AI4EUROPE

D4.1

Integrative Planning Strategy (v1)

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Abstract	This deliverable reports on integration and evaluation processes and WG suggestions applicable to AIoD contributions. It covers initial directions regarding quality and maintainability as well as it provides suggestions for WGs and evaluating assets for trustworthiness.
Keywords	WGs, assets, integration and evaluation, self-assessment, quality

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Revision History

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1	20/12/2022	I. KLAMPANOS (DEM), A. TROUMPOUKIS (DEM)	INITIAL STRUCTURE
2	16/1/2023	I. KLAMPANOS (DEM)	INITIAL VERSION
3	27/1/2023	A. TROUMPOUKIS (DEM)	MODIFICATIONS THROUGHOUT
4	16/2/2023	G. G. CASTAÑÉ (UCC)	ADDITIONS/MODIFICATIONS TO STRUCTURE, METHODS AND PROCESSES, ENSURING QUALITY AND APPENDICES
5	1/3/2023	I. KLAMPANOS (DEM)	FINAL FIXES BASED ON INTERNAL REVIEWS

Table of Abbreviations and Acronyms

Abbreviation	Open form
AIoD	AI-on-demand platform
ALTAI	Assessment List for Trustworthy Artificial Intelligence
CMS	Content Management System
EOSC	European Open Science Cloud
FAIR	Findability, Accessibility, Interoperability, and Reuse of digital assets
ORE	Open Research Europe
RoP	Rules of participation
WG	Working group

Table of Contents

1. Executive Summary

This deliverable reports on integration and evaluation processes and WG suggestions applicable to AIoD contributions. It covers initial directions regarding quality and maintainability as well as it provides suggestions for WGs and evaluating assets for trustworthiness.

AI4Europe plans for interested parties to integrate and validate their AI assets (i.e. datasets, code, services, solutions, and others) into the platform specified in WP3, through:

- User-friendly online forms
- Tools and technical means that enable integration of 3rd party AI assets into the platform, such as APIs, SDKs and accompanying documentation and guides
- Analysis and metadata to aid discovery and to penalise assets that are not FAIR, useful, trustworthy, or maintained
- Self-assessment tools and methodologies
- Appropriate WGs designed for contributors to communicate requirements or problems they encounter and to generally shape the future of the AIoD platform.

As the specification of these methods depends on technical as well as on governance details, a final list of methods employed will be provided in the updated version of the deliverable, due M12.

2. Introduction

AI4Europe supports the concept of the AI-on-Demand at large. This concept aims to construct a framework that can be used to seamlessly provide to the community different tools, assets, and products that can advance and evolve their research and uptake on AI.

To succeed in the process of adoption and to incorporate the work undertaken within the different projects, research labs, and the community the project has to provide robust processes that allow the different actors to contribute in different operations that will be appearing during the lifetime and bootstrap of the platform. These need to be aligned initially by AI4Europe, a project which aims to promote and further improve the European AIoD platform. Within the internals of the Core AIoD architecture, there will be several components. Foremost among these are metadata catalogues that will provide peripheral AI assets, applications, and complete solutions the basis where an AI European ecosystem for research can thrive.

These processes are supported by an organisational structure that will help the different actors to contribute to the parts of the architecture that were mentioned above and that are better described in the Deliverable D3.1

In this document, an initial account of processes and structure for managing the contributions is described. However, and given the nature of the evolving process of the architecture and community - as well as the over 50 projects contributing - some of the structures and processes might be refined in further documents.

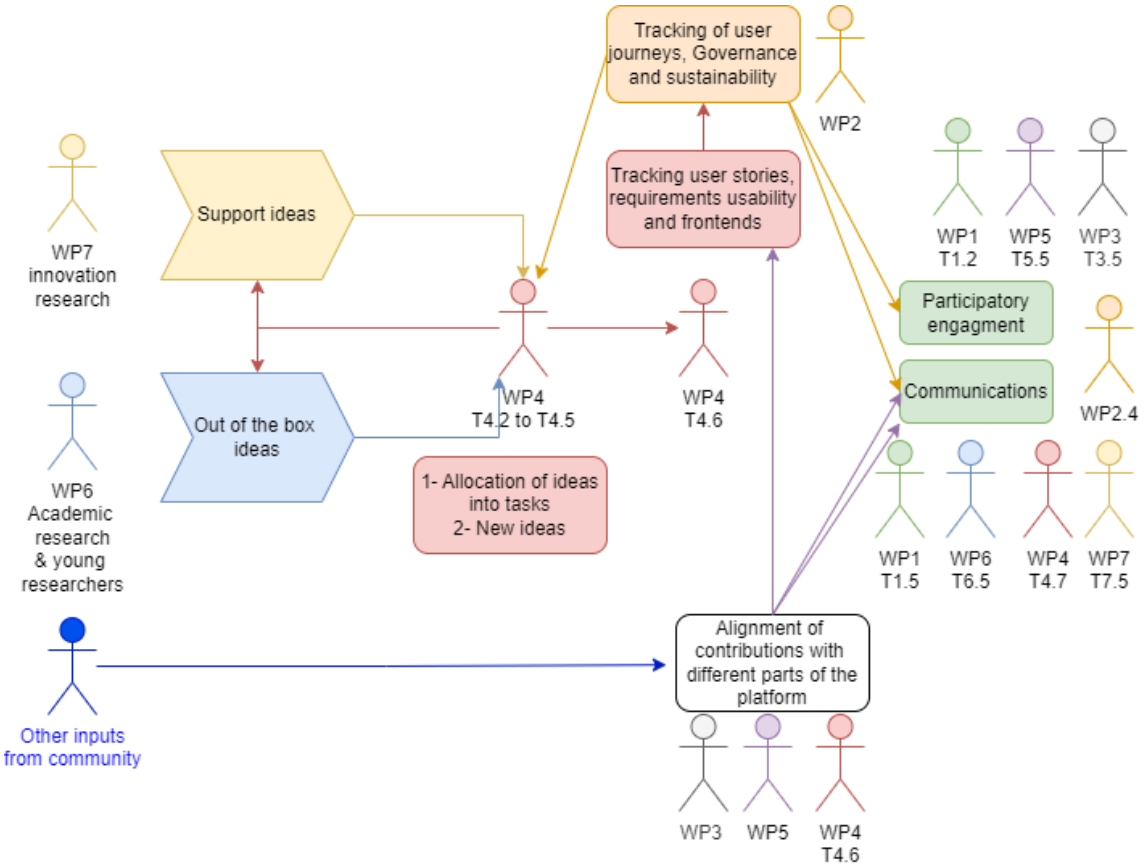
The intention of having this structure is to assign reactive bodies that will be able to contribute and support a seamless integration with the platform and the extension of the core components with the contribution of multiple partners in different projects. However, it is important to remark that not all the projects or contributions will be able to be aligned as not all the projects might agree to contribute following the processes. But the processes were designed to have a supportive mechanism for all partners, internal and external.

Moreover, processes for ensuring that assets contributed to AIoD are of high quality and remain relevant need to be added in place. More specifically, information on how we envisage to ensure the quality and maintainability of the submitted contributions. We also provide pointers for processes that enable contributors to communicate with AI4Europe in order to improve the AIoD platform's uptake, fix errors and bugs and make it more useful and relevant to the wider community.

Furthermore, these processes are independent of the governance. The governance will provide guidelines on some of the directions in which the platform and the ecosystem will move, however, it will move orthogonally to the support of other developers and AI researchers on the operations management that is the focus of this document. This report aims to provide initial directions, to be consolidated in its second iteration (M12).

The scope of this deliverable neither present the quality control or time to deprecate assets or other contributions to the catalogues, nor the decision process for decision making of contributions to the platform – if aligned or misaligned to the vision or mission -, nor the linkage to communications, governance or others corresponding to Task 2.1 such as the user journeys.

The scope is presented on the next figure:



The red rectangles correspond to the scope of the WP4. All sequence and relations are simplified to a high level overview of the flow of contributions for new products, services, contributions to the platform. The scope of WP4 is to support the addition of new products and services (T4.2 to T4.5), the alignment of usability of the outcomes of these tasks and the inputs from any part of the community, the tracking of the evolution of these contributions from any input, and the support on participatory engagement and communications.

