TAILOR

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TAILOR
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Report on industrial innovation programme and industrial outreach

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Fredrik Heintz	#1 / LIU	24 June 2024
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Table of Contents

Summary of the report

WP8 aimed to foster collaboration between industry and the TAILOR network to advance Trustworthy AI in Europe. This was achieved by leveraging TAILOR's strong ties across various application domains and major industrial networks through research partners and multinational companies. Task T8.3 specifically focused on enhancing these links, aiming to establish joint industrial-academic labs, collaborate with Digital Innovation Hubs, showcase use-cases at impactful events, and promote internships and joint PhD programs to integrate industry perspectives into academic research.

Organisation

The following people have been involved in the Deliverable:

Partner ID / Acronym	Name	Role
#28, FBK	Paola Baruchelli	T8.3 Leader
#28, FBK	Cristina Detassis	
#28, FBK	Elio Salvadori	
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1. Introduction to the Deliverable

The objective of WP8 was to develop synergies and cross-fertilization between industry and the TAILOR network of excellence centers to provide the basis for Trustworthy AI in Europe. Industrial participation has been ensured by leveraging TAILOR strong connections to many different application domains and big industry networks via our research partners, as well as our partners from selected multinationals and major companies, representing and providing links to networks in their specific industrial sectors.
In particular, the goal of task T8.3 has been to develop and strengthen the links between TAILOR and the industrial sector so that innovations from research are spread to industrial partners beyond the TAILOR network, and new challenges from industry get addressed by research. T8.3 has been focused on 4 main objectives:
i) support the creation of at least one joint industrial-academic co-innovation/ transfer lab per sector of TAILOR industrial partners, for bridging the gap between research, development, market and society. These labs should be significantly (co-)funded by industry;
ii) collaborate with Digital Innovation Hubs (DIH), and especially with the future European DIH in the context of the Digital Europe programme, with the aim of understanding the needs of the local industrial and public sector and spreading knowledge and tools on the territory;
iii) collect showcases for the use-cases provided in T8.2, and present them in relevant high impact events to promote TAILOR results;
iv) promote with WP9 synergies between TAILOR and industrial sectors by organizing internship of academic staff within industrial partners and developing innovative joint PhD and post-PhD programmes between academia and industry, contributing an industry-specific perspective and mechanisms to the PhD Training in T9.3

Chapter 2 describes the activities performed within subtask i), i.e. the definition of a possible model of joint industrial-academic co-innovation/transfer lab, the assessment of TAILOR partners' potential interest in joint industrial-academic co-innovation/transfer labs and the identification of joint industrial-academic co-innovation/transfer labs realized and/or planned.
Chapter 3 describes the activities performed within subtask ii), in particular the mapping of the Digital Innovation Hubs in Europe, the outcome of the workshops organized with WP8 partners about possible collaborations with DIH, the collaboration with other projects dealing with European DIH (EDIH) and finally the involvement of TAILOR partners into EDIHs.
Chapter 4 provides an analysis of the results of TAILOR Theme Development Workshops and the hackatons and showcases presented by TAILOR partners.
Finally, Chapter 5 provides an overview of the positions promoted by TAILOR partners in terms of Industrial internship, Industrial PhD and hired Industrial post-doc.

2. Joint industrial academic co-innovation/transfer labs

2.1 Introduction

This chapter describes the activities performed within Task 8.3.i Joint industrial academic co-innovation/transfer Labs, which is *"to support the creation of at least one joint industrial-academic co-innovation/ transfer lab per sector of TAILOR industrial partners, for bridging the gap between research, development, market and society. These labs should be significantly (co-)funded by industry"*.

The sectors and industrial partners involved in TAILOR are represented in the following picture:

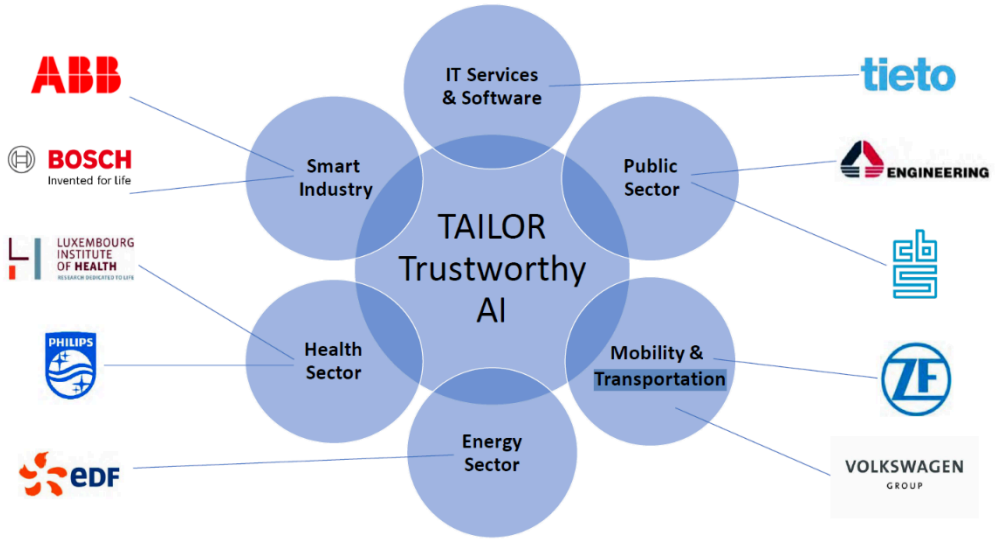


Figure 1 - TAILOR Sectors and industrial partners

The activities performed within this sub-task have been:
1. the definition of a possible model of joint industrial-academic co-innovation/transfer lab. The advent of the pandemic and the consequent economic crisis have made the collaboration and active participation of industries in the project difficult. So, in order to facilitate their activity on the project, the WP8 partners and leader agreed to slowly start the action, proposing the discussion and set up of a model that was of interest for the industries and facilitate their involvement. Starting from an analysis of the SoA, direct experiences of TAILOR partners and open issues, a model was proposed, discussed and approved by academic and industrial WP8 partners.
2. the assessment of TAILOR partners' interest in potential joint industrial-academic co-innovation/transfer labs. Academic and industrial partners were involved in discussions aimed at suggesting potential experiences and topics of interest for co-innovation/transfer labs through interviews and a survey.
3. Identification of joint industrial-academic co-innovation/transfer labs realized within the project timeframe. As emerged in the discussions of the proposed model, the set up of co-innovation/transfer labs is a complex task that need to unveil joint academic and industrial interests, expectations and resources; to identify a shared space (proximity) and funds for sustainability; to define a juridical and economic form agreed among the involved entities.

Despite these common difficulties and the project delays due to the pandemic, two co-innovation/transfer labs were realized and further three are planned to be launched shortly.

2.2 Model building

The work done in the first project year was focused on the design of a possible innovative model for the proactive collaboration of research and industry. In particular, the following activities have been performed:
1. a bibliographic analysis investigating forms and features of research-industry collaborations;
2. a comparison between the models used by DFKI and FBK;
3. a discussion between DFKI and FBK about the models and open issues such as proximity (blended model F2F/online, role of the territory), topics, forms of collaboration, starting points and processes;
4. an overview of the main features of reference for a potential model of joint industrial-academic transfer/co-innovation lab to be applied in TAILOR.

2.2.1 Existing models

2.2.1.1 A bibliographic analysis

The design of an innovative model of joint industrial-academic transfer/co-innovation lab as an opportunity for an effective collaboration between research and industry started from a bibliographic analysis of available models in different contexts and times.

Different possible models
The analysis in Gust-Bardon (2021)[1] highlighted the presence of very different forms, models and definitions all around the world of collaboration industry/research. Some of them are:

- **Innovative Milieu** as incubator of innovations and innovative companies within a given region (such as the GREMI; French for the European Research Group into Innovative Milieu). Key elements here: cooperation and information exchange between regional actors, repeated face-to-face contacts, **engagement of actors from different branches of economy (companies, universities, local authorities etc.)**, the awareness of actors belonging to a coherent unity and regional culture.
- **Industrial District**[2] that exploits the **advantage of a large-scale production by a group of small-sized companies located in a given area** (cost reduction, skills accumulation, 'industrial atmosphere', etc.). Worth mentioning is the Third Italy[3] (in the 1970s) characterized by: sectoral specialization, proximity of suppliers, component producers, subcontractors and producers, together with strong competitiveness between

[1] Gust-Bardon, Natalia Irena (2012), The role of geographical proximity in innovation: Do regional and local levels really matter?, Arbeitspapiere Unternehmen und Region, No. R4/2012, Fraunhofer ISI, Karlsruhe, http://nbn-resolving.de/urn:nbn:de:0011-n-2139400
[2] Definition that started from Marshall, A. (1920): Principles of Economics. London: Macmillan and Co., Ltd.
[3] The Third Italy consists of the following regions: Emilia-Romagna, Friuli-Venezia-Giulia, Marche, Trentino-Alto Adige, Tuscany and Umbria.

companies based on innovation, cooperation in associations of producers and socio-cultural identity.

- **Cluster** that can be described according to the Porter (1990)[4] definition: "a geographically proximate group of interconnected companies and associated institutions in a particular field, linked by **commonalities and complementarities**". Also, another remarkable definition is the one given by OECD (1999)[5]: "networks of production of strongly interdependent firms (including specialised suppliers), knowledge producing agents (universities, research institutes, engineering companies), institutions (brokers, consultants), linked to each other in a value-adding production chain".
- **Regional Innovation System**: a concept that enlarges the territoriality of innovation and can be described following Cooke and Memedovic (2003)[6] as "a strong regionalized innovation system is one with **systemic linkages between external as well as internal sources of knowledge production (universities, research institutions, and other intermediary organizations and institutions providing government and private innovation services) and firms**, both large and small".
- **Learning Regions**: as defined by Florida (1995)[7]: "**collectors and repositories of knowledge and ideas** that provide an underlying environment or infrastructure which facilitates the flow of knowledge, ideas and learning".

All these definitions were developed in the last decades with the focus on the co-design of innovation with a strong active collaboration between industry and research with various roles played by the public administrations (especially in the Regional Innovation System, Learning Regions). Spaces and activities have become locus of innovation as introduced in Gust-Bardon (2021).

Big companies and big consultancies approaches

Another important analysis was performed on possible models to be extracted from the collaboration of big companies and consultancies with research organizations and universities to produce/transfer innovation[8].

Big companies - such as Google, Amazon, Verizon, Volkswagen, Coca Cola and Microsoft - have laboratories in collaboration with the main US universities in order to produce innovative products. A common feature of these Innovation Labs is that they are experimental workplaces aimed at creating disruptive new technologies before competitors.

Big consultancies – such as Accenture and Capital One – have similar laboratories to collaborate with research organizations and universities. They usually are online and physical spaces to offer services: Ideation Consulting and Implementation.

[4] Porter, M.E. (1990): The competitive advantage of nations. Basingstoke: Macmillan.
[5] OECD (1999): Boosting Innovation. The Cluster Approach. OECD Proceedings. Paris: OECD.
[6] Cooke, P./Memedovic, O. (2003): Strategies for Regional Innovation Systems: Learning Transfer and Applications Vienna: UNIDO Policy Paper.
[7] Florida, R. (1995): Toward the Learning Region, Futures, 27, 527-536
[8] Mae Rice 31 CORPORATE INNOVATION LABS TO KNOW - https://builtin.com/corporate-innovation/corporate-innovation-labs

EC priorities for 2019-24[9]

Another important item considered in the design of the model was the coherence with the priorities that the European Commission identified for the period 2019-24, by considering the main general TAILOR objective to promote the Trustworthy AI, i.e.:

- the **Green Deal** aimed at boosting the efficient use of resources by moving to a clean, circular economy, and to restore biodiversity and cut pollution that was identified as an opportunity to realize the Trustworthy AI as environmental-friendly technology to enhance sustainable behaviors according to a 'do not significant harm' approach;
- the **Digital Transformation** to be realized through actions such as Artificial Intelligence; European Data strategy; European Industrial Strategy and identified as an opportunity to realize the Trustworthy AI via digital solutions empowering European businesses;
- the **Economy for People** aimed at growing and reducing poverty and inequality and identified as an opportunity to realize the Trustworthy AI to allow economies to grow and to reduce poverty and inequality.

2.2.1.2 DFKI and FBK models

The primary references for the model design have been the well-known experiences of the partners, as cited in the project document: DFKI's "Transfer Labs" and FBK's "Co-innovation Labs"[10][11].

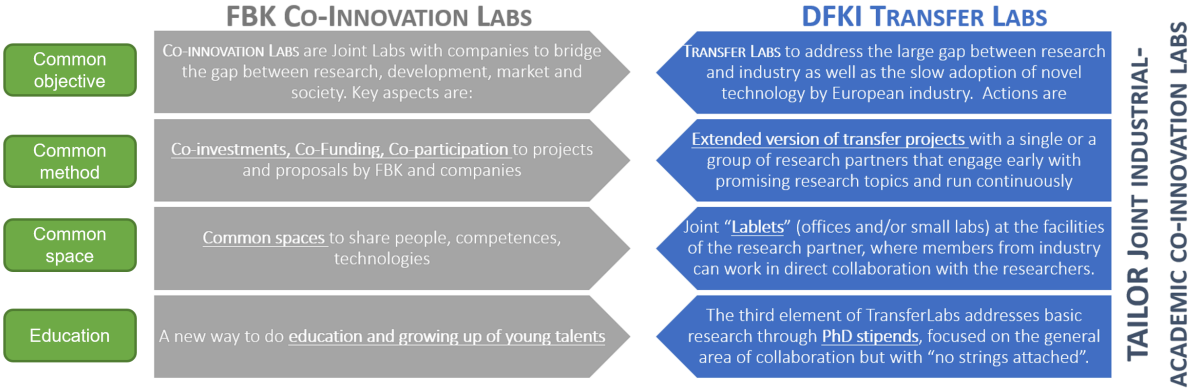


Figure 2 - A possible comparison of the main features of FBK and DFKI models

As described in Figure 2, both approaches propose a very similar model, where common and central items are:

- to have a **common objective** to innovate and bridge the gap between research and industry,
- to adopt a **common method** based on co-design to do that, realized co-investing, co-funding, co-participating,
- to share a **common space** where people, competences and technologies both from industry and research can work together,

[9] https://ec.europa.eu/info/strategy/priorities-2019-2024_en
[10] Paolo Traverso (2019), "Innovation In An Open Public-Private Ecosystem: The FBK Model" in Osservatorio OTM TUTTIMEDIA – MEDIA DUEMILA Rumors of the Future, n. 327 November 2019
[11] E. Giugliani, S. Battisti, R. Prikladnicki, P. Traverso (2017), "High Impact Drivers In Innovation Ecosystems: The Case Of Tecnopuc-FBK Joint Lab", VII Congresso Internacional de Conhecimento e Inovação 11 e 12 de setembro de 2017 – Foz do Iguaçu/PR

- to have **common educational** activities to grow up young talents working both in industry and research.

