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Deliverable D7.2:

Exploitation Plan

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Abstract

This document describes the Exploitation Plan for AARC TREE project. It presents the context, methodology including the common necessary definitions, roles and responsibilities, main activities and the related process and procedures. Main activities are the Identification and management of Results and Key Exploitable Results, along the monitoring of their Intellectual Property Rights, Ownership and Access Rights, the elaboration of Exploitation Plan and the Assessment of the impact of the project.

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Acronym	Definition
AAI	Authentication and Authorisation Infrastructures
BPA	Blueprint Architecture
CC - CC BY - CC0 - CC BY-NC-ND	Creative Commons License - BY: Credit must be given to the creator - Creative Commons Zero: No rights reserved - NC-ND: Non Commercial / No Derivatives
CSA	Coordinated and Support Action
DoA	Description of Action
EOSC	European Open Science Cloud
IP	Intellectual Property
IPR	Intellectual Property Rights
KER	Key Exploitable Result
RI	Research Infrastructure
TRL	Technology Readiness Level
WG	Working Group

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Executive Summary

The AARC TREE project emphasises the importance of an effective exploitation and sustainability plan for maximising the impact of Horizon Europe initiatives. This deliverable outlines a comprehensive strategic approach aimed at amplifying AARC TREE project's influence, facilitating seamless knowledge transfer, and generating future value to the relevant project stakeholders and society in general. By providing a clear roadmap for the successful exploitation of AARC TREE project outputs, this deliverable ensures that AARC TREE's results contribute significantly to the advancement of next generation European Authentication and Authorisation Infrastructure services.

This exploitation plan includes essential concepts, definitions, and processes, as well as detailed measures and activities for implementation during the project for each of the Key Exploitable Results and other results, including IPR measures, Ownership and Access Rights. Drawing from AARC TREE's expected outputs and Key Exploitable Results, the document provides the necessary Tools, Templates, and Impact Indicators. These resources are designed to support the uptake of project outputs, ensuring that the project achieves maximum impact and continues to benefit stakeholders beyond its completion.

1. Introduction

For several years, the authentication and authorisation infrastructures (AAIs) for research worldwide have based their architectures on the "AARC Blueprint Architecture" [[AARC BPA](#)] and the suite of accompanying guidelines. The first version of the AARC BPA was developed under the first AARC project (2015-2017), further enhanced under the second AARC project (2017-2019) and subsequently maintained by the AARC Community.

The AARC BPA framework, with the accompanying guidelines, has been the reference model for the European Open Science Cloud AAI, ESFRI clusters AAIs (such as EOSC Life AAI, DARIAH AAI, etc), for the Erasmus+ AAI, for many national research AAIs, and research and e-infrastructures in Europe, the Americas, and the Asia-Pacific region. Since 2019, the AARC community has further enhanced and maintained (i) the BPA, which has become the de-facto community best practice to deploy interoperable AAI for 'e-Science'; and (ii) the Policy Development Kit, alongside the policy and technical guidelines.

The communities that are deploying an AARC-BPA compliant AAI and that are interested in adopting and extending these outcomes gather in the AARC Engagement Group for Infrastructures, AEGIS [[AEGIS](#)]. Established in 2019 at the end of the AARC projects, AEGIS brings together representatives from research and e-infrastructures, operators of AAI services to bridge communication gaps and to make the most of common synergies. AEGIS ultimately enhances the wider and more effective uptake of AAI recommendations by infrastructures in their federated access solutions, so that they can focus on providing other support for research activities.

AARC TREE takes this inclusive model to capture and analyse the AAI interoperability requirements and service gaps for more research infrastructures, to enhance the AARC BPA to support more effectively RIs by further expanding authorisation aspects and enabling new use-cases. With federated access already in place as the unifying aspect that spans users, organisations, research infrastructures, and services, the AARC technical revision is the key to enable better integration across all thematic areas, to streamline access to federated data and to bring the RIs together to

align strategies and liaise with the broad stakeholder community and relevant initiatives, such as, EU DataSpaces, the European Digital Identity Wallet, and eIDAS.

The main objectives of the AARC TREE project are to:

- (i) **Capture and analyse** new Authentication and Authorisation interoperability requirements (that support emerging integration use-cases across the thematic area) and provide a landscape analysis of AAI services (including gaps) in the RIs represented in AARC TREE
- (ii) **Define and validate** new technical and policy guidelines for the AARC BPA that address RI use-cases. This will improve the integration of RIs across thematic areas and increase the ability of RIs to support emerging needs
- (iii) **Expand** the number of research communities that can implement the AARC BPA and/or the AARC guidelines, by providing a validation environment and toolkits. At the same time support existing AARC communities in adopting new guidelines
- (iv) **Bring RIs, e-Infrastructures and relevant stakeholders together** to align strategies to integrate new technologies, better interoperate and share resources across thematic areas and produce a compendium and recommendations for different stakeholders.

1.1 Purpose and Scope of the Document

The purpose of the D7.2 document is to define the key concepts, processes and expected measures and activities to perform during the project, along with the exploitation and sustainability plans. When necessary, templates are introduced. The aim of this deliverable is not to present the progress towards the realisation of exploitation activities – but the baseline for assessing the progress toward the expected project outputs, its related IPR, the Key Exploitable Results and Impact Indicators as provided in the DoA and expanded for those that are necessary.

