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AI4EU Deliverable D4.2

Establishment of the European AI4EU Association report and status of the association

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Task	4.2	Establishment of European AI4EU Association

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Deliverable abstract

This document is the deliverable D4.2 of the AI4EU project, a Research and Innovation Action project supported by the European Union Horizon 2020 programme under Grant Agreement Number 825619.

Full information on this project including the contents of this deliverable is available online at (http://ai4eu.eu).

This document provides the information on the AI4EU Association creation that serves as one of the main activities for community building.

This document is concerned with the activities related to the creation of an association from the perspective of:

- The collection and aggregation of partners impressions in the AI4EU consortium
- To build a European AI Association that will unify all stakeholders in Europe, therefore avoiding current fragmentation
- To establish a geographically distributed AI network of AI National Contact Point (NCP) Community Managers

This report is organised as follows: Section 1 presents the introduction of the entire document, the AI4EU Association rationale and main objectives. Section 2 outlines the AI4EU vision on the Association, the first steps in the creation of the body and how it was planned to replicate the best practices taken by other European initiatives. Section 3 comprises the strategy taken for the creation of the Association within the project, while Section 4 outlines engagement with the AI Alliance. Section 5 describes the development of the National Contact Point network. Finally, Section 5 concludes the document with a summary of the report including the next steps.

Contents

List of Abbreviations

AI HLEG	High-Level Expert Group on AI
CLAIRE	Confederation of Laboratories for Artificial Intelligence Research in Europe
EB	Executive Board
ELLIS	European Laboratory for Learning and Intelligent Systems
EurAI	The European Association for Artificial Intelligence
NCP	National Contact Point
OSAI	AI4EU Observatory on Society and Artificial Intelligence
SRIA	Strategic Research and Innovation Agenda

List of Figures

1. Establishment of the AI4EU Association

The opening section of this document outlines the first steps taken in the development of the AI4EU Association. This section starts by positioning the concept within the broader vision of the project before going on to describe the specific rationale and needs of task 4.2. The section concludes with an examination of the overall objectives of the task as set out in the project proposal.

1.1. Introduction

At its core, the AI4EU project seeks to establish two very clear outputs. An On-Demand Platform for AI tools and services and a supporting community that ensures its success and long-term sustainability. The second of these aims is centred around the activities included in the Ecosystem creation and development Work Package (WP4) of the project. This WP is focussed on the establishment of the structures to support the community as well as implementing activities that will ensure the buy-in of a large group of different stakeholder groups and types.

In the development of the project proposal, the consortium identified the establishment of an Association, and a supporting network of National Contact Points (NCPs), as the mechanism to organize the community around the Platform and the community events of the project. This Association and NCP network were envisioned as a means of uniting the European AI community around the activities of the project. It would be a body that would act to unite a fragmented community of actors. However, within the first weeks of the project, it became apparent that it would be particularly challenging for AI4EU to develop a new initiative that added significant value beyond what now existed. This was a result of the rapidly changing European AI landscape that had seen the emergence of several new organizations with a very clear focus and ones that already strong community of users. Among these new organizations were the AI Alliance and the Confederation of Laboratories for Artificial Intelligence Research in Europe (CLAIRE).

Committed to developing its own Association within the first six months of the project, the leader of Task 4.2, and the eight partner organizations, were presented with the challenge of identifying where, if anywhere, it could add value to the existing landscape. In consultation with partners, several ideas were considered but none were deemed of sufficient value or broad enough in scope to capture the breadth of activities and ambitions of the project. The challenge to develop the concept was also complicated by the fact that the project had committed not to replicate or replace the activities of any existing initiatives.

To map the activities of other initiatives and to understand possible legal and governance models, the task leader undertook a process of consultation with the other leading AI initiatives in Europe. It was during this engagement, and in conversations with the European Commission, that the suggestion was advanced that the most impactful way in which the AI4EU project could develop its planned Association was through a partnership with the AI Alliance.

Originally set up to support the activity of the High-Level Expert Group on AI (AI HLEG), the AI Alliance had developed into a strong community of its own. It was clear to the Project Coordinator and the leader of Task 4.2, that at collaboration with the AI Alliance had the potential to significantly enhance the status and reach of the project. The partnership also directly addressed the rationale of the Task, namely, to identify a mechanism to support the community activities of the project and to create a bridge between that community and the AI On-Demand Platform.

This report is organised as follows: Section 1 presents an overview of the entire deliverable document, the AI4EU Association rationale and main objectives. Section 2 is concerned with development of the concept and initial activities undertaken to establish the body. Section 3 outlines the evolution of the AI4EU Association concept, while the fourth section describes the development of a strategy of collaboration with the AI Alliance. Section 5 of the document discusses the reorientation of the National Contact Point network and summarizes activities in establishing and activating this group. The final Section of the deliverable outline the steps taken over the duration of the task, points to next steps, and offers a conclusion on the task overall.

1.2. Rationale and needs

The “Establishment of the European AI4EU Association” task was designed to achieve several concrete objectives. Located within WP4, the primary objective of the task was the establishment of an association that would support the ecosystem development and community activities of the project. This association was envisioned as a mechanism to ensure the creation of a rich and dynamic AI4EU community, engaging in activities of the project and becoming active members of the On-Demand Platform.

Task 4.2: Establishment of the European AI4EU Association (M1-M6)

Task leader: UCC; Participants: THA, ELTE, EOS, JSI, LDS, ONR, TIL, TUB, TUK

In this task the European AI4EU Association will be established. It will be an independent NGO to support the community and network activities of the project. To enable this activity a network of National Contact Points (NCP) will be created. We will name of at least one point of contact to act as a conduit between the AI4EU consortium and the national communities that develop in each member-state. These will be people, who are involved in the national AI community, e.g. members of the board of the local EurAI member association, member of the local EU Robotics association, etc. These AI4EU community managers are not intended to have any executive/decision-making function. Based on this network of NCP the European AI4EU Association will be founded and the network of activities will be continued by the association.

The Association was envisioned as a **bottom up horizontal non-profit body** supported by a network of geographically based National Contact Points (NCPs). The AI4EU Association would seek to attract membership from all interested AI organizations in Europe, **broadening engagement** with the AI community to parties outside of the consortia. It would also contribute to the goal of ensuring the **sustainability** of the project, with a formal integration into the AI4EU Foundation envisioned by the end of the project.

The NCP network was identified as “the **initiators** of the AI4EU Association” facilitating the development of a European-wide network of stakeholders. This NCP network was also considered an important mechanism to ensure the **dissemination** and **communication** of the project’s core value propositions to both key national stakeholders and other leading EU-wide initiatives. Acting as a communication multiplier, the activities of this network would also help to overcome language and cultural barriers.

As outlined in the text description of the task, the Association supported by the NCPs would act to develop, support and ignite the project’s target stakeholders (SMEs, Researchers, etc.) to **engage with the On-Demand Platform** and other major outputs and activities of the project.

In undertaking its activities, it was envisioned that the Association and the NCPs would be closely aligned and engaged with the project’s **community events programme**. With networking, information and demonstration events mainly taking place as part of the 14 planned events.

1.3. Objectives

The establishment of the AI4EU Association and supporting network of NCPs was set out as a priority, with the task activity set for completion by month six of the project. The timeline of this task was related directly to a strategic aim of the project, namely, to build the AI4EU Community and On-Demand Platform in tandem. This was deeded important for a few key reasons. Specifically, the vision of the project was for the AI4EU Platform and its community to support one another. This could only be possible if both were in place at a very early point in the project.

The interaction between the Platform and the community was envisioned to be mutually beneficial. Specifically, it was based on a strategy that would provide a first user group of the Platform. Having in place a strong and established community would be hugely beneficial for the developers of the Platform (identify bugs, functionality etc.) and it would allow users to co-design many features. For this reason, in the development of the Platform, it was decided that the community tools, including

“Groups” and “Discussions” would be the first functionalities added. On the other hand, for the community, it would be in a position to guide the direction of many aspects of the project and immediately avail of, and access, many of its services, including events, network of AI experts, open calls etc.

Within the project proposal, there was a limited amount of information provided on the exact nature and offering of the AI4EU Association. However, it clearly positioned the AI4EU Association at the heart of the project’s community building strategy. The principals that defined this community included initiatives to “lower barriers to use AI technology; make AI technology visible, accessible and usable; make experts knowledge available”. It was the AI4EU Association that was considered the vehicle through which all stakeholders could easily get involved in the project’s activities.

While the AI4EU project is a very large consortium, with its own very broad network, there was understanding from the outset that the only way to guarantee the success of the project was by ensuring the buy-in of the entire European AI community of stakeholders. Therefore, the AI4EU Association would need to be an all-encompassing body, one capable of adding to (not replicating) the work of others, while at the same time offering something unique and of appropriate (and diverse) value in order to capture the imagination and attention of the project’s very broad set of stakeholders. The Association was therefore presented as way to both coalesce and enhance the activities of multiple other organizations including representative networks of experts in AI (EurAI, EU-Robotics, etc.) specific existing related eco-systems (Big Data PPP, Robotics PPP, AIOTI, CPS) and member-state AI associations.

While having the buy-in of the abovementioned groups was critical for the success of the project, the scope of the project’s community-building activities would need to be even more ambitious if it had the possibility of meeting a leading KPI of the project, namely attracting 15000 members of the AI4EU ecosystem. Therefore, the scope of the AI4EU Association would need to be similarly broad and ambitious, seeking the involvement of multiple stakeholders including AI thought-leaders, the business community, individual AI-developers, data scientists, representations of policymakers, AI industrial leaders and sector-specific user groups in several verticals including health, manufacturing, automotive, media, agriculture etc.

Given the scope and ambition of AI4EU Association and its importance to the overall success of the project, the initial set up of the Association and support network of NCPs was considered as a priority. This six-month task was concerned with the establishment of the body from a legal and governance perspective, and importantly in defining its positioning and added value in the European AI landscape. The continuation of the activities would then proceed through the work of Task 4.3 “Community Events Programme and AI4EU Association Developments”, that would run for the duration of the project.

2. AI4EU Vision on Association

This Section presents the initial steps of the AI4EU Association. To guarantee a broader vision in the process of creation, feedback from the AI4EU consortium was collected during the kick-off meeting of the project. The consortium, that consists of a blend of industrial, SMEs, and policymakers, was taken as a subset of representative stakeholders, providing their vision on the concept of the AI4EU value, challenges and opportunities. Next, using this input, a document was written as representation of the AI4EU Association vision, and used as a basis for discussions with other European initiatives. The input target from these discussions was oriented towards having a better understanding on the requirements – legal, privacy, etc. – for the creation of an association, but also for establishment of a basis for future engagement with these initiatives.

2.1. AI4EU Association Concept development – Value, Challenges, and Outcomes

In the planning for the project's kick-off meeting, the Work Package leaders engaged with the Project Coordinator to develop the topics for the World Café sessions, which would take place on the first day of the event. It was deemed important that the topic of the AI4EU Association was presented to all partners of the project, allowing for inputs on the structure, functions and added value of the Association for the project overall.

All participants	**World Café - Sessions 1-3** 6 themes, 2 tables per theme, 1 moderator per table, 30 mins per session 1) Ecosystem creation and animation: AI4EU association, events 2) Platform development and coordination with DIH and others platforms 3) Human issues for AI 4) Startups, SME development and finance Industrial alliance 5) Education, training and job 6) Research and Innovation Roadmap Collection of insights through Beekast	14:00 - 15:30	12*12	1: VS213 (-2) 2: VS214 (-2) 3: VS210 (-2) 4: VS217 (-2) 5: VS218 (-2) 6: VS219 (-2)

Figure 1. World Café Session at AI4EU kick-off meeting

During the World Café session, which took place on 10 January 2019, the task leader in cooperation with ORU, lead a discussion on the scope and role of the proposed AI4EU Association. This discussion centred around the experience of partner organizations in other pan-European or national Associations and the extent to which different models might be a suitable model for what the AI4EU Association hoped to achieve.

The session was well attended and there were strong inputs from partners on the potential structures and importantly, how this body would support and enhance the diverse activities of the AI4EU project. The potential added value of the Association as well as concerns about the role and function of the body were collected. These views helped in the design of the initial concept of the Association developed subsequent to the kick-off meeting. Presented below is a brief summary of the key issues discussed during the World Café session.

Summary of discussions during the World Café Session

The opening introduction presented by the task leader involved setting the context for the discussion that would follow. This introduction set out the concept behind the AI4EU Association but importantly also included setting a broader context of the role of the project more generally, namely, to act as a uniting force and to counteract fragmentation in the AI landscape of Europe.

A view shared by many participants and the most significant output from the session was the need to clearly understand the **value exchange** that would be the selling point of the Association. Many partners raised the question (in different ways) "What do I gain if I become a member of the Association?" This question was raised specifically in the context of other pan-European AI initiatives that had emerged in the preceding months, most obviously the CLAIRE initiative and the AI Alliance.

There was a strong consensus among the partners that the emergence of these two initiatives, as well as EurAI, presented a challenge for AI4EU. Careful not to replicate what was already available, the success of the Association developed by the project could only be guaranteed by developing a unique value that clearly spelled out the benefits to potential members. This was understood to be

major challenge given the significant footprint and clear missions of legacy organizations (EurAi) and new initiatives (CLAIRE, AI Alliance).