FBK and DFKI models are in continuous evolution to cope with the fast progression of technologies – and in particular of AI. They have the same bases (a common objective to innovate, a common method based on co-design, a common space to work together, common education) but new needs are emerging, such as: new interest in sharing research results; a continuous reduction of the time to market; open innovation needs.
Due to this new context, the current evolution is considering:

- longer collaborations (medium-long term);
- stronger sharing of human resources;
- a possible innovative/dedicated business model to ensure sustainability;
- the real matchmaking research/industry needs based on a possible research catalogue to be proposed to an identified industry network;
- proximity as everyday routine and relationship with the territorial ecosystem. However, a blended way is under discussion;
- the definition of a possible European standard.

2.2.2 A TAILOR model of joint industrial-academic transfer/co-innovation lab

2.2.2.1 Main features

By combining the bibliographic analysis with the previously described reference models, several key features for a potential TAILOR joint industrial-academic transfer/co-innovation lab model are outlined below:

WHO: *multidisciplinary and multisectoral teams* that co-innovate (‘to have the right person for the right project’) and combining different focuses:

- *Industry/Business*: to be more competitive with innovative solutions and services
- *Academy*: to educate ‘innovators’ and to transfer knowledge and technology
- *Research*: to transfer knowledge and technology
- *Public Administration*: to offer innovative services

WHAT: *Thematic Labs* focused on common/shared problems and/or projects and/or technologies to create innovation facing potential competitors.

WHERE: *Physical Labs / Common (physical/virtual) spaces* creating actor proximity / co-location teams working together.

WHEN: usually with the *identification/sharing of a common interest to collaborate*. In this specific case by the end of the TAILOR project.

WHY: bridging the gap between research, development, market and society.

By combining all these features, a first definition of the joint industrial-academic transfer/co-innovation lab has been proposed:

"A joint industrial-academic co-innovation/Transfer lab is a space where industry and research work together with a common objective (create innovation), following a common method (distributing investments and costs), sharing spaces and human resources, offering training and education to young talents."

Proximity as a potential open issue

The primary issue that emerged from the analyses and initial discussions with the partners is the concept of proximity, specifically the definition of the lab's physical space. An open question remains whether such a lab requires a physical space to ensure active collaboration.

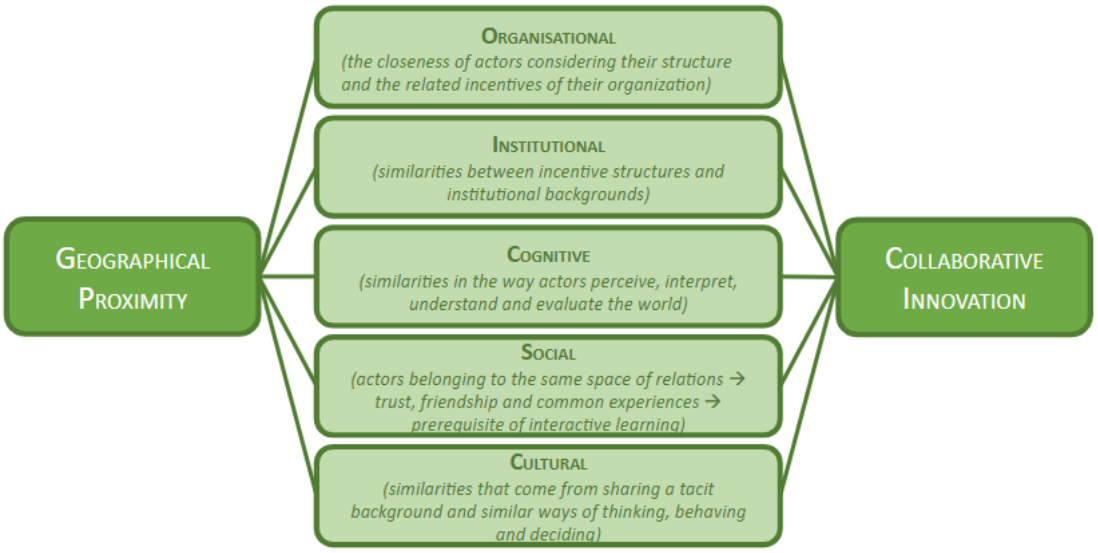


Figure 3 - Geographical proximity and Collaborative Innovation[12]

In various studies, the concept of a transfer/co-innovation lab is identified as a 'locus of innovation,' emphasizing the notion of proximity in terms of both geographical vicinity and collaborative innovation, as represented in Figure 3. This analysis examines how the geographical proximity of universities and industries influences cognitive, social, organizational, institutional, and cultural proximity within university-industry joint laboratories. It also explores the outcomes of these interplays on collaborative innovation. Considering the various dimensions:

- *Organizational and institutional proximity* has marginal roles in facilitating collaborative innovation;
- *Cognitive proximity* at the interface level could systematically influence collaborative innovation;

[12] Maral Mahdad, Thai Minh, Andrea Piccaluga (2020), *Joint university-industry laboratories through the lens of proximity dimensions: moving beyond geographical proximity*, Article in International Journal of Innovation Science · November 2020 https://www.emerald.com/insight/1757-2223.htm

- *Social and cultural proximity* at the individual level could be an enabler of collaborative innovation by triggering mutual learning, trust formation and frequent interactions.

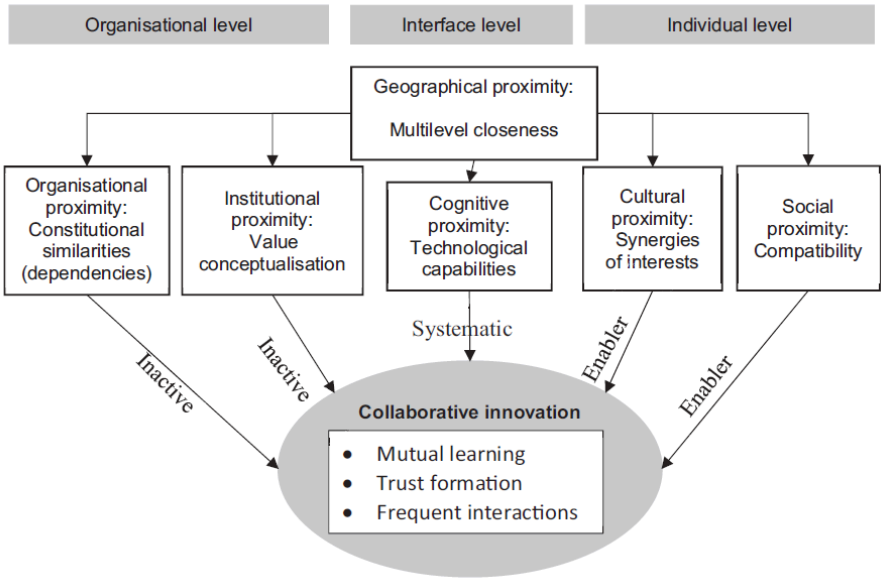


Figure 4 - The influence of geographical proximity on innovation

Another interesting representation is the one given by Boschma[13] and reported in Figure 4 that summarizes the influence of proximity on innovation. Also, in this case geographical proximity is not sufficient to support innovation but it is necessary to consider different dimensions (cognitive, organizational, social, institutional).

The first conclusion from these analyses is that geographical proximity encompasses various dimensions that can positively influence innovation. However, the concept of co-located teams might have evolved after the COVID-19 pandemic, given the emergence of new online labor and communication practices. The current question is whether to establish only physical labs, only virtual labs, or a blend of both solutions.

Various assumptions and discussions have been done about the possibility to have only on-line labs, summarizing:

PROS:

- cost reduction (spaces, travels, …);
- time reduction (commuting, longer work time, …);
- more worker productivity and empowerment;
- reaching more people;
- exploiting the new work models/habits learnt;
- work-family balance.

CONS:

- difficulties in collecting and using tacit that need to be codified;
- difficulties in trust creation in first social relations;

[13] Ron Boschma (2005), *Proximity and Innovation: A Critical Assessment*, Article *in* Regional Studies https://www.researchgate.net/publication/24087849_Proximity_and_Innovation_A_Critical_Assessment

- important role of the local institutions facilitating the collaboration (funding, network, …);
- need of physical laboratory facilities;
- "The secret of industry is in the air"

From the discussion within WP8, two main conclusions were identified about "proximity":

1) There is no "one size fits all" solution to proximity. It seems that an only on-line lab could be the best solution in the case of: SMEs (low budget to invest), ICT collaboration domain (no need of physical laboratory facilities), reduced local institution role (no requested territorial impacts).
2) A blended model emerged as a possible solution / to answer different needs of the partners involved in the lab, a model that should be customized on a case-by-case basis.

Starting from the above assumptions, discussions and definition and before collecting the availability/planning of joint transfer/co-innovation labs, the model defined in Sect. 2.2.2.1 has been validated by two TAILOR task forces: **WP8 Research partners** and **WP8 Industrial partners**.

The expected final product of the model validation is a set of guidelines for establishing the labs. These guidelines will be tailored to the specific case, taking into account the partners involved, their intentions (such as topic, aim, form of collaboration, and funding principles), and the applicable laws.

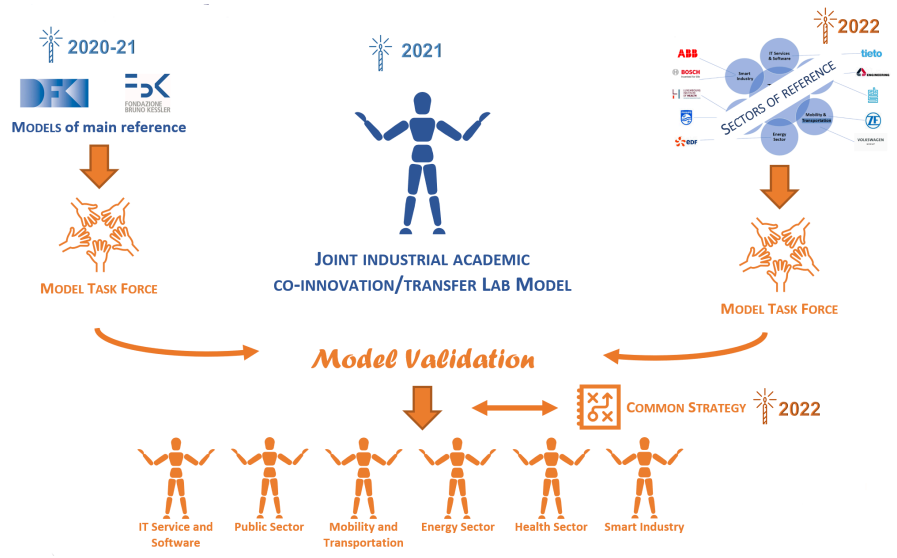


Figure 5 - Model validation

An online questionnaire was proposed to collect and then elaborate feedbacks on the proposed model assumptions. As highlighted in A.1 Annex 1: Survey on the model for transfer/co-innovation labs, the main points of the questionnaire sent to all WP8 partners were:

- *Information about the nature and experience of the responders* in order to describe the sample and collect other possible examples of reference;

- *Feedbacks, suggestions, comments and reviews on the definition and hypotheses done* with specific attention also for possible legal forms, funding models, the role of the Digital innovation Hubs (and then the EDIHs);
- *Potential interest to collaborate* in the task and the constitution of co-innovation labs.

The questionnaire was discussed during the WP8 periodical meetings and partners suggested to use it to manage a workshop to discuss the assumptions therein, collect feedbacks and the potential availability to set up new co-innovation labs.

Results from the questionnaire: key takeaways

The questionnaire was filled by 5 partners: 4 from research and 1 from industry; the participants had different roles and level of experience/knowledge of co-innovation/transfer labs. The key takeaways are the following[14]:

Definition: participants agreed with the given definition (see Sect. 2.2.2.1 Main features) and no reviews were suggested.

About the specific features introduced, collected scores represented an agreement on what was proposed. A specification was given for both the objectives of industry and research/academy to describe them with the concept of co-creation research arena.

Proximity: all the participants agreed with a blended form for the lab. They appreciated the flexibility of this kind of model that allows "*to adapt to the needs of the stakeholders and the requirements of the topic involved*". Despite this, a participant highlighted: "*Physical is preferable, but some people maybe still prefer to avoid moving around the world due to the pandemic. Thus, a blended approach could be the winner solution*."

Funding model: participants introduced different possible funding sources: public funding, EDIH/TEF initiatives, funding coming from industry to increase TRL. A possible best practice did not emerge. The suggestion is to construct the solution case per case.

Legal model: participants have no experience on this. "A clear understanding and agreement setup", NDAs and IPR protection were suggested.