This is expected to be a live document to be updated along the project, as such, any necessary adjustment to the plans, any new processes or updates to templates will be incorporated in the subsequent deliverable to be submitted by the end of the project (M24).

1.2 Structure of the document

The document is structured following way:

- First chapter provides the general introduction, including the context, roles and responsibilities and processes and procedures linked to the task.
- Second chapter describes an overview of the methodology that will be used during the project to assess the progress towards exploitation and sustainability, including relevant definitions needed to have a common understanding of what is expected.
- Third chapter outlines the exploitation process and procedure.
- The fourth chapter provides the baseline status of AARC TREE Key Exploitable Results, IPR Management, Exploitation and Sustainability and Impact, along with the Impact Indicators.
- Chapter five describes conclusions and next steps.
- The annexes include templates for the Intellectual Assets Lists, Results Ownership List and Key Exploitable Results.

1.3 Context

D7.2 Exploitation plan is one of the outputs of WP7, the work package executing the communication and exploitation according to the strategy defined in WP6, concretely T7.2 Exploitation plan and implementation, led by EGI and contributed by all partners: NORDUNET, GEANT, Nikhef (NWO-I), GRNET, CERN, Masaryk University, SURF BV, KIT, CSC, EISCAT, DARIAH, MARIS BV. Main objectives of the task are:

- To implement and conduct the operational process that ensures all project results are systematically captured, assessed for exploitation readiness and validated along with an improvement cycle to strengthen them.
- To articulate and possibly expand the already identified Key Exploitable Results (KERs) ensuring that they will be supported beyond the project lifespan, by providing definition, exploitation paths, and dissemination actions.
- The task will monitor all other project results to verify if they should be added to the initial list of KERs, including all the necessary information on ownership, IPR, and access to maximise the adoption of AARC TREE's project results.

Along with this Deliverable, the main output of the task is the updated Exploitation Plan deliverable D7.4 due to the end of the project M24.

This deliverable complements the other deliverables of WP7 referring to the dissemination and engagement tasks (T7.1) - which include the definition of stakeholders along with communication strategy to maximise engagement with the targeted audiences.

WP7 will execute the communication strategy defined in WP6, leading the dissemination and exploitation of the project. This work will also generate key insights for policymakers, for the exploitation of results, and will support the finalisation and dissemination of the "recommendations for a Common long-term strategy for AAI services in pan-European Research Infrastructures in Europe" (planned under WP5).

There is also an important linkage with the Deliverable D8.1 AARC TREE Strategy document - Who, what, why?, as it describes the strategic approach of the AARC TREE project and a list of activities to advance the AARC BPA Framework and to deliver recommendations to ensure the sustainability of Authentication and Authorisation Infrastructures for the scientific community.

It is noteworthy to highlight the work related to the AARC TREE project is bound to the following legal documents:

- Grant Agreement Nr. 101131237 between the European Commission and the Coordinator
- Consortium Agreement between all project partners

Those specific articles and clauses regulate Exploitation, Results, Ownership and joint ownership, Access, and Open Science among others. Some of those have been included in the definitions and descriptions of the methodology section.

2. Methodology and Definitions

The exploitation approach of the AARC TREE project is developed from the Innovation Management know-how developed within the EGI Foundation, leading the Exploitation task, along many projects (EOSC-Hub, C-Scale, iMagine, interTwin, ANERIS, SPECTRUM) and adapts some of the guidelines

provided by ISO 56002:2019 Innovation management — Innovation management system¹ into a Horizon Europe Coordinated and Support Action.

The main activities foreseen for AARC TREE are:

- Identification and management of Results and Key Exploitable Results;
- Intellectual Property Rights (IPR) Management;
- Exploitation and Sustainability;
- Impact assessment.

2.1 Roles and responsibilities

The Innovation Manager (Task 7.2 leader) will liaise with the project partners concerning the collection of results and all the necessary information on IPR, ownership, access rights, etc. and will help the dissemination and communications officer (WP7 leader) along the dissemination and communication strategy for each of the Key Exploitable Results to ensure the maximum adoption and engagement of the relevant project stakeholders

From an operational point of view innovation manager role (T7.1) is expected:

- To generate Exploitation Plan D7.2 defining the operational processes and methodology and the baseline for AARC TREE Project Exploitation
- Identify and articulate the Key Exploitable Results (KERs) and other project results – including for each of them the specific project results and related ownership, IPR and Access Rights
- To update the Exploitation Plan D7.4 presenting the progress towards initial plan, main achievements in terms of adoption and an updated plan ensuring the sustainability of project results

2.2 Identification and management of Results and Key Exploitable Results

A **'Result'** is *Any tangible or intangible effect of the action, such as data, know-how or information, whatever its form or nature, whether or not it can be protected, as well as any rights attached to it, including intellectual property rights.*

A **Key Exploitable Result (KER)** is *an identified main interesting result (as defined above) which has been selected and prioritised due to its high potential to be "exploited" – meaning to make use and derive benefits- downstream the value chain of a product, process or solution, or act as an important input to policy, further research or education.*

Initial selection of KERs is provided in the impact section of the DoA. During the project duration KERs information will be updated and extended as they are developed, including for each of them, a complete summary description, information on Ownership, Target Audiences/Target Groups and stakeholders, Value Proposition, and the future work.