In order to develop the conversation into something practicable, the moderator refined the opening introduction to each session in order to elucidate **possible elements of unique value** that the AI4EU Association might offer stakeholders of the project. Among the ideas advanced, which partners deemed went beyond what existing Associations offered, included:

- Integrating industry/research prizes (e.g. Kaggle)
- Focussing on concrete industry and/or societal challenges
- Emphasising education and talent retention
- Exploring joint pilots with other organizations (e.g. IMI)

In addition to the above suggestions, there was agreement that a unique aspect of an Association built around AI4EU would the connection with the project's **On-Demand Platform.** Many partners suggested that the offerings of the Platform (AI tools, social element, data sets, sandboxing etc.) provided the new Association with its unique selling point and represented a mechanism to ensure its relevance and value to stakeholder groups. Aligned to this point was a caveat that this approach would only be successful if the content on the Platform was of sufficient quality and quantity; and was accessible in an efficient and user-friendly way.

Several partners alluded to a **"Cold start" problem** for the project in the design of the Association. Specifically, it would be a challenge to develop an effective and dynamic Association without having a very detailed understanding of the preferences and needs of potential members.

Another major issue that was raised concerned the challenge of establishing a pan-European organization. Specifically, in the context of; legal, governance and languages issues were flagged as major obstacles and there was a consensus that before deciding on the model and strategy for the Association, that a focussed **consultation with other leading European-wide associations** and initiatives would be beneficial. The task leader accepted this this recommendation and committed to initiate a consultation process in order to understand best practices and the identify the activities required to pursue different Association models.

Finally, many members of the project argued that it was imperative that a clear distinction be made and communicated about the respective functions and expectations of the planned AI4EU Association and the AI4EU Foundation. The intended role of the AI4EU Association was to support the development of the AI4EU community and to enrich the broader Europe's AI ecosystem. The AI4EU Foundation was designed to act as the **sustainability** mechanism for the Platform and will be created during the second year of the project and executed within Task 3.7, *"Hand-over of the platform to AI4EU Foundation".*

Referencing to some confusing language in the project proposal, many partners suggested that the distinction between the roles of the two bodies was unclear. It was suggested that the Foundation should also ensure the continuance of community activities developed by the project and be wholly responsible for the sustainability of all aspects of the project.

All comments, including this final point about the issue of sustainability, from the World Café were noted and strongly influenced the next steps taken by the leader of Task 4.2.

2.2. Engagement with other initiatives

The purpose of engagement with multiple other pan-European associations and initiatives was twofold. Firstly, to discuss the legal and administrative structures of other initiatives to understand if their models were suitable for the AI4EU Association. Secondly, these engagements sought to better understand the respective roles and functions of these associations, allowing the task leader to understand the value and functions of these bodies. This was important, as in designing the AI4EU Association, it was vital to avoid overlap in functions and to identify the specific added value that a new Association could provide to the already vibrant but crowded landscape. Among the organization that were consulted during this period were the BDVA, AIOTA, CLAIRE, EurAI, euRobotics and the International Data Space Association.

Developed following the kick-off meeting, the task leader produced a draft “First Concept Document” on the AI4EU Association. This document, presented below, reflected both the design of the body as outlined in the project DOA and reflected the recommendations and outputs of the project partners as outlined in the previous section. This document was shared with the Executive Board of AI4EU on 18 January 2019.

First Concept Document of the AI4EU Association

The Objectives of the AI4EU Association. The AI4EU project will create an Association with the objective of providing a focal point for the broad European AI community. Europe has an extremely vibrant AI community and a strong reputation in a variety of applied and industrial areas. There are a variety of strong associations and initiatives in Europe, some funded by the European Commission using various mechanisms. For example, there are a variety of public-private partnerships (PPPs) such as the BDVA, euRobotics, AIOTA. Furthermore, some associations/initiatives represent different aspects of the European AI community and related areas, e.g. the European AI Association (primarily an academic organisation), euRobotics (PPP for the robotics community), Industrial Data Space Association (industrial data, Industry 4.0), etc. In addition, there are various organisations representing European industry, e.g. Digital Europe, as well as various NGOs representing consumer organisations, citizens with disabilities, legal, ethical, and regulatory issues, as well as groups that focus on the impact of AI technology on society. There are also a number of “grassroots” initiatives that are more informal in their organisation, e.g. there are two initiatives promoting investment in excellence in fundamental advances in AI, namely, CLAIRE and ELLIS. It is widely accepted that the broad community of AI stakeholders lacks coordination/integration, and that there is an opportunity to bring the community together in a manner that ensures that the collective has greater impact for Europe than the mere sum of the separate activities.

The European Commission has established an independent High-Level Expert Group for Artificial Intelligence (HLEG-AI) and an associated online platform for the European AI community and interested stakeholders called the AI Alliance. The HLEG-AI has a mandate that runs to June 2020.

Therefore, the objectives of the AI4EU Association are as follows:

1. To provide an organisational mechanism to ensure the legacy of the community-building activities of the AI4EU project to maximise the benefit of the European investment in the AI4EU project.
2. To provide an independent and inclusive mechanism to support collaboration and coordination amongst existing and future initiatives related to AI.

It is important to stress that this objective does not, in any way, envisage an outcome whereby any current initiative is replaced. On the contrary, the objective is to provide support and value to those initiatives through the support of collaboration across the European AI community and stakeholders.

Relationship with Existing AI Organisations and Initiatives. To ensure that the AI4EU Association complements, supports, and does not unnecessarily replicate, the existing activities of organisations and initiatives within the European AI community, a set of Memoranda of Understanding partnerships will be put in place with existing initiatives wishing to work with the Association.

Organisational Issues and Structure. The Association will take the form of an independent NGO to support the community and networking activities of the project. The association will be governed by a Board which, in time, will comprise of a set of elected officers. However, since the Association is a key outcome of the AI4EU project, the board will involve, in part, representatives of the AI4EU project, nominated by the AI4EU Executive Board, while the association is becoming established. The Board will be advised by an Advisory Board, appointed in consultation with the Commission.

As part of the MOU/partnership mechanism, each partner organisation will nominate a representative who will be a member of the association’s Committee of Partner

Representatives. This committee will provide a forum to ensure cooperation, collaboration, and coordination, across the European AI community, interpreted broadly.

The association will be operationalised across Member States through a Committee of National Contact Points (NCPs). Each country will have at least one NCP to act as a conduit between the AI4EU association and the national communities that develop in each Member State. These will be people, who are involved in the national AI community, e.g. members of the board of the local EurAI member association, member of the local EU Robotics association, etc. These NCPs are not intended to have any executive/decision-making function, but are connectors. Membership of the association will be at the level of individuals as well as organisations.

This "First Concept Document" includes several different elements. The document opens by describing **the landscape of other initiatives** that have already an established presence in the European AI landscape. The reference to specific organizations is important as these were the organizations that would subsequently be contacted to understand the potential administrative structures and potential added value of the AI4EU Association. Reflecting the views of the project partners in the KO meeting, and the overall objective of the project, the document is explicit that any new association **would not seek to replace any existing initiatives** and did not plan to replicate the activities of already established bodies. Being clear that a new Association would be in "support of collaboration across the European AI community and stakeholders" was also important from the perspective of engaging other initiatives, as it was important for the project to approach these external bodies in an **open and collaborative manner**.

This initial concept sets out two clear objectives for the AI4EU Association. The first related to the function of the Association to "ensure the legacy of the community-building activities of the AI4EU project". This idea reflects what was written in the project proposal setting out the body as having an important sustainability role for the more high-profile and impactful community aspects of project. However, the objective was included in this First Concept Document with some reservations, particularly following the outputs of consultation with project partners where the suggestion was that the AI4EU Foundation should assume all issues related to sustainability.

The second objective of this First Concept Document was the intention for the AI4EU Association to act as a "mechanism to support collaboration and coordination amongst existing and future initiatives related to AI". This objective responded to the reality that the relevance of the AI4EU Association could only be assured by the support of existing bodies already established and with large membership numbers. It was clear that from the time of the proposal to the project start, the AI landscape in Europe had evolved significantly, with many new and strong players developing in the interim. These new bodies, including ELLIS, CLAIRE and the AI Alliance to name but three, shared a similar space to what the AI4EU Association was hoping to develop.

Importantly, while this second objective reflected the recommendation of the AI4EU project partners, and was pragmatic in understanding that collaboration with other bodies was a necessity, the discussion did not include reference to specific unique features of the AI4EU Association that would make it a valuable asset and position it as a body that would attract a critical mass of support among its target stakeholders.

This short document also outlined potential organizational and legal structures that might potentially guide the new body. These reflected the initial concept as outlined in the proposal and were included in order to discuss other possible models as part of planned engagements with other associations.

3. AI4EU Association Version 2.0

In the second quarter of 2019, there was a recommendation from the EC for the AI4EU project to consider working together with AI Alliance and for that body to assume the role of the planned AI4EU Association. This was initiated from the perspective of avoiding further duplication of effort through the creation of another association affiliated to an AI representative organisation.

This Section presents the evolution of the AI4EU Association from the original concept proposed at the proposal development stage to the concept that is currently ongoing as the main core of the task. In Section 3.1, the reasoning behind the re-evaluation of the AI4EU Association is presented. In the following section, the second concept of the objectives of the AI4EU Association are discussed and presented as they were communicated to the AI4EU consortium and to the European stakeholders attending the public launch event of AI4EU co-located within the AI Night in Paris. Finally, Section 3.3 describes the engagement with the AI Alliance with the AI4EU vision strategy, collaborative steps, and future plans.

3.1. Evolution of the AI4EU concept

The first Concept Document for the AI4EU Association allowed the leader of Task 4.2 to initiate a process of consultation with other leading AI initiatives. As mentioned above, the purpose of these engagements was to map the roles of these bodies and assess the legal and governance structures as possible models for the AI4EU Association.

The consultation process was effective in revealing alternative models for the new body, but it also highlighted the narrowing gap that existed for AI4EU to offer something of value to a broad set of stakeholders beyond what was already available from existing associations.

As engagements continued, the issue of what value AI4EU offered to the community was the focus of the task leader. Several concepts were considered as potential areas of focus in order to offer something unique. These included a specific focus on education, industry engagement, prizes and competitions, as well as a model that was solely based on the assets of the Platform. However, while several of possible concepts had clear merits, given the broad ambition of the AI4EU project, none of these ideas were considered of requisite strength to act as the foundation of the AI4EU Association.

In the absence of a clear a value proposition that was unique and powerful enough to engage the project's target stakeholders, the task leader began to explore the extent to which the AI4EU Association might develop strong and meaningful collaboration with existing initiatives. Mindful of the project's commitment to avoid replication of existing activities of the leading AI initiatives in Europe, this approach was deemed the most appropriate if the AI4EU was to both enrich the European AI landscape and build a community to support the On-Demand Platform and the project's community activities.

At this juncture, the Project Coordinator and the leader of WP4 (and Task 4.2) engaged directly with the EC, advancing several ideas on what might constitute the foundation of the AI4EU Association and the potential activities of the body. What emerged from this engagement was a recommendation from the EC that the AI4EU project should potentially enter into a collaboration or partnership with the AI Alliance, the body established to support the work of the High-Level Expert Group for Artificial Intelligence (HLEG-AI). Since its establishment, the AI Alliance has developed beyond its original remit and had grown into a large and increasingly vibrant community.

The AI4EU project leadership considered this collaboration as something that could be mutually beneficial to both organizations and agreed that this partnership had great potential to engage the broader AI community. It had the added benefit of avoiding overlap with existing initiatives and provided the AI4EU project with a ready-made and engaged community of potential users of the On-Demand Platform. In addition, while the task leader of T4.2 did not have specific insights into the profile of AI Alliance members, given the focus and ambition of the HLEG-AI, there was a strong understanding that there was significant overlap in the target audiences for both bodies.

3.2. Second Concept Document

Shortly following the suggestion of collaboration between the AI4EU project and the AI Alliance, the task 4.2 leader developed a "Second Concept Document" for the AI4EU Association. Below is the draft from describing the proposed relationship between AI4EU and the AI Alliance. This document was shared with the Executive Board of AI4EU on 16 April 2019.

Second Concept Document of the AI4EU Association

The Objectives of the AI4EU Association. The AI4EU project will create an association with the objective of providing a focal point for the broad European AI community; this goes beyond the purpose of existing associations. For example, the European Artificial Intelligence Association represents the academic research community in Europe, but has very few industry members or members working outside the technical aspects of AI.

Europe has an extremely vibrant AI community and a strong reputation in a variety of applied and industrial areas. There are a variety of strong associations and initiatives in Europe, some funded by the European Commission using various mechanisms. For example, there are a variety of public-private partnerships (PPPs) such as the BDVA, euRobotics, AIOTA. Furthermore, some associations/initiatives represent different aspects of the European AI community and related areas, such as the Industrial Data Space Association (industrial data, Industry 4.0), etc. In addition, there are various organisations representing European industry, e.g. Digital Europe, as well as various NGOs representing consumer organisations, citizens with disabilities, legal, ethical, and regulatory issues, as well as groups that focus on the impact of AI technology on society. There are also a number of "grassroots" initiatives that are more informal in their organisation, e.g. there are two initiatives promoting investment in excellence in fundamental advances in AI, namely, CLAIRE and ELLIS.

The European Commission has established an independent High-Level Expert Group for Artificial Intelligence (HLEG-AI) and an associated online platform for the European AI community and interested stakeholders called the AI Alliance. Given the scale of the challenge associated with AI, the full mobilisation of a diverse set of participants, including businesses, consumer organisations, trade unions, and other representatives of civil society bodies is essential. While the original intention of the European AI Alliance was form a broad multi-stakeholder platform which will complement and support the work of the AI High Level Expert Group in particular in preparing draft AI ethics guidelines, and ensuring competitiveness of the European Region in the burgeoning field of Artificial Intelligence, it has grown into a sizeable community and provides a basis for reaching out to the broader European AI community. The European Commission plans to host its first Annual AI Alliance Conference in 2019.

