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Deliverable 2.1

Robotics4EU Platform technical infrastructure and navigation path

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Robotics4EU Platform technical infrastructure and navigation path

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Executive Summary

Robotics has the potential to positively transform lives and work practices, raise efficiency and safety levels and provide enhanced levels of service. Robotics4EU aims to ensure a more widespread adoption of (Al-based) robots in healthcare, inspection and maintenance of infrastructure, agri-food, and agile production. To do this it's imperative to implement responsible robotics principles among the robotics community that results in societal acceptance of the robotics solutions in each application area.

Robotics4EU is creating and empowering the EU-wide responsible robotics community representing robotics innovators from companies and academia in the four application areas, as well as citizens/ users and policy/ decision makers by:

- raising awareness about non-technological aspects of robotics by organising community building and co-creation events bringing together the robotics community and citizens.
- advocating for responsible robotics among all stakeholders' groups.
- developing a responsible robotics maturity assessment model and bringing the project results to the standardisation bodies.
- building the Responsible Robotics Knowledge Hub, an online space that enables access to tools that ensure high visibility and added value to the users and the robotics community in general.

This deliverable is focusing on the last point, "building the Responsible Robotics Knowledge Hub", which entailed in the first phase the creation of a platform (Robospot) as further described in this document, and in a second phase the passage and interaction of the content, tools and functionalities developed on this platform to another, more sustainable, larger platform with a well-established community: the Al-on-Demand (AloD) platform.



1 Introduction

The aim of D2.1 is to present the first version (beta version) of the Robotics4EU platform, describing the site map, the features, functionality, and pages in detail.

The deliverable also reports on the implementation strategy of the platform, that was initially envisioned to be built on the former Al4EU platform and describes how this integration will be done on the current AloD platform.

- In a first stage, we explain what led us to build a standalone platform (Robospot), leaving the integration into the AloD platform to a later phase.
- In a second stage, this deliverable lists the technical infrastructure of the beta version of the Robospot platform, its features and interfaces with screenshots and descriptions.
- We will also explain what the strategy adopted for the integration of Robospot contents and tools into the AloD platform is and give some conclusions and insights for the future of this Responsible Robotics Knowledge Hub.
- Finally, we will also describe how the platform would be managed and give some conclusions and insights for the future of the platform.

This document will be followed by Deliverable 2.2 (to be submitted on M36) which will present the final version of the Robospot integration into the AloD platform. Deliverable 5.3 (M16) will describe the strategy for the communication of the platform and Deliverables 5.4 (M18) and 5.7 will report on the dissemination and communications results of the platform.

Platform Name	Description
AI4EU	This is the platform managed by the AI4EU consortium which the R4EU consortium was supposed to collaborate with. The R4EU consortium would have integrated their content into AI4EU platform under a separate robotics section. After the AI4EU project came to an end, the management of the platform laid dormant, and the Robotics4EU decided to create their own platform specifically for AI robotics called Robospot.
Robotspot	This is the platform originally created by the R4EU when collaboration with the Al4EU consortium was halted after the Al4EU project discontinued. This deliverable will showcase what Robospot looks like in Chapter 2. Robotspot is currently operational, but a decision has been made to integrate its content into the AloD after which it will be made obsolete. The AloD is a resurrected version of the Al4EU platform with wider European Commission support.
Robotics4EU	This is the R4EU institutional website detailing the project. After the creation of Robospot, it is no longer in use.
AloD	The European Al-on-demand (AIOD) platform seeks to bring together the Al community while promoting European values. The platform is a facilitator of knowledge transfer from research to multiple business domains. The R4EU is currently in the process of transferring Robotspot content into the AloD platform. This deliverable explains the transfer process and future plans in Chapter 3.

Table 1 Overview of all the different platforms





2 Platform Beta Version

The R4EU project platform, regardless of its final form, aims to act as an online meeting point for the European high-level robotics community, containing good practices and providing stakeholders with advice about non-technological aspects of robotics with a focus on (AI-based) robotics.