- **'Result/KER Owners'** are the entities or institutions holding legal or intellectual property rights over the outcome. Identifying the ownership information is crucial, as it may involve an individual researcher, a research institution, a company, or a jointly owned result within

¹ <https://www.iso.org/standard/68221.html>

the consortium. This information establishes authority and responsibility for the Result/KER, ensuring its exploitation and long-term sustainability. In the case of collective work, any decision related to the result/KER will be taken by the corresponding governance and decision making body of the project. As such it will be consulted to the Project Management Board (PMB) and escalated to the Project Assembly for any decision needed.

- **‘Target Audiences/Groups’** are the specific stakeholders for whom the KERs are designed. They comprise both the target user group or beneficiaries, such as researchers, industry professionals, policymakers, or the general public, and the interest groups defined in the Horizon Platform.
- **‘Value Proposition’** stands for the unique benefits or selling point that the KERs offer to their adopters. It highlights the key advantages and main benefits that distinguish the KERs from other existing assets.
- **‘Summary Description and Future Work’** provides the comprehensive summary of achievements completed during the project and envisions any future work, updates, or iterations that will be needed for the KER after the project.

This whole information is in line with the required information for including the KERs into Horizon Platform² as presented in the Annex 3.

2.3 Intellectual Property Rights (IPR) Management

Intellectual Property Rights (IPR): Obligation to protect results. According to the Grant Agreement, *the beneficiaries must adequately protect their results — for an appropriate period and with appropriate territorial coverage — if protection is possible and justified, taking into account all relevant considerations, including the prospects for commercial exploitation, legitimate interests of the other beneficiaries and any other legitimate interests.*

Access rights are the rights to use results [...].

In order to monitor and track the information related to the Intellectual assets Annex 1 and Annex 2 templates have been created to collect the **Intellectual Assets** and **Results Ownership List** in line with the information needed for the Continuous Reporting of the European Commission’s participants portal.

2.4 Exploitation and Sustainability

According to the Grant agreement, **‘Exploitation’** (as defined at the beginning of Annex 5) means the use of results in further research and innovation activities other than those covered by the action concerned, including among other things, commercial exploitation such as developing, creating, manufacturing and marketing a product or process, creating and providing a service, or in standardisation activities. According to the clarification of the Annotated Grant Agreement: *Exploitation can also be non-commercial, for example use in non-commercial research or non-commercial teaching activities. When results of the action are used to influence R&I policy or decision making, this is another form of exploitation.*

2

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/horizon-results-platform/>

Beneficiaries must — up to four years after the end of the action (see Data Sheet, Point 1) — use their best efforts to exploit their results directly or to have them exploited indirectly by another entity, in particular through transfer or licensing.

‘Sustainability’ in the context of AARC TREE project refers to the continuation and adoption by the project relevant stakeholders of the project outcomes beyond its completion.

2.5 Impact Assessment

A usual way to assess the impact generated by an Horizon Europe project is to use the Key Impact Pathways Methodology³. It proposes three complementary perspectives: scientific, societal and economic impact.

- **Scientific impact:** Promote scientific excellence, support the creation and diffusion of high-quality new fundamental and applied knowledge, skills, training and mobility of researchers, attract talent at all levels, and contribute to full engagement of the Union's talent pool in actions supported under the Programme.
- **Societal impact:** Generate knowledge, strengthen the impact of R&I in developing, supporting and implementing Union policies, and support the uptake of innovative solutions in industry, notably in SMEs, and society to address global challenges, inter alia the Sustainable Development Goals (SDGs).
- **Economic impact:** Foster all forms of innovation, facilitate technological development, demonstration and knowledge transfer, and strengthen deployment of innovative solutions

In a first approach, specific impact indicators have been identified for each of the Key Exploitable Results in order to provide a first level monitoring of the impact achieved by AARC TREE during the project life-time.

3. Exploitation Process and procedure

3.1 Goals

The goals of this process are:

- Identification and management of Results and Key Exploitable Results
- Intellectual Property Rights (IPR) Management
- Creation and monitoring of an Exploitation and Sustainability plan
- Impact assessment for the project

3.2 Input/Output

Consortium Agreement, DoA, Grant Agreement	In
Deliverables, Milestones, Periodic Reports and WP reports	In
Discussions with WP leaders, task leaders, consortium members and with different boards of the project	In

3

https://research-and-innovation.ec.europa.eu/strategy/support-policy-making/shaping-eu-research-and-innovation-policy/evaluation-impact-assessment-and-monitoring/horizon-europe-programme-analysis_en

A List of Project Results and Key Exploitable Results	Out
Curated information on Results Ownership, IPR and Access Rights	Out
Exploitation and Sustainability Plan	Out
Impact indicators	Out

Table 1: Input/Output of Exploitation procedure

Outputs will be incorporated at:

- Exploitation Plan Deliverables (D7.2 and D7.4);
- Continuous Reporting and Progress Reports from the project and any necessary information for the project reviews;
- Dissemination and Communication activities (such as Website, Dissemination Material, Social Media, etc).

3.3 Entities involved in the procedure

- Innovation Manager (T7.2 Leader);
- Dissemination & Communications Officer (WP7 Leader);
- Project Partners;
- Project Management Board (PMB);
- Project Assembly.

3.4 Triggers

A procedure was triggered at the beginning of the project to understand the exploitation plan baseline. This resulted in a draft Exploitation Plan described in the milestone M6.1. Several iterations took place to produce to produce the first version the D7.2 (this deliverable).