In discussions with senior European Commission officials, who articulated the need to avoid duplication of efforts in AI in Europe and supported the concept of the AI Alliance providing a mechanism for establishing a community around AI4EU, we advocate the following approach to establishing the AI4EU community in close integration with the AI Alliance:

1. The AI Alliance platform will provide the primary mechanism for building a broad-based and coherent AI community in Europe. Membership of the AI Alliance will provide access for its users to the services and opportunities created by the AI4EU AI On Demand platform. In effect, membership of the AI Alliance is membership of the AI4EU community. Content from AI4EU will be served to the members of the AI Alliance. However, for particular AI4EU activities/services, members of the AI Alliance will have to create an account on the AI4EU platform in order to fully benefit from those activities/services. The AI4EU platform will, amongst other things, keep the preferences of the members to provide them personalized services.

2. AI4EU Community Managers will work with the AI Alliance Community Manager to support Alliance members get the most out of the AI4EU project and its events, resources, and services.
3. Since the AI Alliance is an open platform, membership of the AI4EU community is also similarly open and broad-based. The AI Alliance platform will carry the AI4EU logo to indicate content and activities coming from the AI4EU project.
4. The members of the AI Alliance who wish to participate in the member state structures/activities of AI4EU will associate themselves with their home member state within the AI4EU platform.
5. AI4EU will identify a set of national contact points to act as liaison officers with the AI Alliance members in their member state, and to provide a conduit back to the AI4EU project.
6. To maximise openness and opportunity for collaboration, AI4EU will establish a Committee of Partner Representatives which will comprise a set of contact points to all major European initiatives related to AI, e.g. it will have representatives of organisations such as euRobotics, BDVA, EurAI, the AIOTA, and others. This committee will provide a forum to ensure cooperation, collaboration, and coordination, across the European AI community, interpreted broadly.

Therefore, membership of the AI4EU community is reflected in the membership principle of the AI Alliance, which is at the level of individuals. Membership of the AI Alliance currently stands at approximately 3000 people, providing a strong seed for the AI4EU community. In time, the AI4EU AI On-Demand platform will be maintained through a dedicated foundation to be established in consultation with the European Commission to ensure the legacy of the project is properly maintained.

This Second Concept Document advocated a partnership with the AI Alliance through integration in several ways. It envisioned a collaborative model that would see AI4EU populate the AI Alliance Webspace with project updates and content of interest. This mechanism would serve to increase the number and quality of inputs to the AI Alliance Platform, while at the same time communicating the work of AI4EU and its outputs to Alliance members, potential users of the AI4EU On-Demand Platform.

The document did not advance an integration of services between the two open and board-based platforms but rather suggested a complementary relationship were there would be a clear set of mechanisms to encourage and facilitate exchange of users.

It is unnecessary to rehearse each of the key ideas raised in the document, but some key points should be noted. The partnership model created a departure point from the previous concept of the AI4EU Association as to pursue the AI Alliance membership principle, membership would be at the level of individuals, and not individuals and organizations as previously advanced. The new concept also shifts the issue of the sustainability of the AI4EU project from the AI4EU Association and positions it as a responsibility of the AI4EU Foundation.

This Second Concept Document presents several potential collaborative avenues between the two bodies. However, these ideas can be viewed as an initial draft and not an agreement in practice between the project and the moderators of the AI Alliance. Indeed, while the benefits of collaboration between the two initiatives was clear, the finer details of how the engagement would work in practice was left as the subject of future discussions.

From the perspective of the AI4EU project, the benefits of this collaboration were obvious. It allowed the project to tap into, and contribute to, a community of 3000 members, the majority of whom should have a strong interest in the work of the project. The solution addressed the challenge of avoiding duplicating efforts in AI in Europe and provided the project with a very clear avenue to generate value within the current European AI landscape.

The project management considered the impending first public AI4EU event as the appropriate moment to announce the collaboration of the project with the AI Alliance. At AI Night 2019, which

took place in Paris on 18 April 2019, Task 4.2 leader Prof. Barry O'Sullivan of UCC, announced the collaboration and explained the potential relationship and respective roles of the two organizations.

Figure 2. Barry O'Sullivan, Leader of WP4, presenting the AI4EU Association at AI Night

4. Engagement with the AI Alliance

This Section presents three distinct sets of actions that took place in the period following the decision to pursue the collaboration strategy with the AI Alliance. The first section focusses on the internal strategy to facilitate effective engagement between AI4EU and the AI Alliance. The second section presents the Integration Plan developed by Task 4.2 partners that sets out the actions and envisioned physical interlinkages between the two platforms. The final section summarises the focus and content of direct communications between the two platforms.

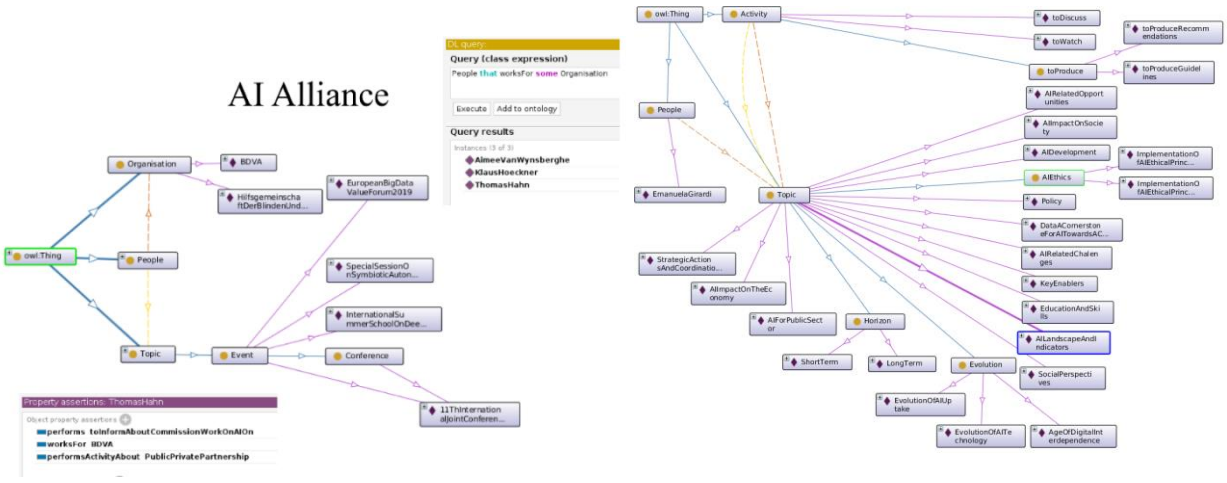
4.1. Internal Strategy

In order to communicate the progress of the development to the AI4EU partners and to enable a more fluid communication with the AI Alliance, two Working Groups were created within T4.2.

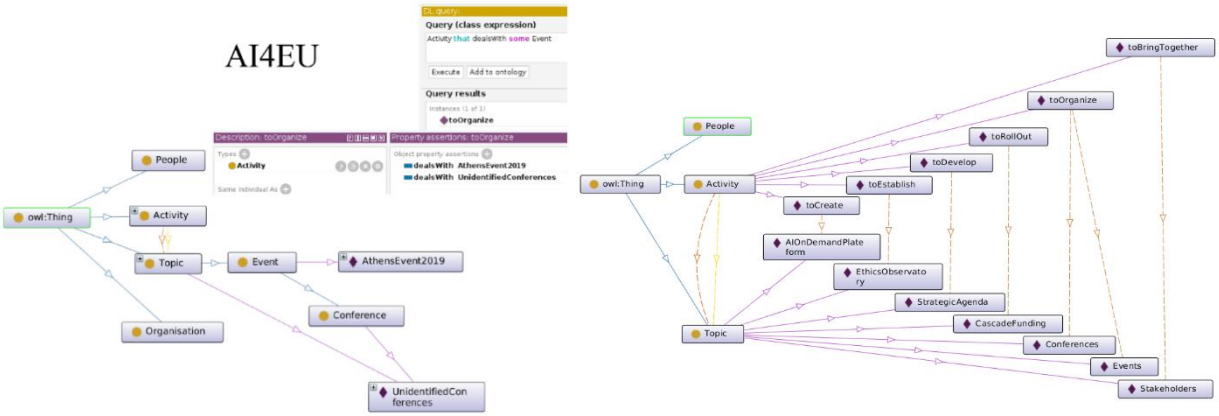
To advance the partnership with the AI Alliance, some deeper understanding on the responsibilities, actions and personnel associated to the initiative was required. This was the focus on the first Working Group within the task. Following internal discussions with the partners of the task and the work package, an initial taxonomy evolved towards having an ontology developed on Protégé.

The second Working group focussed on producing a summary all activities taken within the AI4EU project to be shared with AI Alliance. This work resulted in the document titled *AI4EU activities overview*, which is presented in detail in the Annex. The purpose of this document was to present the AI Alliance with a brief overview of the scope, ambition and vision of the AI4EU project. It was thought that sharing such a document would improve understanding of the project among the AI Alliance moderators, would facilitate more fluid and effective communication and potentially expediate the development of concrete collaborations between the two entities.

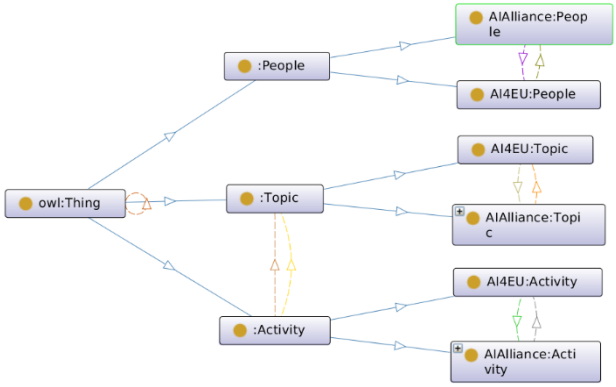
Below is presented some selected outputs of this work of the first Working Group. Some of the AI Alliance topics can be seen in the figure where the main classes associated to the *Organisation*, *People* and *Event* are presented, and in which an organigram of the AI Alliance, participants and main activities can be visually identified.



In parallel, and analogous to AI Alliance described ontology, as a mechanism for a better understanding of the AI4EU activities and responsibilities, an ontology was also created. The AI4EU ontology was also linked to the AI Alliance one, as shown below.



Interlinkage between both, AI Alliance and the AI4EU classes at high level view:



The process of creating these ontologies provided project partners with a better understanding of the both the AI Alliance vision and the AI4EU objectives. In addition, in the creation process and subsequent internal meetings for discussion with the WP4 partners, it became evident that there were some conceptual overlaps between both initiatives. This process was extremely helpful in informing the Integration Plan that would need to be subsequently developed and discussed with the AI Alliance.

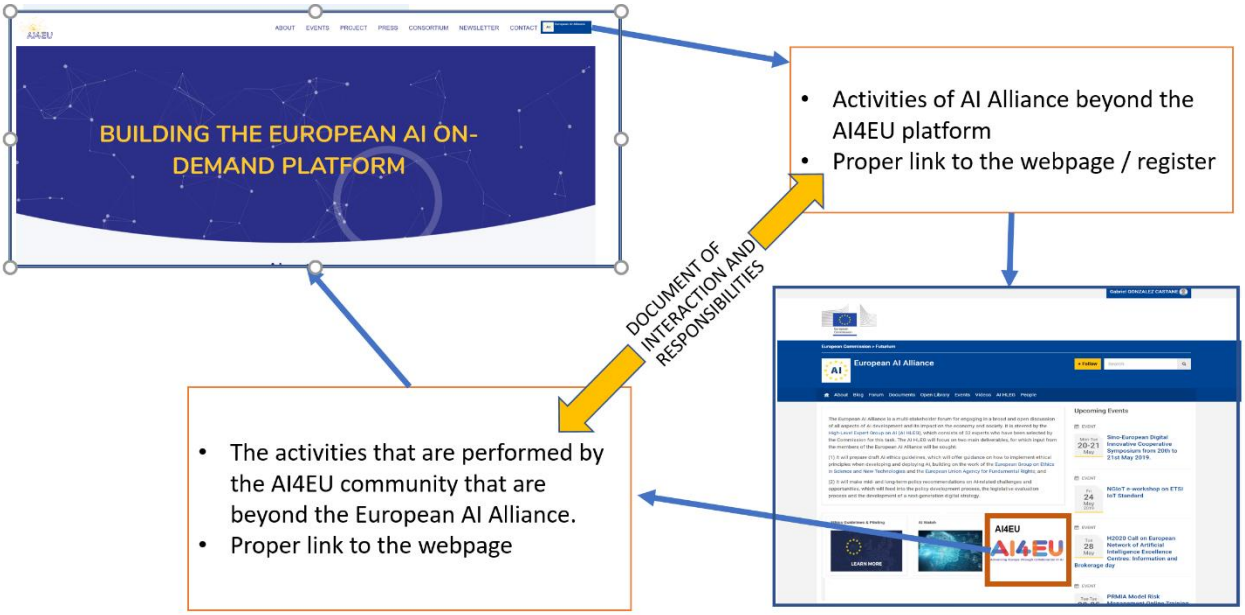
4.2. Integration Plan

The integration plan between the AI4EU and the AI Alliance platforms was developed as a set of actions that can be sequentially implemented over the following months and years. Some of them require an agreement from the end user's perspective in order to be able to join the AI4EU platform seamlessly. The plan can be seen in the following figure:

