribute to Sustainable Development Goals, while boosting Portugal as key in the Euro-Atlantic platform for the digital economy, in the background of the Fourth Industrial Revolution we are living in.

The main goals of the communication strategy are i) to disseminate the projects and the results and impact of the BIG ERA Chair project, namely the newly created BIG Lab (called DCentral) and ii) to raise regional, national and international awareness recognition and attractiveness about Técnico and the two research centres (INESC-ID and LARSyS) involved.

The communication strategy of the project is addressed in the **WP5 - Communication, Dissemination and Exploitation**. This work package focuses on maximising the impact of the project at the regional, national, and international levels, including activities for dissemination of knowledge, networking, and raising international awareness of the research and innovation potential and achievements in the scope of the project. According to the grant agreement, this WP has the following specific objectives:

"i) Developing a detailed Communication and Dissemination Plan; this will help guarantee the results of the dissemination and communication strategy and foster the involvement of all stakeholders in the communication tasks. The communication plan will bring together current knowledge of target audiences, existing networks and priority activities.

ii) Organization of Thematic Workshops and Conferences with the collaboration of the European partner Institutions for dissemination of knowledge to strengthen the research community and industry at a regional level.

iii) Ensuring a strong presence in international events by means of staff participation, information booths, and public demonstrations.

iv) Disseminate and create awareness, both at the level of researchers and corporate affiliates (through a newsletter), and to more broad audiences, via social media and the BIG web page at Técnico's website."

The main objectives of Task 5.1. Communication, Dissemination and Exploitation Plan are:

"i) To raise regional, national and international awareness, recognition and attractiveness of LARSyS and INESC-ID, promoting its areas of excellence.



ii) To disseminate BIG and LARSyS and INESC-ID research results.

iii) To identify relevant audiences, markets and industrial segments in order to create and foster concrete exploitation of research results."

The Deliverable D5.1 gives an overview of initial communication, dissemination and exploitation activities, events and methods. The pandemic and the delays in hiring the team were a limitation to the further development of the communication strategy. The version presented here will be further developed in version 2 of the communication plan, which is expected to be submitted 30 months after the beginning of the project.

# 1. Introduction

The Communication strategy has taken into consideration the measures for promoting the project to a large audience, including the important role of the European Commission as a founding institution, to promote and raise interest in the project beyond the project's own community, general audiences and media at a regional, national and international levels.

Concerning *Dissemination*, while the main focus will be to manage, preserve and share the results of the research activities with the international scientific community, it will be closely related to the *Exploitation* efforts and in many instances, these two will work in close collaboration with one another. This will ensure the adoption of the concepts across the partners and ensure high-quality research outputs - it will ensure that the research outputs are of direct relevance to the research partners, governments, NGOs and others that we engage with - this is illustrated in the diagram 1 below - this is discussed in more detail in the full report dated 31st August 2021. The dissemination efforts will enable its value to be wider and to contribute to the circulation of knowledge among peers (computer science experts but also from different fields of science, in order to create interdisciplinary research around blockchain), mainly through scientific publications, scientific events (seminars and conferences related to the issues addressed by the project) and research networking, while ensuring the protection of intellectual property.

The *Exploitation* efforts will be focused on the innovation activities of the project, including the development and marketing of products and processes, identifying the exploitable results and their value and the creation of a network of a variety of stakeholders for the transfer of knowledge, including commercial actors, industry experts, professional organisations, policymakers' bodies and all the interested institutions to extend the potential success of the project (Figure 1). As discussed above, these will be closely related to the dissemination activities, and we will ensure that the people meant to receive the outputs are actively engaged upfront, so the research aims are closely connected.



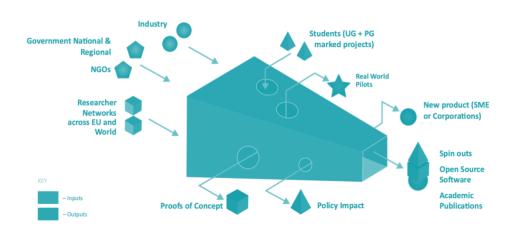


Figure 1. Our engagement plan: illustrating connections between partner and outputs

## 2. BIG's Communication, Dissemination and Exploitation

The BIG project Communication, Dissemination and Exploitation plan focuses on maximising the impact of the ERA Chair, and more generally that of BIG, at the regional, national and international levels, including activities for dissemination of knowledge, networking, and raising international awareness of the research and innovation potential and achievements in the scope of the project.

To reach these general goals, this WP will pursue the following specific objectives:

- i) Developing a detailed Communication and Dissemination Plan; this will help guarantee the results of the dissemination and communication strategy and foster the involvement of all stakeholders in the communication tasks. The communication plan will bring together current knowledge of target audiences, existing networks and priority activities.
- ii) Organization of Thematic Workshops and Conferences with the collaboration of the European partner Institutions for dissemination of knowledge to strengthen the research community and industry at a regional level.
- iii) Ensuring a strong presence in international events by means of staff participation, information booths, and public demonstrations.
- iv) Disseminate and create awareness, both at the level of researchers and corporate affiliates (through a newsletter), and to more broad audiences, via social media and the BIG webpage at Técnico's website.

#### 2.1. Team

(Communication, Dissemination and Exploitation)



The communication, dissemination and exploitation strategy will involve different people and departments within Técnico in strong cooperation, contributing by providing content for the web platform, supporting the social media campaigns, creating newsletters, leaflets, press releases, roller banners and presentations, and producing the Deliverables.

The team includes the Co-PIs Nuno Jardim Nunes and Rodrigo Miragaia Rodrigues, the ERA Chair holder Catherine Mulligan, the researchers hired within the project Teresa Almeida, David Matos, Kevin Gallagher, Mariana Pestana, Alfio Puglisi, the Head of Communications at Técnico Joana Lobo Antunes, the ITI-LARSyS project managers Maria Laranjeiro and Alexandra Mendes, and the INESC-ID communications manager, Tatiana Nunes.