A final version of the exploitation plan (D7.4) is expected close to the end of the project.

3.5 Steps

Step #	Responsible	Action
1	Innovation Manager (T7.2 Leader)	Desk research and careful analysis of deliverables, milestones, DoA, project proposal, presentations and other dissemination material generated by the project - to pre-fill necessary templates, exploitation and sustainability plan information and impact metrics, with the help of the Dissemination & Communications Officer (WP7 leader)
2	Innovation Manager (T7.2 Leader)	Contact relevant project partners to validate and complete the templates exploitation and sustainability plan information and impact metrics
3	Innovation Manager (T7.2 Leader) or Dissemination & Communications Officer (WP7 leader)	Iterate and validate information with Project Management Board (PMB) and incorporate feedback

4	Innovation Manager (T7.2 Leader) or Dissemination & Communications Officer (WP7 leader)	If necessary, validate information with Project Assembly
5	Innovation Manager (T7.2 Leader)	Incorporate information into the project deliverables, progress reports, continuous reporting, project reviews
6	Dissemination & Communications Officer (WP7 leader)	Use curated information for Communication and Dissemination activities (Website, Social Media, Publications, etc.)

Table 2: Steps of Exploitation Procedure

4 AARC TREE Exploitation Plan

This section expands the initial approach defined in the AARC TREE Description of Action (DoA).

4.1 AARC TREE Key Exploitable Results

The DoA defines the AARC TREE Key Exploitable Results (KERs), which, in the case of the AARC TREE project, are already known and were already defined at the very start.

The AARC TREE main KERs are summarised below:

KERs	Description
KER1 Updated AARC Blueprint architecture for emerging technologies and services in pan-European research infrastructures	Up-to-date guidance on implementing the architecture of their Authentication and Authorisation Infrastructure service components, incorporating new requirements, use cases and new technologies.
KER2 Recommendations for a common long-term strategy for AAI services and best practices	The AARC TREE best practices and recommendations align technical approaches and foster collaboration in implementation across scientific domains
KER3 Updated interoperability framework	Framework to harmonise AAI policies to empower identity providers, service providers and user communities to identify interoperable policies for the open science vision.

Table 3: AARC TREE KERs

4.2 AARC TREE IPR Management

As explained in the DoA, the AARC TREE knowledge management and protection strategy aims to maximise the success of the main goal of the project, that is “to develop common strategies for future development of RI technologies and services within broad RI communities”. Hence, the IP

Management strategy is driven by the need to encourage uptake and minimise barriers to adoption by the key stakeholders.

Open science practices will be followed to keep project outputs “as open as possible, as closed as necessary”. As such, the project’s results will be licensed under an open licence:

- Most results will be textual outputs (reports, papers, publications, etc), they will be considered the result of the collective work of the contributing experts, jointly owned by the consortium partners.
- The main protection mechanism expected will be copyright (in any of the appropriate open permissive licence, such as CC BY for texts or CC0 for the metadata).
- GÉANT Association is the owner of the logos. The visual identity has been co-developed by NORDUnet and GÉANT. This material is licensed under a Creative Commons BY-NC-ND 4.0 licence.

The strategy for Knowledge and Intellectual Property Management in AARC TREE is driven by the objective to maximise uptake and minimise barriers to the adoption, adaptation and reuse of its project results. WP7 will coordinate the mechanisms for managing generated knowledge and its IP status.

As a CSA, it is not expected that the project generates SW code or libraries; however, if necessary, a permissive open-source licence will be used for any generated code. For outputs, including code, that improve existing implementations, the improvement will be freely assigned to the owners of the background IP for incorporation therein. The JLA compatibility checker or the License Clearance tool will be used to check licence compatibility when third-party software components are used.

All scientific results (including data, framework, publications, guidelines, and resources) will be made available under a Creative Commons licence and follow Horizon Europe Open Science and research data management approach, as described in the DoA.

For other results, ownership will be assigned to the partner that generates them. Some results may be generated jointly by multiple partners. In these cases, each of the joint owners shall be entitled to use their jointly owned results for non-commercial research activities on a royalty-free basis, and without requiring the prior consent of the other joint owner(s), and each shall be entitled to otherwise exploit the jointly owned Results and to grant nonexclusive licence to third parties (without any right to sub-licence) if the other joint owners are given at least 45 calendar days advance notice.

For collaboration within the WGs, if there is any legitimate interest to keep confidentiality, agreements will be put in place. However, this is expected to be an exception, as AARC TREE by design is an open and collaborative project.

Results	Ownership	Intellectual Property Rights / Access Rights
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KER1 Updated AARC Blueprint architecture for emerging technologies and services in pan-European research infrastructures	Collective Work jointly owned by Project Partners	Copyright under CC-BY 4.0 Licence
KER2 Recommendations for a common long-term strategy for AAI services and best practices	Collective Work jointly owned by Project Partners	Copyright under CC-BY 4.0 Licence
KER3 Updated interoperability framework	Collective Work jointly owned by Project Partners	Copyright under CC-BY 4.0 Licence
Logos, Branding and Visual identity	GEANT	CC BY-NC-ND 4.0

Table 4: AARC TREE Results Ownership and IPR

4.3 AARC TREE Exploitation and Sustainability

Integration with RIs, EOSC and the industry and exploitation therein is the most logical exploitation path for the architecture components and requirements developed in the project. To support user adoption, T7.1 will support the creation of promotional materials (e.g. slides, factsheets). These components will be already tested during the project; however, as the architecture components may have exploitation paths beyond AARC, individual exploitation plans will be developed with the support of all the partners involved in the project.