It was initially envisioned for the platform to be a user interface built on top of the AI4EU own infrastructure as described in the DoA. However, when we started with this process, the AI4EU project came to an end and ROBOTEX (WP2 leader) together with AI4EU representatives concluded that full integration of the two platforms would not be possible at that period. Because of that, and to fulfil our goal, the Robotics4EU consortium decided on moving forward with a stand-alone platform called Robospot, that would replace the Robotics4EU institutional website.

Thus, Robospot and AI4EU are two different platforms, but as a solution they were linked inside. Robotics4EU included an AI4EU banner on the homepage and would add content about the project in the AI4EU platform. When users log in, they could choose which platform they would like to use and inside the platform there is linking as well. However, technically they have different back-end and user management systems.

The users of the platform would have access to information in one place enabling widescale dissemination and visibility. Resources and bibliography from different platforms and projects would be gathered, as well as advice about non-technological aspects of robotics in all 4 priority areas (and beyond).

Robotics stakeholders from these priority areas and stakeholder groups would find tools and tips on how to consider non-technological aspects such as ethics, data, legal and socio-economic aspects in their everyday practice in one place. The responsible robotics maturity assessment model that is under development, would be accessible on the platform too.

The platform was launched at the beginning of April at https://www.robospot.org/. Further details and explanation will be provided in Chapter 2.

However, as of July 2022, the Al4Europe project took over the management and support of the Al4EU platform, which was renamed Al-on-Demand. Since then, this platform has been undergoing a restructuring, until the moment of writing this deliverable, still at a very early stage.

In that sense, the Robotics4EU consortium realised that it would be better to start the process of integrating Robospot into AloD, in order not to duplicate European platforms and to take full advantage of the large AloD ecosystem.

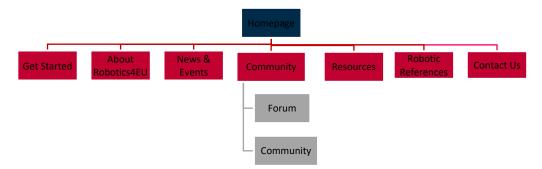


LOBA created the platform design and frontend from scratch, having done major customization at the backend level, to respond to the requirements and needs of the platform (mainly management of inputs from external users to the platform). The platform has been developed using PHP¹, HTML², CCS³ and JS⁴.

All platform's contents have been reviewed by LOBA to implement SEO (Search Engine Optimisation) best practices for a better indexation and accessibility of the project. Additionally, the project used Google Analytics as its web analytics service to track website traffic and assess useful statistics that help to optimise the website and the communication and dissemination strategy. We also used the MonsterInsights plugin for WordPress to track the number of downloads done on the platform.

2.1 Sitemap and Interfaces

The beta version of the platform has the following structure (sitemap) and interfaces.



2.1.1 Registration Page / Log In / Profile

Users can create an account and must fill in a form with certain fields such as:

- Name;
- Email;
- Password;
- Confirm Password.

⁴ JavaScript, often abbreviated JS, is a programming language that is one of the core technologies of the World Wide Web, alongside HTML and CSS.



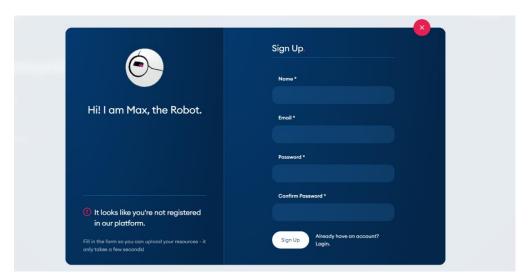
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¹ PHP is a popular general-purpose scripting language that is especially suited to web development.

² The HyperText Markup Language or HTML is the standard markup language for documents designed to be displayed in a web browser.

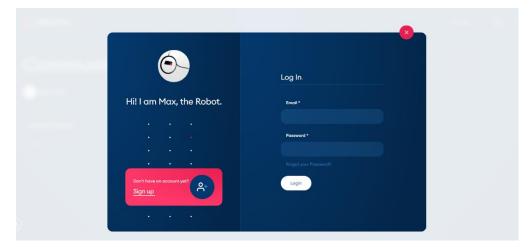
³ Code Composer Studio (CCStudio or CCS) is an integrated development environment (IDE) to develop applications for Texas Instruments (TI) embedded processors.