Digital Innovation Hub (DIH) role: all the participants agreed with the need of a collaboration with the DIHs as support in "*bridging the gap between academia and companies, helping SMEs and start-up to find the right academic partner*". They could also provide physical spaces such as incubators, services for legal requirements (IPR, etc.) and relations with the local ecosystem.

Limitations and difficulties: the principal ones are identified in "*risks associated to unclear management of IPR; unclear expectations on individual roles; lack of focus and clear targets for the collaboration; long-term sustainability*". Financial difficulties were also highlighted.

Pros: participants identified the following advantages: collaboration; technology transfer; cost sharing; advantage of bringing research to real-world cases; opportunity of reciprocal positive contamination; simplifying the road to market of innovative ideas; networking and possibility for identifying young talents for future recruitments; new opportunities for young people; improve AI in the EU.

[14] The detailed outcome of the questionnaire is available in: A.2 Annex 2: Results from the survey on the model for transfer/co-innovation labs

Possible collaboration on T8.3 task: 3 out of 5 participants have shown their interest in collaborating on T8.3, while 2 out of 5 participants have shown their interest in the constitution of a lab.

WP8 Meeting discussion

A follow-up meeting with all TAILOR WP8 partners (both research and industrial) was organized to discuss the hypotheses and collect feedback. After a brief presentation of the work completed in the first year of the project, which included a preliminary model of a joint industrial-academic transfer/co-innovation lab, a brainstorming session was held focusing on the topics covered in the questionnaire.

All participants agreed with the general definition of joint industrial-academic transfer/co-innovation lab given (see end of Sect. 2.2.2.1). The key aspects emerged during the discussion were the following:

Definition/structure: the starting model considered is a 1:1, that is 1 academic/research organization collaborating with 1 industry/SME. The work on TAILOR could enlarge this concept to have **multistakeholder** and **multidisciplinary** labs answering to more realistic common use cases and problems. Various stakeholders could be involved such as different noncompetitive industries, but also producers and suppliers, customers and users, funders and sellers to work on more realistic requirements and needs. Multi-disciplinarity would consider all the problem aspects supporting a more complete and effective solution but also the emergence of new ideas and new research questions. So, the proposal is for an **1: n / n:n model**.

Proximity: in the past, it was recognized as a central feature. Now – after the Covid-19 pandemic and the availability of increasingly effective communication technologies – the context is ready to accept also on-line labs. The best solution emerged is for **blended** labs, where physical and on-line interactions are well planned and alternated following specific needs and context requests. Concepts such as "*The secret of industry is in the air*" and "*Sitting together to work together*" emerged as still important, considering that anyway that online interactions allowed the collaboration between various territories.

Funding model: the need for money to sustain these laboratories was identified as one of the most important criticalities of the labs. In the first phase of establishment of the lab, the suggestions are for: working on commonly funded projects (such as the European ones), and to have an **'in-kind' investment** where each partner puts his own human resources as an effort on the common project. Other aspects discussed to develop effective case per case funding models were related to the important role performed by the local authorities and public administrations as possible supporters/funders of these kind of entities.

Legal model: also in the discussion, legal aspects were essentially related to IPR issues and the need to agree on **NDAs and/or framework agreements** to assure transparency and shared rules for the collaboration and IPR management. Discussing about the legal form of the labs, the presence of so many variables (partner number and types, collaboration types, virtual/physical/blended labs, etc.) and the differences of legal frameworks in force in different countries brought out the need to work case per case.

Wrap up and main results on the model validation

Based on the questionnaire responses and internal discussions, a potential TAILOR model of a joint industrial-academic transfer/co-innovation lab has been outlined, featuring the following main characteristics:

- a **common topic/problem/challenge** as focus of the collaboration. Difficulties in identifying it were highlighted as well as the need to refer to realistic needs and requirements;
- a **blended form** that alternates online and F2F interactions according to a plan to make more effective and efficient the work;
- a **flexible funding model** that can start from a common funded project (such as the European ones) and then continue with the investments of the involved parts, considering also in-kind contributions to assure the sustainability of the lab/collaboration. Public funding – especially at the local level – is identified as other possible source;
- a strong **IPR management regulation** to assure a transparent and effective collaboration. Other legal issues need to define case per case considering all the variables involved;
- a **multistakeholder and multidisciplinary lab** to consider all the aspects, needs and requirements of the identified problem in a realistic perspective, developing **1:n or better n:n labs** (and anymore 1:1).

For all these aspects - descriptions, structures, and collaboration forms - definitions need to be customized on a case-by-case basis to create specific labs that address the context involved.

2.3 TAILOR joint transfer/co-innovation labs

To gather information on the availability of existing joint transfer/co-innovation labs within the TAILOR industrial partners' network, a questionnaire was prepared and presented individually to each partner during separate one-on-one meetings (see A.3 Annex 3: Questionnaire to collect information about existing and planned transfer/co-innovation labs).

In the following Table, an overview of the key information collected from the answers to the questionnaire is reported. As evidenced in the Table, despite the delays due to the pandemic, two co-innovation/transfer labs were realized and further three are planned to be launched shortly.

Lab Name	Location	Sector of reference	Partners / potential partners	Status	Objectives	Key features	TAILOR-related Topics
Lab Cleanse	FBK premises, Trento (IT)	- IT Services and Software	Dedagroup (IND) FBK (RES)	**ACTIVE**	To develop the “Digital Hub”, an Open Source platform that promotes the interoperability of data and services, overcomes application silos and offers advanced data processing and data functions visualization	Shared space (proximity)	TRUSTWORTHY AI
SEIDO Lab	EDF lab premises, Paris (FR)	- IT Services and Software - Energy	EDF (IND) Télécom Paris (RES) Télécom SudParis(RES) LAAS CNRS(RES)	**ACTIVE**	SEIDO is a joint research laboratory devoted to the Internet of Things and cybersecurity for electrical systems. Its objective is to prepare for and facilitate the deployment of energy demand management services based on the interoperability of equipment (heaters, air conditioners, white and brown goods, electric vehicles etc.) to help ensure the coherence, efficiency, and safety	Blended approach to proximity. Lab activities are developed through internships, PhDs, post-docs co-supervised by its industrial and academic members.	TRUSTWORTHY AI

					(security, privacy etc.) of the entire system.		
AI Transfer Lab (*tentative*)	LIH premises, Luxembourg	- Health	LIH (RES) DFKI (RES)	**PLANNED**	The first objective of the transfer lab is to establish an AI compute environment at the LIH, under the guidance of DFKI, as basis for the collaboration. With this infrastructure in place, joint projects will be carried out. Topics for 'low-hanging fruit' projects that can be initiated in the short time based on ongoing activities of both institutes include, but are not limited to, MRI in cancer and federated learning	N/A	TRUSTWORTHY AI
Trustworthy data for ML applications (*tentative*)	TBD	- Public Sector	CBS (IND) Ministries (PUB), Municipalities (PUB), Government service providers (IND), Universities & Research centers (RES)	**WIP**	Attention for AI/ML methods usually focuses on the algorithmic part, while training and testing data is crucial. Availability and quality of data are taken for granted while in reality these are far from realistic assumptions. Trustworthy AI depends	N/A	TRUSTWORTHY AI SOCIAL AI AUTO AI

					critically on trustworthy data. Especially in public sector applications, all care needs to be taken to avoid bias and discrimination.		
Large language models for healthcare professionals	TBD	- Health	Tieto (IND), Universities & Research centers (RES)	**WIP**	Healthcare industry is facing serious challenges in Europe and rest of the world due to ageing population and continue strive to improve the healthcare quality. Another factor is the need of personalized healthcare support to improve the quality of life. Large Language models can help to reduce the work and improve the quality of life by helping healthcare professionals in everyday work.	N/A	TRUSTWORTHY AI SOCIAL AI AUTO AI

3. Collaboration with Digital Innovation Hubs (DIHs)

3.1 Introduction

Chapter 3 introduces the activities developed in Task 8.3.ii Collaboration with Digital Innovation Hubs (DIHs). In line with the objective to *"ii) collaborate with Digital Innovation Hubs (DIH), and especially with the future European DIH in the context of the Digital Europe programme, with the aim of understanding the needs of the local industrial and public sector and spreading knowledge and tools on the territory;"* the implemented activities included:

1. The **Digital Innovation Hub – DIH mapping**. To define the possible context of reference of this collaboration, the first action was the mapping of the active Digital Innovation Hubs in Europe (before the approval of European Digital Innovation Hubs);
2. The **First collaboration: the workshops.** The first contacts with the DIHs known by the WP8 partners were the second implemented action. The organized workshops were aimed at a mutual understanding and planning possible collaborations;
3. The **Collaboration with the other projects.** Many European projects are dedicated to DIHs, their mapping and networking. Interactions and meetings with some of these projects were organized to enlarge the DIH collaboration;
4. **Partners' experiences with (E)DHIs** were collected using interviews and a survey. However, some EDIHs, which partners are part of, experienced substantial delays in the approval and launch phases and this impeded to establish more concrete collaborations within the project period. However, contacts to introduce the TAILOR project were established with some EDIHs (e.g., InnovAction, DIPS, HD Motion). The results of these actions are summarized in this chapter.

Considering partners' active involvement in some (E)DIHs (see section 3.3 Interaction with existing (E)DIHs and 3.4 TAILOR partners' (E)DIHs) and the above-mentioned activities aimed at establishing collaborations, KPIs have been achieved as planned:

- 6 DIHs contacted and organization of workshops with their representatives;
- 5 projects having relations with DIHs involved in TAILOR dissemination;
- 7 (E)DIHs in which TAILOR partners are involved and with whom there have been interactions and presentations of TAILOR. Due to the delay in the approval of some EDIHs, more concrete collaborations will be established in the near future.

3.2 EDIHs mapping

Collaboration activities with the Digital Innovation Hubs were started based on the definitions and structure that the European Commission has given in the Smart Specialization Strategy and in Digital Europe programme, i.e.:
"*Digital Innovation Hubs are one-stop-shops that **help companies to become more competitive** with regard to their business/production processes, products or services **using digital technologies**. They are **based upon technology infrastructure** (Competence Centre - CC) and **provide access to the latest knowledge, expertise and technology to support their customers with piloting, testing and experimenting with digital innovations**. DIHs also provide business and financing support to implement these innovations, if needed across*

*the value chain. As **proximity** is considered crucial, they act as a first regional point of contact, a doorway, and strengthen the innovation ecosystem. A DIH is a regional multi-partner cooperation (including organizations like RTOs, universities, industry associations, chambers of commerce, incubator/accelerators, regional development agencies and even governments) and can also have strong linkages with service providers outside of their region supporting companies with access to their services[15]".*

*"Digital Innovation Hubs (DIHs) can help ensure that every company, small or large, high-tech or not, can take advantage of digital opportunities. DIHs are one-stop shops that help companies become more competitive with regard to their business/production processes, products or services using digital technologies. DIHs provide access to technical expertise and experimentation, so that companies can **"test before invest"**. They also **provide innovation services, such as financing advice, training and skills development that are needed for a successful digital transformation[16]**."*

These definitions highlight the central role of the Digital Innovation Hubs in:

- Supporting companies;
- Increasing their competitiveness using new technologies (especially for the TAILOR project AI).
- Using different instruments at different stages of the innovation process with different types of services (Test before Invest, Support to find investments, Innovation ecosystem and networking, Skills and training) supporting digitalization.

Starting from a DIH definition as entities supporting companies to become more competitive using digital technologies and innovation, we have analyzed various interesting initiatives - such as the work done by PWC on the AI DIH network[17], the VISION project[18], the EC initiative Smart Specialization Platform[19] and many other projects working today on DIHs, networking and mapping – to better define the context of the collaboration and the potential stakeholders.

The first step of our activities – in collaboration with the WP8 partners – was a first mapping of the DIHs of potential interest for our activities (see A.4 Annex 4: EDIH mapping)[20]. We considered also the long list of potential future European Digital Innovation Hubs that were approved at the national level and that applied under the Digital Europe programme in September 2021 and approved as Seal of Excellence projects.

Around 50 DIHs were mapped, also considering the AIDIH network (with the support of PWC) and partners' experience and participation in DIH initiatives at different levels (regional, national and international). Figure 6 represents the distribution of the sample according to the territorial coverage of the DIHs, where the majority were national (25%) and European (21% considering the proposal of EDIHs submitted by the partners at the moment of the mapping).

[15] https://s3platform.jrc.ec.europa.eu/digital-innovation-hubs
[16] https://ec.europa.eu/digital-single-market/en/digital-innovation-hubs
[17] www.ai-dih-network.eu
[18] https://www.vision4ai.eu/
[19] https://s3platform.jrc.ec.europa.eu/digital-innovation-hubs
[20] At the moment of this mapping, the EDIHs initiative had not yet started and there was a delay in the European Commission's activities in this regard. So, the choice was to start to work with the existent DIHs.

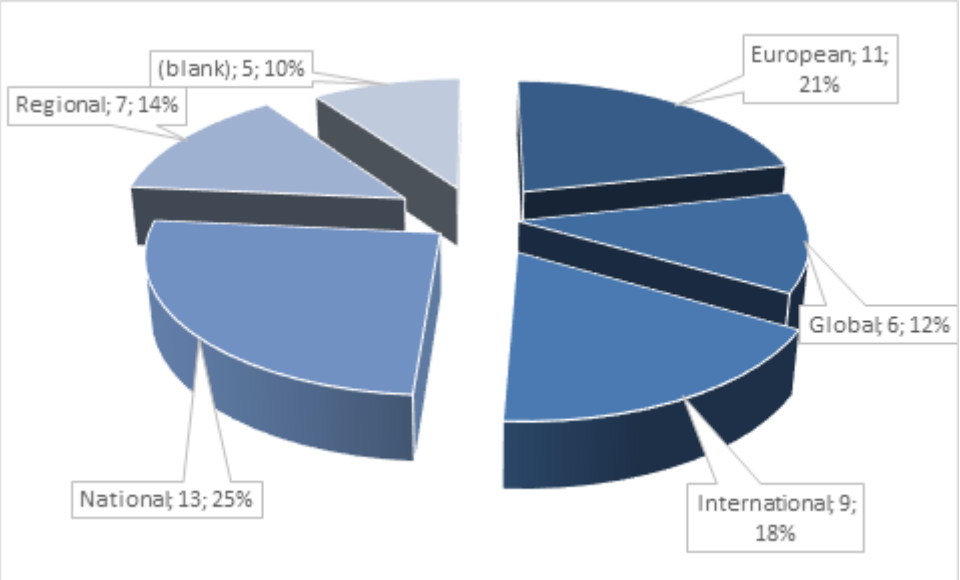


Figure 6 - DIH territorial coverage

Figure 7 reports the source of the data collected with reference to the WP8 partners.