It is worth noting that AARC TREE is funded under the Coordination and Support Actions, which means that there is no dependency on a specific research output. The work of the AARC TREE project revolves around the AARC BPA, its guidelines, and their evolution to meet new research communities' needs and the compendium.

The compendium is a new aspect that ensures that AAI's operated in the R&E sectors can be properly sustained. AARC TREE team will produce the first version of the compendium that will include common long-term strategies for the development of technologies and services in pan-European research infrastructures.

In addition, it is important to stress that the AARC BPA is an architecture released under CC-BY; implementations of the AARC BPA are already possible and, in fact, welcome.

The consortium members will exploit and benefit from the project results in different ways. Most partners are either research infrastructures, e-infrastructures, or organisations that support research infrastructures' goals. They will ensure that the AARC TREE interoperability framework is adopted and promoted.

AEGIS will continue to maintain and enhance the interoperability framework as needed.

By design, the architecture and policy work takes place in open working groups that existed prior to the AARC TREE project and will continue to exist beyond the project's lifetime.

KERs	Exploitation Path
KER1 Updated AARC Blueprint architecture for emerging technologies and services in pan-European research infrastructures	<p>Integration with RIs, EOSC and the industry, starting from relevant project partners.</p> <p>Creation of promotional materials (e.g. slides, factsheets) by T7.1 to support user adoption.</p> <p>The architecture components may have exploitation paths beyond AARC, hence individual exploitation plans will be developed with the support of all the partners involved by the end of the project.</p>
KER2 Recommendations for a common long-term strategy for AAI services and best practices	<p>Adoption by RIs and the relevant stakeholders including decision makers and policy making bodies</p> <p>Strong support from Dissemination and Communications to create adequate promotion campaign at the relevant events, web, professional social media, and the creation of promotional materials (e.g. slides, factsheets) by T7.1</p>
KER3 Updated interoperability framework	<p>Adoption of Harmonized AAI services based on the AARC framework by RIs, starting from relevant project partner.</p> <p>Strong support from Dissemination and Communications to create adequate promotion campaign at the relevant events, web, professional social media, and the creation of promotional materials (e.g. slides, factsheets) by T7.1</p>

Table 5: AARC TREE Exploitation Paths

Regarding the sustainability beyond the project, AARC TREE will use the AARC community web and media presence, which is maintained and ensured by the project coordinator. The results will remain and will continue to be updated as necessary by the community, with persistent outcomes curated in the open Zenodo repository. Results identified during the project that are considered jointly owned will be managed according to the IP policy described.

4.4 AARC TREE Impact

The AARC TREE project can already benefit from a solid foundation, established at the end of AARC TREE project, to monitor the impact.

Over the years, all relevant documents have been uploaded on Zenodo, which, in addition to the AARC website, provides a consistent place to store documents.

4.5 AARC TREE Impact Indicators

Key Exploitable Result	Achievements Indicators	Means of Verification	Target Value (DoA)
KER1: Updated AARC Blueprint architecture for emerging technologies and services in pan-European research infrastructures	Number of guidelines download	News item published to announce the release of the AARC BPA Guidelines are available on the website and on Zenodo Number of downloads from the website and Zenodo (combined)	#100
	RIs adopting the guidelines	RIs announcing the adoption of the most relevant guidelines	#(min)5
	Number of RIs cross-disciplinary use-cases in AARC TREE supported by new AARC BPA/guidelines	Documented cross-disciplinary use cases on the AARC website	#2
KER2: Recommendations for a common long-term strategy for AAI services and best practices	Number of new RIs/communities in AEGIS adopting the guidelines	News item on the website indicating which communities adopted the guidelines	#(min)5
	RIs endorsing the privacy notice model	News item on the website indicating which communities endorsed the privacy notice model	#(min)5
KER3: Updated interoperability framework	Architecture document downloads	Number of downloads from the website and Zenodo (combined)	#50
	RIs implementing AAI services based on the AARC framework	RIs announcing the implementation of AAI services based on the AARC framework	(min)5

Table 6: AARC TREE Impact Indicators

5 Conclusions

This document presents the key aspects of the AARC TREE Exploitation Strategy. It includes the context, the methodology and the Exploitation process and procedure. Expected activities for the task are the identification and management of project results and key exploitable results, the collection of the ownership, intellectual property rights and access rights information, the elaboration of the plan for exploitation and sustainability and the assessment of the impact. A baseline Exploitation Plan for AARC TREE has been developed expanding the information provided on the DoA. There are 3 initial Key Exploitable Results KER1: Updated AARC Blueprint architecture for emerging technologies and services in pan-European research infrastructures KER2: Recommendations for a common long-term strategy for AAI services and best practices and KER3: Updated interoperability framework for which expected Ownership, IP protection and access has been provided and an initial plan for exploitation and sustainability has been included. Impact indicators have been suggested, and will be updated in the final version of the exploitation plan which will be delivered at the end of the AARC TREE project in D7.4, along with the rest of updated information.