A close relationship with all partners will be a key piece for the success of this project and will carry out the promotion of the activities on a regional and national level, using their own communication channels (own website, newsletters, social media, etc.).

## 2.2. Internal communication & Communication with European Commission

(Communication)

The project coordinators and the ERA Chair holder, in contact with the consortium, will define what is internal and external information. For internal information and communication, the project team will have a shared drive for the project documents. Also, three mailing lists have already been created: <u>erachair-all@tecnico.ulisboa.pt</u> (including all the team), <u>erachair-board@tecnico.ulisboa.pt</u> (ERA Chair Board, consisting of 6 elements: Prof. Catherine Mulligan – Era Chair Holder; Prof. Nuno Nunes – Project Coordinator; Prof. Rodrigo Rodrigues - Project Coordinator; Prof. José Santos-Victor – President of LARSyS; Prof. Inês Lynce – President of INESC-ID; Prof. Luís Silva – President of the Scientific Council of IST) and <u>erachair-admin@tecnico.ulisboa.pt</u> (for administrative matters).

Regarding the communication with the European Commission, the production of Deliverables will be the most prominent part.

### 2.3. Key/pertinent messages

#### (Communication, Dissemination and Exploitation)

The different actions and activities of *Communication* aim to spread the potential of blockchain research and innovation for social good and sustainable development goals to the public. It will therefore be important to explain what blockchain technology is, how it can contribute to sustainability and social good and how the project is spending money to achieve those aims. We will also focus on communicating how the research conducted relates to other fields and to citizens' lives. Where appropriate, we will also communicate why it is important for the general public, the government, NGOs and others to understand the project aims and outputs, in particular how the project boosts innovation in Portugal. Our touchstone will be scientific rigour, but oriented towards the general public, focusing on the relationship between technology and social good, with an informative and accurate voice.



Concerning the Dissemination and Exploitation activities, the voice will be, naturally, more technical - in a tone of voice appropriate to the output and the audience in question. Our academic papers will target scientists, while presentations at conferences will address industrial, government and broader experts. Meanwhile, the industry will also have its experts on innovation regarding blockchain, meaning that the tone of voice we use will be more active, to catch the attention and appeal to direct research, involvement and investment of the industry.

A core aspect of our approach is that we will actively engage industry, governments, and NGOs to *help us actively identify the most appropriate areas of research*. This information will be combined with the traditional research approaches - namely literature reviews and engagement with other academics on the topic. Our communication approach is therefore deeply integrated into the research process itself - through our communication process, we will educate companies and others about the activities in INESC-D and LARSyS while using those engagement processes to inform and reinforce our research activities. Through this, we aim to become deeply integrated within broader activities across Europe - contacted and notified about emerging ideas, not just as a "passive" set of outputs when "research" is completed. Our communication strategy is therefore deeply connected to the overall project, rather than a smaller aspect of "broadcasting information". We aim to ensure that the ERA Chair Team - and any other associated researchers - emerge as researchers capable of driving change and pursuing careers leading sustainable change in a multidisciplinary, diverse, multilingual, and global environment.

### 2.4. Target audiences

(Communication, Dissemination and Exploitation)

The Communication target is the general public and society as a whole, spreading information about the BIG ERA Chair research on blockchain and the results at BIG Lab (called DCentral Lab), the associated research at LARSyS and INESC-ID, but also involving the non-scientific public and end-users in the debate about the social and environmental challenges that these technologies can contribute to. Special attention will be given to the Técnico students' community (Computer Science Engineering, Management, Environmental Engineering, Design, Architecture students but also other majors) to engage the public on issues related to the project, such as the role of technology, engineering and design for good and sustainability.

The Dissemination target will be, in the first instance, the BIG, LARSyS and INESC-ID researchers, faculty and students (comprising the Universities of Lisbon and Madeira), the international research community (researchers, professors and academics), the domestic research community, but also other audiences that may use the research results in their own work - for example, public administration with responsibilities in digital innovation, environmental quality and industrial economics. We highlight the importance of dissemination of our research between our universities and lab partners in Europe (CNRS, EPFL, Polimi and Soton) and in the USA (CMU - Carnegie Mellon University and MIT - Massachusetts Institute of



Technology). These have been expanded to include Imperial College London, University College London, and the University of Exeter.

The Exploitation target audiences are mainly the entrepreneurs, investors, businesses, and the industry community, but also the public policy actors, involving the different parts accordingly the different roles they play in society. The goal is to create an affiliate partners community with ten industry partners (Abreu Advogados, ENDESA, EDP, Feedzai, Farfetch, Outsystems, REN, TalkDesk and unBabel) including three unicorn high-tech companies and several end-user organizations recruited during the project, across the Técnico school and the Lisbon digital ecosystem, who will be the beneficiaries of the materials, methods and results created, strengthening innovation and knowledge transfer activities in close collaboration with local and global industrial partners. In addition, in order to ensure that both BIG and DCentral have the opportunity to perform real research in blockchain, we are working to establish partnerships with appropriate blockchain platforms. Each target audience has strategic importance for BIG's efforts and we intend to create different channels to interact with them, but also coordinate them through regular collaborative initiatives.

### 2.5. Language

(Communication, Dissemination and Exploitation)

The official languages will be English and Portuguese. The website and social media will be held in English most of the time, with contents in Portuguese when appropriate.

Since the field of study of the project is a very complex one, the communication strategy will take into account that computer science in general, and blockchain in particular, needs to be explained with simple and non-technical language (when possible), in order to be understood by experts of other sciences beyond the project's community and to reach out the non-expert public, showing the benefits of the research in this field for the society, and also engage in a two-way exchange, receiving inputs, questions and suggestions from the public.

