



"Building the Next Generation Personal Data Platforms" G.A. n. 871370

DELIVERABLE D7.3
- REPORT ON RESPONSIBLE RESEARCH AND INNOVATION (RRI) AND SOCIETAL IMPACT -

H2020-EU: **PIMCity** Project No. 871370

Start date of project: 01/12/2019

Duration: 33 months

Deliverable delivery: 22/03/2021 Deliverable due date: 28/02/2021

Document Information

Document Name: Deliverable 7.3 - REPORT ON RESPONSIBLE RESEARCH AND INNOVATION (RRI) AND SOCIETAL IMPACT

WP7 – Data management and legal & ethical requirements

Task 7.3

Revision: IAB Spain

Revision Date: 20/02/2021

Author: KU Leuven and others

Dissemination Level

Project co-funded by the EC within the H2020 Programme		
PU	Public	$\overline{\checkmark}$

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Document history

Revision	Date	Modification
Version 1	27/11/2020	V1
Version 2	20/01/2021	Further details have been added

List of abbreviations and acronyms

Abbreviation	Meaning
DMP	Data Management Plan
FAIR data	Findable, Accessible, Interoperable and Re-Usable Data
GDPR	General Data Protection Regulation
PIMCity project	Project Coordinator
RRI	Responsible Research and Innovation
IR	Interim Reports

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1. INTRODUCTION

The PIMCity Report on Responsible Research and Innovation (hereinafter as the Report on RRI) reflects the consortium's comprehensive approach and joint efforts towards responsible Research and innovation as an approach adopted in the European Commission Horizon 2020 projects (hereinafter as RRI).

RRI implies that societal actors such as researchers, citizens and businesses, including but not limited, shall work together during the research and innovation process in order to better align both the process and its outcomes with the values, needs and expectations of society. For example, in the light of PIMCity project, it shall provide key means to preserve the rights to privacy and data protection, ensure inclusive and socially acceptable Research. Overall, RRI shall contribute to providing durable societal impact.

The Report on RRI of the PIMCity project provides details on how the PIMCity project partners (all together and individually) aim to ensure the RRI via particular elements of public engagement, Open Access, gender, ethics, science education.²

Concerning each key section, when elaborating inputs received from the consortium, details from relevant partner - such as research & academic institutes and big companies - have been reported in this report. Additional details will be included in a updated version of the document.

The Report also includes the general approach towards societal impact and the results of the <u>Visual Law Lab Workshop</u> (hereinafter as the Workshop) organised in M12 in order to improve accessibility, readability, accuracy and consistency of the privacy policy and informed consent forms that were drafted under D7.1.

2. STRUCTURE

The Report is divided in the key sections of (1) public engagement, (2) Open Access, (3) gender, (4) ethics, (5) science education and (6) societal impact. Sections 1-5 provide both the general approach as adopted by the project partners and individual inputs of the partners which clarify the approach adopted by each partner. Section 6 provides the general approach as adopted by the project partners. The results of the Workshop are provided in the public engagement section (1).

¹ Responsible research & innovation. European Commission: online access at https://ec.europa.eu/programmes/horizon2020/en/h2020-section/responsible-research-innovation [accessed on 2020-11-11].

² Ibid.

3. DISCLAIMERS

The current version of the Report on RRI does not cover all of the actions that were or will be taken to ensure RRI. Some details shall be clarified and agreed upon by the PIMCity project partners at the later stages. The Report on RRI shall be updated during the project taking into account to the significant changes, including but not limited changes concerning data management such as the use of new data, changes in consortium policies, changes in consortium composition and external factors (e.g. new consortium members joining or existing members leaving). The information provided in the Report on RRI does not constitute legal advice. Any user of this information uses it at its sole risk and liability.

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³ European Commission Directorate-General for Research & Innovation. Guidelines on FAIR Data Management in Horizon 2020 as of 26th July, 2016, p. 5.

4. REPORT ON RESPONSIBLE RESEARCH AND INNOVATION

a. Public engagement

PIMCity plan for public engagement spans through the dissemination and communication activities, training and community building and the involvement in the codesign of the solution (primarily WP6 and WP1).

The partner Asociación de Usuarios de Internet (hereinafter as AUI) coordinates the activities (T6.1-6.4) that shall contribute to public engagement. A detailed strategy which provides comprehensive plan including dissemination, communication and community building strategies, as well as dissemination and exploitation reports are provided as deliverables of WP6 on the project's website⁴ (see, e.g. D6.2 and D6.3 as completed on 31st May 2020 and 18th December 2020 accordingly).

Overall, PIMCity partners aim to contribute to building to a scientifically literate society whose members would be well aware of their rights to privacy and data protection, of the developing data markets and the related legal and technological solutions. Furthermore, PIMCity partners aim for their Research to be future-proof and, in relation to this, for it to be supported by the particular knowledge and evidence of the societal challenges. In order to achieve these goals, PIMCity partners aim to engage the society into the development of the PIMCity solutions by establishing inclusive, participatory, and multi-actor dialogues between different stakeholders such as researchers, policymakers, industry and civil society organisations, NGOs, and citizens (e.g. via workshops as organised by KU Leuven – CiTiP, discussed in detail below). PIMCity partners assume that it is important to ensure the public engagement from an early stage,⁵ and they have already undertaken several actions during the first year of the project as revealed in the deliverables mentioned above and discussed briefly below.

Input of different partners

KU Leuven – CiTiP has contributed to public engagement by organising the *Visual Law* workshop on the accessibility of privacy policies and consent forms and the respective requirements stemming from the Regulation 2016/679 on the protection of natural persons, with regard to the processing of personal data⁶ (hereinafter as the GDPR) and the Directive 2002/58/EC concerning the processing of personal data and the protection

⁴ PIMCity website: online access at pimcity-h2020.eu [accessed on 2020-11-11].

⁵ Public Engagement in Responsible Research and Innovation. European Commission: online access at https://ec.europa.eu/programmes/horizon2020/node/766 [accessed on 2020-11-11].

⁶ Regulation 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation) [2016] OJ L 119, 4.5.2016, p. 1–88.

of privacy in the electronic communications sector (hereinafter as the e-Privacy Directive)⁷ in M12. The Workshop has gathered around 10 experts from academia, business, data protection authorities, consumer representatives (hereinafter as the speakers) as well as around 90 privacy experts and data subjects who had no prior knowledge of the topic (hereinafter as the participants). The speakers of the Workshop have discussed the EU legal requirements for privacy policies and consent forms and ways to improve the accessibility of these instruments. Besides, the Workshop has embodied an interactive session during which the participants have provided an extensive feedback on their experiences with these instruments, feedback on their accessibility as well as recommendations for improving it. PIMCity partners will take into account the feedback received while designing the project solutions, drafting privacy policies and consent forms. Examples of the feedback are provided in the table below.

Feedback on accessibility of privacy policies and consent forms			
Questions	Answers		
What makes privacy policy inaccessible for a	23% the document is too long		
user?	7% there is too much text		
	7% there are too many legal words		
	58% a bit of everything		
Do you think it is possible to make privacy	86% yes		
policies more accessible (easy to be	12% no		
understand)?	2% I do not know		
Rank the actions you consider necessary to	1st shorten the text		
improve privacy policies	2 nd improve the format		
	3 rd use less legal words		
	4 th add icons		
Any additional suggestions on how to improve	"Avoid verbose sentences keeping		
privacy policies and consent forms?	flat English messages when law-		
	related topics are addressed ",		
	"use more media and less words ",		
	"give simple options – so that		
	people can choose an understand		
	", "Less vague language ", "clearly		
	describe the effect of the customer		
	choices ", "svisualised cues, icons		
	", "design thinking"		

Towards the end of the project, KU Leuven – CiTiP will organise another workshop which will aim to increase end-users' awareness of their rights and obligations stemming from the GDPR the e-Privacy Directive. KU Leuven – CiTiP will also produce a White Paper with recommendations for the different stakeholders involved.