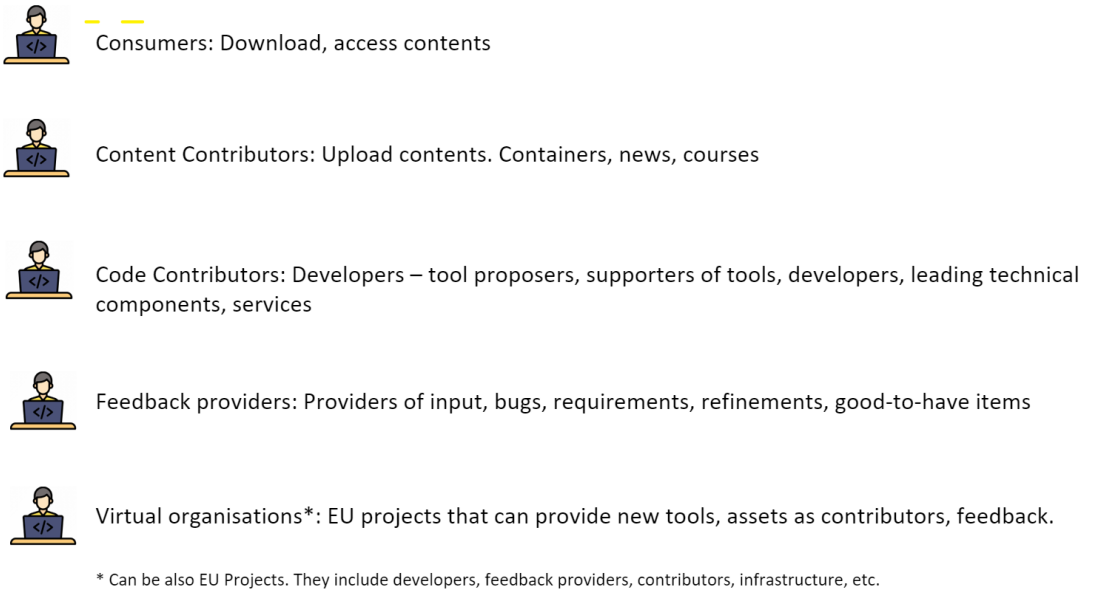
3. Technical structure

This section describes the structure to support the processes and the incorporation of new products and tools into the platform in a structured manner. It focuses on how to construct the user stories, align them and also the technical parts related to the different components being developed.

3.1. Personas

To align adequately the processes the participants to the project made a classification on different types of personas or users that the AIoD platform can have in order to support the different processes and align these to them.

These are classified into: consumers, content contributors, code contributors, feedback providers and virtual organisations. These are schematised in the next figure:



The **consumers** are users to the platform that access the contents of the platform. They might use several services or products to access to information or to download contents that might be there like assets, and/or access to courses or tools available for their use - online or on premises. Examples of these could be independent researchers, or organisations, SMEs, etc.

The **content contributors** are users that upload contents to the different services offered by the platform. These can be of different nature depending on the services. As in the case of the consumers, these can vary from webinars, videos, text for news, containers that can be consumed by several other services, etc.

The **code contributors** are users that will work on developing new parts of the platform or specific services or will provide new services as a whole or connectors, enhancements to the API, or improvements on parts that are related to coding.

The **feedback providers** are users that will provide feedback about different parts of the platforms. They will contribute with existing improvements, detection of bugs or ideas for new tools, even when they might not be code contributors executing them as a prototype or service. They might also constitute focused groups for consulting some of the existing or ongoing activities related to changes on the platform, related to its usability or future focus or directions.

Virtual organisations are those users that act as a superset of some of the others. They can be associations, projects, or clusters of organisations that might develop one (or many) services, having their specific developers, focus groups, etc. They will enable the linkage between different communities to the platform through the services and use of the platform.

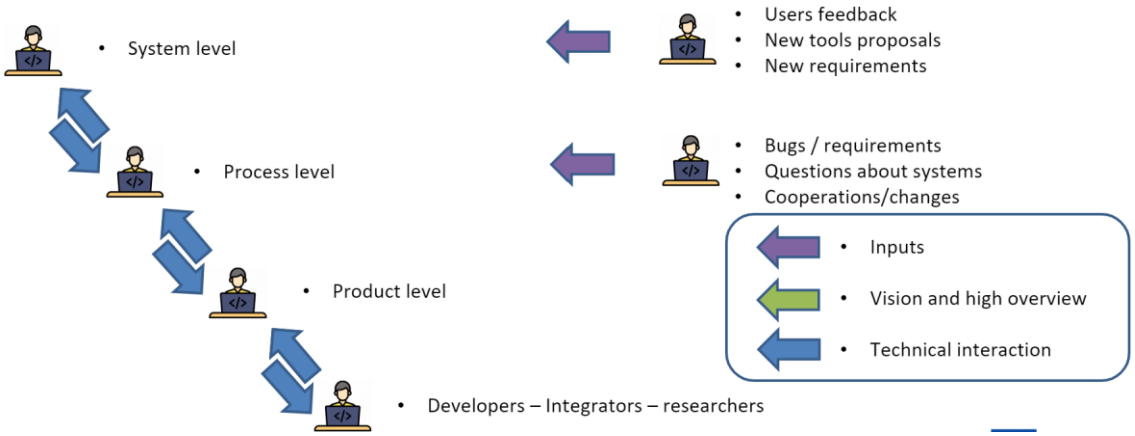
3.2 Technical structure

To support the multiple contributions - internal and external - to the AIoD platform, and given the growing number of tools and projects, and the leadership of the development of a new iteration of the AIoD platform, this project constructs a structure that is orthogonal to the management of the AI4Europe project itself. It is based on best practices for industry and agile processes where the different services are clustered and supported by multiple people so any contribution and development can be aligned and adequately pointed to the different developments on the platform.

The main objectives of the structure are the following:

- Transparent to the set of contributors
- Follow up the developments and contributions
- To avoid overlaps on development
- To align and collect the user stories to the vision of the platform
- Have clear visibility on developments and to avoid bottlenecks on the progress
- To establish teams and communication channels that can support the adequate progress of the platform
- To prioritise features and bootstrap the development of new products and incorporation of existing ones

This hierarchical structure is depicted in the following Figure:



This is supported by several roles that are described next:

3.2.1 System level

These participants receive input from integration, user stories and other proposals. The main tasks are listed next.

- Accountable for the services – regardless of the underpinning technologies, processes or capabilities reside
- Understands service requirements, redirects into existing services
- Helps determine attributes (availability, performance, etc)
- Helps to support agreements
- Participates in reviews, identifies improvements, address issues
- Prepare the materials for discussion with the governance level if a conflict arises with the architecture that involves key changes that can affect the vision or mission of the platform.
- To prioritise improvements
- Prioritises features or tools according to the decisions made by the governance board
- Communicates with process owners to establish the releases and facilitate issues resolution
- Establish channels with communications to provide information on campaigns and releases

3.2.2 Process level

The participants in this group receive input about bugs, and come from the system level to understand how to best support new or existing products within the existing ones. They are also close to the processes and alignment between the multiple products and tools developed at the Product level. The processes for bug treatment are described below. In case of any conflict these are reported at System level. The main tasks are listed next.

- Accountable for ensuring that a process is fit for propose

- Ensures process is performed as agreed upon documented and meets aims of process definition
- Accountable for overall process quality – process sponsor
- Ensures documentation is available and current
- Provides knowledgeable resources
- To ensure compliance
- Conducts reviews, identifies improvements, addresses issues
- Works with product level to prioritise improvements in the register
- Accountable for the delivery of a specific service
- Appoints people for required roles
- Monitors and reports on process performance

3.2.3 Product level

These are the participants that lead products or parts of the platform - architecture, connectors, components, API, etc.

