



TAILOR

Foundations of Trustworthy AI – Integrating Reasoning, Learning and Optimization

TAILOR

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SRIR Development in Collaboration with the ICT-48 CSA, PPP-AI, and AI4EU Report

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Summary of the report

This report describes the process and the strategy for involving strategic European AI initiatives in the definition of the TAILOR Strategic Research and Innovation Roadmap. For creating a cohesive ecosystem, it is important that all initiatives collaborate and coordinate to create roadmaps that cover different aspects, but also are aligned. In the report, we recall the objectives of the TAILOR SRIR, identify the most related initiatives and outline a process for their involvement.

Organisation

The following people have been involved in the Deliverable:

Partner ID / Acronym	Name	Role
10 - UNIBO	Michela Milano	Responsible SRIR
3 - INRIA	Marc Schoenauer	Responsible WP2

1. Purpose of the SRIR

TAILOR is a Network of Excellence devoted to creating an ecosystem and delivering solid research results around Trustworthy AI, focusing on Learning, Optimization and Reasoning. In work package 2, TAILOR will develop a Strategic Research and Innovation Roadmap (SRIR). Its purpose is not only to shape the main research directions of the project, but it goes beyond the project duration with the purpose of influencing and providing guidelines to the whole European AI community as well as to the European Commission in future work programmes. The ambition of the roadmap is to outline the foundations of Trustworthy AI for the years 2020-2030.

The three objectives of the SRIR, aligned with the ones of TAILOR, are the following:

- OB1: Strengthen and enlarge a pan-European network of excellent researchers on the Foundations of Trustworthy AI
- OB2: Strengthen the scientific foundations for Trustworthy AI, and translate them into technical requirements to be adopted broadly by industry.
- OB3: Strengthen collaborations between academic, industrial, governmental, and community stakeholders on the Foundations of Trustworthy AI.

The TAILOR project is clearly the core source of content for the SRIR. The scientific work-packages

- WP3 Trustworthy AI
- WP4 Integrating AI Paradigms and Representations
- WP5 Deciding and Learning How to Act
- WP6 Learning and Reasoning in Social Contexts
- WP7 Automated AI

contribute to define the current and long term research directions by analysing the current gaps and needs, mainly from a research community perspective, but also from an industrial viewpoint.

However, to spread the concept of Trustworthy AI pervasively in Europe, both in academia and industry, it is essential to connect with the other initiatives that form the European AI ecosystem. In the next section, we identify the main initiatives that

we consider for the liaison with TAILOR on the SRIR topic and then we define the process to engage them in the SRIR definition and continuous update.

2. EU initiatives connected to TAILOR

The European Commission has contributed to shape an Artificial Intelligence ecosystem where several initiatives coexist and cooperate. Figure 1, borrowed from the WP4 of the AI4EU project, shows the current main AI initiatives. In the following, we describe the ones we consider more related with TAILOR, therefore they are the initiatives we need to interact with to obtain input for the SRIR and influence their further updates to better take into account, if necessary, the trustworthiness of AI, that might not be their primary concern.

ICT48 Networks of Excellence and the associated CSA VISION: These are the closest initiatives with TAILOR, as TAILOR is indeed one of the ICT48 Networks of Excellence. The others are ELISE, AI4Media and Humane-AI-Net. They are Research and Innovation actions devoted to develop networks across Europe and therefore create the conditions for European foundational research, with low TLR. The coordination and support action VISION coordinates all four ICT48 Networks. Each of them has to produce a Strategic Research and Innovation Roadmap, one of the Work Packages of VISION is to synchronise, align, and synthesise the different roadmaps under the same conceptual and operational strategic canvas.

AI-on-demand platform and follow up projects: The AI-on-demand platform is a strategic initiative funded by the European Commission through the first project AI4EU, that has provided the first investment to create the platform. AI4EU finished in December 2021. The platform is live on <https://www.ai4europe.eu/> and contains several tools, an Ethical observatory, and an experimentation playground.

Six ICT49 projects have then been funded under Horizon 2020 to enrich the platform either through additional services or verticals. These ICT49 are StairwAI, AIPlan4EU, AI4Copernicus, DIH4AI, Bonsapps and IEnergy. These projects are funded under the innovation action instrument. These projects do not have to produce a roadmap, but it is important to interact with them to obtain input for the TAILOR roadmap.