The project team will also place the importance of inclusivity directly at the centre of the activities, in particular, as they relate to gender/sex, ethnicity, racial and nationality diversity and disability.

## 2.6. Visual Identity and branding

(Communication, Dissemination and Exploitation)

The project's visual identity plays a fundamental role in communication planning because people must recognize the project over the years. The corporate branding of the project was built according to the objectives and main values. The logo represents the unified set of activities within Técnico and is shown as a set of "blocks" that link together in a chain.

The project had already defined its logo (Figure 2), brand and graphic identity, including the colour palette (dark blue, light blue and purple) and the guidelines:





Figure 2. BIG logo

For DCentral Lab, the digital lab infrastructure planned to support the development of the research capacity of LARSyS and INESC-ID through blockchain technology, the visual identity is completed, with the website in development. The logo (Figure 3) (is developed as an extension of the BIG logo - but rather than being *within* Técnico, the links reach out to other nodes, externally to Técnico - representing our desire to reach out beyond the original Labs, create new links and connections in our "chain" and to ensure a broader impact beyond Portugal. Below there's the first version of the logo:



Figure 3. DCentral Logo

# 3. Communication Channels and Tools

The Communication and Dissemination Plan has been developed for the past 18 months and determines how the activities and outcomes of BIG should be disseminated. The staff will communicate and disseminate the project in close collaboration with Técnico's communication team (Técnico Public Relations and Media Office (GCRP)), ITI/LARSyS and INESC-ID.

Channels	Tools
Online	
Websites	BIG News posts Publication of Events Publication of Academic Outputs Calls Blog posts DCentral News posts Publication of Events Publication of Academic Outputs



	Calls Blog posts
Social Media	Posts Visuals (images of events, research, infographics) @big_tecnico Hashtags: #DCentral #BIG_Tecnico #BIG_IST
Newsletters	Articles
Email	Email
Offline	
Events (workshops, conferences, summer schools)	Invitation letters Printed material presentations
Face to Face meetings	Printed material presentations

#### **Table 2** - Communication tools used by BIG

The actions related to the communication, exploitation and dissemination of the project results are tailored and will be tailored to ad-hoc target groups according to specific purposes, timing and means. BIG's target groups are and will continue to be provided with an extensive range of content that will be customized in a fashion that can contribute to the sustainable use of its results (Table 3).

Target Audience	Communication channel				
	Website	Face-to-face meetings	Events (workshops,)	Partners / other events	Web tools (newsletters,)
Academic Institutions	Х	Х	X		
R&D Institutions	Х		Х		Х
Industry	Х	Х	Х	Х	Х
EU general public	Х				Х

Table 3 - Communication channels for exploitation and dissemination of the BIG results to specific target
audiences.

### 3.1. Websites

(Communication and Dissemination)

The project website - a key point in communication planning (Task 5.2: Newsletters, Website and Social Media) and a requirement from the EC - will be the main tool for disseminating information from the ongoing project activities through the different publics and beneficiaries. It will be the basis for the creation



of content, including institutional information, project objectives, news, team, events, recruitment, progress, results and outcomes (publications, participation in conferences, etc).

The BIG project has already released a website, which is an important output: https://bigerachair.tecnico.ulisboa.pt/

Beyond this, Técnico (http://tecnico.ulisbon.pt), ITI-LARSyS (https://iti.larsys.pt/) and INESC-ID (https://inesc-id.pt/) will promote the BIG project on its websites, creating a synergy between them.

Técnico website will have a post dedicated to the BIG project on the page "Highlighted Research Projects": <a href="https://tecnico.ulisboa.pt/en/research-and-innovation/rd/highlighted-research-projects/">https://tecnico.ulisboa.pt/en/research-and-innovation/rd/highlighted-research-projects/</a>

The BIG Lab - named DCentral Lab is building a platform/website to be released in Q4 2021, enabling researchers, partners, industry, start-ups and others to share contents, experiences; DCentral therefore, acts as an engagement point for the non-technical and non-research community furthering the reach of BIG, while the BIG website remains the first point of contact for the research community and the European Commission.

## 3.2. Traditional and new Media

(Communication and Dissemination)

One important component of the work will involve the interactions with the media, particularly attracting the science journalists and communicators' community interest, because it's an effective way to reach out to multiple audiences.

The goal is to establish long-term relationships with the media and have a permanent flow of news and events that can catch the attention of the media by sending press releases about news, events and project's discoveries and achievements, but also through contacts for interviews/profiles of the team.

The team will have in mind the press clipping / media monitoring in the ongoing project.

The articulation of the project team with the media will be headed by the Técnico Communications Office, with the involvement of the researchers and the project and communications managers at INESC-ID and ITI-LARSyS.

With regards to New, Media, one method to engage the global media is to create content that is engaging and relevant to the different audiences we have in mind, to this end we have two main tracks of high-quality content outlining the main themes of BIG and DCentral, aimed at the general public and communicated in clear, laypersons English:

### 3.3. Webinar Series,

Called "Blockchain for Global Transformation" - co-hosted with Cointelligence - <u>https://www.cointelligence.com/</u> outlining the role of Blockchain in the development of Social Good being



launched October/November 2021. For the webinar series with Cointelligence, the initial topics and speakers have been identified.