- Developing and explicitly communicating the product goal
- Creating clear communications for product backlog
- Ordering product backlog items
- Ensuring that the product is transparent, visible and understood
- Manage the resources and developer according to the deadlines and releases proposed
- Collect feedback from developers

3.3 Processes to orchestrate the technical work on the AIoD platform

3.3.1 Technical Contributors Board (TCB) and the Open Distributed Development Process

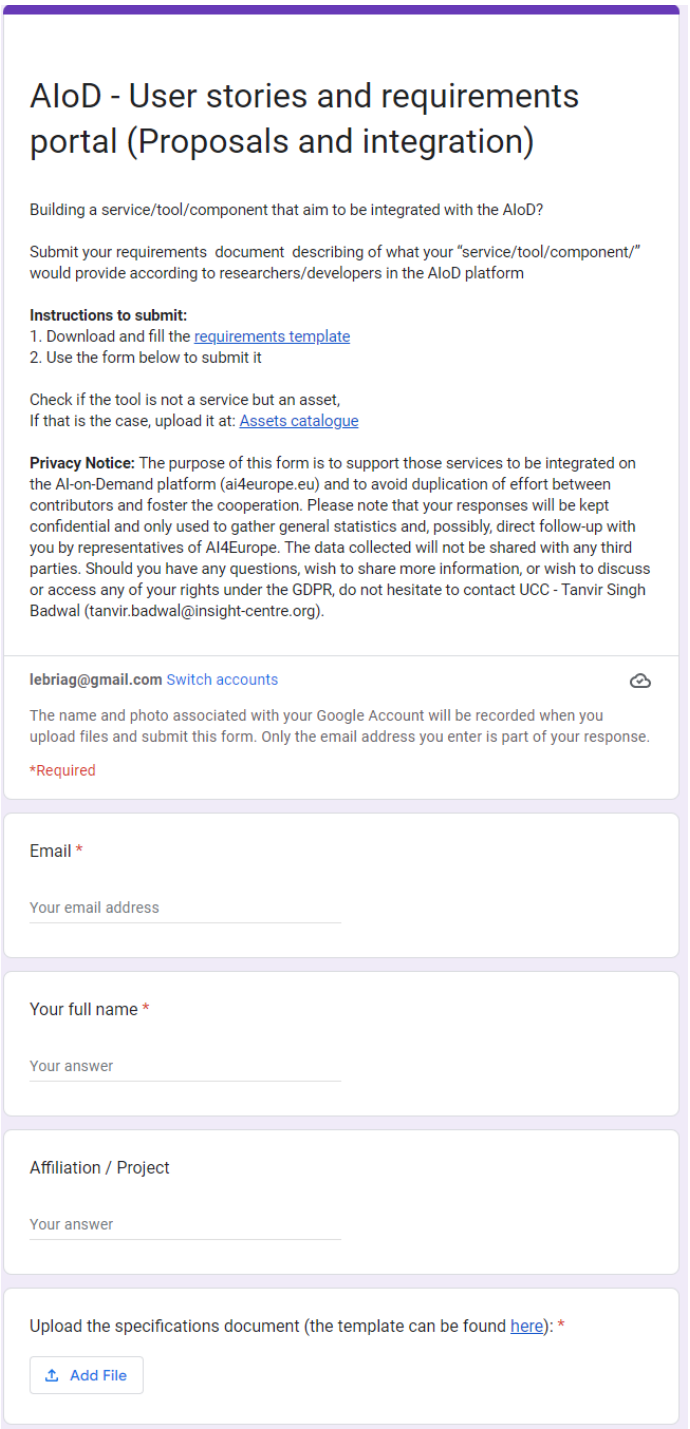
Currently, there is no central development unit for the AIoD platform that collects requirements and implements them. Instead, there are many different projects and parties associated with AIoD with different needs and resources. That is why during the AI4EU project the Open Distributed Development Process was established, to enable any interested party to contribute to the platform by implementing features that the party sees valuable. Thus, the development of AIoD is contribution driven and the TCB keeps track of technical contributions in progress, moderates discussions on technical issues and connects technical platform experts with contributors. More details can be found in the TCB terms of reference[1], currently under finalisation.

[1] https://docs.google.com/document/d/1fVOrP-KlcueDkrEzUyUfL5oimEGCIats4lorbbUnmKU/edit?usp=share_link – 26/01/2023

3.3.2 Process for contributions

As mentioned in previous sections, system and process leaders will open a tool for inputs for user stories and requirements.

This can be seen in the following image:



AIoD - User stories and requirements portal (Proposals and integration)

Building a service/tool/component that aim to be integrated with the AIoD?

Submit your requirements document describing of what your "service/tool/component/" would provide according to researchers/developers in the AIoD platform

Instructions to submit:
1. Download and fill the requirements template
2. Use the form below to submit it

Check if the tool is not a service but an asset,
If that is the case, upload it at: Assets catalogue

Privacy Notice: The purpose of this form is to support those services to be integrated on the AI-on-Demand platform (ai4europe.eu) and to avoid duplication of effort between contributors and foster the cooperation. Please note that your responses will be kept confidential and only used to gather general statistics and, possibly, direct follow-up with you by representatives of AI4Europe. The data collected will not be shared with any third parties. Should you have any questions, wish to share more information, or wish to discuss or access any of your rights under the GDPR, do not hesitate to contact UCC - Tanvir Singh Badwal (tanvir.badwal@insight-centre.org).

lebriag@gmail.com Switch accounts

The name and photo associated with your Google Account will be recorded when you upload files and submit this form. Only the email address you enter is part of your response.

*Required

Email *

Your email address

Your full name *

Your answer

Affiliation / Project

Your answer

Upload the specifications document (the template can be found here): *

Add File

This portal (will be integrated with the platform in further releases[2]) aims to align the contributions of all users on the community and virtual organisations that might need / want to take part of the platform at large.

The document to fill can be seen in the Appendix I.

This document aims to collect the user stories and the requirements for the products / tools that aim to be integrated or developed.

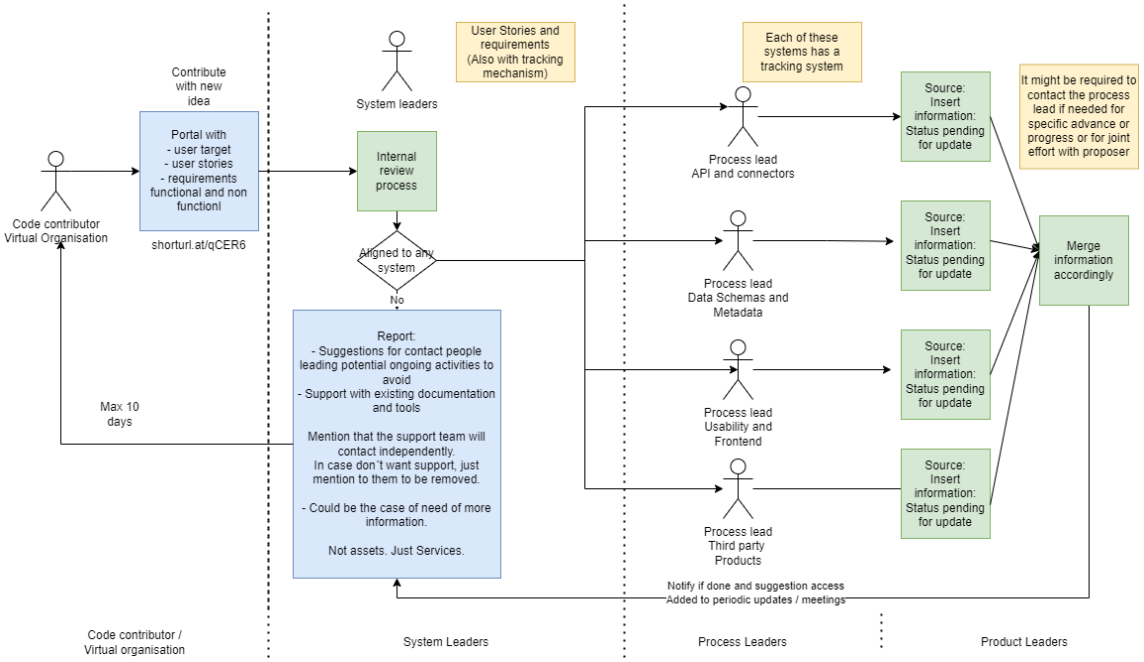
In order to avoid clashing between different projects, avoid duplication of effort, or misalignment with the current version of the platform for the multiple components, the technical structure will analyse and provide responses supporting the multiple components. A report will be provided to the contributors with suggestions to participate in teams, contacts for product leaders for similar/overlapping activities to the ones that could be described, or in some cases, to avoid the implementation of features that are already on-going, so the code contributors can focus their effort on enhancing their activities or speeding up the process of the outstanding components.