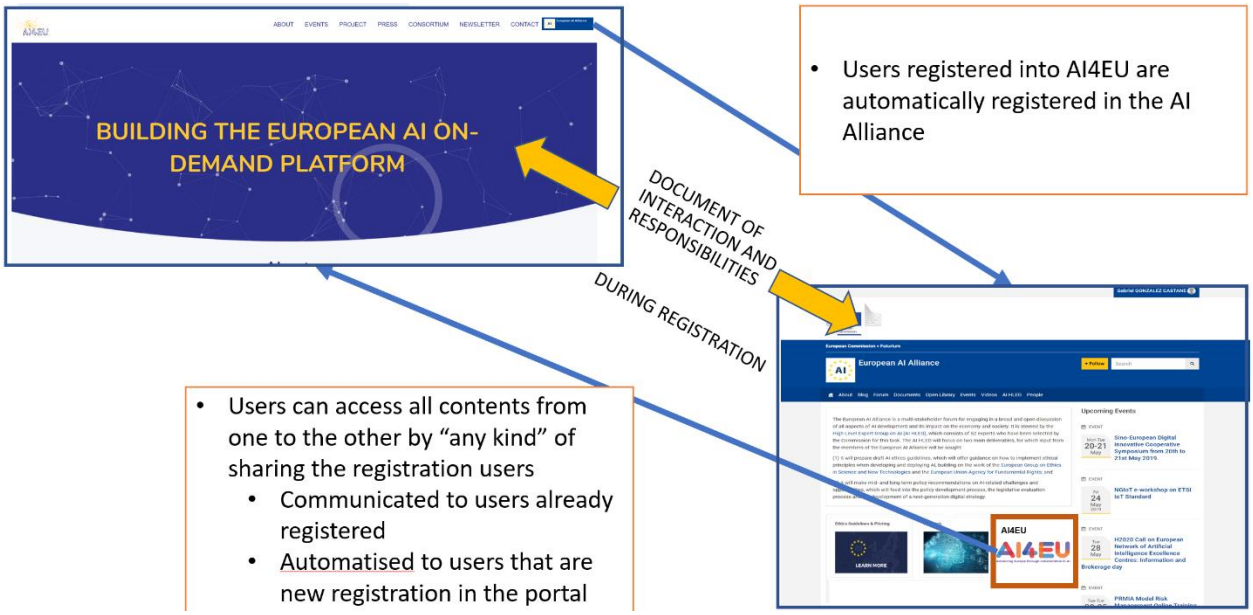
Figure 3. AI4EU engagement steps with the AI Alliance

These steps are described as follows:

- **Static Contents:** To have a plain page included in the AI Alliance web space where members of the AI Alliance can view both the value proposition of the AI4EU Platform and the mechanisms of engagement.
- **Blog:** The creation of a blog within the AI Alliance that will allow the AI4EU members to have a direct presence in the AI Alliance. Some of the more strategic aspects related to AI4EU – events, pilots, open calls – can be described there and used for disseminating items in order to attract more users on the AI4EU platform.
- **Dynamic linkage of AI4EU-AI Alliance:** This is the first step of a more robust engagement between both initiatives. To have a link into the AI Alliance that when the user presses it lands in a page on the AI4EU Platform that have content to attract users on board – news, events, web cafes, pilots, open calls. This part needs to be hosted in the AI4EU environment as having dynamic content in the AI Alliance is complex from a legal perspective. In parallel, having a linkage from the AI4EU Platform to the AI Alliance one, positioning this as the AI4EU Association.



- **Login and register process:** To transparently project the AI Alliance as the AI4EU Association, having the European players moving from the AI Alliance environment into the AI4EU ecosystem and vice-versa, it is necessary to have a single sign on system where the users only need to log in once and can move seamlessly between both spaces. To enable this, it is necessary to analyse the legal aspects of already registered users, and the registration terms and conditions of the AI Alliance. There is the option of giving them the choice of becoming members of AI4EU automatically, in case of new registrations.



- **To host the AI Alliance into AI4EU:** The AI Alliance was created to collect opinion from diverse EU stakeholders, supporting the development of the Trustworthy AI Guidelines. Initially it is envisioned to keep both systems separated. However, the AI4EU ecosystem can offer suitable support to the AI Alliance content and community, representing a potential sustainability plan for both.
- **To increase dissemination in events:** This is a side item that must be present during the development of the AI4EU community in the upcoming years. It is necessary to project the image of the AI4EU members as AI Assembly members. This means to have panellists of AI4EU in AI Alliance events and vice versa. This will increase the attraction of end users of the AI Alliance into AI4EU and will make the AI Alliance more robust as the AI4EU Association.

4.3. AI Alliance Communications

Following the AI Night in Paris in April, the T4.2 leader in collaboration with the Project Coordinator had several informal engagements with the management of the AI Alliance Platform, in order to better define the way in which the two bodies could successfully work together. These discussions focussed on the initial steps that might be taken to develop clear interlinkages between the two Platforms and to begin the process by which AI4EU could begin to add content to the AI Alliance Webpage.

On 14 June 2019, the first formal meeting between AI4EU and the AI Alliance took place via teleconference. The focus of this call was for AI4EU and the AI Alliance to begin to plot the types of exchanges that could be implemented in the short-term. Among the key ideas agreed during this initial discussion was the granting of editorial rights to selected members of the AI4EU project to write blogs on the AI Alliance. This was an important first step as it allowed AI4EU to directly add content to the AI Alliance and inform its community of members of new developments within the AI4EU project.

The second matter that was discussed was the implementation of a mechanism to dynamically link the two platforms. The focus of this discussion centred on the visuals presented above, see demonstrating a short-term solution that would see simple cross referencing on the Websites of both organizations. A more long-term and more integrated strategy was also presented, which focused on the sharing of users and a common registration process. It was agreed that both AI4EU and the AI Alliance would seek to implement the abovementioned short-term actions (blog and interlinkages)

and that the discussions could be further advanced in the forthcoming AI Assembly event that would take place on 26 June 2019 in Brussels.

The AI Assembly event provided further evidence to the leader of Task 4.2 and the Project Coordinator, that the engagement with the AI Alliance was an extremely positive development for the project. The Assembly event included participation of leading figures in the European AI landscape and the quality of debate and discussion was of the very highest standard.

Figure 4. Barry O'Sullivan, WP4 Leader, engaging in AI Assembly

Both during and following the event, the leader of Task 4.2 engaged in detailed discussions with the moderator of the AI Alliance in order to advance issues raised in the recent telco. During this engagement, what was evident was that it was necessary to provide the AI Alliance with some additional information on the overall scope and ambition of the AI4EU project. Indeed, for the AI4EU team, there was also a need for clarity on the long-term plans of the AI Alliance and its intentions beyond the lifetime of the HLEG.

While the focus on the task in the preceding months had been focussed on developing an internal strategy for potential engagement, an action that followed the AI Assembly event included the establishment of a second Working Group within the task that would need to compile the aforementioned "AI4EU Activities Overview" document that would be shared with the AI Alliance.

A final output of the engagement in the AI Assembly event was a commitment from the AI Alliance that AI4EU would be kept abreast of developments within the Alliance and its future plans.

5. AI4EU National Contact Points Network

Within the project proposal, the NCP network was identified as “the initiators of the AI4EU Association”. It would be a group of individuals that would use their research reputation, their broad network, and knowledge of national AI landscapes to untie a broad and geographically and culturally diverse set of target stakeholders behind the vision of AI4EU.

Given the pivot in direction of the AI4EU Association as described in the Sections above, it was necessary to reimagine the role of the NCP network and how best it could serve and benefit from the AI4EU project.

The following Section opens with a discussion of the objectives of the NCP network, including the development of as set of Terms of Reference to guide the activity of the group. The second part of the following Section focusses on the motivations and challenges of the network, including the NCP activity as it relates to the project’s draft stakeholder engagement strategy. The third part describes the activities to expand and complete the network. Finally, the section concludes with a presentation of some initial activity of the network that points to the future value that the NCPs can bring to the project.

5.1. The objectives of the NCP network

No longer fundamentally tied to the AI4EU Association given the collaboration with the AI Alliance, the role of the NCP network needed to be better defined in order to progress the task. While parsed of the role of helping establish the Association, it remained the case the NCP network had an extremely important role to play within the project.

The ignition of the network was delayed as a direct result of the change in the direction of the AI4EU Association but when direct engagement began, the focus was on understanding and agreeing on the objectives of the NCPs. An initial concept of refined objectives linked the dimensions of the contributions expected was developed and is presented in Figure 5.

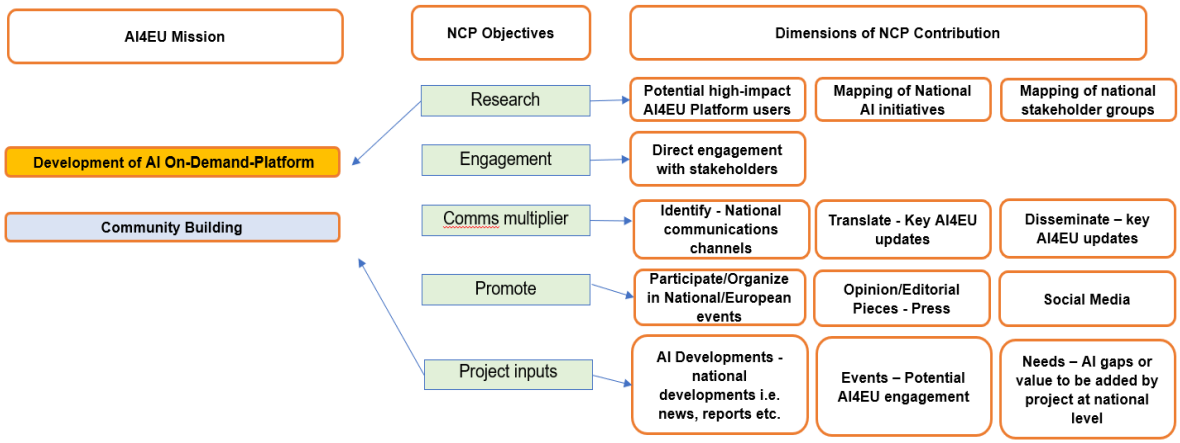


Figure 5. Dimensions of NCP contributions and Objectives defined during the NCP meetings

The objectives identified for the NCPs can be grouped in five key aspects, these are: *Research*, as most of the NCPs are researchers in academia or industry they have a strong interest in engaging in the latest AI trends and developments; *Engagement,* to contact and interact directly with target stakeholders of the project; *Communications multiplier,* disseminating activities from AI4EU at a national level (including translation and engaging professional network) *Promotion,* participating in the media channels and events; *Project Inputs,* to help with Platform development and community building activities through sharing of experiences or needs of national and other European initiatives.

Having mapped the objectives and possible contribution of the NCPs, the next step was to translate these concepts into a working document that could be shared with the network with a view to receiving inputs and to better understand the needs and expectations of each individual NCP. Presented below are the Terms of Reference shared within the NCPs for discussion to formalize engagement.

NCP Network - Terms of Reference

NCPs were appointed during the proposal development stage of the AI4EU project and the current list covers 21 countries. The Executive Board of the project is engaged in an ongoing action to recruit individuals to cover nine additional countries (Bulgaria, Denmark, Estonia, Lithuania, Luxembourg, Romania, Croatia, Malta and Cyprus). The complete list of NCPs will cover all Members of the European Union and Norway and Switzerland, which have a working arrangement with the European Commission. The Executive Board also has discretion to add NCPs from additional countries.

Purpose

1. To undertake **research** on the AI landscape in their respective countries in order to understand the AI needs in a national context.
2. To **engage** with high-level and select stakeholder groups to encourage engagement in community activities (events, webinars, etc.) and with AI tools, in particular those available on the AI4EU platform and community activities.
3. To act as a **communication and dissemination multiplier** to ensure AI communication activities in the context of AI4EU reach the largest and most appropriate audience.
4. To make **inputs** to the AI4EU project on national developments, requirements, and opportunities.
5. To **promote** the AI4EU project in high-profile National and European engagements.

Specific Tasks

The role of the National Contact Points is to:

- Serve as liaison between the national AI communities and the AI4EU project.
- Highlight/flag/provide relevant AI activities from their national AI communities to the AI4EU project.
- Share information about the progress and activities of the AI4EU project with national contacts/groups/networks.
- Identify/introduce/suggest relevant national and European high-level stakeholder groups to participate in the AI4EU platform and community activities.
- Leverage/find/participate in relevant events/talks/speaking opportunities to introduce the project and encourage the participation of the targeted audience.
- Use social media tools and other publication medium to disseminate progress of the project.
- Identify/introduce/update new policies, regulations, programmes, developments, and opportunities relevant to AI R&D, AI applications and AI education and training to the project.
- Identify opportunities (e.g. public consultation) for the project to contribute to new national policies, regulations, programmes, developments, and opportunities relevant to AI R&D, applications and education & training.
- Identify/register to attend key AI relevant national and EU conferences/events as speakers/moderators/participants to network, inform and excite the peer participants about the project, its progress, and relevant benefits (e.g. open calls, resources, experts etc.).
- Write/publish opinion pieces about AI practices, perspectives, prospects of respective countries within EU context at pre or post country leaders' visits at national, bilateral or

inter-EU engagements to highlight the importance of the project for the EU overall economy and their respective socio-economic advancements.
- Engage/participate in press activities at a national level to provide the public with goals and objectives of the projects and their progress.

5.2. NCP Network: Motivations and Challenges

Following presentation and discussion of the Terms of Reference with the NCPs in the first teleconference call, and on a one-to-one basis, a clearer picture emerged as to the motivations and challenges of the different individuals. Understanding this was important as it would help set realistic expectations of what the network could do for the project and it would inform the selection of the most effective engagement and communications strategy with the group.