Albeit less directly, KU Leuven – CiTiP also contributes to public engagement by disseminating its deliverables on the project's website. KU Leuven – CiTiP also contributes to public engagement by communicating about the project's activities through its social media channels (primarily Twitter) as well as through KU Leuven – CiTiP newsletter (internally). Individual researchers also contribute to public engagement by

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⁷ Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications) [2002] OJ L 201, 31.7.2002, p. 37–47.

communicating about the project's activities through their LinkedIn accounts. Particular details are provided in the deliverables of WP6.

Telefónica Investigación y Desarrollo (hereinafter as Telefónica) disseminates the generated scientific knowledge to the society via periodic events like the popular *Telefónica Innovation Day*,⁸. During this event, which takes place every year, the Telefónica Group, S.A. shares with the public the company's strategy on how to bring disruptive solutions to the customers and how it plans to continue transforming the company. Additionally, Telefónica disseminates the research findings to the research community by giving talks and lectures, attending scientific panels and by organizing workshops, seminars, webinars and hackathons. The external communication channels of Telefónica include: (i) the corporate homepage; (ii) social networks: Linkedln.com/Linked

NEC Laboratories Europe (hereinafter as NEC) ensures public engagement by developing different co-creation activities involving both citizens and civil organizations. To this end, the company has incorporated the design thinking⁹ methodology that starts the Research and innovation with the direct involvement of the stakeholders. Moreover, the NEC X initiative (a startup incubator for the best research ideas) helps to bring the research ideas to a real product. This initiative has been designed to ensure citizens can enjoy the latest advances in the wide range of different technologies developed by the Research lab. For PIMCity, NEC will disseminate the material generated through press releases and social networks via the researchers involved in the project.

Politecnico di Torino (hereinafter as POLITO) is an active member of national and international networks related to Public Engagement and RRI, such as APEnet (Atenei per il Public Engagement), the national working group on a gender-responsive budget of the Conference of Italian University Rectors and the CESAER task forces on Open Science and Human Resources. POLITO also has a specific office devoted to the press and public relation (Ufficio promozione e imagine – https://www.politocomunica.polito.it/); their tasks are focused in promoting dissemination activities, organizing events for the public and communicating the projects active on the territory, involving public and private entities as well as all citizens.

In the light of PIMCity, POLITO collaborates in editing the PIMCity newsletter in coordination with other partners of the project. POLITO's teams are involved in circulating the news related to PIMCity and support the creation of the content published on social media (managed by the partner AUI). POLITO collaborates in organizing the workshops in order to involve academic and general public. In particular, during the demonstration activities foreseen for the future steps of the project, POLITO aims to involve students and researchers during the public events organized by POLITO (e.g., *Notte dei ricerctori, Biennale Tecnologia*).

⁹ Design thinking. Wikipedia: online access at https://en.wikipedia.org/wiki/Design_thinking https://ec.europa.eu/programmes/horizon2020/node/1031 [accessed on 2020-11-11].

⁸ Telefónica Innovation Day: online access at https://innovationday.telefonica.com/ [accessed on 2020-11-11].

The **University Carlos III of Madrid** (hereinafter as UC3M) defines its internal regulation regarding RRI in its *Code of Good Research and Transfer Practices of the Carlos III University of Madrid*, ¹⁰ approved in December 2017 (in Spanish).

The research groups at UC3M count on the support of the UC3M institutional communication structure to help them to achieve their objectives of information transfer to the general public regarding their initiatives, processes and results. These activities are undertaken in the area of scientific information and knowledge, through the Office of Scientific Information (hereinafter as OIC in Spanish; Oficina de Información Científica) from the Vice-Chancellor's Office for Communication and Culture of the UC3M. This unit is linked to the *Autonomous Community of Madrid's and the Network of Scientific Culture and Innovation Units* (UCC+i) of the *Spanish Foundation for Science and Technology* (FECYT – *Fundación Española para la Ciencia y la Tecnología*). The OIC uses a variety of formats and journalistic genres to emit scientific information regarding research projects and their findings (in Open Access), along with other subjects of interest in the area of Research and innovation.

It likewise participates in outreach activities such as Science Week, Fairs of Science or European Researchers' Night to disseminate scientific advances to society at large. These science education activities seek public engagement through interactions with the population, promoting a 'science with and for society' philosophy. In addition, the OIC creates and emits piece of news, press releases, videos and other multimedia products weekly about scientific results. In each communication campaign, the OIC prepares a dossier to track the impact that these contents have in webs and communication media. Diffusion Communication Channels: (i) Notiweb. Madrid+d; (ii) SINC Agency; (iii) AlphaGalileo; (iv) EurekAlert! & EurekAlert! Chinese. UC3M's external communication channels: (i) news on the corporate homepage: www.uc3m.es; (ii) social networks (LinkedIn, Facebook, Twitter, Instagram, Weibo); (iii) video channels (Youtube, UC3M Media); (iv) press release deliveries; (v) electronic newsletters for specific audiences; (vi) UC3M Innovation and entrepreneurship newsletter UC3M; (vii) images. UC3M's internal communication channels: (i) UC3M newsletter; (ii) TV Digital Signage; (iii) Corporate Magazine UC3M. Also project deliverables, media coverage and public publications. In the light of PIMCity, the UC3M's team leverages the UC3M's OIC to disseminate the results of PIMCity both publicly internally at UC3M and externally to the society. Moreover, the UC3M's team participating in PIMCity has an established record of appearances in mass media to disseminate their research results as well as share their opinions as international recognized experts in different topics such as privacy, big data and technology. Finally, the UC3M team also develops its public engagement activity through the participation and release of PIMCity deliverable and research papers.

The mission of the **IMDEA Institutes** is to encourage excellent R+D+I and create an efficient science and technology development model while collaborating with the production sector. In order to achieve this mission, the IMDEA Institutes:

- Develop their own excellent and internationally recognized science and technology, applied effectively to the improvement in competition in the economy of Madrid, the productivity of its companies, and its public services.
- Pass on the results of the investigation to society through an efficient transfer of technology model.
- Maintain close links with the business world in every phase of the process of knowledge generation.

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¹⁰ The University Carlos III of Madrid: https://e-archivo.uc3m.es/handle/10016/26071 [accessed on 2020-11-11].

- The institutes disseminate scientific knowledge and participate in activities of scientific collaboration with the aim of informing society about the importance of science and technology.
- They also facilitate collaboration between different disciplines in the field as well as with the various organizations in Madrid involved in science and technology.

IMDEA Networks is active in dissemination activities. During PIMCity and for each communication campaign the impact that the published contents have over web audiences and communication media is measured and then registered in a news clipping, likewise for PIMCity related publications in the website site/blog about workshops, events or any other sort of items we promote as part of the PIMCity project. Additionally, IMDEA Networks has several generic Diffusion Communication Channels to reach the public and disseminate the results of our research with reference to our open access platform:

- Notiweb. Madrid+d
- AlphaGalileo (international/bilingual) (https://www.alphagalileo.org/en-gb/)
- DiCYT (international/bilingual) (http://www.dicyt.com/espana):
- EurekAlert! (international/bilingual) (https://www.eurekalert.org/):
- Globedia (national/Spanish) (http://es.globedia.com/)
- Sciencex.com (international/English) (https://sciencex.com/media/) (relays to phys.org or Tech Xplore: techxplore.com)
- Agencia SINC/FECYT (national/bilingual) (https://www.agenciasinc.es/)
- Total Telecom (international/bilingual) (https://www.totaltele.com/post-article/press-release)
- Blog "Sociedad de la Información" hosted by mi+d (national/Spanish)

IMDEA Networks' external communication channels are mainly: News on the corporate homepage: https://networks.imdea.org/; Social Networks (LinkedIn, Facebook, Twitter, Instagram); Video Channels (YouTube: IMDEA Networks Institute)

IMDEA Networks' internal communication channels are mainly: TV Digital Signage; Media Coverage; Public publications

IAB Spain is committed to disseminating the generated scientific knowledge to society. This happens via periodic events like the <u>Inspirational festival</u> and the <u>Congreso de Regulación</u> where every year IAB Spain shares with the public, and especially with the online advertising ecosystem, new data and advertising strategies while fulfilling with all regulations, particularly data protection ones. Additionally, IAB Spain disseminates the research findings to the online advertising ecosystem by <u>holding webinars</u>, <u>organising workshops and others</u>. The external communication channels of IAB Spain include: (i)news on the corporate <u>homepage</u>; (ii)social networks (<u>LinkedIn</u>, <u>Facebook</u>, <u>Twitter</u>, <u>Instagram</u>); (iii) video channels (<u>Youtube</u>); (iv)IAB Spain <u>Newsletter</u>; <u>studies</u>, <u>Reports</u> and other documents.