The aim is to analyse the user stories to see if there is alignment with existing ones. To identify the different parts or components and align also these with the process owners so the code contributors can align their effort to enhancing existing parts of the platform at the same time that they develop their products, therefore some of the features implemented can be reusable by other products - depending on where these contributions are made.

Finally, the contributor - internal and external contributors to the AI4Europe project - will receive a report with all the information for alignment while the platform technical team can keep alignment of all features that are being developed within the scope of the platform.

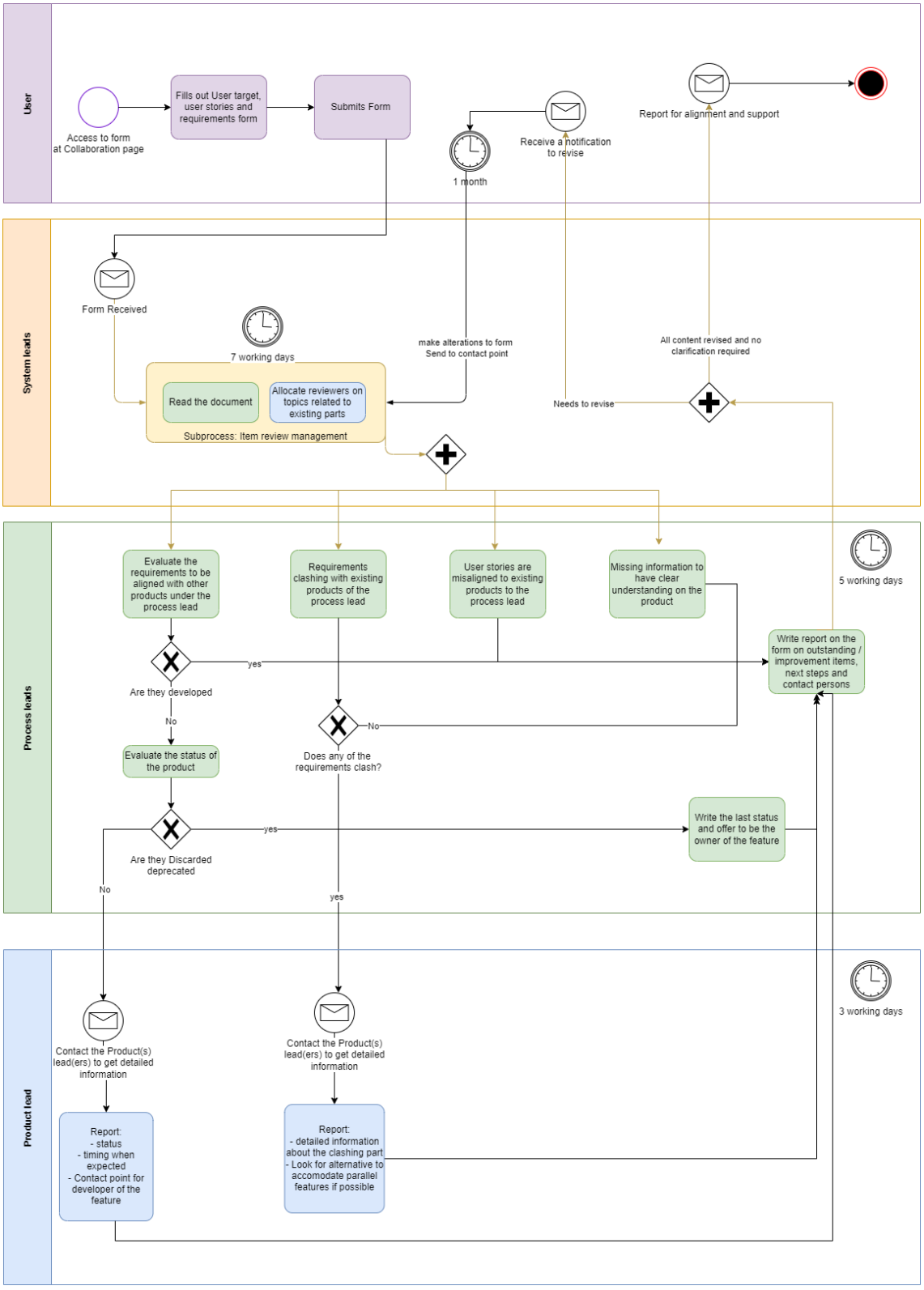
[2] https://docs.google.com/forms/d/e/1FAIpQLSfFJXVdLPTjY48U9jBOM185nlT50sBvUzEyZp-8H1yUuL32Xg/viewform

An overview of the process can be seen in the following picture:



From an operations management point of view, you can see the scope of each role associated to the figure. Furthermore, each process will designate 2 or 3 persons to keep track of the system that will be transparently accessible to all the contributors. The system leaders will be allocating all the user stories and requirements together in order to keep track of the different parts that are being developed as contributions of multiple projects.

The process for revision of the progress of each of these products and contributions will be revised by the process owners periodically (e.g. 2 months) to evaluate the progress and to align the finalisation of the different parts to the communication team for promotion of campaigns but also for the different releases.



Once the process is finalised, the contributors to the feedback will write the reports for support as described in the Appendix II.

In the future and to provide transparency to the users, it is under discussion to provide a process tracking where the code contributor or the virtual organisation can access a portal to check the status of their submissions.

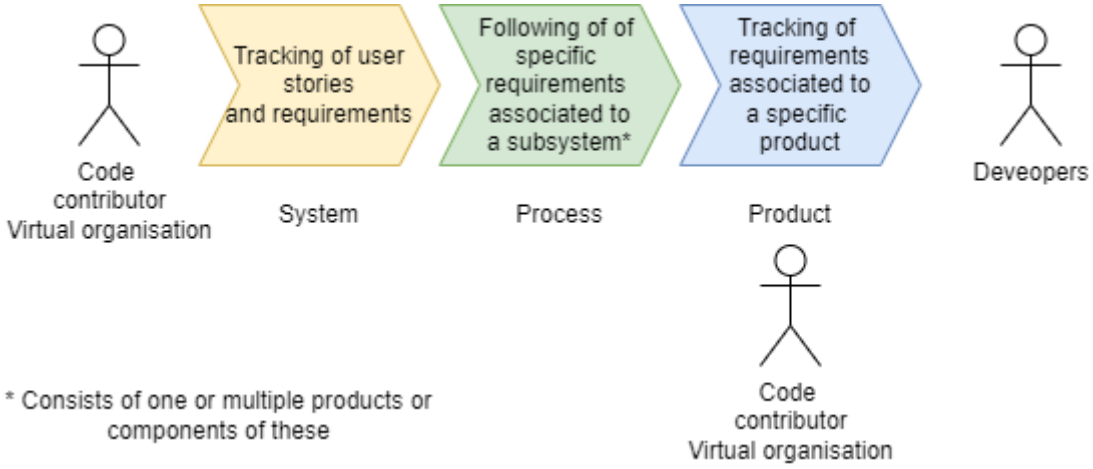
3.3.3 Traceability of features and user stories

In order to have the user stories aligned to be further developed by the user journeys and governance (Task 2.1) and the user experience (Task 1.5 Communications team), the technical processes will keep track of the features being developed and contributed by different parts and teams.

The user journeys proposed by different code contributors and virtual organisations once confirmed by the proposers are inputted by the system leads into the system. Then, at the level of the process leads there is a follow on the requirements specific to each subsystem in order to keep track on the features to be provided to the community but also on the progress and the termination date (approximate). This will be used to align the communication campaigns and the releases with the different features implemented by the community (projects and AI4Europe) in events or media.

Specific product leaders might have their own set of requirements and tracking mechanisms associated with their tools.

The next figure shows the tracking system for the user stories and requirements.