Some of the key motivations and challenges identified include:

- While NCPs are key players in the outreach activities of the project, AI4EU could represent an important instrument for NCPs to promote the progress and activities of AI development in their respective countries and regions.
- NCPs were happy to engage in activities including communications, collaboration, joined efforts, and dissemination of the project to the stakeholders in their territories.
- The NCPs and their affiliations can leverage their participations in the AI4EU to boost their visibilities and access to new funding and publication opportunities.
- Professionally, AI4EU NPCs can benefit from the network itself, including as it does high-level academics, business leaders and high-ranking government officials who have access to wide networks and overall understanding of the AI landscape in their territories/countries.
- NCPs are high performers with multiple commitments, and several members expressed concerns about the amount of time needed to effectively undertake the role and sought direct guidance on the best way to act as “communication multipliers” as outlined in the Terms of Reference.
- Constraints on the travel budgets of partners in the project was alluded to as an obstacle to participation in AI4EU project events, which was deemed necessary in order to network with project partners and keep abreast of latest developments. This aspect was highlighted in a WP4 Workshop in July of 2019 where it was discussed and agreed the seek of mechanisms by the managerial levels of the project to fund the NCPs activities and travels, mainly from national sources.

As outlined in the Terms of Reference, one of the key aspects that NCPs would carry out as is the direct engagement with stakeholders in their countries/territories. Taking into consideration the feedback of the NCPs, the Task leader was eager to facilitate a light-touch mechanism for NCPs to begin to engage national stakeholders. A very basic ‘Stakeholder Engagement Template’ was developed as a framework to help NCPs structure and systematically map their national stakeholders. This template includes a list of stakeholder types under the headings Government, Industries and Business, Academia, Social Organizations, Associations, Strategic Groups, Citizen Groups, and Others.

Subsequently, as part of the project’s broader ‘Draft Stakeholder Engagement Strategy’, the NCP Network was the first group that was consulted for inputs. Sharing this draft strategy with the NCPs was deemed important as would help the network to map the national AI initiatives, the national stakeholder groups, AI development resources (e.g. national reports, strategies, plans, reports, and profound news), to identify events in which AI4EU can participate or the NPCs can join on behalf of the project in their countries/territories.

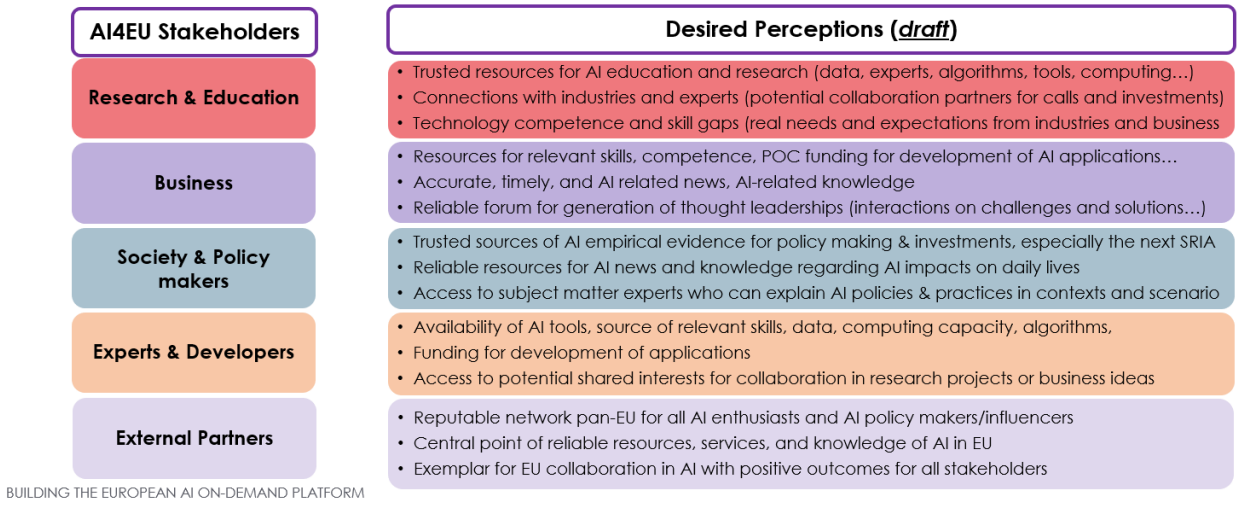


Figure 6. Extract from AI4EU Draft Engagement Strategy

Sharing this draft engagement strategy document could also trigger the identification of gaps or values that the AI4EU project might manoeuvre to close, or new demands that required a solution. As the engagement strategy matures, the NCPs can also work with the project to address the gaps at national levels and AI4EU can expand effort continent-wide. By engaging with this document, the NCPs can also identify the project's potential for the regional collaboration. Finally, the engagement strategy, when fully developed, will also help to create a two-way communication in directing and redirecting the AI initiatives at a pan-European level to align with national and territorial initiatives to maximize the investments to reach better collective impacts. The NCPs have a clear role here.

5.3. NCP network consolidation

All the originally appointed NCPs were members of the AI4EU project, with 21 countries covered in the project proposal. An immediate job for the task upon its commencement was to further expand the network to cover as many European countries as possible.

In order to fill the missing gaps with appropriate individuals, a call was made to project partners to nominate suitably qualified and motivated people that might be a good fit to undertake this role. The call resulted in a number of strong nominations, including the nominations of the WP4 leader Professor Barry O'Sullivan. A list of additional new NCPs was generated based on the key criteria of being familiar with AI areas (e.g. research, teaching and learning, investments, key discussions), having a strong professional reputation, having strong and wide outreach networks, and/or being in positions to have strong visibility of AI progress in their home countries/territories.

Based on the key selection criteria, the task leader conducted desk research on the new proposed NCPs to validate their potential compatibilities to the project. The list, including summary profiles, were submitted to the Executive Board (EB) of the project for approval. The EB subsequently approved individuals among the nominations. The task leader then invited those individuals to consider assuming the role of NCP for their respective country. The invitations included the official invitation to become the NCP, the summary of the project, the potential mutual benefits, and the Terms of Reference for them to understand what was expected of them in the role. Some follow-up one-to-one calls were conducted to persuade the invited NCPs to take on the assignments. While most of the approached NCPs ended up accepting their involvement with the project, some were unable to collaborate due to other commitments. A complete list of the original and update list of NCPs is presented in the Table below.

Table 1. Dimensions of NCP contributions and Objectives defined during the NCP meetings.

Country	Initial NCP	Current NCP
Austria	Dr Roman KERN	Dr Roman KERN
Belgium*	Dr Tom LENAERTS	Dr Tom LENAERTS
Czech Republic	Dr Marek HAVRDA	Dr Marek HAVRDA
Finland	Dr Roope RITVOS	TBC
France	Dr Jerome KODJABACHIAN	Dr Gérard BIAU
Germany	Dr Joachim KOEHLER	Dr Joachim KOEHLER
Greece	Dr Costas D. SPYROPOULOS	Dr Costas D. SPYROPOULOS
Hungary	Dr Németh GEZA	Dr Németh GEZA
Ireland	Dr Barry O'SULLIVAN	Dr Barry O'SULLIVAN
Italy	Dr Amedeo CESTA	Dr Amedeo CESTA
Latvia	Dr Aivars BERZINS	Dr Andrejs VASILJEVS
Netherlands	Dr Milan PETKOVIC	Dr Milan PETKOVIC
Norway	Dr Ieva MARTINKENAITE	Dr Ieva MARTINKENAITE
Poland	Dr Xabier CHAO	Dr Tomasz MAZURYK
Portugal	Dr Joao Paulo COSTEIRA	Dr Joao Paulo COSTEIRA
Slovakia	Dr Marek BUDZEL	Dr Marek BUDZEL
Slovenia	Dr Spela STRES	Dr Spela STRES
Spain	Dr Javier VAZQUEZ	Dr Javier VAZQUEZ
Sweden	Dr Alessandro SAFFIOTTI	Dr Alessandro SAFFIOTTI
Switzerland	Dr Hervé BOURLARD	Dr Hervé BOURLARD
United Kingdom	Dr Antony COHN	Dr Antony COHN
Lithuania	-	Gintas KLIMTYS
Bulgaria	-	Dr Gennady AGRE
Denmark	-	Dr Mads NIELSEN
Luxembourg*	-	Dr Tom LENAERTS
Romania	-	Dr Adina Magda FLOREA
Malta	-	Dr Alexei DINGLI
Cyprus	-	Dr Antonis KAKAS

* Acting for Belgium and Luxembourg

Subsequent to the expansion of the NCP network, a dedicated closed group on the AI4EU Platform was set up to encourage collaboration and to facilitate informal and ongoing communication.

Given the original set of NCPs were members of the consortium, these individuals already had a very strong understanding of the project's vision, mission, objectives, target stakeholders, which was vital for them to communicate the message of AI4EU to their national networks. In addition, while in many cases their budgets were not significant, these individuals did have some ability to use project funds to undertake activities on behalf of the project.

The opening of the NCP network to individuals and organizations not involved in the consortium raises several challenges. Specifically, these individuals are likely to be less well informed on the project overall. Additionally, these individuals have no budget to host national events, develop communication materials, or travel on behalf of the project. These matters will be addressed in 'next steps' mentioned in the conclusion of this document.

5.4. Activation of the Network

The NCPs started their outreach activities from July 2019, and this has already shown encouraging results, demonstrating that the network will be an important channel for the AI4EU project to grow its presence.

Belgium: On 6-8 Nov, the NCP in Belgium presented AI4EU at the 31st Benelux Conference on Artificial Intelligence (BNAIC 2019). At the three-day conference, he presented the AI4EU and its relevant work packages (e.g. pilot experiments and open calls) for the attending business community of hundreds. In the role of a member of the Advisory Board, the NCP was able to identify the best opportunity for AI4EU to be presented to the most potential groups of attendees (i.e. business sector) while he was able to influence other members of the advisory board about the presence of AI4EU and how it could collaborate with the BNAIC in the coming years. The conference was an opportunity for the NCP to demonstrate his leadership in the community within the BENELUX region and he brought back to the AI4EU with a clearer picture of trends, key initiatives and innovations in AI among research, business, and academia.

Poland: On 14 November 14, the NCP for Poland delivered a keynote speech at the annual IT@Bank conference held in Warsaw. The conference was organized by Polish Bank Association with the affiliated Banking Technology Forum. IT@BANK is the largest and most prestigious meeting of the IT environment in Poland with the Polish banking sector. The NCP presented the AI4EU project and the prospective AI applications in the sector. The messages reached over 600 attendees - including representatives of scientific circles and representatives of ministries, parliament and institutions cooperating for the development of the Polish economy. The NCP also got familiar with the most up to date innovations which can be of a mutual benefit for both ICT providers and banks, our focus and interest is focused also on harnessing artificial intelligence.

Lithuania: The NCP for Lithuania joined the network as the Deputy Director of the Agency for Science, Innovation and Technology (MITA), the main governmental institution, responsible for implementation of innovation policy in Lithuania. MITA and the NCP are responsible for implementing a project dedicated to AI promotion in Lithuania starting in October 2019. The first introduction of the AI4EU project was made at the FinTech Inn Week that was held from 27-28 November 2019 in Vilnius, Lithuania. The event gathered over 500 of attendee from business, policy-making agencies, start-up community and others of the innovation ecosystem.

Cyprus: The NCP for Cyprus started promoting the AI4EU project's activities by inviting a leading academic to give a talk on 7 November 2019 at the RISE centre (http://www.rise.org.cy/en-gb/) in Cyprus. He informed the centre about the project, its key objectives and target stakeholders to hundreds of participants at the talk and in his own presentations.

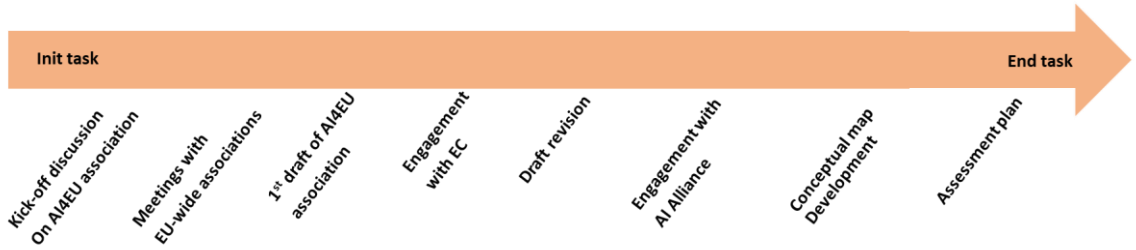
Sweden: On 24 Oct, the NCP in Sweden presented AI4EU in front of the Swedish Association of Local Authorities and Regions (SKL: Sveriges Kommuner och Regioner). SKL represents the local governments in Sweden, and it includes all of Sweden's municipalities and regions. The NCP provided a 40-minute introduction to AI4EU to an audience of about 70 local authorities, followed by a question-answering session. There was considerable interest from the participants, and representatives from two Swedish regions approached the NCP to investigate the possibility to become an AI4EU partner European Region.

6. Conclusion and Next Steps

This final section of the D4.2 document presents the conclusions and next steps of both the AI4EU Association and the AI4EU NCP Network. As explained above, while the two activities were originally conceptualized as being intrinsically interlinked, the evolution of the task has seen the two bodies develop into separate strands. The AI4EU Association, now incorporated within the AI Alliance and the NCP network acting as a communication multiplier and AI4EU representative at a geographical level.

6.1. AI4EU Association

Presented below is a timeline of the key developments undertaken in the development of the AI4EU Association from the start of the task in Month 1 of the project.