Non-registered visitors have access to all pages and materials of the platform. However, login is mandatory to be able to upload content to the platform. Such as:

- Submitting a resource (factsheet, infographic, newsletter, public report, video, etc.)
- Creating forum discussions and participating in them
- Submitting an event or news
- Submit a new project/organisation for the Community page



Registered users have their own profile page that they can edit:

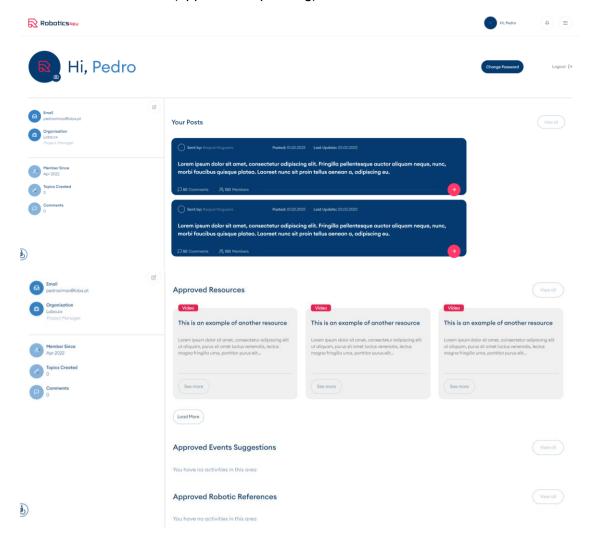
- Profile image
- Email
- Organisation
- Password

They can also check information on their activities in the platform, such as:

- Date of their membership
- The number of forum topics they have created and the number comments they have done
- The list of forum discussions created by them



• The list of resources, events and references they have suggested for the platform and their status (approved or pending)



2.1.2 Homepage

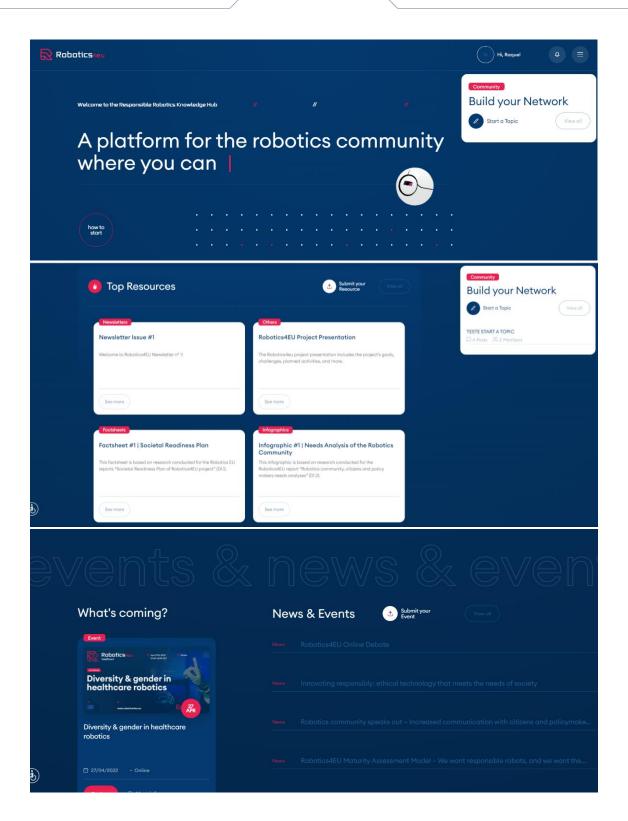
The Homepage includes an introduction to the platform, by showcasing a catchy phrase that grabs the attention of the visitor and in a few words describes the aim of the platform:

A platform for the robotics community where you can build your network, discover new events, collaborate on projects, and much