The topics will include:

Month	Торіс	
September	Launch and Advertisement	
September/October	Blockchain and Social Impact - Digital finance has the potential to reach over 1.6 billion new retail customers in emerging economies and to increase the volume of loans extended to individuals and businesses by \$2.1 trillion.	
September/October	RegulationRegulation, definitions and recent events - This panel will discuss volatility, usability, acceptance and regulation. Compliance and regulation remain a key issue in Blockchain and may remain so for the foreseeable future if the current pace of technological change is maintained.	
November	<b>DeFi, NFTs and the Future of Finance</b> The latest future trends in DeFi. You will learn about the latest trends and their impact on the future of finance organizations. But what exactly will their impact be? What is the future of traditional finance in the face of these developments? How technological developments and their rapid adoption are creating the emergence of a new decentralized financial system.	
November	The New Regenerative Economy If humanity is to do more than merely survive – if it is to thrive in the future – then we need to aspire to greater things, to collaborate as one planet and one human race, in pursuit of a better future for all and build a new regenerative economy.	
December	Digital Assets - State of Play: Where are we? What has been happening? Outside of the El Salvador announcement of BTC as legal tender, what else is going in globally. During the Pandemic many exciting developments have taken place in emerging markets, including (eg. gaming and NFTs to earn money, DeFi is booming, token markets for rare metals). What exciting and unique projects are emerging and how will they build a new decentralised future?	
December	How Blockchain can catalyse social transformation? Blockchain's use cases from financial Inclusion, to identity, supply chain, health care and charity and philanthropy are increasingly clear, but what will it take to scale.	

### 3.4. Podcast series

Called DCentralised, co-hosted by the <u>IET</u> advertised on Spotify, Apple and YouTube being launched October/November 2021. The first series is 10 episodes as outlined below:

|--|



Part 1: Decentralisation and The Future of Work	Episode 1 - Decentralisation and the changing nature of work in a Digital World		
	Episode 2 - Decentralisation and The gig economy		
Part 2: Decentralisation and Education	Episode 3 - Future of Computer Science		
	Episode 4 - Future of University Education		
Part 3: Decentralisation and Future Economies	Episode 5 - Economies of the present / future - Virtual currency		
	Episode 6 - Economies of the present / future – Disintermediation		
Part 4: Decentralisation and Sustainability	Episode 7: Saving the world's oceans		
	Episode 8: Understanding Sustainability		
Part 5: Building Stuff in the Real World	Based on the discussions in the previous three parts - how do we go about building stuff in the real world?		
	Episode 9 - Multi-everything teams		
	Episode 10 - Getting Everyone Heard: Diversity and Inclusion		

#### 3.5. YouTube Channel for BIG

The YouTube channel will contain some presentations/lectures discussing blockchain and its use for sustainability and social good is being developed as well for release in Q4 2021. A series of short lectures will be initially created by the ERA Chair, but over the course of BIG will be expanded to include the rest of the ERA Chair Team and others across Técnico as appropriate. We aim to produce 1 video of about 10-15 minutes every month.

### 3.6. Newsletters

(Communication, Dissemination and Exploitation)

As expected at Task 5.2: Newsletters, Website and social media, a monthly electronic newsletter will be published with updates on ongoing BIG and DCentral Lab activities (including research seminars, workshops, and conferences) but also LARSyS, INESC-ID and Técnico most important news related to the field of the project.

The newsletter will be called "BIG NEWS" and will be divided into four sections:

1) "Our project" - project news and announcements of support/partnerships with corporate affiliates;



- 2) "Our hosts" LARSYS, INESC-ID and Técnico news that could be related to our project and scientifical scope;
- "Opportunities" funding opportunities and prizes because one of the BIG goals is to prepare the researchers for the competitive calls of Horizon Europe;
- 4) "Art Chain" an artistic expression, an image/video/cartoon chosen by a different team member every month to close the newsletter.

## 3.7. Social Media

(Communication, Dissemination and Exploitation)

Social media are important communication channels nowadays and are included in Task 5.2: Newsletters, Website and social media. The project team will use the European Commission guideline for this matter.

For the BIG project we established as our social networks channels a Twitter (@big\_tecnico) and an Instagram (@big\_tecnico) account for the project.

On one hand, Twitter's public is middle-aged and tends to have more literacy than on other social media. Furthermore, it is increasing in importance in Portugal.

On the other hand, Instagram is one of the most popular social networks to engage with non-technical audiences.

Additionally, the DCentral, the blockchain and associated technologies lab, could have its own social media accounts, bridging the gap between the experts public and the non-experts.

The contents published will be both institutional (information about the project and activities) and informative (we intend to create rubrics that allow the demystification of technology to the public).

## 3.8. Brochures and leaflets

(Communication and Dissemination)

An institutional digital brochure/flyer presenting DCentral, as a part of the BIG project, will be created, published on the website and distributed on social networks.

## 3.9. Papers and scientific articles

(Dissemination)

Scientific results from research activities will be published in various relevant venues, such as journals and Scientific magazines, in an open science format.

We highlight the following journals that we will aim for:

- 1. Cambridge Journal of Economics
- 2. Research Policy
- 3. Telecommunications Research Policy
- 4. IEEE ICTE and similar



- 5. IEEE Comms Society
- 6. IEEE TEMS and similar
- 7. ACM Distributed Ledger Technologies: Research and Practice
- 8. ACM Computer Human Interaction and similar

# 4. Organisation of Meetings, Workshops and Conferences

(Communication and Dissemination)

The Task 5.4: Organisation of Meetings, Workshops and Conferences will be one of the most significant tasks in the WP5 to achieve the BIG objectives of dissemination, knowledge sharing, networking, and to gain better visibility at the national and European level.

This task aims to position LARSyS and INESC-ID as a forefront of blockchain and distributed ledger technologies and interrelated design innovation in Europe.