- **Kick-off discussion on AI4EU Association:** Very varied and open. Aspects to be included (e.g., education, industrial others)
- **Meetings with other EU-wide associations:** UCC meet BDVA, International Data Space Association, etc. To better understand legal and other aspects of the establishment of a pan-European association.
- **1st draft of AI4EU association developed:** UCC and THA developed an AI4EU Association document to be discussed with EC
- **Engagement with EC:** Suggested collaboration with AI Alliance
- **Draft revision:** Incorporating potential collaboration with AI Alliance
- **Engagement with AI Alliance:** UCC meeting with AI Alliance
- **Conceptual Map development:** Creation of document – taxonomy/conceptual map - on the value added from AI4EU to the AI Alliance and vice-versa.
- **Assessment Plan:** Performance and evolution plan will be described to see how to measure efficiency within this task after its finalization.

AI4EU Association next steps:

Engagement in Events: An ongoing activity and one that is planned to materialise in mid-2020 is the increased involvement of AI4EU and AI Alliance representatives in one another's events. Moreover, following the revision to the project's Events strategy, the Strategic Events Committee of AI4EU have identified the AI Assembly in the Summer 2020 as a landmark event in which the project needs to have a strong presence. Similarly, with the project holding fewer, but larger events, AI4EU wishes for the AI Alliance to have strong input to the programme of these events, held in 2020 and 2021.

Invitation for AI Alliance members to join AI4EU On-Demand Platform: To date, there has been no explicit invitation for AI Alliance members to join the AI4EU Platform. This was a strategic decision, as it was deemed important that the project send this formal invitation to Alliance members only when the AI4EU Platform was developed to the point where it was certain to engage its community of users. Following the launch of V1 of the Platform in early 2020, the most appropriate timing for this engagement would seem to be a public invitation during the AI Assembly event in 2020.

Sustainability and potential integration: The AI Alliance platform is currently being updated and will involve new release is scheduled in early 2020. This ongoing work is the reason for the delay in implementing the most basic form of interlinkages described previously. However, a more fundamental question remains regarding the long-term plans of the AI Alliance. Should it transpire that following the expiration of the term of appointment of the HLEG, The European Commission decides to remove support for the AI Alliance platform, the AI4EU project believes that it is in a position to fully integrate the community into its Platform. Given the remit of the AI Alliance, and the profile of its users, a natural home for this community would be within the AI4EU Observatory on Society and Artificial Intelligence (OSAI). The goal of the OSAI is to support the distribution and the discussion of knowledge about the Ethical, Legal, Socio-Economic and Cultural issues of AI (ELSEC-AI) within Europe, something very closely aligned to the current work of the AI Alliance.

6.2. National Contact Point Network

Presented below is a timeline of the key developments undertaken in the development of the AI4EU NCP network from the start of the task in Month 1 of the project.

- **NCP Defined:** All NCPs contacted to identify if they planned to continue in role
- **Access to EXO Platform:** Creation of shared space in project's internal communication tool
- **Roles and responsibilities:** Development of the initial Terms of Reference for discussion
- **Meeting with NCP:** Teleconference with NCPs to understand interest and level of engagement
- **Roles and responsibilities:** Development of updated Terms of Reference
- **NCP Engagement Strategy:** Internal Tasks initiative to understand the most effective mechanisms to engage NCP Network
- **1st Official Meeting of NCP Network:** Teleconference to engage the network and update NCPs about on project activities.

NCP Network next steps:

Dedicated space on AI4EU Platform: A map-based presentation of the NCPs network will be created on the Platform. The visualisation of the NCPs presence and their connected network will be of value to the NCPs and the Platform users.

Improved collaboration environment: Along with the initial communication and ideas exchange on the Platform's dedicated group, the NCPs will soon (Jan 2020) have functionality to share relevant information in different formats (e.g. doc, ppt, pdf, CVs, jpeg, video, audio files etc.) when the first version of the Platform is launched at the end of January 2020. This dedicated space will include overall dedicated strategy documents, resources and materials from the AI4EU project.

Dedicated communication strategy: The AI4EU partner with responsibility for Communications and Dissemination is currently in the process of developing a bespoke communication strategy document for the NCP network.

Map of European AI development: Given the unbalanced nature of AI development and investment in Europe, efforts have already begun among the NCPs to collect information about those AI programmes, initiatives, projects, and innovations, and to share this information with one another. Once the initial collection is available, gaps and imbalances will be identified and presented to the NCPs for discussion. It is hoped that NCPs might have the capacity and interest to develop best practices, and "how-to" guidance to help one another to tackle the identified imbalances and gaps. The learnings will also be useful for the AI4EU project across several areas including the open calls, experiment pilots, technology gaps, and inputs for the Strategic Research and Innovation Agenda (SRIA).

NCP Workshops: Several NCPs have advanced the idea of NCP-led workshops or events in their countries/territories. This activity will be beneficial for the AI4EU, for the NCPs and their affiliations. Discussion on how and mechanism to optimise this type of activity will be advanced among the NCPs for 2020-21 plans.

AI4EU Platform user requirement survey: An action that will be rolled out in the first quarter of 2020 is a survey, at pilot scale, seeking inputs regarding users' requirement on the AI4EU Platform. This will focus on the technical requirements, technical skills, and AI competence market matchmaking. The NCPs, with their national understandings, will be able to address the relevance of the survey's content before it is rolled out to the public and AI4EU Platform users to complete. In addition, the NCPs can engage many potential users of the Platform in their network when the official survey stage is activated.

Expansion of the network: The current NCPs are high performers and prestigious professionals and they are increasingly receiving more opportunities to work with other initiatives and activities. Therefore, it will be useful to consider a possible expansion of the network from one NCP to two-three per country to reach the right stakeholders. This action will be considered in the second half of 2020 when the current NCPs' activities show more concrete results and/or limitations.

Regional partnership: Some smaller but very active regions in AI development and investment could be nurtured into strong collaboration regions with the AI4EU project with support from NCPs. This action will be proposed to the NCPs for their consideration and support and the AI4EU representatives in charge of the regional collaboration will present ideas and approaches so that the NCPs will be able to join forces.

Network sustainability: As the Platform become more mature, the roles and contributions of the NCPs network may grow larger and evolve into a network of experts that sustain their operation and union beyond the lifetime of the AI4EU. The current organic trajectory of the network shows that it is possible and if it is the case, the NCPs network can become a reliable and credible source of experts for policy makers in the EC to consult, for investors to seek insights for investing decisions and for SME, Start-up and business to come for local and context-based current understandings and future growth.

6.3. Conclusion

While the objective of Task 4.2 could not have been clearer, the Establishment of European AI4EU Association, the vast majority of activities undertaken throughout its duration were concerned with putting place a strategy that would negate the need to establish this new body. As previously outlined, the realignment of the task was born for a need to develop something of value that responded directly to the project's community building needs. This had to be achieved in the context of a very changed and increasingly crowded landscape of European AI representative bodies, with AI4EU committed to avoiding duplication in activity. The commitment to avoid further fragmentation and to develop an AI community that could ignite and enrich the AI4EU On-Demand Platform and community activities led to a collaboration with the AI Alliance.

While this partnership has clearly the potential to work to the advantage of both organizations, the collaboration is very much in its infancy. The strategy to establish Platform interlinkages and crossover in content and users is in place. However, the full blossoming of the partnership is unlikely

to take place until the removal of uncertainty over the future activities and sustainability of the AI Alliance platform.

The pivot in the direction of the AI4EU Association also led to a reassessment of the roles of the network of National Contact Points. However, the role and responsibilities of the network were clarified relatively quickly, and already through a diverse set of activities from individual NCPs, the value of the network to the project is becoming clear. The next steps are clearly to put in place some formal communication structures to allow the NCPs to effectively and efficiently spread the messages of AI4EU within their national networks. This will be of increasing importance as new features and functionalities of the On-Demand Platform come online in the first half of 2020.

The leader of Task 4.2 and the partner organizations are satisfied that they have put in place a strategy and set of structures that will allow a strong collaboration to develop with the AI Alliance and for a vibrant NCP network to mature into something that will allow the project outputs to reach a broad and diverse set of stakeholders. The next set of activities, migrated to task 4.3, will reveal the extent to which the activities to date have been a success.

7. Annex I

Title:	*AI4EU activities overview*
Version:	*1.0*
Author(s):	*Gabriel González Castañé (UCC), Shaun Gavigan (UCC) and Barry O'Sullivan (UCC)*
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1. Platform

The AI4EU ecosystem provides a platform to lower barriers to innovate with AI by defining, designing and implementing the technical components to provide a consistent one-stop-shop for the European community. The first step is the community portal to allow enrolment of users, experts and newcomers in the AI field, from accessing and finding interesting AI content. The second step will include AI components referencing and first tools for rapid prototyping of AI components into AI services based on the Acumos open-source framework. Interfaces with existing European AI platforms like BEAT, Human Brain Project and Bonseyes are planned. Technical design includes containerization for components allowing scaling AI services, validated by the support for pilots and trials and potential use of HPC environments.

1.1. Architectural overview of AI4EU platform

The overall architecture of the Platform is designed to include a comprehensive service layer. The Platform is composed of three main compartments: A) Web based Compartment to enrol, share knowledge and animate the European AI community, B) Secure and Sovereign Technical Compartment to reference, register and orchestrate AI modules and implement a fast prototyping AI Studio. C) HPC Trial Spaces Compartment to deploy and carry out Pilots from Research and Industry delivering state of the art resources (CPU, GPU, storage) to the project needs. Day-to-day operation support resources will be provisioned, for Service Level monitoring, troubleshooting, and of security strategy. Interoperability to existing platforms is key to boost take up of AI4EU capitalizing on the experience gained by partnering platforms (BEAT, HBP, Bonseyes) and other Leading European platforms.

1.1.1. AI Resources

As part of the platform core components, an Assets Repository, a Design Studio and Playground for fast prototyping, are available to registered users. AI4EU will capitalize on recent open-source project, such as Linux Foundation Acumos Assets Repository & Design Studio as a unique entry point, to assemble and orchestrate different AI components. Containerized approaches will be improved to facilitate the use of different datasets and to provide openness. An AI Playground will be deployed on the user desktop or in a secure cloud environment provided by the platform (limited resources for a limited time). The AI Playground will allow the user to design a basic AI experiment from scratch or start from existing bundles including relevant datasets. Users will be able to assess the usefulness of AI resources for knowledge and service creation. Advanced AI resources and showcases resulting from Pilots are integrated into Assets repository. It is of high relevance of the project to ensure that the overall quality of the Platform and the integrated AI resources (tools, algorithms, application, data) is of high value and of high-quality regarding performance and usability. A quality assurance and benchmarking processes will be applied to provided and integrated AI resources from the community.

1.1.2 Trial Execution Environment, Bundling & Orchestration

HPC resources are part of the AI4EU platform to secure and sovereign environments for Pilots from Research and Industry. AI components orchestration and deployment will be potentially done with real life private data, real life IT resources and adapted security conditions. The targeted infrastructures include non-commercial HPC platforms like BEAT or BSC Access to data should be carried out in respect of privacy and IPR requirements through deployment of specialized Data Governance frameworks like Industrial Data Space. Targeted infrastructures are also Private clouds in Industry partner perimeter. To take the best of HPC for AI, parallelization of the work, and orchestration must be adapted and optimized for proper scalability, as well as solutions to host AI bundles that can be queried and inspected programmatically.

1.1.3 Integration of results

The pilots carried out in AI4EU will be supported to select the appropriate AI resources and to use the AI4EU platform to realize and run the pilots. The results of the pilots, like data sets, showcases, applications are foreseen to be integrated in the Platform. The R&D activities within the ecosystem

will also be supported on the platform. Finally, the partners of the cascading funding and external research partners will be guided to use and to enrich the AI4EU Platform.

1.1.4 Interoperability & AI European partnering platforms

Interoperability is a success factor. The main objective of this task is the design and implementation of a mechanism that ensures AI knowledge encoded in R&D experiments is shareable, findable and interoperable on different environment including HPC platforms. To do so, multiple resources contained in AI experiments (workflows, algorithms, software stacks and data assets) will be bundled in a shareable archive. A unique system will then support import/export bundles, allowing objects to be cross-referenced by the AI4EU Platform. Bundle mechanisms are implemented to transparently execute, locally or on a HPC platform of choice.

1.1.5 European Data for AI

Relevant European data to fuel AI research and experiments will be referenced. This includes major languages, image recognition and data science corpora. All corpora will be assessed technically, scientifically as well as in terms of ELSEC requirements. The existing catalogue of the DIAS/Mundi programme will be integrated with specific requirements of the project. These platforms are assessed for their ability to provide usable data for integration, most prominently the European Data Portal, BIG IoT, and the Data Market Austria. The activities will include the automatic matchmaking recommendations between datasets and AI components such as algorithms or services. The industrial Data Space governance framework will be reused and configured for each relevant AI4EU use case.

1.2. Community Tools

This task aims at delivering in the first year of the project the web-based interface to enroll and animate the community, specifications being elaborated include on-boarding, tools for webinars, newsletters, web meetings, as well as social networks tools like walls or slack when relevant. A Content Management System is provided to create and maintain AI4EU website. To assume a large scalability, these Community tools are hosted on classical commercial European cloud environment. These community tools are seamlessly integrated to allow a unique User Experience from knowledge discovery to AI components technical understanding and usability.