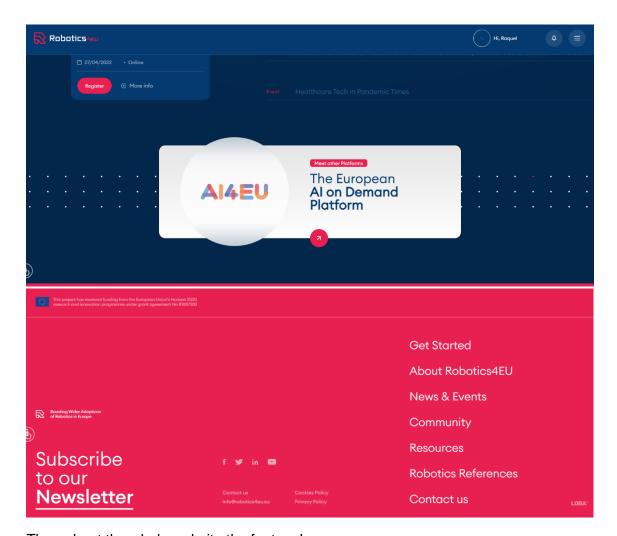
The homepage also includes the following contents:

- Get Started button redirects to a page with a tutorial on how to use the platform.
- Top Resources.
- News and Events.
- Banner that redirects to the <u>AI4EU Platform</u> the banner is a promotion to this "sister" platform.









Throughout the whole website the footer showcases:

- Newsletter subscription
- EC flag and funding disclaimer of Robotics4eu
- Social media channels of Robotics4eu
- Sitemap of the website
- Contact information
- Cookies and Privacy Policy

2.1.3 Get Started

In this page we explain in an interactive way how to use the platform and a FAQs section with pertinent questions.







PAGE *

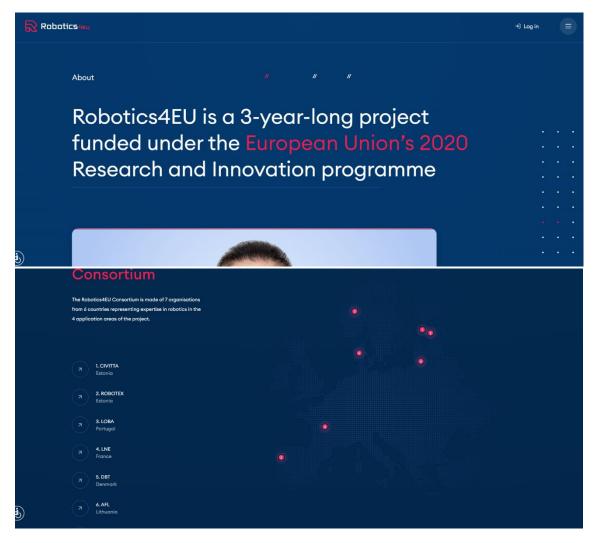




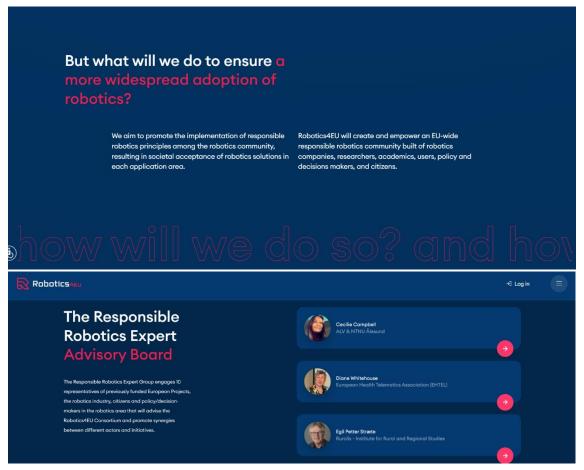
2.1.4 About Robotics4EU

This section provides information on:

- Project's scope, activities and expected results.
- The consortium.
- The Responsible Robotics Expert Group (advisory board of the project).