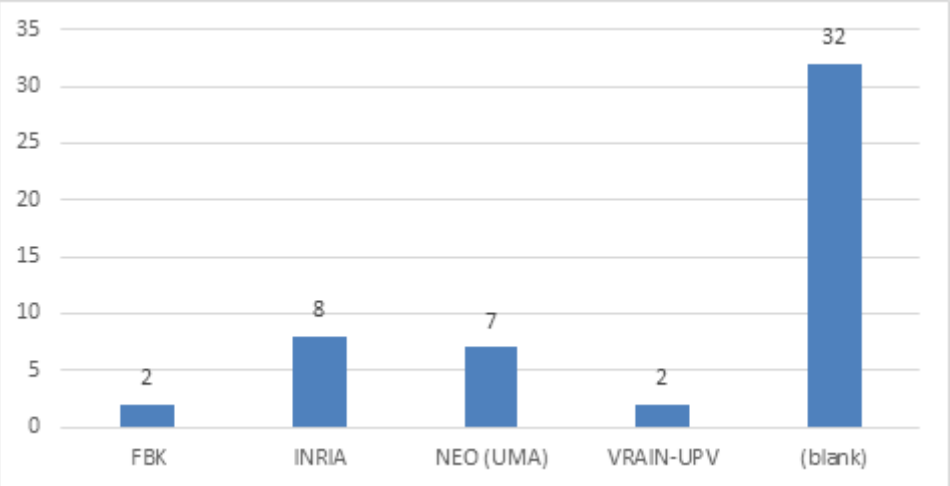


Figure 7 - TAILOR WP8 partner and DIHs collected

The territorial distribution of the DIHs collected highlighted a high presence in Spain (13) and France (11), as shown in Figure 8. Thanks to the AIDIH network we can consider at least 1 DIH for EC State members plus the ones in relationship with TAILOR partners either active or approved at the national level for the EDIH initiative.

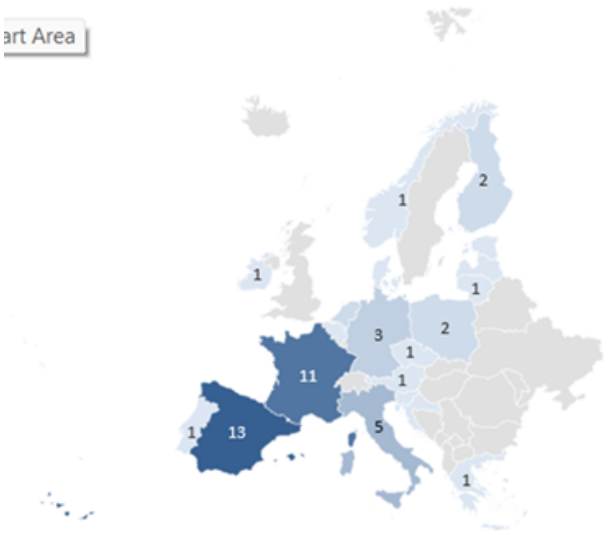


Figure 8 - DIH territorial distribution

3.3 Interaction with existing (E)DIHs

Once the mapping was completed, the following step was to establish interactions between TAILOR and (i). Other (E)DIHs and (ii). Other projects working on (E)DIHs, in order to:

- Create awareness in the (E)DIHs about the TAILOR project but also about trustworthy AI and related topics;
- Plan with the DIHs activities to work with industries and public administrations on the understanding of needs and future requirements on trustworthy AI and how DIHs will have to modify their services to better answer to them;
- Interact with industries and PAs;
- Elaborate and analyze the results of the interactions to produce a possible future plan for DIHs coherent with the TAILOR expectations/objectives.

Figure 9 shows the 4 steps that were followed to establish interactions.

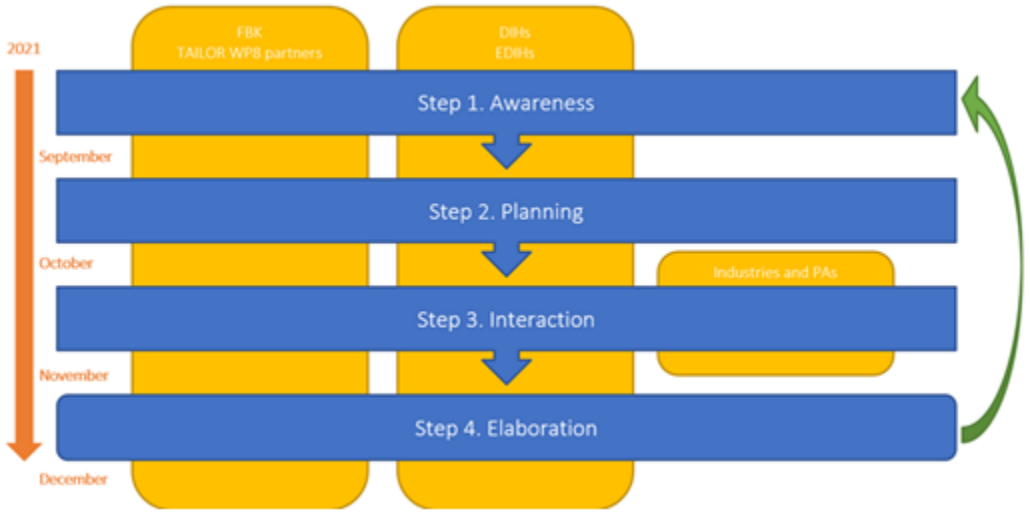


Figure 9 - The model for the DIH engagement

3.3.1 Workshops with other DIHs

Two workshops were organized with several DIHs, involving the TAILOR partners, identified DIHs and then EDIHs industries and public administrations locally related to the DIHs involved. The workshops were organized as follow:

- First workshop: it was dedicated to mutual understanding. The TAILOR project was presented by WP8 Leader DFKI, with a specific focus on T8.3, presented by Task Leader FBK. Possible collaboration modalities were discussed, including the creation of a dissemination and promotion channel for TAILOR concepts, actions and instruments, and the potential active involvement of companies/PAs part of DIHs in TAILOR actions.
  The workshop was concluded collecting the interest expressed by participants in collaboration (especially in mutual dissemination) and highlighting the necessity to find funding opportunities to have a realistic participation of SMEs and companies in TAILOR activities and to support them in the digitalization process.
- Second workshop: it was dedicated to the discussion of possible collaboration plans, including joint dissemination, mutual knowledge and sharing data and experience, and interactions with SMEs and industry.

However, difficulties in the answer and active engagement of the identified DIHs stopped these activities. Therefore, the collaboration approach was modified and less time-spending actions were adopted, such as: sharing TAILOR information with DIH networks and projects working with them and using interviews and survey with WP8 and TAILOR partners, DIHs and EDIHs to share information and collect potential interests.

3.3.2 Collaboration with the other projects

Presentations and discussions about potential DIH collaborations were organized involving other projects in order to enlarge the network with DIHs. In particular, FBK was invited to present and discuss TAILOR and the possible DIHs actions in:

- The *First ICT-48 Community workshop*[21] (online) aimed at the constitution of the network of the projects funded under the ICT-48 topic to share experiences, results and best practice. FBK was invited to introduce the industry collaboration with specific attention for the collaboration with DIHs;
- The *First TAILOR conference*[22] (online) aimed at the sharing and discussion of the TAILOR results. FBK was invited to introduce the industry collaboration with specific attention for the collaboration with DIHs;
- The *DIH4EU - AI on-demand platform for regional interoperable Digital Innovation Hubs Network - project*[23] that is aimed at the joint development and provision of ecosystem-business-technology-transformation services targeting local SMEs and tech governmental agencies passing through the DIHs. The project counts: 12 partners, 5 DIHs directly involved in the project and other 20 DIHs in the project open calls.

[21] https://www.vision4ai.eu/ict-48-1-workshop/
[22] https://tailor-network.eu/events/1st-tailor-conference/
[23] https://www.dih4ai.eu/ https://cordis.europa.eu/project/id/101017057

Discussions with INTELLERA – as partner focused on the constitution of a collaborative network of DIHs – were carried out on the DIH mapping and contacts. In line with these other discussions were carried.

- The *WAZIHUB - Accelerating Open IoT and Big Data Innovation in Africa - project coordinator*[24] to introduce the TAILOR project in the African ecosystem of Innovation Hubs developed by the project interested in improving both their Trustworthy AI knowledge and their services thanks to the connection both with the project and the DIHs involved. The project network counts: 14 partners, an ecosystem involved with around 100 start-ups and Hubs;
- The *HUBCAP - DIGITAL INNOVATION HUBS AND COLLABORATIVE PLATFORM FOR CYBER-PHYSICAL SYSTEMS - project*[25] and with Fortiss in charge of the Wp working with the DIHs and in particular on a review of the services provided by the DIHs in the consortium in order to identify gaps and opportunities going forward. The project counts: 17 partners and 8 DIHs involved in the discussion.

3.4 TAILOR partners' (E)DIHs

Following the first interactions established with DIHs, the activity was also focused on establishing collaborations with European DIH in the context of Digital Europe programme. A questionnaire was prepared to collect industrial partners' contacts participating in EDIHs. The questionnaire was also presented in one-to-one meetings with WP8 partners. The questionnaire has been responded to by 5 WP8 partners, 3 of them providing information on and contacts of (E)DIHs in which they are participating or have contacts with.
The delay in the approval of some EDIH projects, which also TAILOR partners are part of, has also influenced these activities. However, collaborations with several DIHs and EDIHs have been activated, as mentioned above. Partners that are active part of these DIHs started introducing the TAILOR project and its results, planning future collaborations to promote Trustworthy AI in the services provided and with the companies involved.

The results of the questionnaire are reported below, focusing on the main information regarding the TAILOR partners' (E)DIHs.

[24] https://www.waziup.io/research-innovation/projects/wazihub/ https://cordis.europa.eu/project/id/780229
[25] https://www.hubcap.eu/ https://cordis.europa.eu/project/id/872698

EDIH Name	EDIH Country	TAILOR partner(s) involved	EDIH vision and mission	EDIH expertise	Partners	Link
Energy4Climate	*France*	EDF	*Addressing the systemic complexity of the energy transition*	*Greenhouse gas decrease* *Energy consumption decrease* *Renewable energies deployment* *Feedback to energy policies*	*Institut Polytechnique de Paris* *École des Ponts ParisTech* *CNR* *CEA* *France2030* *TotalEnergies* *EDF*	*https://www.e4c.ip-paris.fr/#/fr/*
SINCLAIR	*France*	*EDF*	*Development of artificial intelligence methods and tools (M&O) that meet the shared needs of these three companies*	*Explainability* *Learning* *Simulation*	*Thales* *TotalEnergies* *EDF*	*https://sinclair-lab.com*
DIPS *(awarded with Seal of Excellence)*	*Italy*	*FBK*	*Implementation of and support to the digital transformation of PAs and local companies (Large companies and SMEs) that work with PAs*	*Digitalization of PA* *Integration of digital technologies (i.e., AI and CS)*	*FBK* *HIT* *EIT DIGITAL* *UNITN* *Intesa San Paolo* *Confindustria Trento* *Confcommercio Trentino* *FTC*	*https://european-digital-innovation-hubs.ec.europa.eu/edih-catalogue/dips*
InnovAction *(awarded with Seal of Excellence)*	*Italy*	*FBK*	*Support to SMEs in implementing the Twin Transition (TT to enhance their competitiveness and sustainable technological innovation*	*Twin Transition (Sustainable and digital transitions)* *Circular economy* *Advanced digital technologies*	*CEFRIEL* *FBK* *Intesa San Paolo* *Fondazione LINKS* *UNINA*	*https://european-digital-innovation-hubs.ec.europa.eu/edih-c*

						atalogue/innovaction
HD MOTION *(awarded with Seal of Excellence)*	*Italy*	*FBK*	*Development of enabling technological solutions targeting the digitization of sustainable mobility and transport services*	*Transport and Mobility* *Digital infrastructures* *Digital Transportation Systems*	*Politecnico Torino* *ALMAVIVA* *Fondazione LINKS* *FBK* *RADIOLABS* *UNIVAQ* *UNINA* *Intesa San Paolo Innovation Center S.p.A.* *Intesa San Paolo S.p.A.* *Unione Industriale Torino* *Confindustria Piemonte* *DIHP* *SKILLAB srl*	https://european-digital-innovation-hubs.ec.europa.eu/edih-catalogue/hd-motion
Digital Innovation Hub	*Italy*	*FBK* *Via HIT*	*Supporting companies in the digital transformation towards Industry 4.0*	*Digital Transformation* *Industry 4.0* *Open Innovation*	*HIT* *Confindustria Trento*	https://www.confindustria.tn.it/dih
VNG NL DIGI HUB	The Netherlands	CBS	*Interregional cooperation for a mission-driven approach in the public sector in times of data and digital technology.*	*Innovation of public sector services* *Public Administration* *Data and digital technologies*	*VNG* *STICHTING ICTU* *Brightlands Smart services campus* *Gemeente Rotterdam* *Province of Utrecht* *BRAINPORT*	https://european-digital-innovation-hubs.ec.europa.eu/edih-catalogue/vng-nl-digi-hub

4. Showcases

4.1 Introduction

The following deliverable chapter introduces the activities developed in Task 8.3.iii – Collection and presentation of showcases: *"iii) collect showcases for the use-cases provided in T8.2, and present them in relevant high impact events (e.g. Hannover Messe) to promote TAILOR results;" […] "Furthermore, TAILOR will provide and collect showcases, which will be presented in relevant high impact events (e.g. Hannover Messe) to promote the latest research results and further extend industrial outreach".* This activity was supposed to be strictly linked with T8.2, whose aim was to embody the main challenges identified in the Theme Development Workshops of T8.1 in use cases provided by the industrial partners.
The implemented activities have been:

- Analysis of the results of TAILOR Theme Development Workshops and the hackatons organized by WP8 to derive possible use cases for industrial partners.
- Providing a questionnaire to partners to collect show cases presented in relevant events and use cases with the potential to be translated into showcases;
- Collaboration with INRIA (T8.2 Leader) in order to collect relevant events in which TAILOR results have been presented.