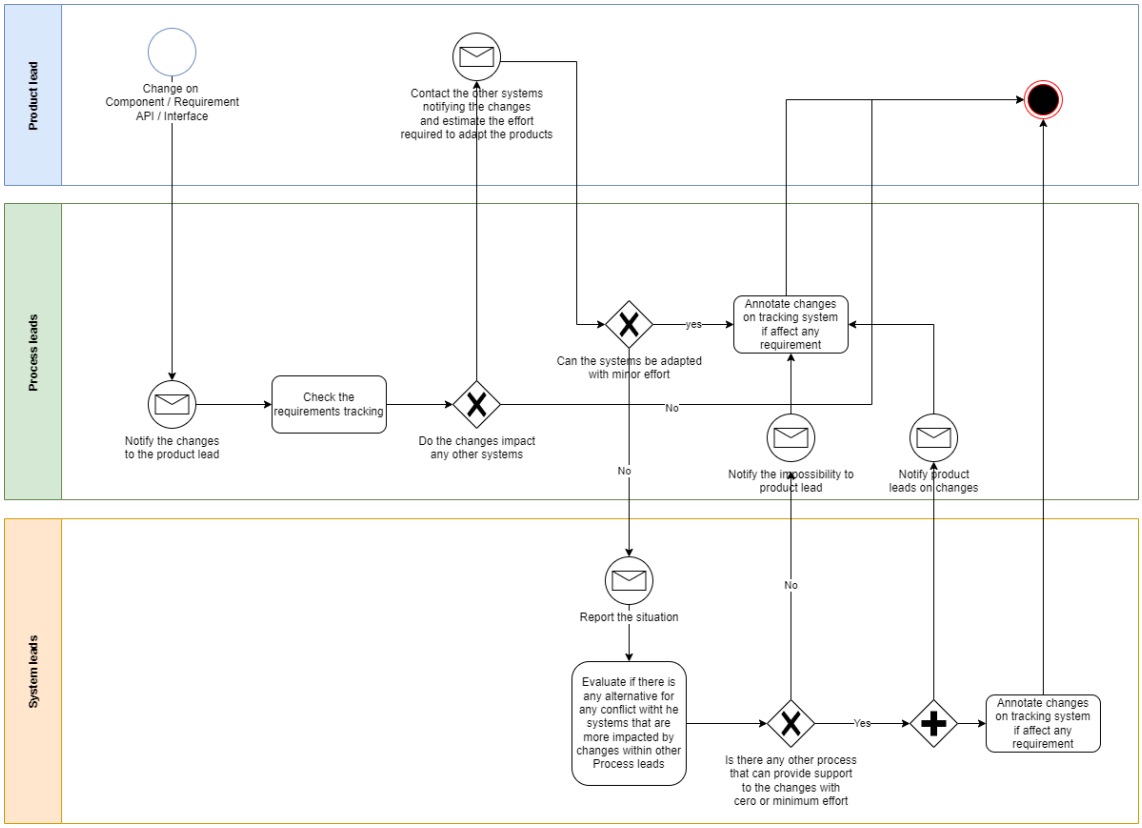
3.3.4 Modification on a product or core component

There is an event that can trigger a cascade effect on multiple components that is the change on an interface, API, product or core component that has dependencies on multiple other components. If this is the case, and in order to orchestrate adequately the progress, any modification should follow the process that is described in this subsection in order to minimise the impact and adapt all systems dependencies accordingly.

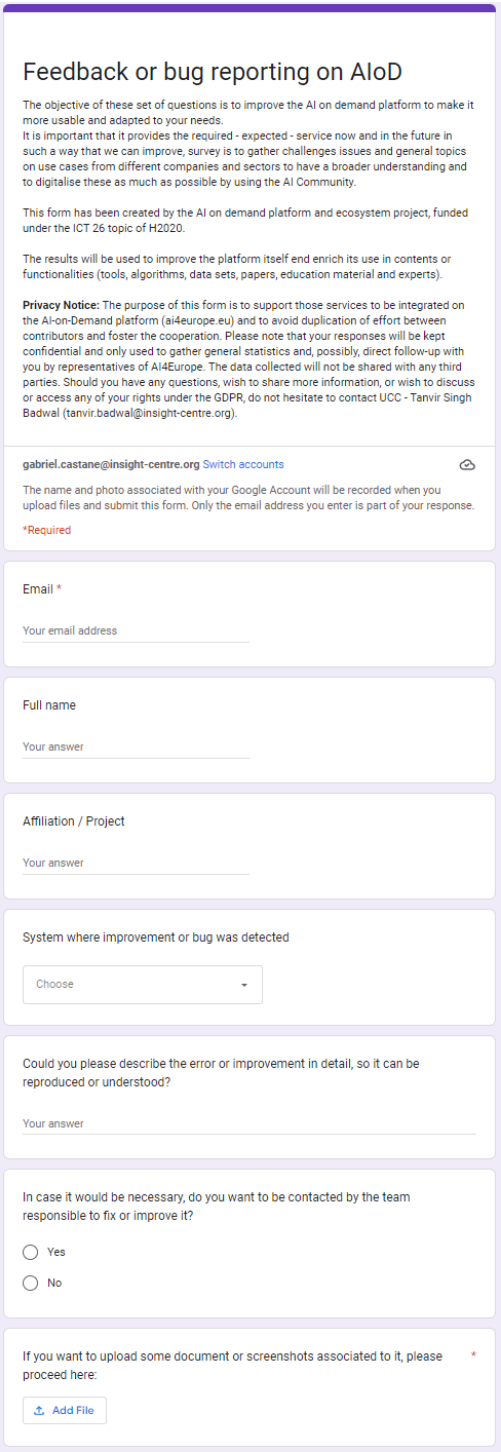
The process must be communicated to the process leader before any change and the impact on other subsystems or products that might depend on that component must be analysed.

In case there is an impact on the modification, it is at the level of process to minimise the impact and, in case of not reaching a solution or of having a heavy impact on any of the components, that will be scaled up to the system leaders, that will look for another solution on the other processes. If the changes can be minimised, the subsystem or subsystems that can be redirected or supported by another process will be migrated/linked to the new process and this adjusted accordingly on the spreadsheets. In case the impact is severe and can't be minimised this will be raised at a higher level (the responsible entity appointed by the governance model is defined by Task 2.1). If there is no severe impact and the systems can be adapted, these will be notified to the process leader and, from here, to the products to schedule the changes and adapt to these accordingly.

In any case, the subsystem notifying the changes need to have a period of time for migration in which changes between old and new additions might coexist, until the old is deprecated giving to the systems that are depending on the component to be changed a period of time to adapt, to be decided by process or system level owner.



3.3.5 Process for reporting bugs / issues



Feedback or bug reporting on AIoD

The objective of these set of questions is to improve the AI on demand platform to make it more usable and adapted to your needs.
It is important that it provides the required - expected - service now and in the future in such a way that we can improve, survey is to gather challenges issues and general topics on use cases from different companies and sectors to have a broader understanding and to digitalise these as much as possible by using the AI Community.

This form has been created by the AI on demand platform and ecosystem project, funded under the ICT 26 topic of H2020.

The results will be used to improve the platform itself end enrich its use in contents or functionalities (tools, algorithms, data sets, papers, education material and experts).

Privacy Notice: The purpose of this form is to support those services to be integrated on the AI-on-Demand platform (ai4europe.eu) and to avoid duplication of effort between contributors and foster the cooperation. Please note that your responses will be kept confidential and only used to gather general statistics and, possibly, direct follow-up with you by representatives of AI4Europe. The data collected will not be shared with any third parties. Should you have any questions, wish to share more information, or wish to discuss or access any of your rights under the GDPR, do not hesitate to contact UCC - Tanvir Singh Badwal (tanvir.badwal@insight-centre.org).

gabriel.castane@insight-centre.org Switch accounts

The name and photo associated with your Google Account will be recorded when you upload files and submit this form. Only the email address you enter is part of your response.

*Required

Email *

Your email address

Full name

Your answer

Affiliation / Project

Your answer

System where improvement or bug was detected

Choose

Could you please describe the error or improvement in detail, so it can be reproduced or understood?

Your answer

In case it would be necessary, do you want to be contacted by the team responsible to fix or improve it?