For that purpose, BIG will organise different types of events, public-target ones but mainly scientific and targeted conferences such as:

- BIG Conference LARSyS and INESC-ID will organise a biannual conference called "Trends in Blockchain and Distributed Ledger Technologies", each year dedicated to a different theme relevant to an application area of the S3 and aiming to disseminate the research developed by the project.
- During 2022 / 2023, IEEE TEMS Blockchain and ACM DLT Blockchain conferences to be hosted by BIG / DCentral
- Friday seminars Friday seminars presented by LARSyS and INESC-ID researchers and students at the Técnico Campus are one of the key occasions for researchers to get acquainted with the research activities of their colleagues. The Friday seminars have already commenced - with activities presented around the following topics: Environmental Impact of Cryptocurrency and Blockchain; Economic Growth Impact opportunities for Portugal through Blockchain; Blockchain for Social Good - a Service Design Perspective.
- Student and researcher seminars BIG will present at least two researcher and two student seminars annually, describing the main achievements of the ERA Chair team. In addition, the ERA Chair members will be responsible for presenting each year at least one seminar in each of the other research groups of LARSyS and INESC-ID, which will contribute to improve the internal communication within BIG and to boost the uptake of distributed ledger and blockchain technologies by all research teams. The first of these activities is already booked for September.
- Workshops A two-day workshop will be organised each year to bring together well-known international scientists and relevant stakeholders (industry, local government and media), providing an opportunity for presenting cutting-edge scientific developments and their application to solve pressing societal problems using design innovation based on distributed ledger and blockchain



technologies. The workshops will also be used to disseminate the quality research being done at LARSyS and INESC-ID, and for our researchers to learn first-hand about complementary good quality research being done in international excellence research centres. Workshops will be organised each year, starting in the second year of the project.

- Round-table discussion meetings Together with our partnering organizations and invited international specialists, we will organise round-table discussion meetings focused on the problems, challenges, and opportunities that LARSyS and INESC-ID are facing to further develop and improve their research outcome, attract researchers and consolidate the gained capacities gained during BIG beyond the scope of the project. Round-table discussions will be organised each year, starting in year two.
- Bauhaus of the Seas Conference the BIG project will be involved in the New European Bauhaus through the Bauhaus of the Seas initiative. We have organised a high-level international conference related to sustainability and urban environments and systems on 20th May 2021 and we will participate in the Venice conference on XX September.

# 5. Participation in Workshops and Conferences

(Communication and Dissemination)

The BIG project team - but also selected LARSyS and INESC-ID researchers (senior and junior) - will participate in international research conferences, preferably face-to-face, in the most prestigious international events related to blockchain and distributed ledger technologies. Some examples are the involvement in ACM conferences such as Professor Nuno Nunes in the C&C conference in Venice, Professors Valentina Nisi and Augusto Esteves in TEI in South Korea and IEEE ICTE by Prof. Cathy Mulligan

This is important not only for the dissemination of the results but also for networking as it was explained in the Task 5.3 Participation in Workshops and Conferences of the WP5.



# 6. Evaluation of communication and dissemination activities

(Communication and Dissemination)

A final evaluation of the communication strategy will be performed. That study will have into account the website statistics (visits, downloads, etc), social media metrics (tweets, likes, retweets, followers, discussions, mentions, shares), the feedback received in all channels (quality and quantity), the number of press releases and collaborations with the media, the number of newsletters produced sent to a mailing list and the number of mailing list members, the number of participants at organized events and their feedback, the number of participations of our researcher in important international conferences.

At the end of the project, all sorts of materials, press articles, photographs, and videos in the scope of the BIG project will be stored.

# 7. Action plan

This plan outlines activities we have performed or will perform in order to improve the communication and dissemination strategy of the BIG project. It is envisaged to carry out an evaluation through an iterative process. It is necessary to consider the effect that the dissemination strategies have on conveying the project's message to target groups. Dissemination and communication is not a one-time activity. It is rather a long-term relationship with users that will provide ongoing feedback to help BIG to improve its message.

The following time plan summarizes the Communication, Dissemination and Exploitation Activities that are described in this plan, including a time plan for each one. This plan might be revised at a later stage.

What?	How	When
Internal communication & Communication with European Commission	Creation of a shared drive for documents; Creation of3 mailing lists; Production of deliverables	Ongoing and over the course of the project
Visual Identity and branding	Design of the project's brand identity, colour pallete, and logo; Design of DCentral's brand identity, colour pallete, and logo;	Completed
Websites	Creation of BIG project's website; Promotion of the project on partners websites: Técnico, ITI-LARSyS, and INESC-ID; Featuring BIG project on Técnico's webpage "Highlighted Research Projects"; Creation of DCentral's website	Completed
Traditional Media and clipping	Writing of press releases to national and international media about key project milestones	Periodically every semester starting in Q4 2022



New media	Webinar series "Blockchain for Global Transformation" consisting of 6 episodes	Monthly releases starting in Q4 2023
New media	Podcast series "DCentralised" consisting of 10 episodes	Weekly releases starting in Q1 2023
New media	Youtube channel with lectures and academic content	Over the course of the project
Newsletters	Releasing the newsletter "BIG NEWS"	Monthly releases over the course of the project starting in Q1 2023
Social media	Creation of the social media profiles; Content production and publication	Social media profiles created; Publications ocurring bi-weekly over the course of the project
Brochures and leaflets	Design of 3 sets of brochures/leaflets: one containing general information and two regarding the project outcomes for academic and general audiences	Q3 2023 (general information) and Q3 2024 (outcomes)
Papers and scientific articles	Dissemination of knowledge though open access scientific publications in top journals	One publication every semester starting in 2023
Organisation of meetings, workshops and conferences	BIG Conference ""Trends in Blockchain and Distributed Ledger Technologies"	Biannual
Organisation of meetings, workshops and conferences	IEEE TEMS Blockchain and ACM DLT Blockchain conferences to be hosted by BIG / DCentral	During 2022/2023
Organisation of meetings, workshops and conferences	Organisation of Friday seminars	Weekly, ongoing
Organisation of meetings, workshops and conferences	Organisation of student and researcher seminars	4 seminars per year
Organisation of meetings, workshops and conferences	Organisation of 2-day workshops bringing together well-known international scientists and relevant stakeholders	Yearly
Participation in workshops and conferences	Praticipation of BIG team members and other LARSyS and INESC-ID researchers in top conferences	Two conferences/ year
Evaluation of communication and	Producing an evaluation document with every communication and dissemination output of the project	At the end of the project