IAB Spain is committed to leverage such public engagement channels as above listed fully, to ensure the proper and wide dissemination of the research results and deliverables of PIMCity, both internally within the members of IAB Spain and externally to the society. Also, part of the role of IAB Spain in PIMCity Project is getting feedback of the online advertising ecosystem and for that reason, will organize two workshops involving these types of companies for disseminating results and for demonstration purposes.

b. Open Access

PIMCity partners recognise that making research results more accessible contributes to better and more efficient science, and to innovation in the public and private sectors. In relation to this, the default policy of the PIMCity project is to make its data publicly available through public copyright licenses (e.g. Creative Commons), archiving it on the publicly accessible project website and OPENAIRE compliant repositories. Most PIMCity outputs will be available for auditing, re-use and verification following the Open Access principles.

Input of different partners

Multiple partners such as AUI, KU Leuven – CiTiP, NEC and POLITO have already contributed to the Open Access by disseminating their deliverables on the project's website <u>pimcity-h2020.eu</u>.

KU Leuven – CiTiP underlines that KU Leuven strongly believes in Open Access as the way to increase access to knowledge. KU Leuven supports *Green Open Access* with the deposit obligation in the institutional repository Lirias. KU Leuven also supports Fair Open Access, a.k.a. non-profit Gold Open Access, with the KU Leuven Fund for Fair Open Access. In the light of PIMCity, KU Leuven – CiTiP has so far contributed to the Open Access by disseminating their deliverables on the project's website <u>pimcity-h2020.eu</u>. Following H2020 Open Access policy, KU Leuven – CiTiP will ensure that peer-reviewed scientific publications resulting from Horizon2020 funding are deposited in repositories and made Open Access.

Telefónica Investigación y Desarrollo is committed to Open Access of research results and other data, whenever possible and whenever it does not contradict its obligation and legitimate interests to protect the results. In particular, Telefónica is obliged to examine the possibility of protecting its results and must adequately protect them — for an appropriate period and with appropriate territorial coverage — if:

- (a) the results can reasonably be expected to be commercially or industrially exploited and
- (b) protecting them is possible, reasonable and justified (given the circumstances).

When deciding on protection, Telefónica must consider its own legitimate interests and the legitimate interests (especially commercial) of the other beneficiaries in the project. In relation to this, Telefónica is committed to following the FAIR Data management guidelines in H2020 EU projects, and whenever possible and applicable, use Open Access repositories for disseminating research results and academic articles, such as www.arxiv.org, www.researchgate.net, or generally open-access journals and conferences such as the ones under the Foundations of USENIX, ICLR, etc. The same principles apply for sharing data, by using Open Access dataset repositories such as

Open Science (Open Access). European Commission: online access at https://ec.europa.eu/programmes/horizon2020/node/1031 [accessed on 2020-11-11].

¹² Open Access @ KU Leuven: online access at https://www.kuleuven.be/open-science/what-is-open-science/scholarly-publishing-and-open-access/open-access-kuleuven [accessed on 2020-11-23].

www.openAIRE.eu, www.zenodo.org, or generally available online storage repositories, including associated metadata, needed to validate the results presented in scientific publications, as soon as possible. Finally, Telefónica will contribute to the Open Access of the project, by disseminating their deliverables on the project's website (i.e., www.pimcity-h2020.eu) and source code via project's account on Gitlab (i.e., https://gitlab.com/pimcity).

NEC fully endorses the Open Access policy marked by the European Commission for all the outputs generated during the course of publicly funded research. As such, NEC has published dozens of papers during the past years following either a Green or Gold Open Access standard. For PIMCity, NEC will make publicly available all the papers generated during the project. Typically, by publishing in conferences and journals that are open, and uploading it to personal websites when that is not possible. Moreover, NEC will participate in the different workshops organized by the project.

POLITO. In 2018 the Rector of POLITO appointed for the first time a Rector's Advisor for Open Science and in December the Governing Bodies approved the *Politecnico di Torino Policy on Open Access to Scientific Publications*. In 2018 an inter-departmental working group was created to raise awareness about open science and Open Access; the working group involved staff of the *Library and Museum Department*, of the Research Support Department and the Quality and Evaluation Division. The Strategic Plan POLITO4IMPACT strongly encourages and promotes Open Access to research results in order to bring POLITO's policies closer to the level of international best practices. Moreover, several trainings and events are organized on a regular basis.

In the light of PIMCity, as part of Horizon 2020, POLITO will ensure the free accessibility of every result. POLITO will publish the results of the Research in Open Access modality. As of November 2020, the majority of POLITO's publications are *Green Open Access*, and the final versions of the publications are deposited into an open repository and are dependent on the funder or publisher. Furthermore, the research group commits to publish artefacts (data and source code) used during the development of the Research in open repositories, to allow reproducibility, and foster further studies. Additionally, as coordinator of PIMCity, POLITO ensures that all publications (articles, book chapters, thesis dissertations, papers, including but not limited) are published on the PIMCity website 13 and are freely available for the public, with each publication linked to the repository and with references to the authors.

At **UC3M**, the mandates and issues related with *Open Science*, are managed by the <u>Library Service</u>, which reports to the Vice-President for Strategy and Digital Education, who collaborates, for this purpose, with the <u>Research Service</u>. The Library offers advice about all aspects related to Open Access to UC3M researchers. It also undertakes monitoring of the mandates of the funding organisms through the deposited research results in the *e-Archive and e-scienceData institutional repositories*. The Library, within its search engine, integrates all the existing sources with Open Access content to be used by UC3M users. Similarly, the results are available at the <u>UC3M-Research Portal</u>. The legal framework that affects the *Open Science* policies at UC3M, are conditioned by the fact that it receives public financing for Research from the regional government of Madrid, MINECO and the European Union.

¹³ PIMCity: online access at <u>www.PIMCity-h2020.eu/dissemination/publications/</u> [accessed on 2020-11-11].

In the light of PIMCity, the UC3M team commits to release publicly all data, software and code produced as part of PIMCity. The only exception to this general rule would be any data, software of code subject to be part of commercial activity of being patented. These mechanisms avoid the public release of the asset, especially in the case of patents. In addition, the UC3M team commits to make publicly available all the scientific publications produced by its work in PIMCity following either the Gold or Green Open Access options.

The research groups at **IMDEA Networks Institute** count on the support of the Communication & Operations department, also for the Data Transparency Group (DTG) in PIMCity, in order to help them achieve their objectives of results dissemination and publication to the general public regarding their initiatives, processes and results.

The Communication & Operations department uses a variety of professional formats and journalistic genres to emit scientific information regarding research projects and their findings (in open access), along with other subjects of interest in the area of research and innovation.

In addition, the Communication & Operations department creates and emits piece of news, press releases, videos and other multimedia products weekly about scientific results.