Yes

No

If you want to upload some document or screenshots associated to it, please proceed here: *

Add File

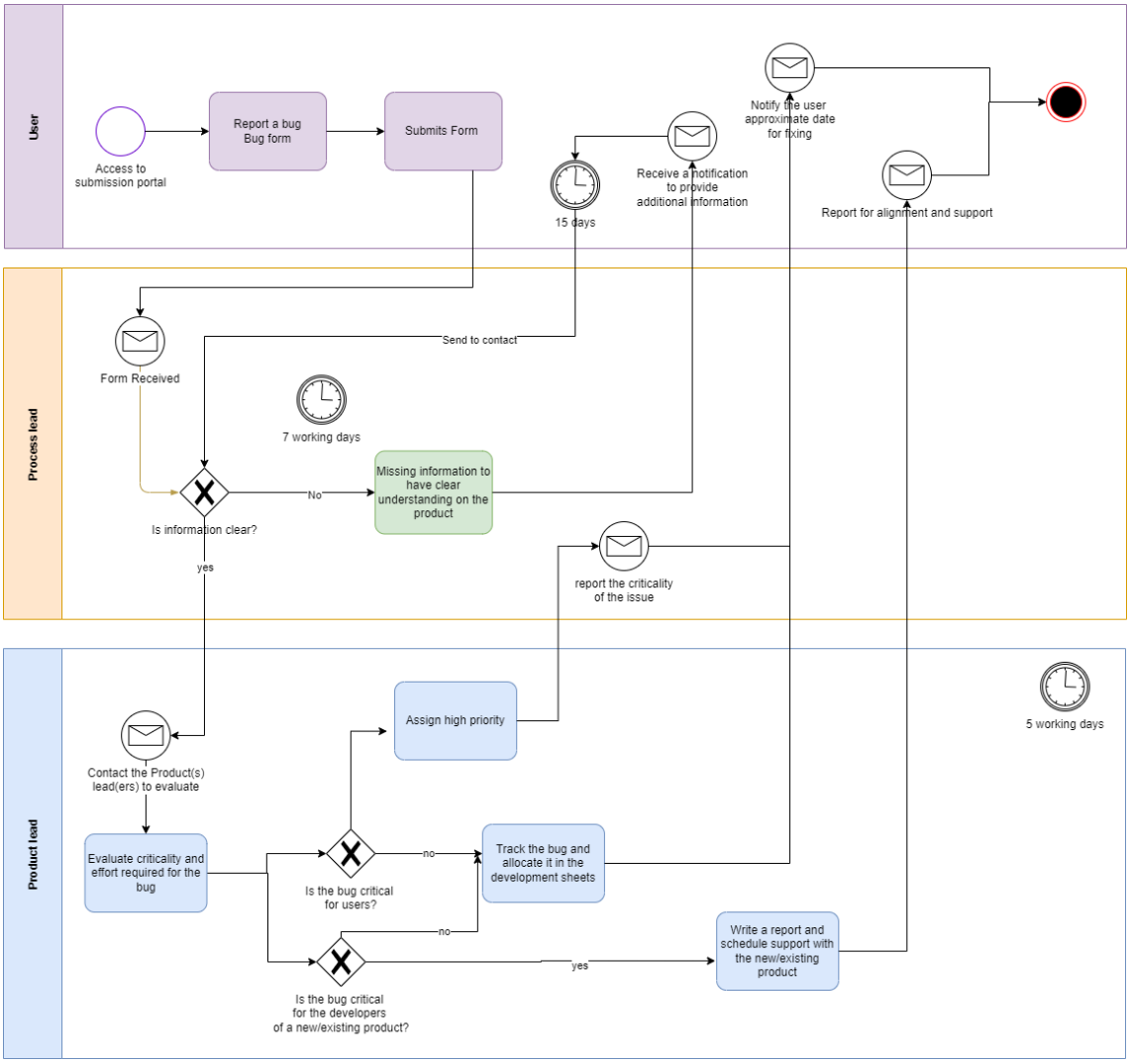
The feedback form depicted, in combination with issue tracking (e.g. on GitHub) as appropriate, will be used by users to report bugs and suggest improvements. Users can either submit their ideas or report issues with specific systems. The purpose is to allow the development teams or system administrators to contact the user for further clarification if necessary. If the user wishes to engage with the platform to resolve the issue, they can do so through this feedback form[3].

Furthermore, the systems that can be listed are currently three: The content management system (CMS), AI4Experiments and the AI Playground. However, it is expected that with the contribution of other projects, the form will grow in options and also the community to engage with the reports on bugs or issues to fix.

This procedure is at a high level, and is a mechanism for the community at large to have one of the input mechanisms for the AIoD improvement. However each of the subsystems might have their own developer community to provide input in a diverse direction, github, working groups, or other channels that they enable as they grow.

The next figure shows the operations management procedure for handling the bugs, issues, and improvements with respect to any system with respect to the platform or services. This will be taken by the process leads, and from there will be directed to one or several product leads to fix the issue accordingly.

3 https://docs.google.com/forms/d/e/1FAIpQLSdvz0FKRFdo_7R4yu9xsIyqJsEghu3pRrMudtOZBktSNqUQfg/viewform



3.4 Product contributions

Each product leader can have a flexible manner in which they decide to proceed with the development. These can be contributions from external inputs to their product can be merged or notified until these will be finished in case they are in development.

This is an example of how a project could contribute with an internal structure for their product aligned to the different parts. It is recommended that full projects allocate persons for interacting with the different parts of the team aligned to the following roles described in next table:

#	Role	Responsibilities
1	Product owner / Project manager / This could be the leader of the Participatory engagement	- Is the go-to person for the tool - Defines the mission - Defines the priorities: what features need to be built based on the outcome of the user research - Responsible for the specifications (high level user stories) required to build a new feature **Collaborates with:** - all of the below mentioned roles.
2	Communication / Marketing Team /	**Is responsible for** - marketing activities to promote the content of the website - measuring engagement of users with the platform - providing content for the website taking into account the users research, the branding, tone of voice and marketing strategy. **Collaborates with** - Product owner - UI/UX
3	UI /UX team	**A UX role Is responsible for** - creating user stories (breaking down a feature into smaller steps) with the help of developers and the Product owner - creating the user journeys, user flows - making periodic interviews with personas, capturing feedback and proposing improvements - analyzing feedback gained by the community - creates wire-flows, low fidelity mockups **A UI role is responsible for** - create high fidelity mockups - graphic design **Collaborates with** - Product owner - Communication team - Developers
4	Developer	**Are responsible for** - Participate in defining requirements (user stories, functional and non-functional requirements)

Another option is the creation of the development working groups as it is the case of the tool AI4Experiments as contribution of several projects to their development.

Development WGs can be established to direct the development of significant internal solutions, following the example of the AI4Experiments DWG. Individual technological solutions, e.g. AI4Experiments, or the central AIoD CMS system, can define DWGs where the gathering of technical requirements, development and management methodologies and planning/versioning can be decided upon.

4. Ensuring quality and maintainability

Maintaining high quality as well as FAIRness and trustworthiness is important to AI4Europe as it will increase the platform's usefulness, sustainability and adoption by the community. At this early stage we provide initial directions in the corresponding sections below. Some of these directions will depend on technological decisions made, primarily by WP3, while others will depend on governance decisions taken within the project, e.g. by WP1, as well as in coordination with sibling AIoD projects, e.g. ICT-49s, the upcoming Digital Europe AIoD project, etc. Essentially the processes and procedures reported here are meant to describe the overall technological and governance framework implemented to enable high-quality contributions and continuous co-development with the community.

4.1 Technical quality

Technical quality of the AI assets can be ensured in the following steps of the integration process:

- Ensuring quality of submissions by following guidelines and completing intuitive online forms, which will help the review process
- Ensuring quality of submitted AI assets using a review process, where experts verify that an AI asset is worth publishing in the AIoD platform
- Ensuring quality of already published AIoD assets, by ensuring maintainability and collection feedback from the end users of the services

- Adding periodic check-ups within the platform with expiring date under which the assets must be revised.

For example, technical quality of submitted AI-related assets on the platform will be encouraged by:

- disallowing anonymous or unverified submissions.
- providing usability guidelines depending on the type of contribution
- introducing a comprehensive review system
- maintaining statistics, such as times an asset has been downloaded, linked assets it has been used in, etc.
- allowing users to provide feedback on AI assets and allowing them to report technical issues

4.2 Maintenance and maintainability

The AIoD platform will promote assets that are maintained and in use, but penalising ones that are not, e.g., by making them less discoverable during searching or browsing. The possibility of removal from the catalogue of assets will be discussed and decided upon in due course.