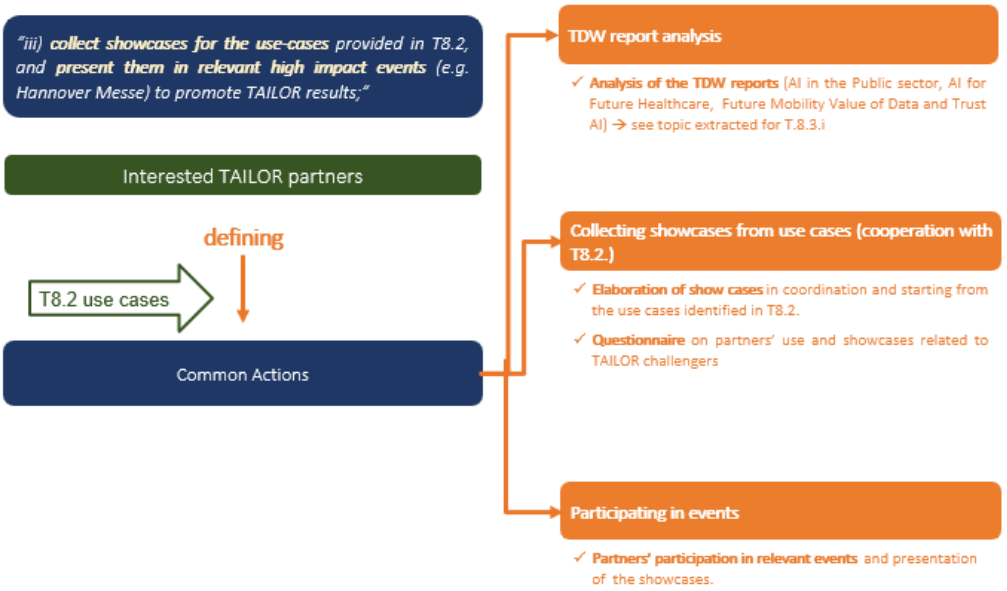


Figure 10 - Planned activities

4.2 Mapping on TAILOR theme-development workshops

Starting from the Theme Development Workshops (TDWs), whose objective was to identify the most promising and emerging Artificial Intelligence (AI) topics in the involved sectors (Public Sector, Future Mobility, Healthcare), an analysis of the reports on the implemented TDWs was

performed by FBK with the aim of identifying possible use cases that could have the potential to be translated into showcases.

Possible topics that could provide input for the emergence of possible research-industry collaboration ideas were analyzed. Some transversals common subjects emerged as necessary enablers for the realization of the Trustworthy AI, i.e.: Expertise and education; Trustworthiness/confidence measurability; Privacy, personal data and GDPR; Ethical use of data; Human factor; Standardization and certification.

The analysis of the results of the TDWs led to the identification of some sectors in which Trustworthy AI is relevant, e.g., AI in the public sector, AI for future healthcare, future mobility value of data and trust in AI, etc., and the relevant technologies for each of those sectors to be further investigated, developed and implemented (Figure 11). To provide a few examples:

- Regarding AI in the public sector, and in particular AI for the public administration, it emerged the necessity to develop solutions based on AI to optimize processes, maintenance in cities, inspection and enforcement, crime investigations, forecasting and policy developments, AI for urban mobility both in planning and managing (e.g. AI applied to solving the surface parking problem in city centers; use of satellite images for developing AI mobility solutions; combining car sharing / carpooling / automatic driving and optimizing algorithms), AI for reliable statistics in a no-competitive environment for an European collaboration.
- Regarding AI in the healthcare sector, the ideas that emerged as possible use cases regarded the use of complex data and accessibility (related issues are data sharing and data control) and how to access and extract information in terms of security, NPL, images and other no-structured sources, ontologies and data normalization and semantic interoperability; Population health and healthcare service planification (from the population segmentation to predictive systems and planification based on individual, family data health records); Person-centric healthcare (advanced diagnosis with holistic approaches; optimizing patients selection for specific healthcare programs; addressing patient monitoring needs; and augmenting capabilities with a human interfaces); Support to the healthcare professionals ‘decision-making using image data.

The TDWs represented an innovative engaging initiative between academia, industry and other stakeholders. The topics discussed required to be further developed to move from broad to specific topics with participation of industries from different sectors. Further workshops were thus organized by WP8 (e.g., 1st Industry Collaboration and Transfer Exchange on AI “From Research to Market”) to deepen the cooperation that could open new opportunities for new proposals in the future.

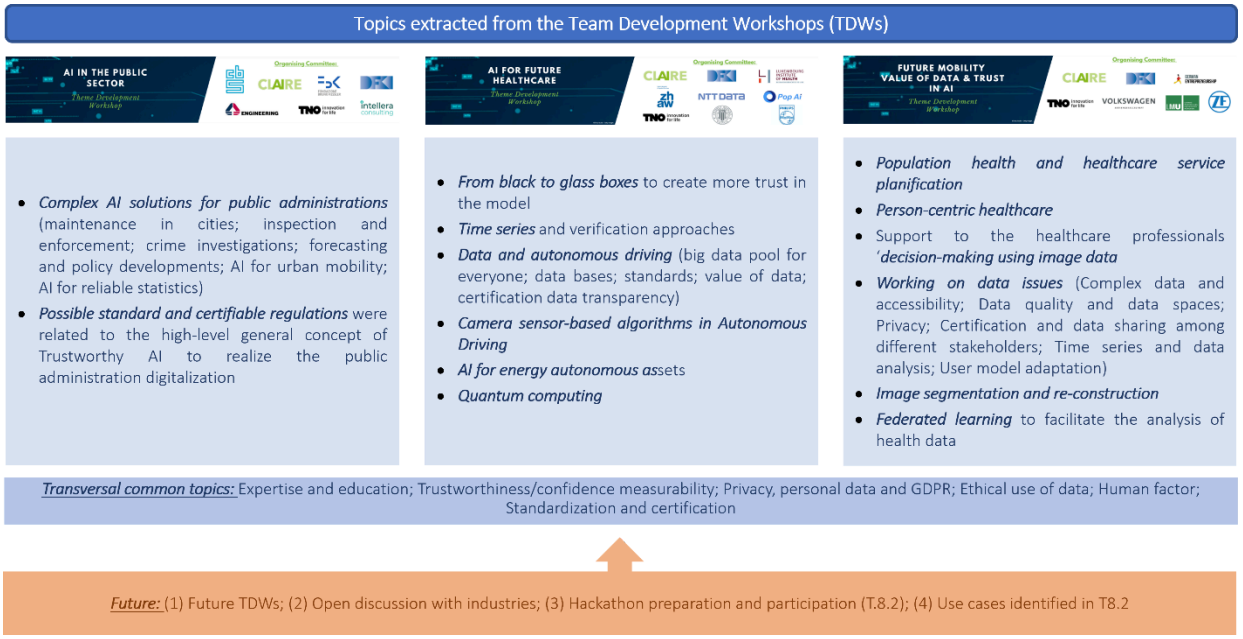


Figure 11 - TDWs' emerged topics

4.3 Collecting showcases from the use cases

Partners have been engaged in several international conferences and workshops in which use cases were showcased and in which they had the occasion to participate in discussions related to the industrial challenges in Trustworthy AI.

The table below illustrates some relevant events in which TAILOR partners participated in also through the presentation and show case of some developed use cases:

Event	Date	Topic	Partners involved	Authors	Use case title	Publication Year	URL
International ConferenceML4 CPS 2020		Machine Learning for Cyber Physical Systems Conference	ABB	M.W. Hoffmann, R. Drath, and C. Ganz	Proposal or requirements on industrial AI solutions	2021	[pdf]
2022 IEEE International Conference on Big Data and Smart Computing	17-20/01/2022	Big data and smart computing	ABB	S.M. Tripathy, A. Chouhan, M. Dix, A. Kotriwala, B. Klöpper, A. Prabhune	Explaining Anomalies in Industrial Multivariate Time-series Data with the help of eXplainable AI	2022	[pdf]
AI Open days 2023	01/06/2023	Trustworthy AI – Human vs Algorithms	KUL, Vrije University (VUB)	Tias Guns, Milan Pesa, Maxime Mulamba, Ignace Bleukx, Emilio Gamba, and Senne Berden	Demo “Suduko Assistant” Demo “Robots you can trust”	2022	[pdf]
HHAI 2023	26-30/06/2023	Hybrid Human Artificial Intelligence	ABB	G. Manca, N. Bhattacharya, S. Maczey, D. Ziobro, E. Brorsson, and M. Bång	XAIProcessLens: A Counterfactual-Based Dashboard for Explainable AI in Process Industries	2023	[pdf]
2023 INDIN International Conference on Industrial Informatics	17-20/07/2023	Industrial informatics	ABB	M. Dix, G. Manca, K.C. Okafor, R. Borrison, K. Kirchheim, D. Sharma, Chandrika KR, D. Maduskar and F. Ortmeier	Measuring the Robustness of ML Models Against Data Quality Issues in Industrial Time Series Data	2023	[pdf]
IECON 2023	16-19/10/2023	Industrial electronics	ABB	G. Manca and A. Fay	Explainable AI for Industrial Alarm Flood Classification Using Counterfactuals	2023	[pdf]

5. Synergies between TAILOR and industrial sectors

5.1 Introduction

This chapter describes the activities performed within Task 8.3.iv, which is to "*promote with WP9 synergies between TAILOR and industrial sectors by organizing internship of academic staff within industrial partners and developing innovative joint PhD and post-PhD programmes between academia and industry, contributing an industry-specific perspective and mechanisms to the PhD Training in T9.3.*"

The activities performed within this sub-task have been:
1. to promote synergies and cross-fertilization between industry and these networks of excellence centers, in particular through internships of academic staff in industry, or PhD programmes with industry
2. to facilitate the activation of common academic/industrial PhD programmes and post-doc programmes with a focus on industrial challenges with the ambition to establish a unique and world-recognised brand for a European programme for industrially-oriented PhDs in AI while improving the conditions to keep researchers in Europe after they complete their PhDs

While the original plan was to set up a TAILOR-specific PhD programme, the difficulties due to the pandemic has forced TAILOR partners to re-focus the objective into proposing a TAILOR PhD curriculum on Trustworthy AI (see Deliverable 9.6). As specified therein, "The proposed curriculum can later materialise into a PhD program by an accredited institution of higher education or a consortium".

However, a number of synergies between TAILOR and industrial sectors have been developed during the project timeframe, and the objective of this Chapter is to provide evidence about the results obtained according to the aforementioned subtask 8.3.iv objectives.

5.2 TAILOR survey on interns, PhD, post-docs

An online questionnaire[26] has been prepared and distributed to all TAILOR partners with the aim of providing evidence about the results obtained by TAILOR in terms of:

- Number of Industrial internship positions promoted, hosted or sponsored by partners related to TAILOR topics, as well as their application Sector and Research Areas
- Number of Industrial PhD positions promoted, hosted or sponsored by partners related to TAILOR topics, as well as their application Sector and Research Areas
- Number of Industrial post-doc hired by partners related to TAILOR topics, as well as their application Sector and Research Areas

[26] The questionnaire is available at this link: https://docs.google.com/forms/d/e/1FAIpQLSeTzQkaUaZ3kWBDrUqX3wI9rvoD1ZTqa-zwsh7uxZ0G2ME3pw/viewform

The questionnaire has been distributed to all TAILOR partners and 13 submissions were collected over a 3 weeks timeframe. In the following an overview of the key takeaways from the provided answers is described.

The Table below provides a very high overview of the results obtained from the questionnaire, while a detailed analysis is available in Annex 5: Results from the questionnaire on internships, PhD and post-docs.

Topic	Total	Main Sectors	Main Research Areas
TAILOR-related internships	47	Mobility & Transportation Energy Health	TRUSTWORTHY AI PARADIGMS AND REPRESENTATION SOCIAL AI
TAILOR-related PhD positions	15	IT Services & Software Mobility & Transportation Energy	TRUSTWORTHY AI PARADIGMS AND REPRESENTATION ACTING
TAILOR-related post-docs	5	Public Administration	TRUSTWORTHY AI SOCIAL AI

6. Conclusions

This deliverable outlines the various activities performed within WP8 to enhance collaboration between industry and research and to lay the groundwork for adopting Trustworthy AI at the market level, significantly transferring research insights.
These activities have positively impacted these connections and facilitated new joint initiatives that could become pivotal for future projects in the Trustworthy AI domain.

The project faced several challenges, primarily due to the COVID-19 pandemic, which severely affected industries across Europe, impacting their economic and organizational resources. The time and effort required to restore normal operations in industries led to delays in implementing T8.3 activities, and consequently affected its results.