IMDEA count with the support of the Communications & Operations in PIMCity as well as done in other projects. This department helps the Company in publishing original content on social networks, the IMDEA Networks website and other platforms for open access to our research results. For the PIMCity project as for any other EU funded project, IMDEA Networks stores publications in an open access repository called EPrints. EPrints is a free and open-source software package for building open access repositories that are compliant with the Open Archives Initiative Protocol for Metadata Harvesting. The current repository is at https://eprints.networks.imdea.org/

IAB Spain website (+20000 users' / month) has a restricted area, only for members, but also has an open access area. For disseminating research results and outputs of PIMCity Project IAB Spain will use the open-access part of its website so that any internet user has access to the project's outputs. IAB Spain is committed to open access to research results and other data and to follow the FAIR Data management guidelines in H2020 EU projects.

c. Gender balance

PIMCity partners recognise the importance of fostering gender balance in research teams and decision-making as well as of integrating the gender dimension in research and innovation content. PIMCity partners assume that ensuring gender balance shall help to improve the scientific quality and societal relevance of the PIMCity solutions.¹⁴

Gender balance in research teams and decision-making

PIMCity partners undertake various equality measures in order to ensure equal opportunities in relation to HR processes (e.g. recruitment, training, promotion, work-life balance) and to address gender-related biases and under-representation. Although there

¹⁴ Promoting Gender Equality in Research and Innovation. European Commission: online access at https://ec.europa.eu/programmes/horizon2020/node/797 [accessed on 2020-11-11].

are more male researchers in the PIMCity working team,¹⁵ this underrepresentation reflects the well-documented gender gap in computing occupations and STEM careers, inventions and scientific publishing.

Integrating the gender dimension in research and innovation content

PIMCity partners undertake proactive measures to ensure all research and innovation activities are carried out in a gender-sensitive way. PIMCity partners acknowledge gender in every aspect of the research formulation, methodology, and outcome planning, including:

- gender-based differences related to the <u>perception of vulnerability</u> in privacy threats: studies suggest that there are differences related to how men and women react to privacy threats. PIMCity partners shall make sure it explores, addresses and reports any possible gender and sex-based nuances in both the design and development phases;
- gender-based differences related to <u>self-disclosure</u> in the social web: women seem to hold more concerns about privacy and are less willing to share personal information in social web than men, particularly when it comes to revealing sensitive information publicly. PIMCity partners shall explore if similar genderbased differences apply when sharing information to third parties via trackers, for instance:
- gender-balanced <u>composition of engaged groups</u> (volunteers, interviewees, etc.): in planning qualitative Research that may include interviews, focus groups and discussions with experts, as well as building communities of early adopters and beta testers, PIMCity partners shall ensure gender-balanced compositions.

Input of different partners

KU Leuven – CiTiP aims to ensure gender-balanced research teams by ensuring an equal opportunity policy and by actively recruiting female researchers, sharing the tasks and leadership roles equally, to the extent possible. In the light of PIMCity project, it is notable that 50% of the involved KU Leuven – CiTiP researchers are female, and 50% are male so far. In concrete, a female professor, Prof. Peggy Valcke, supervises the project.

Generally, KU Leuven has committed itself to ensure gender balance through the *Gender action plan* (2014-2017),¹⁶ of which the first results were published in December 2016.¹⁷ It also relies on VLIR and Young Academy's gender charter (2019)¹⁸ and on the new set of gender actions as approved by the Academic Council on 26th May 2020.¹⁹ The latter include (i) strengthening and broadening existing measures combatting implicit bias in assessment processes; (ii) expanding efforts to support the career advancement of new ZAP-members, with attention to diversity aspects; (iii) ensuring equal career

Gender Action Plan. KU Leuven: online access at https://www.kuleuven.be/diversiteit/pdf/BRO_GENDERACTIE_def_ENG.pdf [accessed on 2020-11-11].

¹⁷ Figures and actions. KU Leuven: online access at https://www.kuleuven.be/diversiteit/diversity/facts-figures-2 [accessed on 2020-11-11].

¹⁸ VLIR and Young Academy's gender charter: online access at https://vlir.be/wp-content/uploads/2019/10/Publicaties-Gender-in-Academia-Gendercharter_VLIR-JA-1.pdf [accessed on 2020-11-11].

¹⁹ 2020 A New Set of Gender Initiatives for KU Leuven. KU Leuven: online access at https://www.kuleuven.be/diversiteit/diversity/2020-a-new-set-of-gender-initiatives-for-ku-leuven [accessed on 2020-11-11].

¹⁵ Particular details are provided below in this section.

opportunities in all disciplines, carrying out systematic career interviews and improving access to information about mentoring and flexible work organisation in terms of work-life balance; (iv) building towards a balanced gender representation in decision-making bodies by, in addition to existing measures, striving for a balanced gender distribution in faculty and departmental boards; (v) preventing the committees that consist of all female and male members from doctoral defences²⁰. KU Leuven regularly monitors gender figures and other relevant data.²¹ In December 2019, 70% of the senior academic staff at KU Leuven was male, and 30% was female.²² Yet, the higher the level of academic hierarchy,²³ the lower the percentage of women, and gender balance among professors is *not yet within reach in 2020*.²⁴ Only 26.9% of professors and 18.9% of full professors are female.²⁵

Telefónica Investigación y Desarrollo is part of the Telefónica group: one of the top 25 of the most diverse and inclusive companies in the world, according to the index published by Refinitiv D&I 2020, which recognizes the top 100 companies that stand out most for incorporating both aspects into their work culture. Through its established *Global Diversity Council and its Diversity and Inclusion Policy*, Telefónica Group seeks to guarantee equal opportunities for all employees regardless of their gender, origin, age, sexual orientation and identity, abilities or any other personal characteristic. Under the umbrella of this company strategy, tools have been implemented to favor gender equality in selection and promotion processes; training programs have been created for managers on unconscious biases and diversity has been included as a quantifiable and measurable metric for variable annual remuneration, among many other actions.

NEC ensures fairness among genders in the hiring process, fostering the gender balance in research teams. All of the research activities developed by the lab consider the possible gender issues and integrate the gender dimension in research and innovation content. Finally, NEC yearly organizes the *Girls day*. The *Girls day* is an activity to attract young females to consider an education in the MINT professions (MINT = Maths, Informatics, Nature Science, Technology). Those professions are –in Germany- typical male professions. Currently, the work area is introduced to a group of schoolgirls and sample success stories of women in this profession presented. For PIMCity, NEC is not taking any action different from those taken in all the projects. The NEC's team in PIMCity includes a female researcher. However, her presence is not to ensure the gender balance, but taking into account that the project topics are in line with her interests.

POLITO. In 2007, POLITO approved its first Institutional Gender Equality Plan. With the new Strategic Plan 2018-2024 *POLITO4IMPACT*, POLITO moved one step further and set the following objectives regarding gender balance of students and staff: to increase the number of female students (up to 35%) and to support the career development of female researchers (+ 50%). In 2018 by sharing and implementing the principles of the European Charter for Researchers, a new governance structure of Equality@POLITO has been created and new initiatives to monitor and govern equal opportunities for the various aspects of diversity, starting from gender diversity, are ready to be launched. At last, in 2020, POLITO adopted its gender budget that is the basis on which to build an ambitious Gender Equality Plan.

²⁰ 2020 A New Set of Gender Initiatives for KU Leuven. KU Leuven <...>.

²¹ 2020 A New Set of Gender Initiatives for KU Leuven. KU Leuven <...>.

²² Figures and actions. KU Leuven <...>.

²³ Figures and actions. KU Leuven <...>.

²⁴ 2020 A New Set of Gender Initiatives for KU Leuven. KU Leuven <...>

²⁵ Figures and actions. KU Leuven <...>.

In the light of PIMCity, POLITO fully commits to involve a gender-balanced personnel, following the general guidelines. The following table provides the number of people involved into PIMCity.²⁶

Personnel	Male	Female	Total
Administration	1	3	4
Researchers	3	1	4
Students	3	1	4
Total	7	5	12
%	58%	42%	100%

POLITO aims to increase the number of female students involved, which is now below the 35% (target at the global level): the total number of students involved in the project so far is 4 (3 males and 1 female), working specifically on research and development activities.

POLITO is planning to involve female students, especially at the later stages of the project, particularly during the demonstration activities and recruitment actions, by adopting the general guidelines of POLITO.