dissemination	
activities	

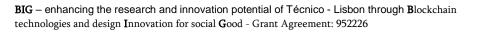
# 7.1. Achievements 2020-2022

Type of Activity	Title	Venue	ERA Chair Member	Year/Date
Kick Off Meeting	<u>BIG ERA Chair kick</u> off meeting	ITI / LARSyS	Cathy Mulligan Nuno Nunes Kevin Gallagher Mariana Pestana	8 <sup>th</sup> November 2020
Academic				
Panel	<u>Demystifying</u> <u>Blockchain</u> <u>Technology Panel</u>	ITI / LARSyS	Cathy Mulligan Nuno Nunes	18 <sup>th</sup> December 2020
Panel	Redes Descentralizadas na Perspectiva Mediática da Cultura da Cidadania e Informação	XVI Semic Jovem, U. Fereral de Goias, Brasil	Nuno J. Nunes	24 August, 2022
Conference presentation	Empatia mais que humana: reações culturais à crise climática	Nuit des Idées, Gulbenkian Foundation, Lisbon	Mariana Pestana	27 February 2022
Conference presentation	Portal Tables: Connecting Multiscalar Communities	Bridge Hole, Taipei (online)	Mariana Pestana	27 November 2021
Conference presentation	Empathy as Decentering	Design Talks, Eindhoven Design	Mariana Pestana	20 October 2021
Conference presentation	Collective Enactments	PARTE Portuguese Art Encounters Summit, Loulé	Mariana Pestana	6 August 2022
Conference presentation	Enacting Possible Futures	Ars Eletronica, Linz	Mariana Pestana	9 September 2022
Conference publication in proceedings	Bodies Like Yours: Enquiring Data Privacy in FemTech	NordiCHI 2022	Teresa Almeida	October 2022

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Conference publication in proceedings	Vision: Too Little too Late? Do the Risks of FemTech already Outweigh the Benefits?	EuroUSEC 2022	Teresa Almeida	September 2022
Conference publication in proceedings	<u>Hitting the Triple</u> <u>Bottom Line:</u> <u>Widening the HCI</u> <u>Approach to</u> <u>Sustainability</u>	ACM CHI 2022	Cathy Mulligan Nuno Nunes	May 2022
Conference publication in proceedings	COLBAC: Shifting Cybersecurity from Hierarchical to Horizontal Designs	NSPW 2021	Kevin Gallagher	October 2021
Conference publication in proceedings	<u>Digital</u> <u>Entrepreneurship:</u> <u>Ensuring True</u> <u>Compliance with</u> <u>Sustainable</u> <u>Development Goals</u> (SDGs)	2021 IEEE International Conference on Technology and Entrepreneurship (ICTE)	Catherine Mulligan	August 2021
Journal article	A Survey on Business Process View Integration: Past, Present, and Future Applications to Blockchain	Business Process Management Journal, Vol. 54, Issue 8	Miguel Correia	November 2022
Journal article	A Survey on Blockchain Interoperability: Past, Present, and Future Trends	ACM Computing Surveys, Vol. 54, Issue 8	Miguel Correia	November 2022
Journal article	Hermes: Fault- tolerant middleware for blockchain interoperability	Future Generation Computer Systems. Volume 129, Pages 236-251	Miguel Correia	April 2022
Journal article	Decentralized Business Process Control using Blockchain - An experience report from two applications: Food Supply Chain and Car Registration	Enterprise Modelling and Information Systems Architectures, Volume 15	Miguel Correia	2020

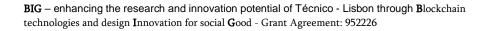




Conference publication in proceedings	Blockchain Address Transparency with DNS	26th IEEE Symposium on Computers and Communications	Miguel Correia	September 2021
Conference publication in proceedings	Enabling Cross- Jurisdiction Digital Asset Transfer	the 2021 IEEE International Conference on Services Computing	Miguel Correia	September 2021
Conference publication in proceedings	CryingJackpot: Network Flows and Performance Counters against Cryptojacking	19th IEEE International Symposium on Network Computing and Applications (NCA)	Miguel Correia	Nov. 2020
Conference publication in proceedings	Recoverable Token: Recovering from Intrusions against Digital Assets in the Ethereum Blockchain	19th IEEE International Symposium on Network Computing and Applications (NCA)	Miguel Correia	Nov. 2020
Conference publication in proceedings	Cryptojacking Detection with CPU Usage Metrics	19th IEEE International Symposium on Network Computing and Applications (NCA)	Miguel Correia	Nov. 2020
Conference publication in proceedings	Blockchain Ecosystem for Verifiable Qualifications	2nd Conference on Blockchain Research & Applications for Innovative Networks and Services (BRAINS)	Miguel Correia	September 2020
Conference publication in proceedings	Towards Secure, Decentralized, and Automatic Audits with Blockchain	European Conference on Information Systems (ECIS)	Miguel Correia	Sept 2020
Conference publication in proceedings	Alea-BFT: Practical Asynchronous Byzantine Fault Tolerance	CoRR abs/2202.02071	Rodrigo Rodrigues	2022
Journal article	<u>AI ethics: A</u> <u>framework for</u> <u>measuring embodied</u> <u>carbon in AI systems</u>	Springer AI & Ethics	Catherine Mulligan	June 2021
Journal article	On the sui generis value capture of new digital technologies: The case of AI	Cell Patterns	Catherine Mulligan	July 2022
Panel	Conversations on Care	NordiCHI 2022 (invited lead)	Teresa Almeida	October 2022