Despite these setbacks, the activities yielded significant outcomes, strengthening the links between research and industry, and setting the stage for future collaborations through various initiatives. More specifically:

1. Two co-innovation labs were established within the project timeframe and three more are being planned/under discussion. Defining a co-innovation lab and establishing a common model took time. The constitution of a co-innovation/transfer lab revealed to be a complex task and several challenges emerged in the discussions with partners, such as: the combination between academic and industrial interest, expectations and resources; high costs, thus requiring external funding sources at least at the beginning; complex agreements between the parties, to ensure transparency and accountable collaboration, as well as proper IPR management regulation; long validation and implementation procedures that prolong the time needed to launch the labs. Despite these constraints, the two established co-innovation labs demonstrated the potential for innovative knowledge and results exchanges between research and industry. Flexibility (in terms of type of interactions, funding model) and a well-defined regulatory framework are key to ensure smooth implementation and efficient cooperation.
2. Collaboration and exchanges with DIHs and EDIHs also contributed to strengthening the link with industry and better understanding their needs. Interactions were established in the form of workshops and presentations of TAILOR. However, due to the delay in the approval and launch of EDIHs (for example the SoE EDIHs in Italy), the activities involved mainly DIHs and Trustworthy AI was promoted as a relevant topic to be included in DIHs/EDIHs services. Contacts and first interactions were nonetheless established with some EDIHs (e.g. InnovAction, DIPS, HD Motion). Despite difficulties in actively engaging DIHs, the planned KPI was achieved by reaching out 18 DIHs/EDIHs. (E)DIHs represent great opportunities for companies and industries to foster networking, cooperation and knowledge transfer activities and to foster the adoption and implementation of innovative digital technologies.
3. TAILOR results and use cases were presented at several relevant events, contributing to promoting the project and enlarging the industrial network via showcases. Industrial partners had the chance to contribute to discussions on AI technologies through presentations and demonstrations in relevant venues allowing for interaction with interested stakeholders on Trustworthy AI.

4. Further exchange between research and industry was promoted through the establishment of industrial internship and PhD/post-doc opportunities. The COVID-19 pandemic particularly affected these activities due to mobility restrictions and economic difficulties, requiring partial KPI refinement. However, in the past two years, partners, especially the industrial ones, have managed to recover and initiate internships and PhD/post-doc positions in TAILOR topics, partly also thanks to the TAILOR Exchange Fund. The amended KPIs were achieved, with 47 internships, 15 PhD positions and 5 post-docs started by M48. This highlights the mutual interest in investing in young talents and bridging the gap between research and industry to develop breakthrough solutions that meet market needs.

A. Annexes

A.1 Annex 1: Survey on the model for transfer/co-innovation labs

A. You and your experience in innovation

Some general data about you and your organization (position, department, sector, …) are collected with the purpose to describe the sample of the investigation. You can decide to answer or not to these questions.

A.1. What's your job title in your organisation?

A.2. What department do you work in?

A.3. Do you work in research (RTO, university, etc.) or in industry?

Check all that apply.

- [ ] Research
- [ ] Industry

A.4. Which sector does your organisation belong to or the focus of your research?

Check all that apply.

- [ ] IT Services and Software
- [ ] Public Sector
- [ ] Mobility and Transportation
- [ ] Energy
- [ ] Health
- [ ] Smart Industry

Other: [ ]

A.5. Do you have any experience in labs co-participated by industry and research stakeholders?

Check all that apply.

- [ ] Yes
- [ ] No

B. TAILOR hypotheses for a possible model of joint industrial-academic co-innovation/transfer lab

Joint industrial-academic co-innovation/ transfer labs will be introduced by the TAILOR project for bridging the gap between research, development, market and society and propose the constitution of one per sector of TAILOR industrial partners (IT Service and Software, Public Sector, Mobility and Transportation, Energy Sector, Health sector, Smart Industry).
We introduce you possible hypotheses and items of interest (please see the slides at: ...) for collecting your feedbacks and to validate possible future choices.

B.1. Definition

(see slides 8-12)

A joint industrial-academic co-innovation/Transfer lab is a space where industry and research work together with a common objective (create innovation), following a common method (distributing investments and costs), sharing spaces and human resources, offering training and education to young talents.

B.1.1. Do you agree with the above mentioned definition of co-innovation/transfer lab? *

Check all that apply.

- [ ] I agree
- [ ] I disagree

B.1.2. Please add any other possible items of potential interest to the given definition:

B.1.3. Do you agree with the following list of features for a co-innovation/transfer lab?(5 = I fully agree; 0 = I disagree) *

Mark only one oval per row.

	0	1	2	3	4	5
Thematic lab focused on common problems and/or projects and/or technology to create innovation facing potential competitors	◯	◯	◯	◯	◯	◯
Multidisciplinary and multisectoral teams co-innovate combining different focuses:	◯	◯	◯	◯	◯	◯
Industry/Business ineterest: to be more competitive with innovative solutions and services	◯	◯	◯	◯	◯	◯
Academy interest: to educate 'innovators' and to transfer knowledge and technology	◯	◯	◯	◯	◯	◯
Research interest: to transfer knowledge and technology	◯	◯	◯	◯	◯	◯
Public Administration interest: to offer innovative services	◯	◯	◯	◯	◯	◯
Physical Labs creating actor proximity co-location teams that could change after COVID-19 and the new labor practices emerging.	◯	◯	◯	◯	◯	◯

B.1.4. Do you have any model/definition of reference you want share with us?

B.2. Proximity

(see slide 13-15)

Analyzing in depth the concept of transfer/co-innovation lab as 'locus of innovation', a central feature is the concept of proximity to be considered both as geographical proximity and as collaborative innovation based on specific characteristics organizational, institutional, cognitive, etc.

B.2.1. What is in your opinion the best form for a con-innovation/transfer lab? *

Check all that apply.

- [ ] Only physical
- [ ] Only virtual
- [ ] Blended

B.2.2. What are in your opinion pros and cons of the form co-innovation/transfer lab you chose in B2.1.?

B.2.3. What should be - in your opinion - the impact of the COVID-19 on the possible constitution of a co-innovation/transfer lab? *

B.3. Funding Model

These labs are usually based on co-funding and co-investment model, many times the industries are mostly in charge of the expenses.

B.3.1. What is – if you have one – your experience in this? How are they financed? *

B3.2. What funding model do you suggest for these labs? What guidelines and risks?

B.4. Legal form

These labs need to be recognized at the legal level to regulate their activities relationship, partnerships, IPR, topics, etc. Legal forms are very different and related to the country where the lab works.

B.4.1. What is – if you have one – your experience in this? How are they financed?

B.4.2. What legal model do you suggest for these labs? What guidelines and risks?

B.5. A possible role for the Digital Innovation Hubs

The proposed co-innovation/transfer labs are usually very connected to the territory where they are and/or the territories of belonging of the organizations that form them. Local funding, collaborations, relationships with the institutions, etc. are important items for the labs. Important actors are locally the Digital Innovation Hubs (DIH) and in the future the European Digital Innovation Hubs (EDIH) to represent and support the local innovation stakeholders.

B.5.1. Do you think that the collaboration with DIHs is important/necessary? *

Check all that apply.

- [ ] No
- [ ] Yes

If yes, what kind of collaboration/actions do you suggest?

B.5.2. Can the Digital Innovation Hubs have a role in the joint industrial-academic Co-Innovation labs (looking for funding? Business model? Relations with the local ecosystem? Collecting needs and requirements? …)? *

Check all that apply.

- [ ] No
- [ ] Yes

If yes, what role do you suggest?

B.6. Possible limitations and difficulties

B.6.1. Please list 3 Cons for constituting a co-innovation/transfer lab (priority order) *

B.6.2. Please list 3 Pros for constituting a co-innovation/transfer lab (priority order) *

B.6.3. What are in your opinion the possible limitations/obstacles for the constitution of a co-innovation/transfer lab (priority order) *

B.6.4. Please leave us a general comment and your suggestions on the proposed the joint industrial-academic Co-innovation/transfer lab concept *

C. Possible future **collaboration**

We would appreciate if you could consider possible future collaboration both on the construction of a model of joint industrial-academic Co-innovative/transfer lab and on the constitution of one.

C.1. Are you interested to be part of the activity of TAILOR WP8 - Task 8.3? *

Check all that apply.

- [ ] No
- [ ] Yes, please contact me (pbaruchelli@fbk.eu).

C.2. Are you interested in the constitution of a co-innovation/transfer lab? *

Check all that apply.

- [ ] No
- [ ] Yes, please contact me (pbaruchelli@fbk.eu).

A.2 Annex 2: Results from the survey on the model for transfer/co-innovation labs

As introduced in this report. The survey was considered a tool too complex and time-spending to be used to discuss and collect feedbacks on the hypothesis done on the possible TAILOR joint industrial-academic Co-innovative/transfer lab. Nevertheless, 5 partners have compiled it.
The answers collected are reported below.

A. You and your experience in innovation

Participants in the survey have been:

- 2 Project Managers
- 1 Head of Research Unit
- 1 Specialist
- 1 Researcher/Teacher

They work in:

- 1 Research
- 2 in Health
- 2 in Automation, Programming languages and computer science

4 work in research and 1 in industry.

Work sectors represented have been IT Service and Software (2), Health and digital health (2), and smart industry (2).

3 of the participants have previous experience in n labs co-participated by industry and research stakeholders?

B. TAILOR hypotheses for a possible model of joint industrial-academic co-innovation/transfer lab

B.1. Definition

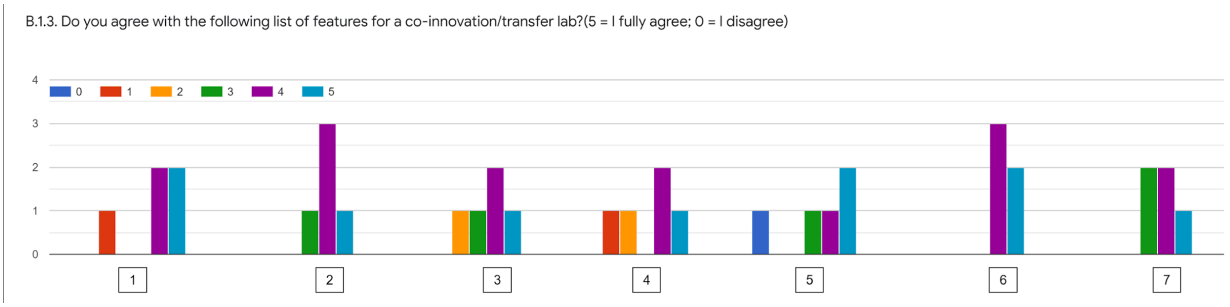
B.1.1. Do you agree with the above-mentioned definition of co-innovation/transfer lab?

All the participants agreed with the definition given as: *"A joint industrial-academic co-innovation/Transfer lab is a space where industry and research work together with a common objective (create innovation), following a common method (distributing investments and costs), sharing spaces and human resources, offering training and education to young talents."* and no suggestions were collected (B1.2).

B.1.3. Do you agree with the following list of features for a co-innovation/transfer lab?(5 = I fully agree; 0 = I disagree)

Considering various features present in the hypotheses done, answers were:

1. **Thematic lab** focused on common problems and/or projects and/or technology to create innovation facing potential competitors: 4/5 responders agreed (score 4-5) with this definition; 1 disagreed;
2. **Multidisciplinary and multisectoral teams** co-innovate combining different focuses: all the responders agreed with this (score 3-5);
3. **Industry/Business**: to be more competitive with innovative solutions and services: opinions: about this are very different (2-5 score);
4. **Academy**: to educate 'innovators' and to transfer knowledge and technology: about this are very different (2-5 score);
5. **Research**: to transfer knowledge and technology: 4/5 responders agreed (score 3-5) with this definition; 1 disagreed;
6. **Public Administration**: to offer innovative services: all the responders agreed with this (score 4-5);
7. **Physical Labs** creating actor proximity co-location teams that could change after COVID-19 and the new labor practices emerging: all the responders agreed with this (score 3-5).



B.1.4. Do you have any model/definition of reference you want share with us?

1 response was given: "First a comment on the first question- I would suggest to remove "facing potential competitor", since it is a very hard constrain in the context of "innovation". Possible reference: Co-created research arenas such as- WARA (Wallenberg Research Arena)"

B.2. Proximity

B.2.1. What is in your opinion the best form for a con-innovation/transfer lab?

All the responders agreed with a blended form for the lab.

B.2.2. What are in your opinion pros and cons of the form co-innovation/transfer lab you chose in B2.1.?

4 answers collected were:

- In a blended model the main benefits of both modalities, physical and virtual, can be better exploited while the limitations may be easier overcome due precisely to the possibility of switching from one modality to the other to maximize benefits.

- The possibility to have a blended form allows to adapt to the needs of the stakeholders and the requirements of the topic involved
- I am an advocate of flexibility!
- Physical is preferable, but some people maybe still prefer to avoid moving around the world due to the pandemic. Thus a blendend approach could be the winner solution.

B.2.3. What should be - in your opinion - the impact of the COVID-19 on the possible constitution of a co-innovation/transfer lab?

5 responses were collected:

- To learn smart working, on-line interactions, etc.
- To learn about the strengths and possibilities of remote working that better came out after COVID.
- I don't know
- Utilizing even more innovative solutions providing more flexibility considering the concept of proximity in context of collaborations in general.
- I do not see it as a problem in the future.

B.3. Funding Model

B.3.1. What is – if you have one – your experience in this? How are they financed?

5 responses were collected:

- No experience
- Both actors should be involved in the funding taking into account the individual cost-benefit relation of each partner obtained through this collaboration schema.
- They are funded mainly with public funding and co-funded in small amount by the private sector
- It depends very much on the focus area of the research activity as well as collaboration context, but trying to generalize I would say that the willingness for funding from industry increases almost linearly with the Technology Readiness Level(TRL) of the outcome :-)
- Public sector should also fund this. But I have no experience on this.

B3.2. What funding model do you suggest for these labs? What guidelines and risks?