UC3M. Currently, in the UC3M there is a <u>Vice-rectorate for Students</u>, <u>Social Responsibility and Equality</u>, and an Equality <u>Unit (EU)</u>, responsible for developing, implementing, monitoring and evaluating the Equality Plans of the University. These plans are part of the Strategic Plan of UC3M and establish the objectives in terms of promoting equal treatment and opportunities, as well as the strategies or measures to achieve them. On 30th October 2017, the Governing Board approved the <u>II Gender Equality Plan at the UC3M (hereinafter The Plan)</u>, which main aspects are summarized as follows. The Plan consists of 52 measures applicable to the entire university community. These measures are divided into 4 Axes (E) of intervention with a common theme: E1) Sensitize, communicate and train on equality issues; E2) Access, promotion, career and working conditions; E3) Conciliation and co-responsibility; E4) Teaching and Research. Each measure has a specific body responsible and related 'best indicators' to achieve.

Measures within Research (within the fourth axis: E4):

Within the fourth axis of intervention, *Teaching and Research*, 8 specific measures have been established to promote and raise awareness about gender equality in Research:

- E4.1. Encourage the inclusion of the gender perspective in national and European research projects.
- E4.2. Call for grants for the organization of congresses and workshops on gender issues.
- E4.3. Promote gender research through the <u>Pilar Azcárate research awards</u>.
- E4.4. Analyse the evolution of women's participation in Research and disseminate the results.
- E4.5. Increase the visibility of the Research carried out by women at the UC3M.
- E4.6. Promote the participation of UC3M researchers in Science Week.

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²⁶ Data of November 2020.

E4.7. Promote agreements with public and private institutions for Research and the transfer of research results with a gender perspective.

E4.8. Promote the inclusion of gender equality aspects as objectives of the research activity.

In the light of PIMCity, UC3M underlines that while the presence of women in engineering departments and project is significantly small, the UC3M team participating in PIMCity includes female members. The technical work conducted by UC3M team in WP3 aims at retrieving the value of audiences (users' profile). As part of this work UC3M will consider gender as one of the parameters to be considered what may help to identify potential biases in the value of audiences.

IMDEA Networks Institute aims to increase the proportion of women and therefore qualified female applicants are explicitly encouraged to apply. Until a balanced ratio of men and women has been achieved at the institute, preference will be given to women if applicants have similar qualifications.

IMDEA Networks Institute actively promotes diversity and equal opportunities.

Applicants are not to be discriminated against in personnel selection procedures on the grounds of gender, ethnicity, religion or ideology, age, sexual orientation (anti-discrimination). People with disabilities who have the relevant qualifications are expressly invited to apply.

During WP3, likewise UC3M, we will consider the value of gender data as something important but also a possibly sensitive feature for data valuation. Besides, if time allows, the PIMCity consortium is already proposing zero-knowledge proofs or anonymization techniques that ensure data is sold respects strict privacy regulation (GDPR), regarding data subjects and Personally Identifiable Information (PII).

IAB Spain has a very marked gender equality policy. Approximately 75% of the employees are female, including all the top positions of the company, including its general manager, its marketing director, and its legal department director. IAB Spain has an internal complaints system created explicitly for abuse, discrimination and related issues. The above mentioned implies equal opportunities for all employees regardless of their gender, origin, sexual orientation. The IAB Spain team that participates in PIMCity is formed by exactly 50% of each gender.

d. Ethics

PIMCity partners recognise the importance of ethics as an integral part of Research from the beginning to the end.²⁷ PIMCity partners are aware that ethical research conduct implies the application of fundamental ethical principles and legislation to scientific Research in all possible domains of Research, including the domains researched in the light of PIMCity project. Taking into account that one of the most common ethical issues include privacy and data protection issues and the particular activities within the project, PIMCity partners pay particular attention to the compliance with all of the relevant national, European, EU and international privacy and data protection requirements.

Ethics. European Commission: online access https://ec.europa.eu/programmes/horizon2020/node/767 [accessed on 2020-11-11].

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Besides, PIMCity partners aim to ensure there is no breach of research integrity, i.e. no fabrication, falsification, plagiarism or other research misconduct.

PIMCity partners pay particular attention to the European Commission Guidelines on ethics and data protection.²⁸ Besides, since PIMCity partners shall work on algorithms, the project pays particular attention to ethical requirements regarding the use of artificial intelligence. The take into account, among others, the AI HLEG Ethics Guidelines for Trustworthy Af²⁹ and the Guidelines on Artificial Intelligence and Data Protection under the Council of Europe.³⁰ Overall, the consortium works in line with these ethical values: (i) research should be designed, reviewed and undertaken to ensure integrity and quality: (ii) research staff and subjects must be informed fully about the purpose, methods and intended possible uses of the Research, what their participation in the Research entails and what risks, if any, are involved; (iii) the confidentiality of the information supplied by research subjects and the anonymity of respondents must be respected; (iv) research participants must participate in a voluntary way, free from any coercion, or risk; (v) harm to research participants must be avoided; (vi) the independence of Research must be clear, and any conflicts of interest or partiality must be explicit. The project partners will reveal their compliance with the ethical requirements through their individual inputs in detail.

As a part of ethics, PIMCity partners also undertake to fulfil all of the legal requirements stemming from the relevant legal frameworks as defined in the deliverables of WP7, including the implementation of internal organizational and technical measures. Besides, taking into account that the PIMCity project is expected to collect and/or generate at least four broad categories of data, the project partners have developed the data management plan (D7.1) that elaborates on the management of these categories of data (hereinafter as the DMP). Overall, it reflects the consortium's comprehensive approach and joint efforts towards making research data findable, accessible, interoperable and re-usable (hereinafter as FAIR).31 As part of making research data FAIR, the DMP provides the information on the handling of research data during and after the end of the project. The DMP indicates what data will be collected, processed and/or generated, which methodology and standards will be applied, whether data will be shared/made Open Access and how data will be curated & preserved (including after the end of the project).³² The current version of the DMP is accessible on the project's website (pimcity-h2020.eu). The DMP is based on the information provided by the project partners Politecnico di Torino, NEC Laboratories Europe, Ermes Cyber Security, IMDEA Networks, Universidad Carlos III de Madrid, Telefónica Investigación y Desarrollo, Fastweb, LSTech ESPANA, KU Leuven - CiTiP, AUI, Big Data Analytics and CLIQZ. The DMP will be updated in the course of the project.

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²⁸ Ethics and Data Protection. European Commission: online access at https://ec.europa.eu/info/sites/info/files/5. https://ec.europa.eu/info/sites/i

²⁹ Ethics Guidelines for Trustworthy AI. European Commission: online access at https://ec.europa.eu/digital-single-market/en/news/ethics-guidelines-trustworthy-ai [accessed on 2020-11-11].

³⁰ Guidelines on Artificial Intelligence and Data Protection. Council of Europe: online access at https://www.coe.int/en/web/artificial-intelligence/-/new-guidelines-on-artificial-intelligence-and-data-protection [accessed on 2020-11-11].

³¹ The DMP is drafted in accordance with the Guidelines on FAIR Data Management in Horizon 2020 as of 26th July, 2016, as issued by the European Commission Directorate-General for Research & Innovation and already referenced above.

³² European Commission Directorate-General for Research & Innovation. Guidelines on FAIR <...>, p. 4.

The PIMCity partners have also appointed the <u>PIMCity data protection officer team</u> to act as a single point of contact for data subjects wishing to exercise their rights, following the provisions of the GDPR and Article 29 Working Party Guidelines on Data Protection Officers.³³ The PIMCity data protection officer team will develop a roadmap with actions to be taken if a data subject sends a request to give a response within the timeframes provided in the relevant legal frameworks.

More details on data management, including details on various technical measures are provided in D7.1, as well as in D9.2 and D9.3 (confidential reports).

In particular, Deliverable 9.3 - due on M15 - about Ethics Requirements for Non-European Countries (NEC) focus on the possible risks in case personal identifiable data will be transferred to Argentina. Among PIMCity partners, GRANDATA and WIBSON* are the interested beneficiaries. In the confidential report of the D9.3, the consortium has evaluated the ethics risks related to the data processing activities of the project, that could be transferred in a third country.