Finally, in Horizon Europe and Digital Europe, two projects are going to be funded to develop the AI-on-demand platform: a CSA under Horizon Europe is supposed to develop the platform strategy toward the research community, while under Digital Europe the CSA and the following project is supposed to develop the platform strategy toward the industrial ecosystem and drive it to the market. It will be important as well to liaise with these initiatives.

AI, data and Robotics PPP and related CSA The AI, Data and Robotics Partnership is one of the European Partnerships in digital, industry and space in Horizon Europe. To deliver the greatest benefit to Europe from AI, Data and Robotics, this Partnership will drive innovation, acceptance and uptake of these three technologies.

The Partnership will boost new markets, applications and attract investment, to create technical, economic and societal value for business, citizens and the environment. By 2030, European sovereignty is expected in the development and deployment of trustworthy, safe and robust AI, Data and Robotics, compatible with EU values and regulations. The PPP has developed a Strategic Research, Innovation and Deployment agenda and it would be important to connect with the PPP to obtain important input about the TAILOR SRIR. Connected associations and initiatives are of course relevant to the TAILOR SRIR, like BDVA, DAIRO and euRobotics, CLAIRE, Ellis and EurAI.

Furthermore, an on-going call will fund a CSA to support the AI, Data and Robotic partnership. Though it is not yet known at this point in time, it will also be important to stay tuned with this CSA.