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University Presentation	More Than Human Empathy	MA Narrative Environments, Central Saint Martins College of Art and Design	Mariana Pestana	9 February 2022
University Presentation	More Than Human Empathy	Design School, China Central Academy of Fine Arts	Mariana Pestana	28 April 2022
University Presentation	Design para Debate	ESAD Caldas	Mariana Pestana	4 May 2022
University Presentation	More Than Human Empathy	Universidade Católica do Porto	Mariana Pestana	20 Junho 2022
University Presentation	More Than Human Empathy	ESAD Caldas	Mariana Pestana	22 Junho 2022
University Presentation	Blockchain Research Perspectives	CEGIST Seminar	Catherine Mulligan	28th April 2022
Panel	The Future of Trust with Blockchain	IDC Security Roadshow 2021	Miguel Correia	April 21, 2021
Courses				
Full course	Sistemas de Elevada Confiabilidade / Highly Dependable Systems (total 126 students)	IST	Paolo Romano	Since 2020- now
Full course	Human-Centered Design and Evaluation (130 students)	IST	Nuno Nunes Valentina Nisi	Since 2020- now
Full course	Human-Computer Interaction (340 students)	IST	Nuno Nunes Augusto Esteves	Since 2020- now
Full course	Interaction Design Studio (70 students). Master's program.	IST	Hugo Nicolau	Since 2020- now
Full course	Service Design (60 students). Master's program.	IST	Valentina Nisi	Since 2020- now
Short course	Blockchain e Smartcontracts	Técnico+ e Católica Lisbon	Miguel Correia	3ª edição - set. 2021 4ª edição -
				março 2022
Short course	Tech4Law - Technology	Técnico, Católica	Miguel Correia	





	Bootcamp for Layer - Blockchain session			
Keynotes				
Keynote	DAOs for Dignity: How to Overthrow the World Bank and Deliver Real-World Change with DeFi	MARBLE 2022 (Invited Conference Keynote)	Catherine Mulligan	July 2022
Keynote	Digital Assets: How they work and can we trust them?	International Conference in Accounting and Finance Innovation, Aveiro, Portugal	Miguel Correia	July 1, 2021
Keynote	Intimate Soft- Material Interactions	Bezalel Art & Design, Israel	Teresa Almeida	April 2022
Keynote	Circular Cultures: Waste Landscapes	Onassis Foundation, Athens / online	Mariana Pestana	3 February 2022
Keynote	The Future of Decentralised Systems	The 5th International Conference on Future Networks & Distributed Systems (Invited Conference Keynote)	Catherine Mulligan	December 2021
Keynote	DAOs for Dignity: How to Overthrow the World Bank and Deliver Real-World Change with DeFi	MARBLE 2022 (Invited Conference Keynote)	Catherine Mulligan	July 2022
Keynote	Critical development of technologies of participatory culture	Cultuur Eindhoven	Nuno J. Nunes	22 Set. 2021
Keynote	Ecocentric Interaction: for the rebalance of the relationship between humans and nature,	EIT Digital Summer School, Como, July 2022.	Nuno J. Nunes, Valentina Nisi,	July 2021
Keynote	Interação Eco- centrica: o papel da tecnologia para (re)equilibrar os humanos e a natureza.	Hub Internacional Sustentável, U. Campinas, Brasil.	Nuno J. Nunes,	8 Junho 2022.
Keynote	The Bauhaus of the Seas Vision	Sonar+D and ART+S talk, https://sonarlisboa.pt/pt/2022/artists/sonar-d- nuno-nunes	Nuno J. Nunes,	Lisbon, 8 April 2022,



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Keynote	Intimate Soft- Material Interactions	Bezalel Art & Design, Israel	Teresa Almeida	April 2022
Keynote	Circular Cultures: Waste Landscapes	Onassis Foundation, Athens / online	Mariana Pestana	3 February 2022
Keynote	The Future of Decentralised Systems	The 5th International Conference on Future Networks & Distributed Systems (Invited Conference Keynote)	Catherine Mulligan	December 2021
Popular Science				
Panel	CBDCs - future perspectives on cryptocurrency	T500 - Panel, London (Lazards)	Catherine Mulligan	6th April, 2022
Panel	Enabling circular economy in Food industry with blockchain technology	Online (CBCat, Catalunya)	Catherine Mulligan	21st June, 2022
Art Magazine	More Than Human Empathy	Umbigo, Lisbon	Mariana Pestana	30 June 2022
Panel	Digitalization at the Service of People and the Environment	Cultuur Eindhoven	Nuno Nunes	22 Sept. 2021
Panel	Crypto Impact and Sustainability Accelerator	World Economic Forum (online)	Catherine Mulligan	Jan - July 2022
Seminar				
Seminar	Blockchain Research Perspectives	CEGIST Seminar	Catherine Mulligan	28th April 2022
Webinar	Blockchain: O impacto dos NFT na economia e nas empresas	Técnico+ / Católica Lisbon	Miguel Correia	March 9, 2022
Seminar	From Intrusion Tolerance to Trust and Recovery: A Research Overview, Resilient Computing and Cybersecurity Center	KAUST	Miguel Correia	Dec. 2021