Annexes

Annex 1: Template for Intellectual Assets List

Intellectual Asset	Result Type (choose one)	Key Results (KER)	Audience or target group (Only for KERs - choose one)	Steps undertaken towards exploitation (Only for KERs)	Market Maturity (state of the market targeted by this result (Only for KERs choose one))
[Result Name]	<ul style="list-style-type: none"> -SCI: Scientific discovery, model, theory (...) -PROD: Product (new or improved) -SERV: Service (new or improved) 	<ul style="list-style-type: none"> - high scientific potential - high societal potential (other than climate or environmental) 	<ul style="list-style-type: none"> - Researchers - Industry, business partners - Investors - EU institutions and/or agencies 	<ul style="list-style-type: none"> - Prototyping in laboratory environment - Prototyping in production environment 	<ul style="list-style-type: none"> - Not yet existing and not clear if market can be created - Market creating: Not existing but potential for the

	<ul style="list-style-type: none"> -BUS: Business model (new or improved) -DSG: Design (new or improved) -METH: Method, material, technology, design (new or improved) -PO: Policy recommendation, guidance, awareness raising, advocacy -EVNT: Event (Conference, Seminar, Workshop....) -STAFF: Qualified personnel (qualified personnel exchanges) -LEARN: Learning and Training (Learning Modules, Curricula) -INFRA: New and improved infrastructure or facilities Other 	<ul style="list-style-type: none"> - high societal potential - high technologic, business or economic potential - high policy or regulatory potential - N/A 	<ul style="list-style-type: none"> - Policy-makers and authorities, international - Policy-makers and authorities, national - Policy-makers and authorities, regional or local - Citizens - Standardisation bodies - Innovators - End users (Practitioners, farmers, etc) - Education/training organisation/learners - Research Infrastructures - Business Accelerator - Providers, - Other - Applicable to all 	<ul style="list-style-type: none"> - Pilot, demonstration or testing - Intellectual property management - Licencing to third party - Complying with regulatory framework - Contribution to standards - Feasibility study - Market study - Business plan - Other 	<p>creation of a new market</p> <ul style="list-style-type: none"> - Emerging: Growing demand, scarce supply - Mature: the market is already supplied with similar products
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Annex 2: Template for Results Ownership List

Results Owner ship List	Single or joint owners hip result	Result Owners	Will the owners exploit the result?	In which form will the result be made available to other consortium members and/or third parties?	Does the exploitation of the results require access to consortium members' background?	If yes- Measures taken / envisaged to give access to the background required for exploitation	Does the exploitation of the results require access to third party IPR?	If yes- Measures taken/envi saged to give access to the required IPR
[Result Name]	[Single / Joint]	[Partner/ Partners]	[Yes/No]	[Describe the type of licence / agreement / access mechanism needed for implementation and exploitation]	[Yes/No]	[Describe the type of licence / agreement / access mechanism needed for exploitation]	[Yes/No]	[Describe the type of licence / agreement / access mechanism needed for implementation and exploitation]