In addition, we will examine the possibility of automatically checking the availability of services hosted by third parties and integrated with the platform, allowing the platform to conduct appropriate actions, e.g. in case some service becomes permanently unavailable.

4.3 Trustworthiness and ethics

AI4Europe AIoD aims to mark and prioritise trustworthy and ethical assets via generally accepted best practices:

- Appropriate evaluation via the ALTAI methodology and tools[4]
- Markup and search boosting of ethical assets

We will combine self-assessment with review process and/or feedback from the community (e.g., contributors provide their own ALTAI self-assessment of the provided AI asset, while the community will be able to provide feedback or report violations of some points from the self-assessment that were claimed by the contributors to be fulfilled). Because ALTAI is a comprehensive framework, we will also explore the possibility to implement its simplified version.

The input for these processes will be an outcome from the Task 4.4 Trustworthy tools.

4.4 Data and process FAIRness

AI4Europe prioritises FAIRness[5] as an integral part of research excellence and open science. By maintaining an open and interoperable catalogue, and by giving incentives towards findability and trustworthiness and correctness, AI4Europe is at its core a FAIR facilitator. This is further described and tacked in WP3, Task 3.4 FAIR data objects and knowledge discovery.

4 https://futurium.ec.europa.eu/en/european-ai-alliance/pages/welcome-altai-portal
5 https://www.go-fair.org/fair-principles/

5. Internal and related external contributions for assets

5.1 Internal processes

AI4Europe is currently defining its internal processes to help integrate internal as well as external assets. The final processes will be reported in the second and final iteration of D4.1 (due M12).

For our purposes we view three distinct tiers of contributions, also reflected by the AI4Europe design (reported in *deliverable D3.1*):

1. Internally developed assets and applications: Assets developed as part of the AI4Europe project by members of the consortium, e.g. the AI4Experiments platform
2. Assets developed by projects explicitly in support of the European AI-on-Demand platform, e.g. these responding to the ICT-49 call.
3. Externally contributed assets and products. These contributions are envisaged to form part of the overall European AI on demand and will contribute to sustain and extend the AIoD.

Assets developed in all tiers will be included in the metadata layer according to the D3.1 and accessible to any service of the AIoD via any of the developed services. Currently, the CMS is providing this functionality, as well as the assets within the AI4Experiments The introduction and on-boarding of new assets, as well as the availability of the information uploaded by the contributors will become more standardised and streamlined as the iterations on the architecture become more stable with the next releases.

5.2 Relevant external processes

EOSC rules of participation

The European Open Science Cloud (EOSC) has long established specific requirements on contributors on a voluntary basis, known as Rules of Participation (RoP)[6]. Participating in EOSC includes preparing an application and going through an initial screening process. According to the Commission:

"*The Rules of Participation (RoP) for the European Open Science Cloud (EOSC) state the standards and conduct required of EOSC participants. EOSC participants agree to adhere to the RoP. Adherence to the RoP is expected to build trust in the EOSC and the resources accessible through EOSC. The RoP are based on the idea to develop quality through transparency and minimise the need for regulation*."

[6] European Commission, Directorate-General for Research and Innovation, *EOSC rules of participation*, Publications Office, 2021, https://data.europa.eu/doi/10.2777/30541

AI4Europe and indeed the broader European AIoD platform(s) have very similar goals. During the following months AI4Europe will decide the extent to which a similar procedure will be established.

OpenML

OpenML[7] is an online service for sharing ML-related datasets, algorithms and experiments in an open manner. To contribute assets to OpenML users simply submit them via an online form. OpenML is able to link between different types of asset, which can potentially be used for improved filtering and searching results. AI4Europe will consider adopting the processes of OpenML for new contributions.

Future AI Checklist

Future AI, an initiative focusing on trustworthy medicine and healthcare AI has created a checklist for AI solutions and assets[8]. AI4Europe might make use of the Future AI checklist to self-assess assets submitted.

ALTAI

The Assessment List for Trustworthy Artificial Intelligence (ALTAI) is a practical tool that helps business and organisations to self-assess the trustworthiness of their AI systems under development[9]. ALTAI has been supported by the European AI Alliance. AI4Europe will require tool and dataset contributors to self-assess trustworthiness via ALTAI. We will examine the possibility to modify ALTAI to increase adoption by the users (implement shorter version, select relevant parts for different AI assets etc.).

FAIRness self-assessment for datasets

Specific to datasets is the FAIR principles: Findability, Accessibility, Interoperability and Reproducibility. The FAIR principles are core to open science and are therefore of central importance to AI4Europe. In the near future we will evaluate FAIR self-assessment tools, such as the one at https://satifyd.dans.knaw.nl, with the prospect of adding them to the AI4Europe arsenal.

Open Research Europe

Open Research Europe (ORE)[10] is an open access publishing platform for the publication of research papers stemming from Horizon 2020, Horizon Europe and/or Euratom funding across all subject areas. ORE offers an interesting Open and Transparent peer-review process. Submissions are published rapidly as preprints after a set of pre-publication checks, and then authors suggest appropriate reviewers and engage in an open and public dialogue with their peers. We will examine the possibility of adopting some of ORE practices in the reviewing process of AI assets in the AIoD platform.

7 https://www.openml.org
8 https://future-ai.eu/checklist/
9 https://futurium.ec.europa.eu/en/european-ai-alliance/pages/welcome-altai-portal
10 https://open-research-europe.ec.europa.eu/

6. Conclusions

This deliverable has reported on initial processes (still under testing) regarding integration and contribution processes and WG suggestions. Specifically we have outlined an initial set of processes and tools for ensuring that assets contributed to AIoD are of high quality and remain relevant. We have provided information on how we envisage to ensure the quality and maintainability of the submitted resources. We have also described processes that can enable contributors to communicate with AI4Europe in order to improve the AIoD platform's uptake, fix errors and bugs and make it more useful and relevant to the wider community.

Several of the directions reported will be specified and consolidated in the coming months where the architecture will be better defined and the roles and responsibilities better aligned with respect to the envisioned governance.

The limitations of the processes described are in the lack of decision making with respect to the alignment of the contributions to the vision of the platform. All contributions will be supported, same as the processes to keep the contributions to the different catalogues.

For the moment, these are being moved to the product leaders of the catalogues and the tools, and the platform will provide mechanisms for updating these or detecting their consistency, but neither their usability, security or trustworthiness.

Furthermore, there exists the need for having a process to support legal, or exploitation, sustainability evaluation. The scope of this document presents the technical contributions and how the AI4Europe as CSA and project will support these contributions from internal but also other projects to foster cooperation and to make operational these projects to be able to contribute seamlessly to the (technical) growth of the AIoD platform.

These might be added as the contributions from the different projects and products within the WP4 are being developed in the tasks - trustworthy AI, collaboration, reproducibility, etc.

The second and final version of the deliverable is due at the end of M12.

Appendix I - Integration with the AIoD

1. Purpose of the document

The document describes the functional requirements for the xxx system. These requirements have been identified through several iterations from the partners organised by Project/organisation XXX.

- How was it created

Describe how it has been created.

- How to use

This document aims at being a description of what an “ideal Service” would provide according to researchers/developers in the XXX project. This means that this document aims to be a guide in deciding which requirements should be focused on based on available resources and time. Each functional requirement is linked to two variables: desirability and difficulty.

The desirability variable is ranked from High to Low, with the following meanings:

1. High desirability: a feature to have available in a first prototype.
2. Medium desirability: a feature to have available by the end of the development
3. Low desirability: a feature out of the scope of the service

Task. The difficulty variable is ranked from Low to High with the following meanings:

1. Low difficulty: a feature that can be implemented using the existing structures on the AIoD platform (or planned), or existing tools, and through simple changes in configuration.
2. Medium difficulty: a feature that requires substantial development, but based on structures already existing on the AIoD platform (or planned), or through existing tools.
3. High difficulty: a feature that requires the development of new functionalities on the platform or the resolution of extensive administrative issues.