*WIBSON will join the consortium approximately starting from the 1st of May 2021, according to the changes proposed with the ongoing Amendment to the Grant Agreement.

Input of different partners

KU Leuven – CiTiP plays an important role in ensuring ethics as an integral part of the Research. In particular, in the light of WP7 KU Leuven – CiTiP provides detailed guidance on all of the relevant privacy and data protection requirements in their deliverables, e.g. in D7.2 which will be updated in the course of the project. KU Leuven – CiTiP has also advised the project partners on the data protection impact assessment (D7.1).³⁴ In addition, KU Leuven has provided project partners with the detailed guidelines for consent management and privacy policies, as well as with the templates of informed consent forms and privacy policies that shall be adjusted by the partners' on a case by case basis taking into account particular details (D7.1). Albeit less directly, KU Leuven – CiTiP also contributes to ethical Research through its workshops as revealed in part 1 of this document (public engagement). Besides, KU Leuven – CiTiP advises the project partners on the relevant requirements on a daily basis.

Telefónica Investigación y Desarrollo has published Business Principles where the presented ethical code helps every part of the company to act with integrity, commitment and transparency. In this way, Telefónica's vision can be actualized and be sustainable over time based on trust and legitimacy. Its commitment to ethics and integrity is key for its transformation process. As per the established <u>Responsible Business Principles</u>, the company's ethical code arises from three basic values: *integrity, commitment and*

³³ Article 29 Working Party Guidelines on Data Protection Officers, adopted on 13 December 2016, last revised and adopted on 5 April 2017 https://ec.europa.eu/newsroom/article29/item-detail.cfm?item

id=612048, and endorsed by the European Data Protection Board which replaced the Article 29 Working Party on 25 May 2018.

³⁴ NEC, POLÍTO, Fastweb, Asociación de Usuarios de Internet, Universidad Carlos III de Madrid, Telefónica Investigación y Desarrollo, IMDEA Networks and CLIQZ have concluded that, given their roles and foreseen activities in the PIMCity project, they shall carry out data protection impact assessment.

transparency: values that are essential in promoting the relationship of trust the company wants to sustain with its stakeholders.

Security and respect for data privacy constitute the foundations of Telefónica's business and are of paramount concern when designing new services. Telefónica is committed to complying with all regulations in force across all markets in which it operates.

Telefónica follows the GDPR and has appointed a Data Protection Officer (DPO), who reports directly to the Board of Directors of Telefónica Group. The DPO oversees the Governance Model of Data Protection within the Group. The DPO leads the Global DPO Office, which performs the functions regulated in article 39 of the GDPR, focusing on (a) the design and coordination of the privacy compliance program at the global and corporate levels, in accordance with the corresponding risk analyses, and without prejudice to the specialties of each company and jurisdiction; and (b) the supervision of the implementation of said program.

NEC has a mission is to create value for all members of society. Looking to a brighter future, NEC believes that, with technology and co-creation, digital solutions can address society's needs. To this end, NEC has developed the NEC Way.35 The NEC Way is a common set of values that form the basis for how the entire NEC Group conducts itself. Within the NEC Way, the *Purpose* and *Principles* represents why and how as a company NEC conducts business, whilst the Code of Values and Code of Conduct embodies the values and behaviors that all members of the NEC Group must demonstrate. While implementing the NEC Way NEC aims to create social value, revealed in detail below.

Purpose: NEC creates the social values of safety, security, fairness and efficiency to promote a more sustainable world where everyone has the chance to reach their full potential.

Principles: The Founding Spirit of "Better Products, Better Services" Uncompromising Integrity and Respect for Human Rights Relentless Pursuit of Innovation.

Code of Values: Look Outward. See the Future. Think Simply. Display Clear Strategy. Be Passionate. Follow through to the End. Move Fast. Never Miss an Opportunity. Encourage Openness. Stimulate the Growth of All.

Code of Conduct: In order to realize a sustainable society, the NEC Group contributes to solving our customers' issues and advancing the resolution of social issues through the power of ICT, and thereby continues promoting our values of safety, security, fairness and efficiency. To provide our customers and society with excellent value, we need to have "Integrity", or in other words, high ethical standards and sincerity, as a foundation for all of our actions. This Code of Conduct provides detailed guidelines for this "Integrity". As a member of the NEC Group, we promise to comply in good faith with this Code of Conduct so as to be connected with people all over the world, beyond boundaries, and to enable the solving of social issues and sustainable economic growth for the future. It is based in: (i) Basic Position; (ii) Respect for Human Rights; (iii) Environmental Preservation; (iv) Business Activities with Integrity; (v) Management of the Company's Assets and Information, Consultation and Report on Doubts and Concerns about Compliance.36

NEC: Code of conduct. online access at https://www.nec.com/en/global/about/pdf/necway/nec_code_of_conduct.pdf [accessed on 2020-11-23].

³⁵ NEC: online access at https://www.nec.com/en/global/about/the-nec-way.html [accessed on 2020-11-23].

NEC guarantees an ethical approach in all the Research and business with a special focus on the respect for the Human Rights, the Environmental Preservation and the Business Activities with Integrity. During PIMCity, NEC researchers will follow the code of conduct.

POLITO. In 2012 POLITO adopted the *Code of Ethical Conduct of the University Community* with the purpose of making all university members aware of the ethical principles which give rise to their rights and obligations as members of the university community. In July 2019, the Academic Senate approved the *Research integrity at Politecnico di Torino*, that is the programmatic manifesto of the internationally recognized fundamental principles that POLITO embraces in conducting its Research. In June 2020 also the Regulation of Research Integrity was approved to promotes the dissemination of the principles of integrity in Research and manage any violations. POLITO provides increasing support in the field of research ethics. In June 2020 the Regulation of the *Research Ethics Committee* was adopted; the Committee has been appointed in November 2020.

In the field of data protection and privacy, POLITO applies the data protection principles and faces issues concerning the processing of personal data as established by the GDPR. Since 2018 POLITO has a registered Data Protection Officer (DPO). The DPO ensures compliance of research objectives, processes and practices with the applicable EU and national law. The DPO acts as a data management consultant to the projects with particular regard to the lawfulness, fairness and transparency of the processing, to the use of data for legitimate purposes and connected to the institutional activities of the POLITO, as indicated in art. 2 of the Statute of the University, in a manner relevant to the treatment, respecting the principles of data minimization, accuracy, storage limitation, integrity and confidentiality, accountability.

In the light of PIMCity, POLITO embraces all previous activities and aspect reported above, actively working in close collaboration with the universities bodies. Specifically, for the data protection declaration for the privacy policy of the PIMCity website (www.PIMCity-h2020.eu/) POLITO ensures to not share collected data with any third parties. In case of consent for the use of cookies for statistical purposes, POLITO adopted a strategy to guarantee that the data collected through the use of these cookies is processed in POLITO's premises, using the Matomo Analytics that is installed in the servers hosted in POLITO's premises. POLITO takes appropriate administrative, technical and organizational measures against unauthorized or unlawful processing of any data or its accidental loss, destruction or damage, access, disclosure or use.

UC3M. The Research Ethics Committee of UC3M was established in September 2014 to assess and to monitor ethical issues of the University's research activities. It oversees all activities undertaken both, on the University's premises using its facilities, or on behalf of the University, by all University staff and students engaged in a research project. University policy for approval, structure and appeals procedures are laid out in the University's Research Ethics Regulation, adopted on 27th April, 2017, to ensure that the Research conforms with general ethical principles and standards. Researchers who intend to appeal the decision of any Research Ethics Committee at UC3M should follow such procedures and obtain approval before the Research begins. This Regulation applies across all subject disciplines and areas of study, regardless of the funding source, private or public, national or international calls, specific research aspects supervised by this Committee will cover: (i) Human and animal research; (ii) Personal data protection; (iii) Protection of Fundamental Rights of People; (iv) Cooperation with developing countries; (v) Defence and security issues. If a project needs any approval

or ethical screening, it will be conducted by the UC3M Ethics Committee, regarding any of these research aspects.