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The European AI Landscape

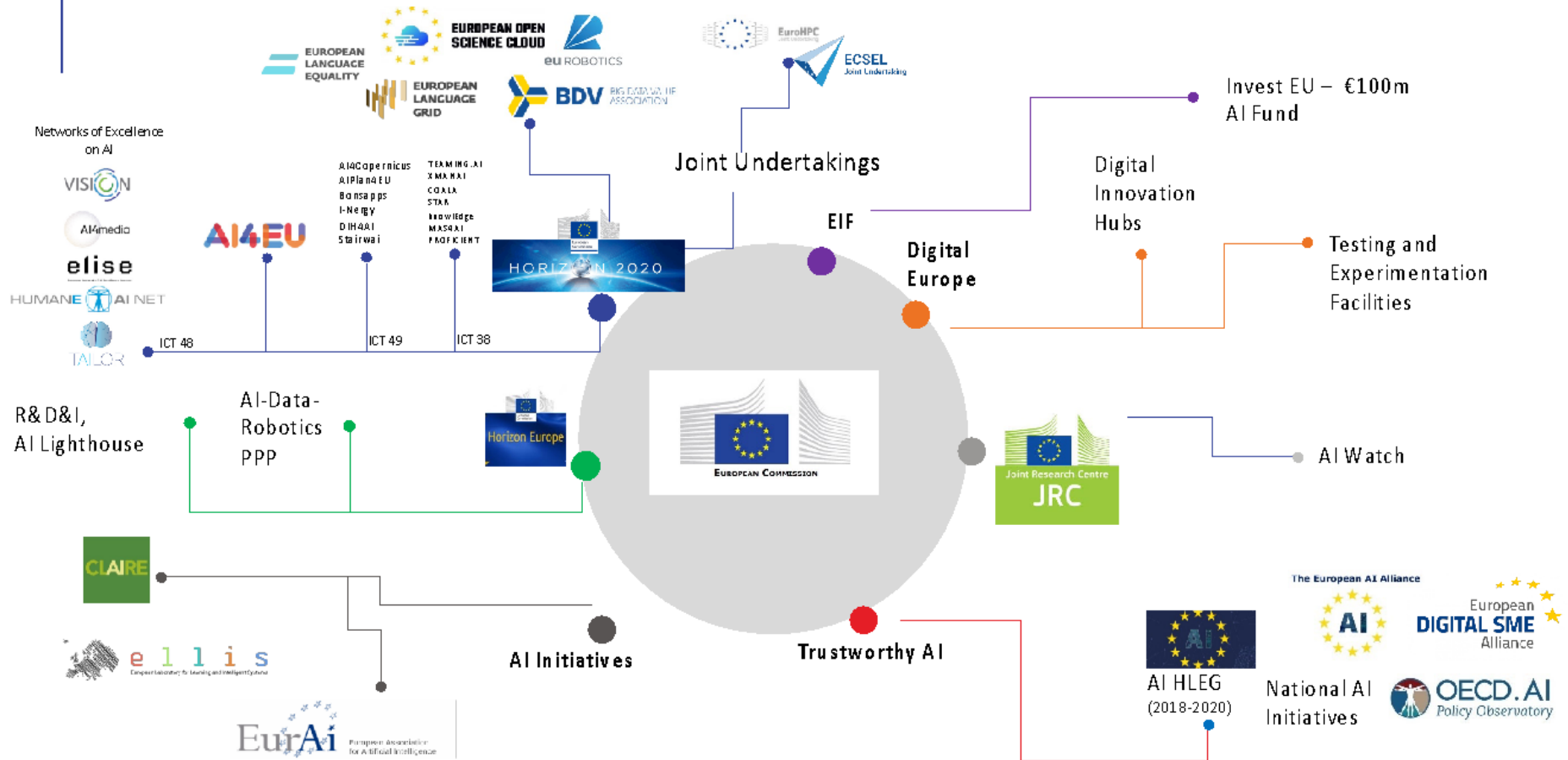


Figure 1: the European AI ecosystem

3. Process of engagement

Once we have defined the initiatives that are targeted toward the engagement with TAILOR, we have to define the WHO, WHAT and WHEN. WHO is the TAILOR responsible that will take care of the action, WHAT concerns the action we have to deliver and WHEN is the timing.

Concerning the timing, we have in TAILOR WP2 decided that the first version of the SRIR will be merely based on inputs from the TAILOR consortium, while for the second version we plan to engage with all the above mentioned initiatives. Starting from the end of March 2022, when the first version of the SRIR is delivered, we plan to interact with the other initiatives following the process defined in Figure 2.

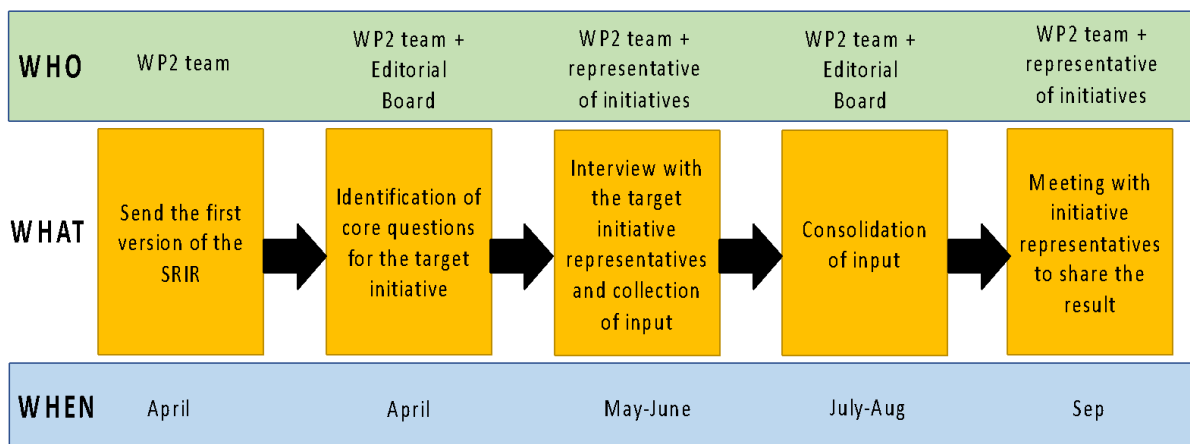


Figure 2: Process for engaging related initiatives

Starting from April 2022, the SRIR Editorial Board will send the first version of the SRIR to the initiatives identified in Section 2 (btw, the three CSA funded under Horizon Europe and Digital Europe will not be started yet, therefore the same strategy will apply when they start). For each target initiative, the WP2 team and the SRIR editorial board should identify questions that are specific for the initiative itself. For each initiative, in May-June we will run interviews/workshops with selected representatives to collect input for the SRIR.

Then the WP2 team and the SRIR Editorial Board will consolidate the inputs obtained by the interviews and then we share the final result and we start disseminating the final version of the TAILOR SRIR document.