2. Overall description

- User personas target

Describe here the final users, and/or the ones using this service

Persona ID	Description
P1	

- Objectives

Describe here in bullet points the objectives and use them for the user stories traceability.

3. User Stories

Fill the user stories per objective

- Objective 1

User story ID	Description
US1	As a [persona], I [want to], [so that]

- Objective 2

User story ID	Description
US2	As a [persona], I [want to], [so that]

4. Functional & Non-functional requirements

For each objective associate describe the functional requirements.

- Objective 1

ID	Related user stories IDs	Description	Desirability	Difficulty
FR001	US1, US2	A connector to get/push datasets from OpenML must be developed	Medium	Medium
			Medium	Medium

- Objective 2

ID	Related user stories IDs	Description	Desirability	Difficulty
FR201	US21	The system must run as a web service	Medium	Medium
			Medium	Medium
			Desirability	Difficulty

5. Describe the architecture of the system (only if is already implemented)

Appendix II - Feedback form for contribution to AIoD

Request label: <Ticket_id>

Date: dd/mm/yyyy

1. Purpose of the document

The document describes a set of recommendations that the proposers of <Ticket_id> can use to facilitate the integration and construction/extension of components concerning the current architecture and services of the AIoD.

Please, within one month of receiving this document, contact via email at XXX for confirmation to proceed, any clarification, or question solution via email from the time receiving the document. Otherwise, the user stories and other materials will be erased from the AIoD system, and the contribution might not be considered for synergies with other projects/teams or contributions concerning the AIoD.

2. Alignment with the API

To be described here are pointers to current repositories, documentation, tools and, if necessary, the leaders or contact of some parts in case a clarification is required as follows:

If any development is already ongoing, align to this component, and it can be merged with the team developing it; provide the contact to the person or team on it.

If any development will result as an extension of any existing API part already implemented, provide the contact of the main contributor/developer.

If a development proposed is already done, point at it.

If development is scheduled, provide the time plan and evaluate whether this can be accelerated or suggest that it can be part of the proposer (individual or as part of the proposer team).

3. Alignment with the metadata or data schema/ontologies

To be described here are pointers to current repositories, documentation, tools and, if necessary, the leaders or contact of some parts in case a clarification is required as follows:

If any development is already ongoing, align to this component, and it can be merged with the team developing it; provide the contact to the person or team on it.

If any development will result as an extension of any existing API part already implemented, provide the contact of the main contributor/developer.

If a development proposed is already done, point at it.

If development is scheduled, provide the time plan and evaluate whether this can be accelerated or suggest that it can be part of the proposer (individual or as part of the proposer team).

4. Alignment with the synchronization and nodes distribution

To be described here are pointers to current repositories, documentation, tools and, if necessary, the leaders or contact of some parts in case a clarification is required as follows:

If any development is already ongoing, align to this component, and it can be merged with the team developing it; provide the contact to the person or team on it.

If any development will result as an extension of any existing API part already implemented, provide the contact of the main contributor/developer.

If a development proposed is already done, point at it.

If a development is scheduled, provide the time plan and evaluate whether this can be accelerated or suggest that it can be part of the proposer (individual or as part of the proposer team).

5. Alignment with the resource providers

To be described here are pointers to current repositories, documentation, tools and, if necessary, the leaders or contact of some parts in case a clarification is required as follows:

If any development is already ongoing, align to this component, and it can be merged with the team developing it; provide the contact to the person or team on it.

If any development will result as an extension of any existing API part already implemented, provide the contact of the main contributor/developer.

If a development proposed is already done, point at it.

If a development is scheduled, provide the time plan and evaluate whether this can be accelerated or suggest that it can be part of the proposer (individual or as part of the proposer team).

6. Alignment with the security/privacy/authentication

To be described here are pointers to current repositories, documentation, tools and, if necessary, the leaders or contact of some parts in case a clarification is required as follows:

If any development is already ongoing, align to this component, and it can be merged with the team developing it; provide the contact to the person or team on it.

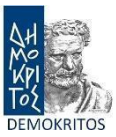
If any development will be result as an extension of any existing part of the API already implemented, provide the contact of the main contributor/developer.

If a development proposed is already done, point at it.

If a development is scheduled, provide the time plan and evaluate whether this can be accelerated or suggest that it can be part of the proposer (individual or as part of the proposer team).

------End of Document------

Consortium



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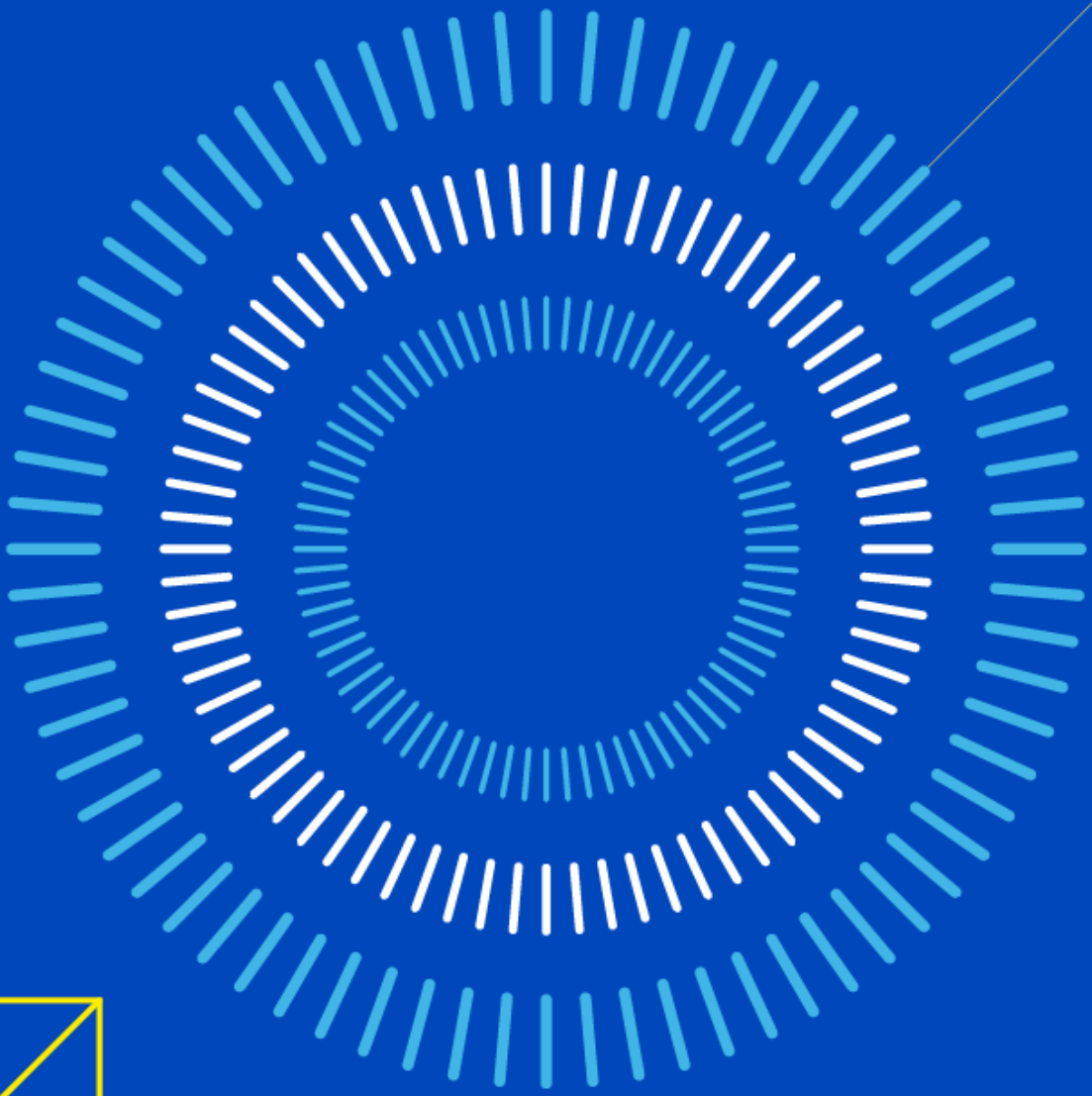

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