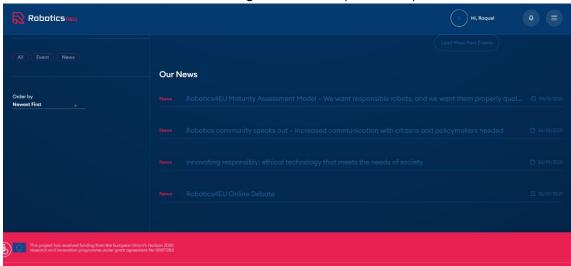




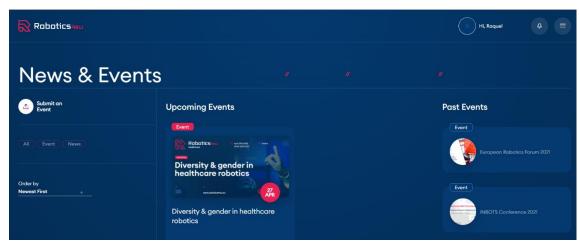


2.1.5 News & Events

The News & Events interface lists all the news and/or events of the project as well as other news and/ or events relevant to the project, and that might interest our visitors. The news and events are listed in chronological order showcasing its date, place (in case of an event) and title. All news and events have a detail page in which each one is further described and, if needed, there's a registration form (for events).

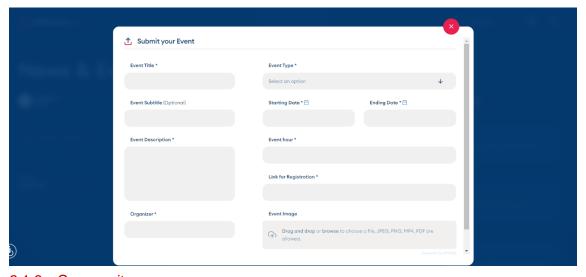






The registered users can submit their events in the platform. The user must fill in the form certain fields such as:

- Event tile.
- Event subtitle (Optional).
- Event Description.
- Organiser.
- Event Type.
- Starting and Ending Date.
- Event Hour.
- Link for Registration.
- Event Image (Optional).

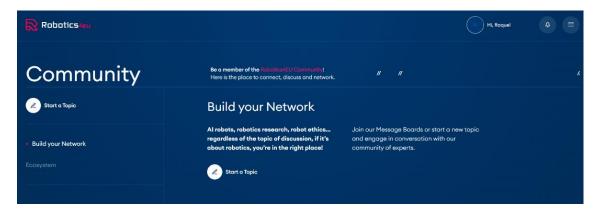


2.1.6 Community

2.1.6.1 Build your network

In this page we provide a space for the overall robotics community to engage, reach out to experts and build their own topics of discussion. This section is a place for discussion of certain topics that concern the Robotics4EU project and the field of application. Participants of the forum are able to suggest topics for the forum but some of the topics were provided by the Consortium. All the users who are logged in/have an account can join the forum discussions.





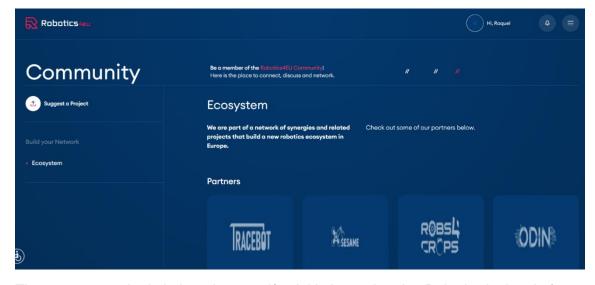
The users can submit their suggestion for topics on the platform. The user must fill in the form certain fields such as:

- Title of topic.
- Description.
- Attachments.



2.1.6.2 Ecosystem

In this page we provide a network of synergies and related projects that build a new robotics ecosystem in Europe.

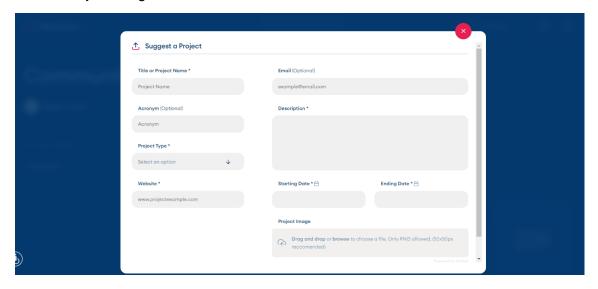


The users can submit their projects and/ or initiatives related to Robotics in the platform. The user must fill in the form certain fields such as:

Title or Project Name.