3 responses were collected:

- Again, a model favouring
- Co-funded through initiatives such as EDIH and TEF.
- Very much depending on the content and possible outcomes from the lab--- case by case!

B.4. Legal form

B.4.1. What is – if you have one – your experience in this? How are they financed?

4 responses were collected:

- No experience
- In general a positive experience IF there is a clear understanding and agreement setup

by the involved partners highlighting their individual benefits.

- I don't have experience on this.
- I am not sure what kind of "finance" in this context you are referring to, but as it is also pointed out in B.4. , it is quite different between countries and sometimes even inside one country, but the policy is to try to keep the company's legal form as unique and consistent as possible.

B.4.2. What legal model do you suggest for these labs? What guidelines and risks?

3 responses were collected:

- Depending on the level of involvement of parties it can be defined as a co-innovation lab or even as a Joint Research Unit.
- I don't know
- Generally speaking the companies should avoid sharing sensitive information unless there are clear agreement, NDAs and guidelines on how the intellectual properties should be handled. This can be handled case by case in different collaboration projects or it can be decided to go for a frame agreement for all involved partners-- the latter can be a long process but can be worth the effort in long-term if several cases of conflict of interests are anticipated in the frame of planned activities.

B.5. A possible role for the Digital Innovation Hubs

B.5.1. Do you think that the collaboration with DIHs is important/necessary?

All the responders agreed with the necessity of the collaboration with the DIHs.

If yes, what kind of collaboration/actions do you suggest?

- Those where clear, measurable KPIs could be identified.
- DIHs are intended as a one-stop-shop for companies: they should help bridging the gap between academia and companies, helping SMEs and start-up to find the right academic partner.
- Sorry but I have limited knowledge about DIHs and have no current ongoing collaboration with any. But looking at their website, I can imagine that they can be of great help in several ways of interest for Tailor WP8.3.
- To involve SME or even provide physical spaces. Some of them are incubators and have offices and buildings.

B.5.2. Can the Digital Innovation Hubs have a role in the joint industrial-academic Co-Innovation labs (looking for funding? Business model? Relations with the local ecosystem? Collecting needs and requirements? …)?

All the responders agreed with the necessity of a defined role for DIHs.

If yes, what role do you suggest?4 responses

- Partner of related third party
- Providing support for legal requirements (IPR, etc.)
- AS mentioned earlier I have limited knowledge about them but looking at their website they can be of great help in almost all listed aspect in your question
- Collecting needs and requirements with Relations with the local ecosystem

B.6. Possible limitations and difficulties

B.6.1. Please list 3 Cons for constituting a co-innovation/transfer lab (priority order)

- High costs; Not common objective; Time lost
- Risks associated to unclear management of IPR; Unclear expectations on individual roles; Lack of focus and clear targets for the collaboration
- IPR management; long-term sustainability;
- Identification of a "common" problem/project and technology can be difficult, looking at the current participants- we need a more balanced mix of "problem owners" and suppliers rather than almost only suppliers. Identification as well as maintaining of the "multidisciplinary and multisectoral teams" can be a challenge with considerable level of engagement from participants. Proximity
- Difficulty to motivate industry to fund this. Location of the labs (in different countries would be desirable). How to involve public sector on this.

B .6.2. Please list 3 Pros for constituting a co-innovation/transfer lab (priority order)

- Collaboration; Technology transfer; Cost sharing
- Advantage of bringing research to real-world cases; Opportunity of reciprocal positive contamination; Simplifying the road to market of innovative ideas
- boost innovation; fostering ideas; accelerate lab to market
- Possibility to test and evaluate innovative ideas and solutions; Access and share knowledge and innovations; Networking and possibility for identifying young talents for future recruitments
- Detect and work on real needs of society and industry; New oppotunities for young people; Improve AI in the EU.

B.6.3. What are in your opinion the possible limitations/obstacles for the constitution of a co-innovation/transfer lab (priority order)

- Financial difficulties and not common objectives
- Funding; Identification of common interests and gaps between participants; Adequate governance
- SMEs often do not have resources to invest (human resources, time, money) in co-innovation lab and it is difficult to ensure long-term sustainability
- see B6.1
- Location; Funding

B.6.4. Please leave us a general comment and your suggestions on the proposed the joint industrial-academic Co-innovation/transfer lab concept

- Very challenging
- Could identify and exploit success stories and best practices
- .
- Good luck :-)
- Nothing to add.

C. Possible future collaboration

C.1. Are you interested to be part of the activity of TAILOR WP8 - Task 8.3?

3/5 responders are interested in collaborating on T8.3. but there was no contact.

C.2. Are you interested in the constitution of a co-innovation/transfer lab?

2/5 responders are interested in the constitution of a lab but there was no contac

A.3 Annex 3: Questionnaire to collect information about existing and planned transfer/co-innovation labs

Joint industrial-academic co-innovation/ transfer labs will be introduced by the TAILOR project for bridging the gap between research, development, market, and society and propose the constitution of one per sector of TAILOR industrial partners (IT Service and Software, Public Sector, Mobility and Transportation, Energy Sector, Health sector, Smart Industry).

The work done in the previous months allowed to formulate a possible definition of TAILOR joint industrial-academic co-innovation/Transfer lab as:

> *A joint industrial-academic co-innovation/Transfer lab is a space where industry and research work together with a common objective (create innovation), following a common method (distributing investments and costs), sharing spaces and human resources, offering training and education to young talents.*

Aim of the activity is to "support the creation of at least one joint industrial-academic co-innovation/ transfer lab per sector of TAILOR industrial partners". To achieve this aim, we would like to collect partners' experience and possible interest in these labs, using the following grids:

A. in the case you have already constructed a lab;
B. in the case you are interested in construction a lab in the future.

A. Existing/developed Joint industrial-academic co-innovation/transfer lab

Please compile this data/information if you have already developed a lab or have one/more under construction.

A.1. General data

A.1.1. What are the main references for the Lab?

Name_____

Link

_____

Location

_____

Duration: starting on _____ ending on _____

Possible contact _____

A.1.2. What is the sector of reference of the Lab?

- ☐ IT Services and Software
- ☐ Public Sector
- ☐ Mobility and Transportation
- ☐ Energy Sector
- ☐ Health Sector
- ☐ Smart Industry
- ☐ Other

_____
(please specify)

A.1.3. What are the participant entities?

Please indicate the partners of the Lab, at list the type of partner.

Industrial Partners

N.	Name	PMI (Y/N)	Sector	Role in the Lab
1				
2				
3				
4				
5				

Research Partners

N.	Name	Academy (Y/N)	Sector	Role in the Lab
1				
2				
3				
4				
5				

Other Partners

N.	Name	Type	Sector	Role in the Lab

1				
2				
3				
4				
5				

A.1.4. What is the status of the Lab?

- □ Active (started in _____)
- □ Under formalization
- □ Under discussion
- □ Other _____ (please specify)

A.2. The model

A.2.1. What is the legal form of the Lab?

These labs need to be recognized at the legal level to regulate their activities relationship, partnerships, IPR, topics, etc., please briefly describe the legal form chosen for your Lab.

_____

_____

_____

_____

_____

A.2.2. What is the business / sustainability model of the Lab?

These labs need to have a business / sustainability model, please briefly describe the legal form chosen for your Lab.

_____

_____

_____

_____

_____

A.2.3. What are the main features of the Lab?

Many features can characterize the Lab such as: virtual – on-site – blended Lab, type of personnel involved (researchers, industry employees, managers, …), facilities offered, etc., please indicate the main features of your Lab.

_____

_____

_____

_____

_____

A.3. Objective and activities

A.3.1. What is the topic of common interest industry/research of the Lab?

These labs are originated starting from a topic/problem of common interest for the industry and the research organizations/academy, please briefly describe the one that is the basis of your Lab.

_____

_____

_____

_____

_____

A.3.2. What are the main activities developed in the Lab?

_____

_____

_____

_____

_____

A.3.3. What is the relationship with the TAILOR topics of the Lab?

Please consider the 5 TAILOR Research Area briefly describe the relationship of your Lab.

□ TRUSTWORTHY AI – to develop the foundations for trustworthy AI

_____

□ PARADIGMS AND REPRESENTATIONS - – to combine and integrate learning, reasoning and optimization

_____

□ ACTING – learning and reasoning to plan, act and monitor behaviour

_____

□ SOCIAL AI – learning and reasoning for multi-agent interactions and human AI collaboration

_____

□ AUTO AI - – to automate the development and deployment of AI systems and democratize the access to state-of-the-art technology

_____

B. Possible ideas/interest for the construction of a Joint industrial-academic co-innovation/transfer lab

Please compile this data/information if you have an idea/interest to construct one or more labs.

B.1. General data

B.1.1. What could be the main references for the Lab?

Name

_____

Location

_____

Duration: _____ Possible contact _____

B.1.2. What could be the sector of reference of the Lab?

- ◻ IT Services and Software
- ◻ Public Sector
- ◻ Mobility and Transportation
- ◻ Energy Sector
- ◻ Health Sector
- ◻ Smart Industry
- ◻ Other

_____
(please specify)

B.1.3. What could be the type of the participant entities?

Please indicate the potential partners of the Lab, considering the type of partner and if you already have some contacts.

Industrial Partners

N.	Sector	PMI (Y/N)	Main features	Role in the Lab	contacted (Y/N)
1					
2					
3					
4					
5					

Research Partners

N.	Sector	PMI (Y/N)	Main features	Role in the Lab	contacted (Y/N)
1					
2					
3					
4					
5					

Other Partners

N.	Sector	PMI (Y/N)	Main features	Role in the Lab	contacted (Y/N)
1					
2					
3					
4					
5					

B.2. The model

B.2.1. What are the main features you are planning for the Lab?

Many features can characterize the Lab such as: virtual – on-site – blended Lab, type of personnel involved (researchers, industry employees, managers, …), facilities offered, legal form, business model, etc., please indicate the main features of your Lab.

_____

_____

_____

_____

_____

B.3. Objective and activities

B.3.1. What is the topic of common interest industry/research of the Lab?

These labs are originated starting from a topic/problem of common interest for the industry and the research organizations/academy, please briefly describe the one that is the basis of your Lab.

_____

_____

_____

_____

B.3.2. What are the main activities that will be developed in the Lab?

_____

_____

_____

_____

_____

B.3.3. What will be the relationship with the TAILOR topics of the Lab?

Please consider the 5 TAILOR Research Area briefly describe the relationship of your Lab.

□ TRUSTWORTHY AI – to develop the foundations for trustworthy AI.

_____

□ PARADIGMS AND REPRESENTATIONS - to combine and integrate learning, reasoning, and optimisation.

_____

□ ACTING – learning and reasoning to plan, act and monitor behaviour.

_____

□ SOCIAL AI – learning and reasoning for multi-agent interactions and human AI collaboration.

_____

□ AUTO AI - – to automate the development and deployment of AI systems and democratize the access to state-of-the-art technology.

A.4 Annex 4: EDIHs mapping

	DIH Name	DIH Level	DIH Country	Registered in the EC Smart Specialization Platform[27]	Data source
1	***DIPS: Digitalization and Innovation of Public Services***	*European*	*Italy*		*FBK TAILOR partner*
2	***Trentino Innovation Hub***	*International*	*Italy*	*Y*	*FBK TAILOR partner*
3	***Hub4.0MANUVAL***	*Regional*	*Spain*		*VRAIN-UPV TAILOR partner* *TAILOR letter of support*
4	***Tech4CV***	*Regional*	*Spain*		*VRAIN-UPV TAILOR partner*
5	***"AIR4S"*** ***Digital Innovation Hub in Artificial Intelligence & Robotics for Sustainability***	International	*Spain*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
6	***CROBOHUB DIH*** ***Croatian Robotics Digital Innovation Hub***	*National*	*Croazia*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
7	***DIGIHALL*** ***The Paris Region's DIH***	*Global*	*France*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
8	***IP4FVG*** ***Industry Platform 4 Friuli Venezia Giulia***	*National*	*Italy*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
9	***Czech Institute of Informatics, Robotics and Cybernetics*** ***Czech Technical University in Prague***	*National*	*Czech Republic*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
10	***DFKI Human Centric AI Innovation Hub***	*International*	*Germany*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
11	***Public, Private, People Partnership*** ***Digital Innovation Hub 4P DIH***	*National*	*Slovenia*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
12	***Danish Technological institute***		*Denmark*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
13	***Data Value Center*** ***Smart Industry Hub*** ***South Netherlands***		*Netherlands*	*N*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*

[27] https://s3platform.jrc.ec.europa.eu/digital-innovation-hubs-tool

14	***Know-Center GmbH Research Center for Data Driven Business & Big Data Analytics***	*National*	*Austria*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
15	***DIH Munich Munich Innovation Hub for Applied AI***		*Germany*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
16	***nZeb Smart House DIH***	*European*	*Greece*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
17	***PIAP HUB***	*National*	*Poland*	*y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
18	***ITI Data Cycle Hub***	*European*	*Spain*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
19	***Brainport Industries Smart Connected Supplier Network (DIH-AI)***	*Global*	*Netherlands*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
20	***DIH VDTC of the Fraunhofer IFF***	*Global*	*Germany*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
21	***TeraLab***	*European*	*France*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
22	***DIH RIF BioRobotics Institute***	*National*	*Italy*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
23	***Finnish Center for Artificial Intelligence (FCAI)***	*European*	*Finland*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
24	***Latvian IT Cluster***	*European*	*Latvia*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
25	***SuperIoT AI DIH***	*Global*	*Finland*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
26	***HPC4 Poland***	*National*	*Poland*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*