For projects that collect and/or process Personal Data, it is required to follow all the procedures required according to institutional, local, national and international regulations. In particular, UC3M must comply with the GDPR and the Data Protection Act 2018 (DPA Regulation (EU) 2018/1725). This Act requires organisations that collect and use personal data, be transparent with individuals about how their data will be managed. The Act also imposes responsibilities and requirements on any organisation that handles personal data. Moreover, under the GDPR, the University is required to appoint a Data Protection Officer (DPO) for their compliance. UC3M has appointed a DPO to advise the University on data protection law. UC3M DPO's primary roles are to ensure that any processing of any personal data of its staff, customers, providers or any other individuals (also referred to as data subjects), regardless the method used, is carried out in compliance with the data protection legislation and monitoring its performance against it, in cooperation with the data protection authority (for the EU institutions and bodies, this is the EDPS). The DPO also keeps an inventory and analysis of the processing activities and is involved in handling questions and complaints. The DPO also advises the organisation about the interpretation or application of the data protection rules. Everyone who processes personal data on behalf of the University must ensure that they comply with the University's Data Protection Policy: UC3M Data Protection Regulation.

In the light of PIMCity, the UC3M team does not plan to conduct any activity that requires the collection of personal data or implies any ethical concern. Therefore, it is not required to launch any procedure to obtain validation of its activity. Of course, if during the execution of the process, any new activity requires such validation, UC3M will follow the established procedure described above. As part of the work in PIMCTY, the UC3M team has participated in the elaboration of D7.1 and D7.2.

To ensure ethical research during PIMCity, **IMDEA Networks** will validate their research experiments with their *Ethical Research Board (ERB)*, which is a committee formed of senior professors and faculty that decides on the suitability and measures the experiment requires (if any). Besides that, there is a *Data Protection Officer* (DPO) supporting IMDEA Networks data management operations.

In the PIMCity context IMDEA does not plan to collect user datasets that require the approval of our ethics board or DPO for use in PIMCity. In all cases, IMDEA does not employ human subjects in the context of PIMCity and in most cases it will employ public datasets or data from partners in the PIMCity consortium. If in doubt, IMDEA holds direct internal contact with our ERB and DPO through our group leader at the DTG, in case we need to consult regarding ethical research regarding ur contributions to PIMCity. This is in line with the vision of IMDEA Networks for Responsible Research and Innovation

IAB Spain, defines its mission and in its ethics on the <u>Code of Ethics and Conduct</u>. This ethical code helps IAB Spain to act with integrity, transparency, impartiality, compliance and legality with data protection and environmental matters, among others. IAB Spain commitment to ethics and integrity is key for its daily operations within their activity and members. As per the established Code of Ethics and Conduct, the company's ethical code arises from five basic values: (i) respect for legality; (ii) transparency; (iii) impartiality; (iv) integrity; (v) respecting others. These values are essential in promoting the relationship of trust that IAB Spain wants to sustain with its members and with the online advertising ecosystem. Security and respect for data privacy are key in IAB Spain daily operations but also is committed to complying with all regulations. IAB Spain follows

the GDPR, and data protection national laws and all of its employees have signed a data protection code of conduct which defines the risks when processing personal data and how they should be handled. Each company that processes personal data on behalf of IAB Spain has signed a data protection agreement.

In the light of PIMCity, IAB Spain does not plan to conduct any activity that requires the collection of personal data or implies any ethical concern. Therefore, it is not required to launch any data protection risk assessment or data protection impact assessment. If during the execution of the process, any new activity requires such assessment, IAB Spain will perform it.

e. Science education

PIMCity partners recognise the importance of formal and informal science education in the society.³⁷ In relation to this, PIMCity partners contribute to it in a number of ways, e.g. by developing trainings and educational materials as revealed in detail below.

AUI coordinates the activities (WP6) that shall contribute to science education. Overall, activities coordinate by AUI shall contribute to maximising the opportunities of adoption, increasing public acceptability and building new awareness and educational opportunities around personal data platforms.

PIMCity training strategy will address three different target groups – potential end-users and stakeholders in the digital and data-centric businesses, society at large and University students.

Firstly, PIMCity will deliver online video tutorials providing guidance for the use of the tools developed for potential end-users and stakeholders in the digital and data-centric businesses, so that they would be able to educate themselves about the product use and configuration proactively. These video tutorials will be freely accessible through major social platforms as well as in the project website, including but not limited.

Secondly, PIMCity will prepare educational materials and sessions for engaging citizens into project topics (e.g. privacy, data ownership, etc.) in a broader scope than the innovation carried out in the project. These will be imparted/translated into the local language of the audiences.

Thirdly, academic partners will produce training materials for courses. For example, UC3M, will deliver training material that will become part of UC3M Masters courses (e.g., Big Data, Cybersecurity) and degrees (e.g., in Data Science). The deliverables of WP6 that reflect the achievement of these goals can be found on the project's website <u>pimcity-h2020.eu</u>.

Besides, PIMCity partners recognise that effective dissemination and communication contribute to science education. In relation to this, PIMCity partners assume that their dissemination and communication activities contribute to achieving their science

Science Education. European Commission: online access at https://ec.europa.eu/programmes/horizon2020/node/795 [accessed on 2020-11-11].

education goals as well. As briefly mentioned in the part 1 of this document (public engagement), the reports of dissemination and communication are provided as deliverables of WP6 on the project's website <u>pimcity-h2020.eu</u> (see, e.g. D6.3 as completed on 30th November 2020).

Input of different partners

KU Leuven – CiTiP contributes to science education through its workshops as revealed in part 1 of this document (public engagement). Also, albeit less directly, it also contributes to science education by disseminating its deliverables and content of the workshops on the project's website pimcity-h2020.eu and communicating about the project's activities through its social media channels (primarily Twitter). Particular details are provided in the deliverables of WP6.

Telefónica Investigación y Desarrollo believes that education is the most powerful tool for reducing inequality and building the foundations for sustainable growth. Telefónica is committed to educational quality as a vehicle for social transformation. Telefónica, and specifically Fundación Telefónica contributes to science education via various ongoing projects:

- <u>EnlightED</u>: a global conference that brings together prestigious international experts in education, technology and innovation to encourage a debate about Education in the digital era.
- <u>ProFuturo</u>: an initiative inspired by Pope Francisco that offers a comprehensive education solution to enable teachers to continue to make progress in their professional work and to manage their classrooms, whilst improving learning.
- <u>Code.org:</u> A joined project with Code.org aiming to boost learning in Computer Science among younger people. Code.org offers its courses to educators at schools and to parents at home and is also an excellent option for young people starting on their own. In addition, any person, anywhere in the world can sorganise a 'Code Time' event with one-hour tutorials in more than 45 languages.
- <u>STEAM Challenge</u>: A challenge aimed at young people between 14 and 25 years of age. It is time to put our skills in adaptation, collaboration, reflection and creation into practice.

In addition, Telefónica Investigación y Desarrollo contributes indirectly to science education by disseminating its deliverables on the project's website <u>pimcity-h2020.eu</u>, and communicating about the project's research results via the company's large number of external communication channels (see Telefónica Investigación y Desarrollo Public Engagement section above), as well as invited and regular lectures at universities, summer schools and workshops, and other similar science-related education activities.

NEC contributes to the science education in two key ways: the execution of scientific projects leading to academic publications and the interaction with dozens of universities around Europe. Moreover, NEC participates in several activities to promote science in Europe. In particular, it organizes a reception for students during the prestigious

Heidelberg Laureate Forum.³⁸ In PIMCity, NEC collaborates with the different events organized by the universities in the consortium.