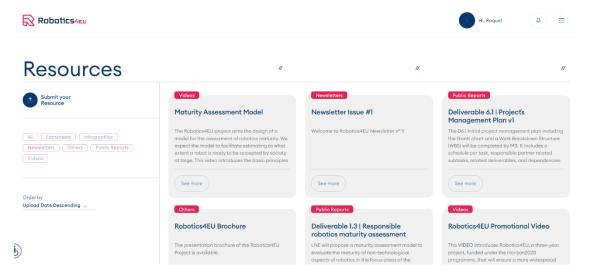


- Acronym (Optional).
- Type.
- Website.
- Email (Optional).
- Description.
- Starting and Ending Date.
- Project Image.



2.1.7 Resources

In this page we make available important resources to the public (reports (pdf), video links of relevant events/recordings (YT), other documents (pdf)). Also, the registered users are able to add resources such as public reports, Scientific papers, Videos, Factsheets, Infographics, Newsletters and Others.



The users can submit suggestions to resources related to Robotics. The user must fill in the form certain fields such as:

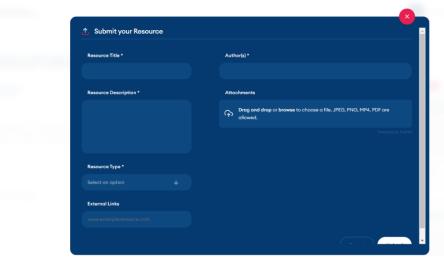
- Resource title.
- Resource description.
- Resource type.
- External links (Optional).



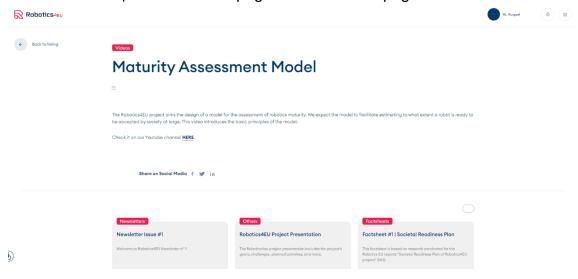


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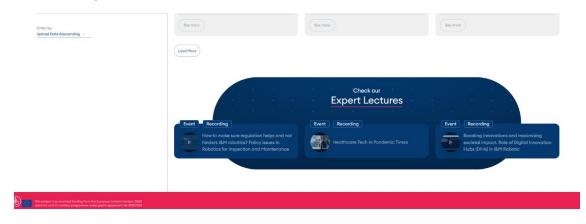
- Authors.
- Attachments.



All the content uploaded on this page has a detailed page with more information.



In the Resources page, it's available a section called 'Expert Lectures' which is where all the recordings of all the workshops that have been held are presented.

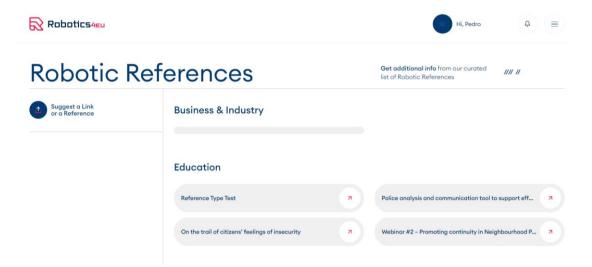


2.1.8 Robotic References

In this page, we list relevant topics focusing in 4 areas:

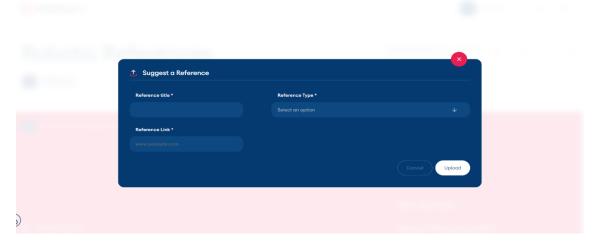


- Research in Europe.
- Business & Industry.
- Ethics.
- Education.



The users can submit suggestions to resources related to Robotics. The user must fill in the form with certain fields such as:

- Reference title.
- Reference type.
- Reference link.



2.1.9 Contacts

Finally, the Robotics4EU platform has a contact page in case a visitor wants to send a message to the project. The emails are redirected to CIVITTA as coordinator of the project, and to LOBA as communication and dissemination leader.