1.3. Search and Discovery

The search and discovery engine will allow experts and newcomers to retrieve knowledge about AI, discover the EU AI landscape and resources. This key component is based on semantics technologies, especially dynamic AI ontologies and knowledge graph to allow each type of users to navigate easily through AI contents. Collaborative mechanisms involving AI4EU experts and users in place to create these ontologies and knowledge graph. The engine will target also technical repositories (GitHub) as well as recommendation for data sources. To assume the best scalability, the engine, for the Open web, will rely on dedicated features developed by QWT to crawl specifically the multilingual European Web, integrated into the AI4EU portal. AI4EU will include its own Search tool with advanced AI based features for internal repository. It will capitalise on open-source solutions (e.g. Elastic Search) and integrated to the repository and indexes proposed in the open source Acumos project. Future versions will include knowledge graph search and be interfaced with QWT solution. In addition, geospatial search features related to the existing catalogue of the DIAS/Mundi programme will be integrated.

1.4. Providing and modelling knowledge on AI

The collected AI resources will be modelled, stored and exposed using a semantic approach. One important activity is the creation of graph-based data model to capitalise on the search engine functionalities and to respond appropriately to users' queries. Based on previously established work on the conceptualisation of software, data, machine learning processes etc., the AI4EU ontology, a specification using Semantic Web technologies (like the RDF / RDF-S and the Web Ontology Language specifications), will be designed and created. The ontology will be improved and enriched through several iterations during the project. The process will entail inconsistency and non-satisfiability checking to ensure that the representation is semantically complete and valid.

1.5. Sustainability of the platform - Hand-over of platform to AI4EU Foundation

The hand-over process of the AI4EU Platform has been planned within the lifetime of the AI4EU project. First, the creation of a Foundation will be supported as a sustainable organization to either raise funds, ensure the transparency and the promotion of European values and to take over the Platform and its operation and scale up. Then, the sustainability concept for the follow up project will be elaborated, including a Platform operation handbook as deliverable. Then this plan will be executed. Therefore, representatives of the Foundation and of the follow up project will be trained and informed how to install, use, enrich and operate the whole Platform, including all relevant components. The requirements of the IT infrastructure will be defined and documented to allow the Foundation to provide the IT resources. The installation process of the Platform in this new infrastructure will be supported facilitating the operational management ensuring a smooth transition.

2. Ecosystem development

The AI4EU ecosystem targets to actively engage with innovators and developers in all sectors creating a wide user community, including non-AI experts. The principles of our approach to community building include, but are not limited to: lower barriers to use AI technology; make AI technology visible, accessible, usable; make experts knowledge available; AI should become a commodity for users and non-AI Experts.

The community targets to bring together the various stakeholders across Europe: Academic world (students, researchers); Academic AI Leaders (professors, senior researchers); Representative associations (EurAI, EU-Robotics, etc); AI associations in each member state (member organisations of EurAI, for example); AI industrial leaders (CTO, division leader, CAIO, department heads); SMEs, KMU (innovative small companies); AI-developers, data scientists; Politics, government, strategic people; Public citizens; Users; Specific groups, such as Big Data PPP, Robotics PPP, AIOTI , CPS (CyPhERS), cybersecurity cPPP, etc.

Finally, a wide set of communication channels will be used to support and assist the development of competence across a broad range of sectors such as health, manufacturing, automotive, media, agriculture.

2.1. Establishment of a Network of National Contact Points

A network of National Contact Points (NCP) will be created. We will name at least one point of contact to act as a conduit between the AI4EU consortium and the national communities that develop in each member-state. These will be people, who are involved in the national AI community, e.g. members of the board of the local EurAI member association, member of the local EU Robotics association.

2.2. Community Events Programme

Physical events will contribute to the engagement of new community members across Europe, as well as to strengthening the ties among community incumbents. This will mobilize all the target audiences: researchers; academics; industry; SMEs; entrepreneurs; investors, and policymakers. The agenda for each event will give room for the participation of the different target audiences, like workshops and summit series for specific international groups of stakeholders.

2.3. Industrial Alliance for AI

As part of the European Association on AI, industrial engagement across different activities on AI in Europe demand a match-making between industrial needs and technical AI capabilities and to ensure industrial impact for all endeavours. This will be accomplished by two different mechanisms: an AI4EU Industrial Committee and the AI4EU 'Perks' programme for Business Accelerators. The AI4EU Industrial Committee will be a body of board-level industrial partners related to the pilots. The objective is to advise AI4EU in strategic decision reflecting user needs regarding the platform usage, the sustainability of the AI4EU Platform, the research priorities, open calls and short- and long-term research directions.

The AI4EU Perks programme includes discounts or fremium access to AI resources (computational services, data, algorithms) for Business Accelerators. It will consist in defining and promoting a specific offering pack of the AI4EU Platform for Business Accelerators across Europe.

Furthermore, to foster cooperation between industry, academia and innovative training to enhance employability and career development around AI. Thus, strategies have been designed to build a collaborative framework to link innovative early-stage researchers with business organizations, mostly SMEs and Start-ups, able to face current and future technological challenges and to convert knowledge and ideas into products and services for the economic and social benefit. The core service will consist of creating a specialized online matchmaking service within the AI4EU umbrella for this purpose.

2.4. Education and training activities

To foster competence creation and development on Artificial Intelligence in Europe, the AI4EU ecosystem targets future generations of researchers and innovators, through curricula in higher education, as well as the current generation, through specific courses aimed at people who already work in industry, academia and other sectors. A process to discover and index relevant education and training activities in Europe is implemented beyond the umbrella of AI4EU users. Further, professional seminars and summer camps on AI will be offered for AI4EU users.

2.5. Editorial team for AI press and news

Editorial content about AI (news, events, highlights, etc.) will be edited to provide high quality, up-to-date content about European AI related activities. Based on automatic content ingesting methods, AI related information will be selected, edited and qualified for publishing on the Platform. This work will be carried out with the selected CMS system and with the search engine ingest process implemented in the platform.

2.6. AI4EU Cafe: online interviews for international networking activities

These live meeting match technology to users and talents to European companies. The AI4EU Cafe will act as meeting place for regular web shows with presentations from innovative AI minds. After the presentation, participants of the meetup can discuss further with the presenter in a videoconference and continue the exchange over the AI4EU community platform or email. 100 meetups will be produced in an initial phase.

3. Promoting European ethical, legal, cultural and socio-economic values for AI

The AI4EU ecosystem will be a two-way bridge between AI practitioners on the one hand and regulatory activities and strategic planning by the European Parliament, member states, and AI industry on the other. In this process, the reflection, discussion and due consideration of ELSEC-AI issues will be stimulated within the project, acting as the Ethical Board of AI4EU, as well as within the EU AI community (researchers, educators and practitioners).

The production of a mechanism to educate the general EU public more accurately about state of the art in AI is being studied in which processes are in place for identifying and monitoring values and societal acceptance of decisions and policies. As output, a set of methodological guidelines for the integration of ELSEC considerations in the design and development of AI systems avoiding negative bias, such as on gender or other forms of discrimination, will be developed.

The AI4EU project will also be responsible for producing two reports for the High-Level Expert Group on AI (AI HLEG) associated with the Piloting Phase the AI Ethics Guidelines.

3.1. The AI4EU ethical AI observatory

Through a network of experts, coming both from the consortium and from reaching out widely within the EU to industry, government, R&D organisations and other ELSEC initiatives, AI4EU members will:

Set up/operate a coordinating office for the study/promotion of ELSEC issues in AI within the EU;

Support ELSEC-AI activities in the context of the AI4EU ecosystem meetings, as well as more generally AI conferences or trade meetings based on open calls.

Produce roadmap for future AI R&D that takes ELSEC into account;

Organize the Observatory integration in the AI4EU Foundation

Promote and disseminate ELSEC values to the Press.

3.2. ELSEC-AI working groups

A set of working groups (WGs) we be set up to formulate positions on critical ELSE issues. Each WG brings together experts, queries public or specialist opinion, organises a brainstorming meeting, constructs a green paper, and disseminates the outcomes. The following topics are considered:

Fair AI. Examine the impact of AI on jobs in the EU. Identify deployment strategies so that access and benefits of AI are spread fairly and more equally, with respect for privacy and transparency.

AI and governance. Contribute to proper governance and regulation of AI-based systems and their enactment. Survey existing initiatives by member states and the European Parliament.

Moral AI. Develop a framework for AI-based decision making in morally challenging circumstances (health, weapon systems, legal decisions), possibly implemented as machine ethics.

Human-centred multi-cultural AI. Stimulate work towards AI that is primarily beneficial for humans, and that takes into account the multi-cultural nature of the EU.

Unbiased AI. Investigate the role of bias through algorithmic or data choices and find ways to avoid or mitigate its effects. For each of these topics partners from the AI4EU project with expertise in these areas are co-financed to participate. External experts may also be solicited as well as EU citizens through online consultations.

3.3. Value-based design methodology

A survey and development of a precise industrially usable methodology is being developed for AI incorporating ELSEC issues, building further on the IEEE Global Initiative for Ethically aligned design for AI and autonomous systems, and the European Group on Ethics in Science and New Technologies. It will identify, develop and evaluate methodological guidelines to be proposed as EU standards for certification. Through application to case studies within AI4EU umbrella, this methodology will be assessed and improved. We will propagate the methodology, develop educational tools and support initiatives to the AI community. We will deliver a value-aligned design methodology committing to ensure human-centricity alongside speed to market in AI development.

3.4. Validation and verification process

Procedures for the verification and validation of AI and autonomous systems that can be applied to real case studies within the umbrella of AI4EU ecosystem with the goal of developing a certification procedure (e.g. can lead to a 'CE label for AI') which will be also used for the open calls. Activities are planned for AI4EU members, as well as trade shows and academic conferences to help train AI practitioners to take into account ethical issues properly.

4. Pilot experiments with the platform

The main objective of the pilots is to promote the AI4EU ecosystem to have a successful adoption by end users. By solving concrete and ambitious AI-related technical challenges in several application domains including Public Services, Robotics, Industry, Healthcare, Media, Agriculture, IoT and Cybersecurity. AI4EU members will demonstrate the potential of the AI4EU ecosystem for the European AI community. The chosen methodology for addressing this objective is to operate carefully selected and impactful pilot experiments within the platform by creating new AI-powered technologies. A complementary objective is to identify common requirements between the selected pilot experiments in order to foster cross-fertilization ruse of assets between these pilots by sharing data, models, issues, and results.

4.1. AI4Citizen: An AI-powered Personal Assistant for Public Services

This pilot will show an AI-powered assistant to support citizens in their interactions with the Public Administration so they can take more informed decisions. AI components able to explain the recommendations in a convincing way (Explainable AI) will be provided while extra information from the interaction between citizens and civil servants (Integrative AI) will be used to refine the proposed solutions. Our assistant will aim to engage citizens in the whole interaction process to improve efficiency and effectiveness of service delivery. The pilot use cases are focused on education domain.

4.2. AI4Robotics: Intelligent Performance Analytics for Industrial Robots

A prototype for industrial robots will be shown for intelligent collection, analysis and generation of recommendation for performance analysis. The prototype, based on cloud-based AI engine specially generated for predicting quality degradation issues in industrial robotic systems, will cover the complete lifespan from development of industrial robots, test and release phase and usage scenarios with customers.

4.3. AI4Industry: AI-Driven Digital Companion for Production Facility

A pilot on global production and manufacturing systems will be realized in an experimental production facility and showcase how promising AI functionalities, such as autonomous systems, augmented intelligence, or assisted intelligence can facilitate improvements in the overall production performance. Digital companions for production facilities building on digitalized domain knowledge will rely on a) Integrative AI to combine knowledge-based with data-driven methods b) Explainable AI to inform user in interactive manner about reasoning results that enable feedback loops c) Verifiable AI to crosscheck reasoning outcomes with independently engineered rules. The implemented scenario will be used as a blueprint implementation for future product developments.

4.4. AI4Healthcare: Fostering confidence by estimating model uncertainty

AI-based methods like deep learning (DL) are known to provide optimal performance for many tasks. However, while a model may perform well in its development phase, changing or unforeseen circumstances during its deployment may cause it to give a wrong answer. This can be disastrous in medical applications, as diagnosis and treatment may depend on the model's reliability. Every model output should therefore come accompanied by an uncertainty level, flagging cases where human expert interaction is required. This pilot focuses on new, reliable methods to estimate uncertainty (e.g. of DL model outputs in medical image analysis). Such methods may involve approaches like probabilistic AI (e.g. Bayesian DL) but may rely on the incorporation of domain knowledge in AI methods as well. The expected outcome of the pilot project is a set of algorithms, software and user interface that will be available on the platform. The pilot links to the horizontals of Verifiable AI. New uncertainty estimation methods are sought that have a higher accuracy that needs to be verified on reliable benchmark data. Real world AI: We need methods that flag real life situations where circumstances of use of the model may change gradually by a rise in uncertainty.

4.5. AI4Media: AI-Based 3D-Generation of Animated Video

In professional media production, animation is a step that requires a huge number of talented resources who collaborate. State of the art animation uses a motion capture (MoCap) stage to digitalize human actors and their movements, but AI is still in its infancy. Recently, the first successful applications of AI, in particular "collaborative AI", such as Adobe Sensei AI platform, have shown the potential for improving the interaction between humans (artists) and the "digital pipeline" on different steps of the workflow. An improvement in the animation process enabled by AI is expected to bring significant competitive advantages to Technicolor affiliates working in the movie industry (Operating brands: MPC, The Mill, Mikros, Mr.X) and therefore to the whole European film/advertisement industry. This pilot focuses on the application of AI to 3D animation of body and faces from 2D videos. The key challenge is to be able to modify the 2D video in a completely seamless way, translating the facial and body emotion according to the new cultural face/body language.