POLITO promotes science education through many channels. PIMCity project will be promoted through all these initiatives, events and association, with the perspective to involve students and general public:

- POLITO organizes public and free initiatives such as the "Festival della Tecnologia" and "Biennale Tecnologia" and the "European Researcher's Night".
- POLITO has a specific structure, specifically devoted to the master's organization (https://didattica.polito.it/master/home/it/home) giving the opportunity to start an internship with Private companies.
- POLITO with Politecnico di Milano form part of ASP Alta Scuola Politecnica (https://www.asp-poli.it/) dedicated to the best students, who are invited to follow specific multidisciplinary projects, in which they may practice the process of envisioning, framing, planning and implementing innovation.
- The initiative Giovani Talenti (https://didattica.POLITO.it/percorso_giovani_talenti/home) has been created to support the best bachelor students in developing their potentiality.
- Teams of students are supported by POLITO to be involved in projects and research initiatives (https://didattica.POLITO.it/pls/portal30/sviluppo.ateam.elenco2?p_lang=IT)
- Many hackathons have been organized and will be organized on specific topics (list of past events is available here: https://www.POLITO.it/search/?lang=it&q=hackatlhon)
- POLITO is one of the 400 members, part of *Accademia delle scienze* (www.accademiadellescienze.it), association focused in spreading scientific knowledge through congresses, conventions, seminars, Workshop and other dissemination activities, with the aim to involve not only student but also general public and citizens.
- POLITO offers specific master degrees in ICT technologies (Data Science Engineering, Communication and Computer Networks Engineering, ICT for Smart Society, Computer Engineering) where specific course on privacy and data protection are offered.
- POLITO has decided to make substantial investments in order to finance PhD programs, which are deemed as strategic in the University agenda and education (http://dottorato.POLITO.it/it/home).
- POLITO has funded the SmartData@PoliTO center, which focuses on data science, big data and machine learning. The center organises specific dissemination events such as SmartTalks and SmartSeminars that aim at fostering the usage of fair data too.

POLITO commits to use all the above channels to disseminate the culture of fair data usage, personal data protection, data monetization, and related problems and solutions within PIMCity. Specifically, POLITO will participate in public events, prepare classes and short seminars with different level of details, involve students and the general public, also in the light of the demonstration activities within PIMCity.

UC3M, as an academic institution, has a double commitment to Science Education. On the one hand, as a Higher Education Institution, it participates in formal education with different degrees, master and doctoral programs ranging across different social sciences and engineering disciplines. On the other hand, as a Public Institution, it is committed to

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³⁸ Online access at https://www.heidelberg-laureate-forum.org/ [accessed on 2020-11-23].

disseminating the scientific knowledge to the society (See UC3M Public Engagement section above).

In the light of PIMCity and in the context of formal education, UC3M team participating in PIMCITY will work on transferring and integrating some of the results and findings obtained in the project to teaching material to be potentially integrated with relevant degrees and masters such as the Master in Cybersecurity, the Degree on Computer Science or the Degree in Telematic Engineering. In the context of science education UC3M Team, in addition to the actions described in Section of UC3M Public Engagement, will also actively participate in different divulgation forums such as *Data Beers talks*, *Week of Science*, etc.

IMDEA Networks participates in outreach activities such as *Science Week, Fairs of Science or European Researchers' Night* to disseminate scientific advances to society at large. These science education activities seek public engagement through interactions with the population, promoting a 'science with and for society' philosophy. In addition, the institute organizes weekly seminars alternately invited talks with presentations by internal researchers.

In the context of formal education IMDEA Networks DTG group participating in PIMCity will work on transferring and integrating some of the results and findings obtained in the project to teaching material to be potentially integrated in relevant UC3M degrees and masters such as the Master in Cybersecurity, the Degree on Computer Science or the Degree in Telematic Engineering.

"PIMCity Context" has or will also plan to actively participate in different divulgation forums such as "Big Data Things", "Internet Governance Forum Spain 2020" and others, "Data Beers Madrid", etc. For instance, IMDEA has already spoken at the following even highlighted by the Communications & Operations department at the IMDEA Networks website: https://networks.imdea.org/how-to-value-effectively-the-data/

IAB Spain provides education and training to its members and to the public in general. Those trainings are focused on digital matters, especially online advertising but also on data protection and other regulations. The education and trainings are offered in both online and traditional formats, also IAB Spain offer education and trainings to companies for covering their ad-hoc needs. IAB Spain host courses that have ethics sessions included by default, among others, on: (i) digital marketing and digital creativity; (ii) data analysis, regulation and data protection, GDPR; (iii) RTB; (iv) addressable TV and online video; (v) mobile ecosystem; (vi) marketing of influencers.

In the light of PIMCity IAB Spain will work on integrating some of the results and findings obtained in the PIMCity project to teaching material to be potentially integrated in relevant courses such as the Advanced Course of RTB & Data and the Advanced Course of Legal and business aspects of digital advertising.

f. Societal impact

PIMCity partners underline that the Research within PIMCity project addresses documented societal needs. The **goal** of PIMCity is to advance solutions for **transparency and to empower users to make informed decisions when sharing personal data**, i.e. to provide users with the information and tools to take **control over personal data**. The rationale behind this goal is consistent with documented societal

needs with regard to fundamental rights, in particular privacy and data protection.³⁹ Overall, PIMCity will contribute to implementation of privacy-enhancing technologies and privacy-by-design principles. PIMCity will contribute to societal values related to accountability and transparency of (data) markets, as well as to the social and territorial cohesion efforts conveyed in the Digital Single Market strategy.⁴⁰ Besides, through dissemination and communication activities, PIMCity will contribute to the visibility of research funding and its importance to addressing societal challenges such as privacy and data protection affecting citizens in their daily lives.

PIMCity partners expect that their **Research will benefit**

- ✓ (i) end-users such as individuals and corporate users, since PIMCity provides tools for easily understanding the monetary value of personal data, and taking informed actions that determine privacy settings;
- √ (ii) digital and data-centric businesses and services, since they may improve their products and services; and
- √ (iii) enforcing and monitoring organisations, including regulatory bodies, since they may take advantage of PIMCity tools for improving their capacity for providing transparency and privacy auditing services for helping and/or enforcing compliance.

The Research will not have a negative impact on the rights and values of any subjects, will not affect disproportionately specific groups and will not unduly discriminate them.

Although the Research within PIMCity does not address threats to society directly, PIMCity solutions are designed in a way that their components contribute to user's privacy and data protection. Accordingly, this report contributes to **preventing privacy threats indirectly**. Within WP7, PIMCity monitors the RRI, including ethical challenges related to privacy and data protection, making sure that all of these elements are taken into account while developing the project's solutions. It shall contribute to societal trust in PIMCity's solutions and shall serve as key means to achieve societal impacts, in particular with regard preserving the rights to privacy and data protection, and inclusive, relevant and socially acceptable Research.

At later stages of the project, PIMCity partners are planning to validate outputs and demonstrate them in companies, public organisations and digital advertising platforms. PIMCity partners are planning to assess public acceptance and engagement, including attitudes between different socio-economic, demographic and gender groups. Building on these findings, along with relevant literature, PIMCity partners will address barriers in public perception and acceptability within the dissemination and public communication activities reaching society at large. The methodology for user engagement and community building shall also contribute to the trustworthiness of the system.

⁴⁰ European Commission: online access at https://ec.europa.eu/digital-single-market/en/shaping-digital-single-market [accessed on 2020-11-11].

³⁹ These needs have been extensively documented in consultations, independent reports, impact assessments, including but not limited, and they are at the core of recent and large policy and regulatory efforts that address data subject's right to privacy and transparency from different angles. Besides, PIMCity explores the specific needs, expectations and reluctances of users and stakeholders with respect to the project planned results, which include an important empowering component (particularly within WP6).

5. CONCLUSION

The Report on RRI reveals that PIMCity partners commit to responsible research and innovation via particular elements of public engagement, Open Access, gender, ethics, science education. Taking into account the particular goals and research activities of the project, PIMCity partners pay particular attention to ethics as an integral part of research and, specifically, to the requirements of privacy and data protection. In the light of the actions undertaken by the consortium as a whole and by different partners individually, PIMCity partners expect the results of the project to be inclusive and socially acceptable and to provide durable societal impact.