27	***Digital Innovation Hub Lombardia - DIH Lombardia***	*Regional*	*Italy*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
28	***Spanish Digital Innovation Hub for HPC (esHPC) (by the Spanish Supercomputing Network, RES)***	*National*	*Spain*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
29	***CeADAR Ireland's National Centre for Applied Data Analytics & Artificial Intelligence***	*International*	*Ireland*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
30	***IMEC***	*International*	*Belgium*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
31	***DIH Smart Industry Centre (SmartIC)***	*National*	*Estonia*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
32	***Images et Réseaux + TES***	*International*	*France*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
33	***PRODUTECH DIGITAL INNOVATION HUB PLATFORM***	*National*	*Portugal*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
34	***SINTEF***	*International*	*Norway*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
35	***Digital Innovation Hub of Lithuanian Robotics Association***	*European*	*Lithuania*	*Y*	*AI DIH Network, Final Study Report (2020), presented by PwC, in partnership with CARSA and Innovalia, to the European Commission – DG CONNECT (in course of publication)*
36	***IoT Digital Innovation Hub***	*Global*	*Spain*	*Y*	*TAILOR letter of support*
37	***DASCII Digital Innovation Hub***	*Regional*	*Spain*	*Y*	*TAILOR letter of support (Granada University)*
38	***Fundación Cajamar***	*National*	*Spain*	*y*	https://s3platform.jrc.ec.europa.eu/digital-innovation-hubs-tool/-/dih/12490/view
39	***Robotics Digital Innovation Hub***	*National*	*Spain*	*y*	https://s3platform.jrc.ec.europa.eu/digital-innovation-hubs-tool/-/dih/3100/view
40	***ETICOM Digital economy cluster in Andalusia***	*Regional*	*Spain*	*y*	https://s3platform.jrc.ec.europa.eu/digital-innovation-hubs-tool/-/dih/5881/view
41	***On Granada Tech City Granada Plaza Tecnológica y Biotecnológica***	*Regional*	*Spain*	*y*	https://s3platform.jrc.ec.europa.eu/digital-innovation-hubs-tool/-/dih/1074/view
42	***PTA Parque Tecnológico de Andalucía***	*International*	*Spain*	*y*	https://s3platform.jrc.ec.europa.eu/digital-innovation-hubs-tool/-/dih/2670/view

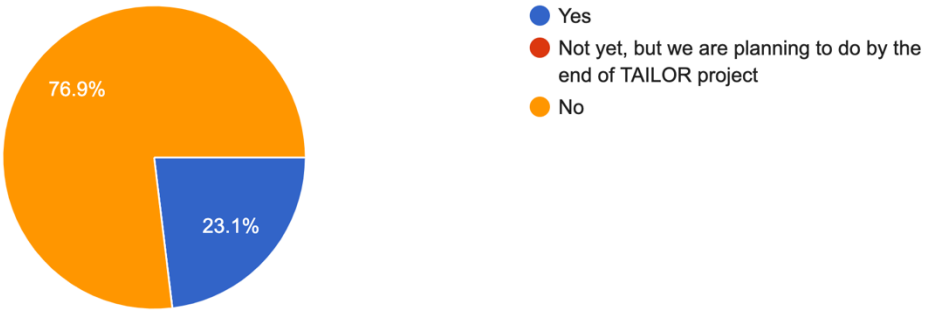
43	***PTS Granada Granada Health Technology Park***	*International*	*Spain*	*y*	https://s3platform.jrc.ec.europa.eu/digital-innovation-hubs-tool/-/dih/3071/view
44	***DINHAMIC***	*Regional*	*France*	*N*	*INRIA TAILOR partner*
45	***MINASMART***	*European*	*France*	*Y*	*INRIA TAILOR partner*
46	***GreenpowerIT***		*France*	*N*	*INRIA TAILOR partner*
47	***EDIH Grand Est***		*France*	*N*	*INRIA TAILOR partner*
48	***Digihall***	*Global*	*France*	*Y*	*INRIA TAILOR partner*
49	***SUMITY***	*European*	*France*	*N*	*INRIA TAILOR partner*
50	***EDIH Bretagne***	*European*	*France*	*N*	*INRIA TAILOR partner*
51	***MOVE2DIGITAL***	*European*	*France*	*Y*	*INRIA TAILOR partner*

A.5 Annex 5: Results from the questionnaire on internships, PhD and post-docs

A.5.1 Internship positions

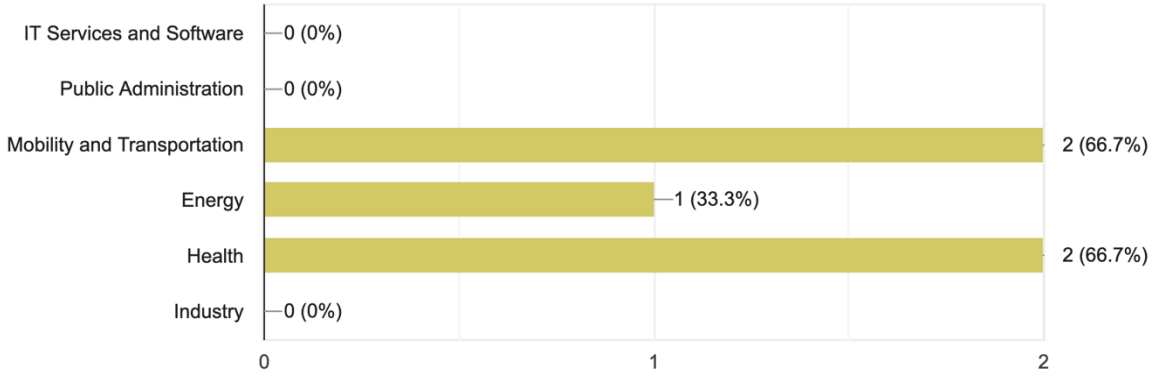
Has your Institution promoted, hosted or sponsored Industrial internship positions related to TAILOR topics?

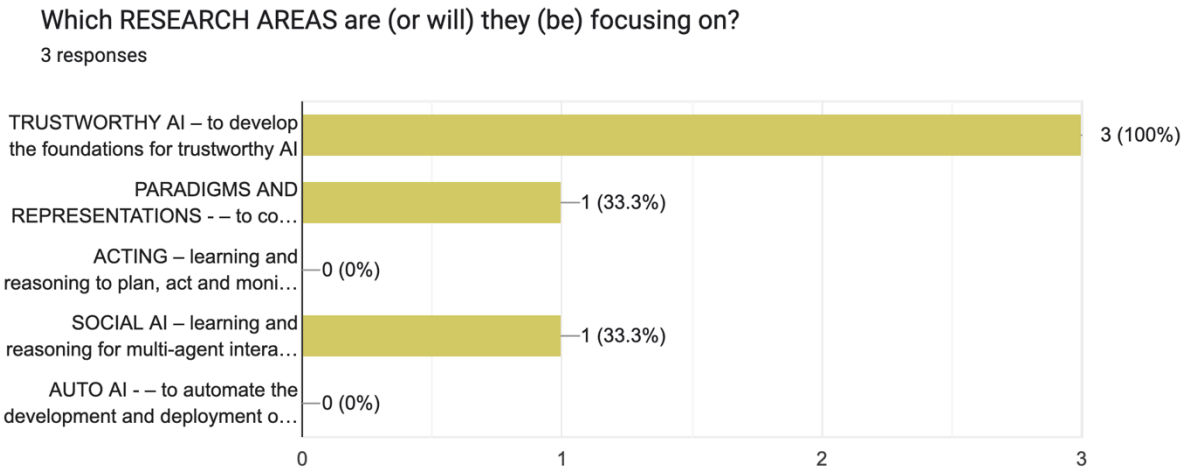
13 responses



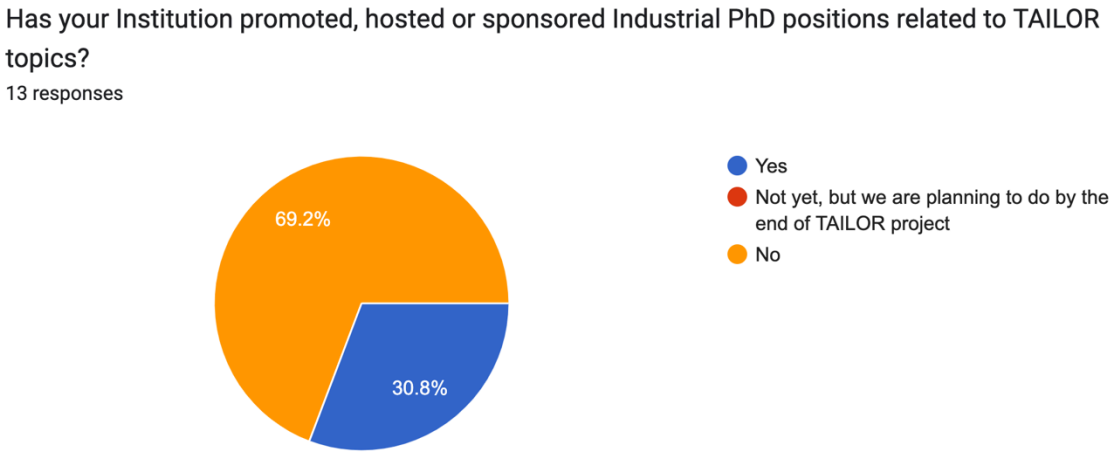
Which SECTOR are (or will) they (be) focusing on?

3 responses



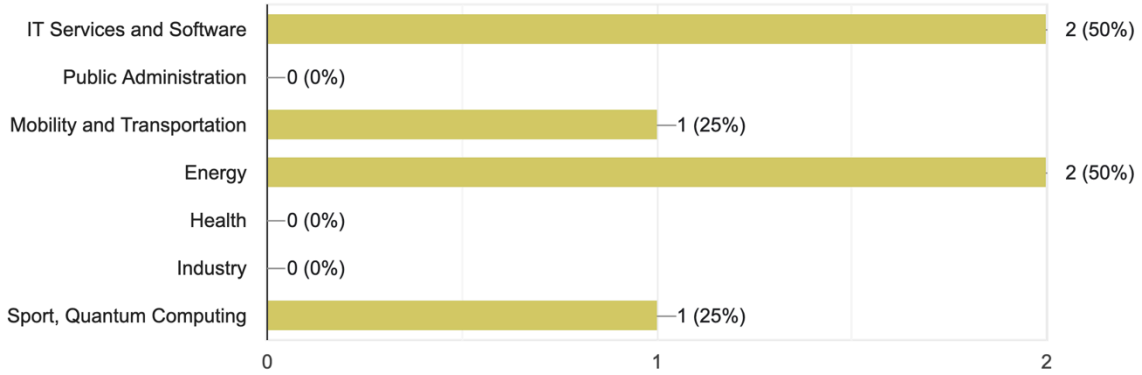


A.5.2 PhD positions



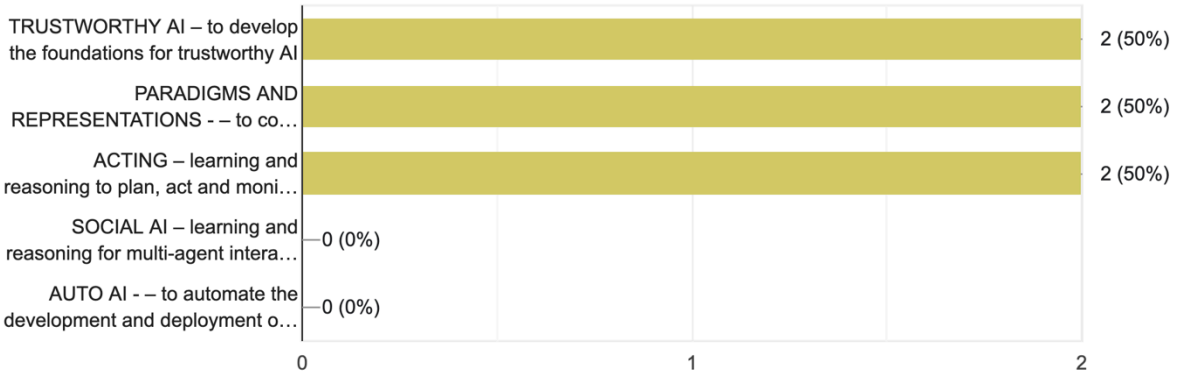
Which SECTOR are (or will) they (be) focusing on?

4 responses



Which RESEARCH AREAS are (or will) they (be) focusing on?

4 responses



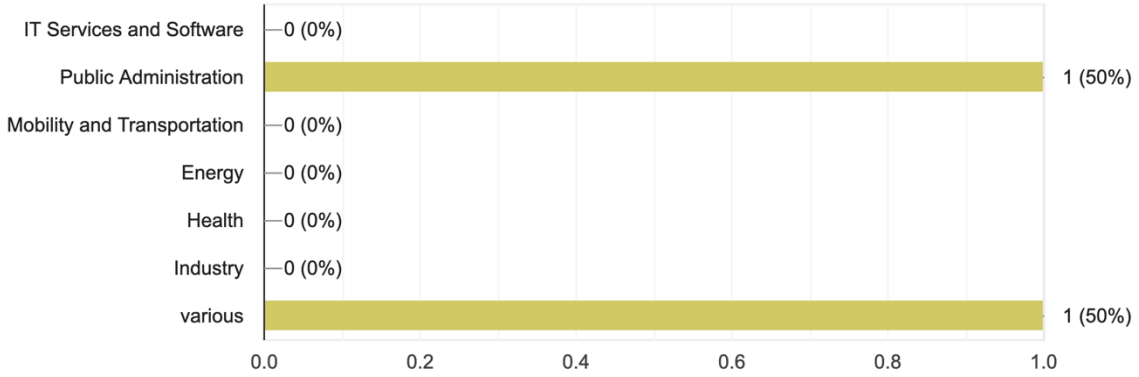
A.5.3 Post-doc positions

Has your Institution hired an Industrial PostDoc related to TAILOR topics?

13 responses

Which SECTOR are (or will) they (be) focusing on?

2 responses



Which RESEARCH AREAS are (or will) they (be) focusing on?

2 responses