Annex 3: Template for Key Exploitable Results

Title of result (120 characters)	Ideally, a punchy name that makes sense to someone who hasn't heard about AARC TREE Project.
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<p>Message/ Teaser to the potential user (1000 characters)</p>	<p>State what your result is, what it is for, what makes it special in terms of adding value or knowledge, what is your purpose for making it public, and what is your target audience.</p> <p>Refer to: page "Five Ws" in Wikipedia</p>																		
<p>Video/ image section</p>	<p>Upload an image (primary goal: visually attractive item to draw attention and trigger curiosity) or add a link to a YouTube/Vimeo video.</p>																		
<p>Result Type</p>	<p>Select one from the following list,</p> <table border="1" data-bbox="480 546 1426 752"> <tr> <td data-bbox="480 546 778 667"> <ul style="list-style-type: none"> Policy Related Results </td> <td data-bbox="778 546 1123 667"> <ul style="list-style-type: none"> Scientific or Technological R&D results (including HW) </td> <td data-bbox="1123 546 1426 667"> <ul style="list-style-type: none"> ICT Software Digital Solution </td> </tr> <tr> <td data-bbox="480 667 778 752"> <ul style="list-style-type: none"> Other Intangible Results </td> <td data-bbox="778 667 1123 752"> <ul style="list-style-type: none"> Services </td> <td data-bbox="1123 667 1426 752"> <ul style="list-style-type: none"> Other </td> </tr> </table>	<ul style="list-style-type: none"> Policy Related Results 	<ul style="list-style-type: none"> Scientific or Technological R&D results (including HW) 	<ul style="list-style-type: none"> ICT Software Digital Solution 	<ul style="list-style-type: none"> Other Intangible Results 	<ul style="list-style-type: none"> Services 	<ul style="list-style-type: none"> Other 												
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<p>Target Audience</p>	<p>Select max three from the list,</p> <table border="1" data-bbox="480 831 1426 1128"> <tr> <td data-bbox="480 831 804 925"> <ul style="list-style-type: none"> Others/ No specific audience </td> <td data-bbox="804 831 1110 925"> <ul style="list-style-type: none"> Public or private funding institutions </td> <td data-bbox="1110 831 1426 925"> <ul style="list-style-type: none"> EU and Member State Policy-makers </td> </tr> <tr> <td data-bbox="480 925 804 1039"> <ul style="list-style-type: none"> International Organisations (ex. OECD, FAO, UN, etc.) </td> <td data-bbox="804 925 1110 1039"> <ul style="list-style-type: none"> Other Actors who can help us fulfil our market potential </td> <td data-bbox="1110 925 1426 1039"> <ul style="list-style-type: none"> Research and Technology Organisations </td> </tr> <tr> <td data-bbox="480 1039 804 1128"> <ul style="list-style-type: none"> Academia/ Universities </td> <td data-bbox="804 1039 1110 1128"> <ul style="list-style-type: none"> Private Investors </td> <td data-bbox="1110 1039 1426 1128"></td> </tr> </table>	<ul style="list-style-type: none"> Others/ No specific audience 	<ul style="list-style-type: none"> Public or private funding institutions 	<ul style="list-style-type: none"> EU and Member State Policy-makers 	<ul style="list-style-type: none"> International Organisations (ex. OECD, FAO, UN, etc.) 	<ul style="list-style-type: none"> Other Actors who can help us fulfil our market potential 	<ul style="list-style-type: none"> Research and Technology Organisations 	<ul style="list-style-type: none"> Academia/ Universities 	<ul style="list-style-type: none"> Private Investors 										
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<p>Our needs are</p>	<p>Select max three from the list,</p> <table border="1" data-bbox="480 1202 1414 1823"> <tr> <td data-bbox="480 1202 810 1323"> <ul style="list-style-type: none"> Business partners - SMEs, Entrepreneurs, Large Corporations </td> <td data-bbox="810 1202 1102 1323"> <ul style="list-style-type: none"> Incubators / Accelerators </td> <td data-bbox="1102 1202 1414 1323"> <ul style="list-style-type: none"> Marketing Mentoring or Coaching </td> </tr> <tr> <td data-bbox="480 1323 810 1413"> <ul style="list-style-type: none"> Financing Expertise </td> <td data-bbox="810 1323 1102 1413"> <ul style="list-style-type: none"> Technology Transfer Expertise </td> <td data-bbox="1102 1323 1414 1413"> <ul style="list-style-type: none"> Legal / IPR advise </td> </tr> <tr> <td data-bbox="480 1413 810 1532"> <ul style="list-style-type: none"> I/we wish to transfer my/our IPR to an interested party </td> <td data-bbox="810 1413 1102 1532"> <ul style="list-style-type: none"> Investor readiness training </td> <td data-bbox="1102 1413 1414 1532"> <ul style="list-style-type: none"> Investor introductions </td> </tr> <tr> <td data-bbox="480 1532 810 1644"> <ul style="list-style-type: none"> Business plan development </td> <td data-bbox="810 1532 1102 1644"> <ul style="list-style-type: none"> Expanding to more markets /finding new customers </td> <td data-bbox="1102 1532 1414 1644"> <ul style="list-style-type: none"> Executive Training </td> </tr> <tr> <td data-bbox="480 1644 810 1733"> <ul style="list-style-type: none"> Business Angels </td> <td data-bbox="810 1644 1102 1733"> <ul style="list-style-type: none"> Venture Capital </td> <td data-bbox="1102 1644 1414 1733"> <ul style="list-style-type: none"> Crowd-funding Equity </td> </tr> <tr> <td data-bbox="480 1733 810 1823"> <ul style="list-style-type: none"> Other type of Investment </td> <td data-bbox="810 1733 1102 1823"></td> <td data-bbox="1102 1733 1414 1823"></td> </tr> </table>	<ul style="list-style-type: none"> Business partners - SMEs, Entrepreneurs, Large Corporations 	<ul style="list-style-type: none"> Incubators / Accelerators 	<ul style="list-style-type: none"> Marketing Mentoring or Coaching 	<ul style="list-style-type: none"> Financing Expertise 	<ul style="list-style-type: none"> Technology Transfer Expertise 	<ul style="list-style-type: none"> Legal / IPR advise 	<ul style="list-style-type: none"> I/we wish to transfer my/our IPR to an interested party 	<ul style="list-style-type: none"> Investor readiness training 	<ul style="list-style-type: none"> Investor introductions 	<ul style="list-style-type: none"> Business plan development 	<ul style="list-style-type: none"> Expanding to more markets /finding new customers 	<ul style="list-style-type: none"> Executive Training 	<ul style="list-style-type: none"> Business Angels 	<ul style="list-style-type: none"> Venture Capital 	<ul style="list-style-type: none"> Crowd-funding Equity 	<ul style="list-style-type: none"> Other type of Investment 		
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<p>We specifically need/ are looking for (600 words)</p>	<p>Freeform description of what the result owners are looking for (more specifically than the selection from the list) from the members of the target audiences selected.</p>																		

About us

Main project	EC-funded project that was the main contributor
Other related projects	Optional – won't be visible in the entry
Result Contributors	The partners that contributed to the result.
Owners for exploitation	Partners that will serve as contact points for further exploitation.
Start-up created for further exploitation?	<ul style="list-style-type: none"> ● Yes ● No
Logo	Not applicable unless there's a startup in the works

Testimonials

Title	Title of the success story collection (should at least contain material that is not created by the contributors or owners). You can add several entries on this section (click Add information)
Link	URL

Find us on

Description	This could be e.g. homepage or EOSC marketplace entry. As with testimonials, it is possible to add more than one line: homepage + marketplace entry ideal solution.
Link	URL