3 Platform Next steps & Updates

Initially, it was envisioned for the Robotics4EU project to develop a user interface to be built on top of the AI4EU own infrastructure.

However, when we started with this process, the AI4EU project came to an end, and the R4EU consortium concluded that full integration of the two platforms wouldn't be possible. Because of that, the consortium decided on moving forward with a stand-alone platform that would replace the Robotics4EU institutional website. From that point, our strategy was to make the Robospot platform an independent source from the Robotics4eu website, serving as a responsible robotics virtual knowledge hub that it could function after the end of the project.

This approach would ensure the more effective exploitation of results.

Since the AI4EU platform, now AI-on-Demand, is being supported by the AI4Europe project from July 2022, the Robotics4EU consortium reconsidered the possibility of integrating Robospot contents, assets, tools, and functionalities into the AloD platform, since it has a strong added value:

- It is a big community and a well-established entity, effectively reaching its target groups.
- It is in the right place, having the European Commission's support.
- It's a user-friendly one-stop-shop, requiring less resources for the projects to have their resources and assets promoted.
- It is sustainable since it does not have an end date.

As such, Robospot will cease to exist once this transition is made.

3.1 Integration into AloD and content development

As soon as it was decided that an integration of the Robospot into AloD would be made, we started working on mapping all the content, tools, resources, assets, and functionalities that we would like to transfer to the platform.

To this end, we have created a table with various categories:

- Content matrix: for each robotics field covered in the project, we mapped the
 platform content (e.g. introduction to RR and overview of the main challenges;
 factsheets based on WS deliverables; factsheet for other Tools/Resources, etc.)
 related to Ethics, Legal, Privacy & Cyber security and Social Economic.
- Content format: it described what was the type, format, outline, page count and sources of the content mentioned above.
- Release schedule: for each robotics field and asset we established the release month and leader responsible for making it happen.
- External Resources: it mapped all the external resources that could be integrated into the AloD (specifying their type, link, focus, project to which they are connected to, and the issues category that it focuses on.
- External Projects: list of all the projects we should involve in the AloD platform.
- External Experts: list of all the experts outside Robotics4EU consortium that we can involve in the AloD platform.





 Tools & Assets: list of all the tools and assets (both those that were already integrated in Robospot and those that we want to introduce for the first time in AloD).

Once this table is finalised with the contributions of all partners, a meeting will be scheduled with those responsible for AloD, in order to understand how it will be possible to integrate all the contents and tools, as well as involve all entities and experts in the platform (especially at technical level).

Through this strategy, we will make sure that the platform AloD will be fed with specific content related to non-technological aspects with focus to (Al-based) robotics.



4 Management of the Platform

The platform and its contents were written, designed and developed by LOBA.cx in collaboration with all partners. LOBA will be the one managing the contact with the team from AloD and the technical integration of Robotics4EU contents and assets into the platform. LOBA, as the dissemination and communication leader will make sure to promote the platform throughout the project's channels.

Civitta will manage the platform's contents, users and their contributions, in deep contact with LOBA, who will provide these input to the AloD team.

Additionally, since LOBA is responsible for the contents uploaded on the Robotics4EU institutional website (such as Robotics4EU events, articles, newsletters, public reports, materials, etc.), which should also be included in the AloD platform, LOBA will make sure that these contents are directly transferred to the AloD platform.

All partners will put efforts into inviting other projects and initiatives to upload content in the platform and interact in the forum discussions.



5 Conclusions

The integration of Robotics4EU contents, assets, resources and tools into the AloD platform will create a virtual knowledge hub for the responsible robotics community within this wider Al European ecosystem. The objective is to mobilise it and create a space for the community to connect, work together and share insights.

The activities and constant update of the platform will be a shared effort of the Robotics4EU consortium and Expert Group members, the robotics community, the former Robospot members and all the interested stakeholders. Furthermore, the efforts in dissemination and communication of the Robotics4EU project will also ensure the livelihood of the Responsible Robotics Virtual Knowledge Hub into the platform and its successful exploitation after the project's termination.

The Robotics4EU consortium, in particular LOBA, will be open to any recommendations and feedback received from the platform users in order to improve the platform during the project's lifespan.



CIVITTA



LOBA®











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