Seminar	Blockchain Cross- Borders: The European Blockchain Services Infrastructure	IEEE EMEA Blockchain Seminar	Miguel Correia	Sep. 8th 2021
Webinar	Euro Digital: O que vem aí?	Técnico+ / Católica Lisbon	Miguel Correia	March 3, 2021
Webinar	Blockchain Cross- Borders: The European Blockchain Services Infrastructure	IEEE Engineering Day	Miguel Correia	Nov. 27, 2020
Webinar	Blockchain e Smart Contracts: Oportunidades e Desafios para as Empresas	Técnico+ / Católica Lisbon	Miguel Correia	October 29, 2020
Workshop				
Participant	Participant - Cryptocurrency	Resilience Foresight Project Working Group: UK government GO Science (government office for science)	Catherine Mulligan	20th April, 10th June, 5th July
Participant	Participant - UX for Cryptocurrency	Crypto Research and Design Lab (World Economic Forum)	Catherine Mulligan, Sabrina Scuri	Jan 2022 - July 2022
Exhibition				
Exhibition	Index 2022	Braga	Mariana Pestana	March 2022
Exhibition	EdenX	Jardins Efémeros, Viseu	Mariana Pestana, Kevin Gallagher	May 2022
Editorship				
Editorship	ACM - Distributed Ledger Technologies: Research and Practice	ACM	Cathy Mulligan	2022-
Editorship	Frontiers in Blockchain	Frontiers	Cathy Mulligan	2019 - (renewed)



PhD examination	Algorithmic Regulation using AI and Blockchain Technology Hirsh Pithadia (PhD Viva)	UK	Cathy Mulligan	Nov 21
Program Committee				
Program Committee	Associate Committee (AC)	ACM TEI 2022	Teresa Almeida	2022
Program Committee	Associate Committee (AC)	ACM DIS 2022	Teresa Almeida	2022
Program Committee	ТРС	The Research Conference On Communications, Information And Internet Policy	Cathy Mulligan	2022
Program Committee	TPC	Mathematical Research for Blockchain Economy	Cathy Mulligan	2022
Program Committee	TPC, <u>University of</u> <u>California, Berkeley</u>	Fifth International Symposium on Foundations and Applications of Blockchain 2022	Cathy Mulligan	June 3rd, 2022
Program Committee	invited as PC Member	New Security Paradigms Workshop 2022	Kevin Gallagher	2022
Organisation of events				
	Workshop	Crypto Carbon Ecosystem Workshop	Catherine Mulligan, Kevin Gallagher	July 1st 2022
Jury	Index 22	Braga Media Arts	Mariana Pestana	21 February 2022
Organizer of Call/Jury	Expressions of Interest Call - CyFer	PETRAS UK	Teresa Almeida	June 2022- March 2023

# 7.2. Plan and timeline 2022-2025

Type of Activity	
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Academic	Target Venues inclu	de			Year	
Academic Publications: Conferences	<ul> <li>Privacy Enhancing</li> <li>Computer and Com</li> <li>USENIX Security</li> <li>ACM Conference of</li> <li>Nordic Conference</li> <li>Designing Interaction</li> <li>IEEE Security and P</li> <li>EuroS&amp;P</li> <li>Network and Distrip</li> <li>Academy of Manage</li> </ul>	2022- 2025				
Academic Publications: Journals	. Interacting with Co Computer Interaction IEEE Communication IEEE Software	. Transactions on Computer-Human Interaction (TOCHI) . Interacting with Computers: the interdisciplinary journal of Human- Computer Interaction (BCS) IEEE Communications IEEE Software ACM Transactions on Information Systems				
Popular Science						
	. Ars Eletronica World Economic Forum White Papers					
Summer School	Target Audiences in	Target Audiences include     Class Topics Include				
	. Technology Graduate. CryptographyStudents. Basics of Consensus. Company Employees. Smart Contracts. Law students. Existing Blockchains and Applications. Lawyers. NFTs. Policy Experts. Blockchain Economics and Tokenomics. Blockchain and Policy			Summer 2023		
Project Activities: Workshops						
Thematic line	Energy Usage	Online	World Economic Forum Working Group	Catherine Mulligan	2022- 2025	
Thematic line	Semantic Blockchain	In person	ONTOCHAIN	Catherine Mulligan, JP Costeira	2022- 2023	
Thematic line	Future Blockchain Research themes	hybrid	BIG Internal Project	Catherine Mulligan	2022- 2025	
Residencies		Artistic residencies / fellowships programme exploring blockchain for social good, engaging both students and general public				



Exhibitions	As a result of the residencies / fellowships programme, a number of	
	exhibitions to be created in partnership with local cultural organisations	

# 7.3. Secured invitations and service 2023-2025

Type of Activity	Title	Venue	ERA Chair Member	Year/Date
Program Committee	Diversity & Equity Chair	NordiCHI 2024	Teresa Almeida	2024
Program Committee	Associate Committee (AC), Design	ACM CHI 2023	Teresa Almeida	2023
Program Committee	Associate Committee (AC), Papers and Pictorials	ACM TEI 2023	Teresa Almeida	2023
Program Committee	PC Member	PETS 2023	Kevin Gallagher	2023
Program Committee	TPC	TPRC 2023	Catherine Mulligan	2023
Program Committee	Mathematical Research for Blockchain Economy (MARBLE)	MARBLE 2023	Catherine Mulligan	2023

Table 6 - Secured invitations and service 2023-2025

# 7.4. Metrics & Feedback

We will develop instruments to measure the results and collect feedback from the targeted audience, including:

- A form on the website to collect open comments from the audience about needs and barriers identified in BIG. It will be collected periodically in order to think of possible solutions. These are available: <u>https://dcentral-lab.org/contact/</u> and <u>https://bigerachair.tecnico.ulisboa.pt/contact/</u>
- Statistical analytics of the websites which include visits, keywords, unique access, time spent on the page, and social media interactions such as comments, etc.
- Citational outcomes

As researchers, we will actively monitor our citation count and actively work to ensure these are as high as possible through interaction with the academic community.



# 8. Conclusion

The version presented in this document is version 1 which sets the guidelines for the communication, dissemination, and exploitation strategy, which will be developed when the whole project team will be completed. Version 2 of this plan will have the full and updated strategy.