Results description and influence

Result description (1200 characters)	A more detailed description of the result, freeform.					
Business Sector(s)/ Policy Area(s)	Select max three from the list,					
	Agriculture and rural development	Banking and financial services	Borders and security	Budget	Business and industry	Climate action
	Competition	Consumers	Culture and media	Customs	Digital economy and society	Economy, finance and the euro
	Education and training; Employment and social affairs	Energy; Environment	EU enlargement	European neighbourhood policy	Food safety	Foreign affairs and security policy
	Fraud prevention	Home affairs	Humanitarian aid and civil protection	Institutional affairs	International cooperation and development	Justice and fundamental rights

	Maritime affairs and fisheries	Migration and asylum	Public health	Regional policy	Research and innovation	Single market
	Sport	Statistics	Taxation	Trade	Transport	Youth
Tags/ Keywords	Recommend that you use keywords to describe the technology, science, sector, content or nature of the result and very importantly, keywords to denote potential uses or applications of your result. Please note that, by default, you will see in your submission form all keywords linked to the main project you had chosen for declaring this result. This is to help you get started. Feel free to remove those keywords irrelevant to this result.					

Result's contribution to Sustainable Development

Contribution to UN Sustainable Development Goals	Select max three from the list,			
	GOAL 1: No Poverty	GOAL 2: Zero Hunger	GOAL 3: Good Health and Well-being	GOAL 4: Quality Education
	GOAL 5: Gender Equality	GOAL 6: Clean Water and Sanitation	GOAL 7: Affordable and Clean Energy	GOAL 8: Decent Work and Economic Growth
	GOAL 9: Industry, Innovation and Infrastructure	GOAL 10: Reduced Inequality	GOAL 11: Sustainable Cities and Communities	GOAL 12: Responsible Consumption and Production
	GOAL 13: Climate Action	GOAL 14: Life Below Water	GOAL 15: Life on Land	GOAL 16: Peace and Justice Strong Institutions
	GOAL 17: Partnerships to achieve the Goal	Not Applicable		
Radical Innovation Breakthrough?	(Optional) Is it a Radical Innovation Breakthrough?			
Are you a member of the 'World Alliance for 1000 Solutions'?	<ul style="list-style-type: none"> • Yes • No 			

Result's influence on policy

Has your result had or do you expect it to have a significant influence on policy-making?	<ul style="list-style-type: none"> • Yes • No
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Other information/data to share

Title (optional, one or more links to further information)	Open access publications, presentations, etc.
Link	URL

Result, Business Maturity and Exploitation Outlook

Result Maturity	TRL Level					
Current Stage and Next Steps	More details/justification of the maturity.					
Do you already have customers for this result?	Yes No					
Number of existing customers	<ul style="list-style-type: none"> • 1-5 • 6-30 • 31-50 • 51-100 • 101-500 • 501-1000 • >1000 					
What type of customers/ users do you have?	Select all that are applicable,					
	Individuals	SMEs	Big corporations	Academia	R&T organisations	
	Public Institutions and Authorities	Governments	Commerce	Manufacturers		
Which Business Sectors do your customers mainly come from?	Select all that are applicable,					
	Agriculture and rural development	Banking and financial services	Borders and security	Budget	Business and industry	Climate action
	Competition	Consumers	Culture and media	Customs	Digital economy and society	Economy, finance and the euro
	Education and training; Employment and social affairs	Energy; Environment	EU enlargement	European neighbourhood policy	Food safety	Foreign affairs and security policy

	<table border="1"> <tr> <td>Fraud prevention</td> <td>Home affairs</td> <td>Humanitarian aid and civil protection</td> <td>Institutional affairs</td> <td>International cooperation and development</td> <td>Justice and fundamental rights</td> </tr> <tr> <td>Maritime affairs and fisheries</td> <td>Migration and asylum</td> <td>Public health</td> <td>Regional policy</td> <td>Research and innovation</td> <td>Single market</td> </tr> <tr> <td>Sport</td> <td>Statistics</td> <td>Taxation</td> <td>Trade</td> <td>Transport</td> <td>Youth</td> </tr> </table>	Fraud prevention	Home affairs	Humanitarian aid and civil protection	Institutional affairs	International cooperation and development	Justice and fundamental rights	Maritime affairs and fisheries	Migration and asylum	Public health	Regional policy	Research and innovation	Single market	Sport	Statistics	Taxation	Trade	Transport	Youth
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Sport	Statistics	Taxation	Trade	Transport	Youth														
Unique value proposition	The unique selling proposition (USP), also called the unique selling point, or the unique value proposition (UVP) in the business model canvas, is the marketing strategy of informing customers about how one's own brand or product is superior to its competitors (in addition to its other values).																		
Do you have a scalable business model?	For a business model to be scalable, staffing requirements should grow in a strongly sublinear fashion and/or the revenue per customer (or end-user) should remain relatively stable. Grant-based sustainability is usually not scalable, nor is consulting. Franchising, licensing and platform business models can be.																		
Is your result replicable?	(Judgement call) <ul style="list-style-type: none"> • Yes • No 																		
Please elaborate on the Replicability	Justification for a claim for replicability.																		
Is your result and your business model sustainable in the long term?																			
Please elaborate on Sustainability	Justification to claim the solution is sustainable.																		
Are you targeting geographical markets?	Geographical market areas, or can also be global																		

Investor Corner

What level of investment (EUR) are you currently looking for?	Levels of funding sought: if a € sum is chosen.
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