4.6. AI4Agriculture: Crop quality assessment through computer vision

Nowadays it is urgent to create solutions that help producers to reduce production costs and obtaining the maximum yield possible. AI techniques have the potential to improve precision

agriculture and food science. Technologies for computer vision powered by state-of-the-art deep neural networks are being extensively applied in other application domains, but agriculture is lagging behind. A promising application of AI in agriculture is the automation of decision-making in relation to plant and fruit status. In particular, this pilot is considering the use of AI to counting fruits in a plant or in the ground, and performing spatio-temporal analysis of their maturity and quality, based on features such as size, colour, etc. Optimization techniques could be applied once this quality assessment is done, saving costs and maximizing production, by for instance supporting the decision of the optimal harvesting time and amount of resources (human and machinery) for recollection.

4.7. AI4IoT: Air quality monitoring

This pilot explores the use of AI and advanced analytics on air quality data captured by IoT devices. The collection of IoT data measuring e.g., CO_2, SO_2, particle dust levels are combined with data from other sources, e.g., records from mobile telecommunication networks, weather forecasts and satellite data from Copernicus. These data are used as basis for monitoring and visualizing historical and current status to run advanced analytics for measuring pollution effects, predicting breakthroughs and helping authorities to take preventive actions. Telenor will develop and deploy IoT devices and will set up infrastructure for streaming IoT and other relevant data.

4.8. AI4Cybersecurity: AI-Driven Attacks Learner

The growing digitalization trend creates an ever-stronger fusion of the physical and virtual world in the form of cyber-physical systems. These increasingly complex and highly dynamic systems also carry significant risks, since cyberattacks on them can have serious and far-reaching consequences even in the physical world. Due to their inherent complexity and dynamicity, such systems cannot be secured with classical methods alone that depend on constant human monitoring and intervention. The application of ML and data analytics technologies to cybersecurity is expected to transform how such digitalized and networked systems are secured in the future. This pilot displays the use of AI4EU for achieving a higher degree of automation in securing networked systems, using an ML-based "predictive security" approach.

5. Filling AI technological gaps

The AI4EU ecosystem target to consolidate and strengthen excellence in AI in Europe, by aggregating the research community and fostering the area of formal foundations, in which Europe is a world-leader. The mechanism for addressing it is to produce new AI tools and techniques that cover specific technological gaps. More specifically to those relevant to the vertical case studies considered into AI4EU ecosystem, and next, results will be included into the AI4EU platform. Then, the five priority areas needed for a human-centred development of AI discussed are: Explainable AI, Verifiable AI, Collaborative AI, Integrative AI and Real-World AI. Within each area, AI4EU will:

aggregate a cohesive, sustainable EU research community by organizing discussions, events and joint activities; develop methods that address specific, focused technological gaps relevant to the pilot experiments; generalize these methods into domain-independent tools included into the AI4EU Platform; foster the development of new foundations needed to properly address these topics; improve the Strategic Research and Innovation Agenda with input gained by the above activities.

6. Technology Transfer Program

€3M will be distributed for Open Calls in order to reach out to new user domains and enhancing the AI4EU platform. Therefore, a global strategic Technology Transfer Program has been defined and the process adapted to the European AI community to coordinate the Open Call process for selecting early adopters of the AI4EU platform following the EC requirements and H2020 standards. Some key aspects are:

Organisation and reporting of the services to the beneficiaries.

Monitoring through periodic meeting with the mentors to plan and track the project evolution.

Quality assurance mechanisms.

7. Research and Innovation Roadmap

AI4EU's research and innovation roadmap aims to identify strategic and innovation avenues towards human-centric, socially-responsible and ethical-sensitive AI to bring Europe to a leading position in strategic areas of AI, to contrast fierce world-wide competition in the field, to reinforce industrial competitiveness across all sectors, and most importantly, to reduce the fragmentation of AI. To progress with this task, KPIs will be identified to enable measurements of advancements and achievements.

Leveraging the AI4EU community, all stakeholders will be involved inside and outside the consortium: European institutions, national governments, companies, universities and research institutes, NGOs and the society in Europe and beyond. The aim is to produce: (i) connection with EU communities, research initiatives and industrial road-mapping documents; (ii) consolidated innovation agenda and identification of technology gaps; (iii) a European Strategic Research and Innovation Agenda for AI. The process followed by the community will cover the following steps:

Understanding: analyse what all the other related research communities, industrial partners, stakeholder groups are doing in terms of strategic road-mapping;

Visioning: develop a promising vision for Europe and AI;

Consolidating/Integrating: develop a consolidated innovation agenda (common language, ontology for AI technologies);

Drive: use the consolidated innovation agenda to identify research/technology gaps and barriers/enablers;

Share: formulate strategic recommendations.

The instruments employed by the AI4EU members will focus on collecting contribution for the Strategic agenda and feedback from stakeholders on the produced documents. It is envisaged participation, preparation of material for discussion, and elaboration of feedback from workshops and summits organized by the community, online surveys and online polls for voting and focused interviews

8. Annex II

This Annex address questions raised by reviewers in the document associated to the review process that took place on 06/05/2020.

The general impression is that the ideas expressed in D4.2 are extremely relevant, but it is not clear

how and when the AI4EU platform will keep up with the needed implementations to better integrate with AI Alliance.

It is requested to revise the deliverable by the next Review and include the information requested below.

A few sentences in the document are raising attention:

1. 'Invitation for AI Alliance members to join AI4EU On-Demand Platform: To date, there has been no explicit invitation for AI Alliance members to join the AI4EU Platform. This was a strategic decision, as it was deemed important that the project send this formal invitation to Alliance members only when the AI4EU Platform was developed to the point where it was certain to engage its community of users. Following the launch of V1 of the Platform in early 2020, the most appropriate timing for this engagement would seem to be a public invitation during the AI Assembly event in 2020.'

Has this engagement initiated?

2. 'Improved collaboration environment: Along with the initial communication and ideas exchange on the Platform's dedicated group, the NCPs will soon (Jan 2020) have functionality to share relevant information in different formats (e.g. doc, ppt, pdf, CVs, jpeg, video, audio files etc.) when the first version of the Platform is launched at the end of January 2020. This dedicated space will include overall dedicated strategy documents, resources and materials from the AI4EU project.'

Is this working as of today? Reviewers could not find it.

3. 'AI4EU Platform user requirement survey: An action that will be rolled out in the first quarter of 2020 is a survey, at pilot scale, seeking inputs regarding users' requirement on the AI4EU Platform. This will focus on the technical requirements, technical skills, and AI competence market matchmaking. The NCPs, with their national understandings, will be able to address the relevance of the survey's content before it is rolled out to the public and AI4EU Platform users to complete. In addition, the NCPs can engage many potential users of the Platform in their network when the official survey stage is activated.'

Was this activity performed?

In general the document is good and T4.2 properly worked on establishing the Association as integrated to AI Alliance, and the NCP network. It would be interesting to understand if the NCP could collaborate more with the AI Alliance: this could expand the reach of the AI Alliance/AI4EU.

The technical integration of the two platform is not completed, as from direct tests of the Reviewers, while a set of initiatives listed in the document (to be implemented in the Platform) do not seem to be there. It would be important to know the status of the integration and if it will happen.

1. To date the invitation has not been extended to the AI Alliance community. It was considered that the best option to engage with the AI Alliance was as part of an event, specifically, the AI Assembly event in the Summer of 2020. However, due to the Covid-19 situation, this event was not scheduled. Even if this event had proceed as planned, it would have been unlikely that AI4EU would have proceeded to engage and invite the community in mid-2020 as in order to do so it would be necessary to have a stable version of AI4EU Platform that would satisfy the requirements presented in this document.

It was decided that were no clear benefits and several potential drawbacks in prematurely engaging with the AI Alliance community. The engagement is still ongoing and presented below are all recent engagements that have taken place between the project and the AI Alliance. This represents part of the project's Promotion and Engagement plan for communication and engagement with different stakeholders.

- The following activities have been reported in the D4.2 already submitted.
    - 09/05/2019 – Barry O'Sullivan introduces UCC team to AI Alliance team
    - 14/06/2019 – Call between UCC and AI Alliance to discuss collaboration
    - 17/06/2019 – Follow up email outlining engagement options
    - 17/06/2019 – Granting of editorial rights of Futurium (AI Alliance Platform) to AI4EU
    - 26/06/2012 – Bilateral meeting during the AI Alliance event in Brussels
    - 31/07/2019 – Follow up email to advance next stage of collaboration
    - 29/08/2019 – Blog post of Barry O'Sullivan on AI Alliance Platform
    - 17/09/2019 – Invitation to AI Alliance to engage in AI4EU event in Athens
    - 23/10/2019 – Meeting between UCC and EC in Umea
    - 08/10/2019 – Follow up email on the next stage of collaboration
    - 12/11/2019 – Meeting between UCC and EC in Paris
- 10/01 Invitation to representative of AI Alliance to the General Assembly

After the Deep Dives process and the collaboration of Jaroslav Baran with the UCC team, the EC was invited to the general assembly of AI4EU in Venice. Dates were 16-17 January 2020, hosted by Università Ca' Foscari Venezia. The intention was to restart the discussion on the collaboration with the AI Alliance and the AI Watch. Unfortunately, and in spite that the answer was positive, it was not possible from any person from the DG Connect Unit to participate.

- 21/01 Discussion about collaboration by email with representative of the AI Alliance

The two main topics to be discussed in this email was collaboration between AI Alliance, AI Watch and AI4EU. The development team were requested to start an operational plan on how to have an active linkage between AI4EU and AI Alliance engagement. Furthermore, with respect to the AI Watch it was mentioned to avoid duplication of effort by engaging with the AI Watch team and to access information already collected by them. Unfortunately, there was no answer to this email.

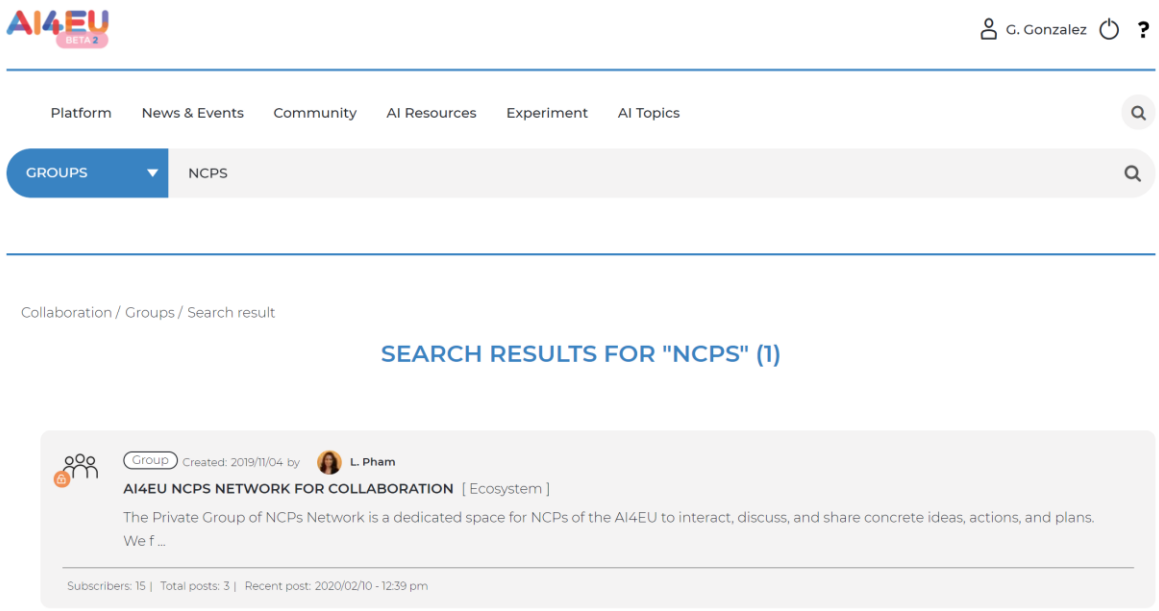
- 29/04 Discussion about engagement on AI Alliance event and cross-linkage between spaces

Discussion on AI Alliance event: nothing was decided by that time about the AI Alliance event. It was discussed that the event will not take place in 2020, and either might be replaced by an online event some time in autumn or cancelled. The coordination between the Alliance and AI4EU have been discussed internally. Cross-referencing links is seen as not problematic. Any other solution requires to be raised to a higher level. Cecille Huet, the deputy head of unit, will be closely following the project and the question will be raised to her.

- 13/08 Reminder sent to representative of EC to advance the discussion on AI Alliance event and NCP contribution and collaboration.

Awaiting response.

2. The collaboration environment is comprised of two different parts. One is the internal to the consortium – according to the internal communications plan – it consists of using the space set up within the WP4 management in NextCloud. There, the NCPs can deposit documents and slides due to the lack of this feature in the web frontend, and to avoid overburdening for the supporting server. Moreover, there is a group created for discussions offline to avoid emailing lists that is within the forum capabilities of the web frontend, as it is depicted in the next figure.



3. The NCP collaboration with AI Alliance is envisioned as AI representatives geographically distributed. The Survey was started by the Community Manager, Long Pham, also responsible for the management of the NCPs group, however, it was deprioritised in favour of the Task 3.2, "*Gathering user requirements for the Platform"* led by Telenor in order to avoid potential misunderstandings between the community surveyed. It was rescheduled for the first quarter of 2020, however, it was newly deprioritised in favour of the survey executed by the AI4EU coordinator to analyse the current features already developed by WP2 and WP3.

It is now rescheduled to be executed in the next period if any pending feature is required or to collect information of the implemented features.

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