Robotics4EU
Boosting Wider Adoption of Robotics in Europe

AI on Demand
Knowledge and services for the AI community

Factsheet #5.

Responsible Robotics Compass:
Prepare your robot for the future

Welcome to the Responsible Robotics Compass (RoboCompass), an innovative tool that offers a unique, bottom-up approach to measuring and addressing the non-technological barriers to robot adoption, and guiding developers toward Responsible Robotics.

For whom is this tool?

Developed over three years through consultations with the general population, robotics community, and policymakers, this tool provides a standardised framework for:

Small or large companies & manufacturers
It helps them optimize their robots and enhance societal acceptance, ultimately improving market competitiveness.

Researchers from industry or academia
RoboCompass offers a consistent method to assess and advance non-technological aspects of robots, ensuring research aligns with societal needs.

EU-funded projects
It ensures that research conducted within these projects effectively contributes to their objectives and societal requirements, enhancing project outcomes.

Policymakers
RoboCompass offers a consistent method to assess and advance non-technological aspects of robots, ensuring research aligns with societal needs.

What makes it unique?

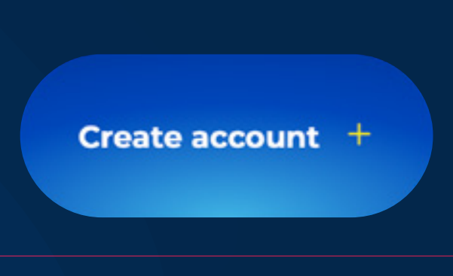
1. **Constructed over three years by the community and for the community.**
2. **Designed as a self-development tool through which you can track progress over time.**
3. **It offers recommendations and resources.**
4. **Easy to use with clear categories and checkboxes, with simple yes/no answers.**

This cutting-edge tool provides a comprehensive overview of the development aspects that may affect the acceptance of a robot. These are divided into the following categories:

- **Socio-economic:** This category measures how the development, deployment and use of the robot impact the socio-economic situation across different economic areas.
- **Human experience:** This category assesses how the robot can impact the lifestyle, well-being and trust of the humans interacting with it, both in professional, personal and public settings.
- **Environment:** This category measures the ecological impact of the robot during the entirety of its lifecycle.
- **Legal:** This category evaluates the risk of legal issues during the development and the functioning of the robot, for example issues around the accountability of robot actions, development governance, and regulatory compliance.
- **Data:** This category measures how the robot and associated systems collect, manage, and use data.

Let's start the assessment?

1



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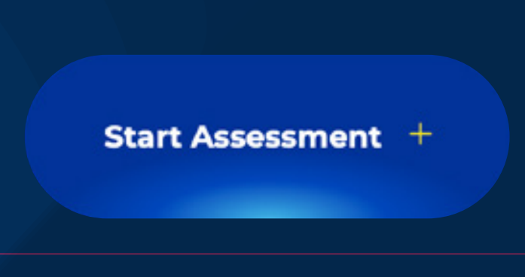
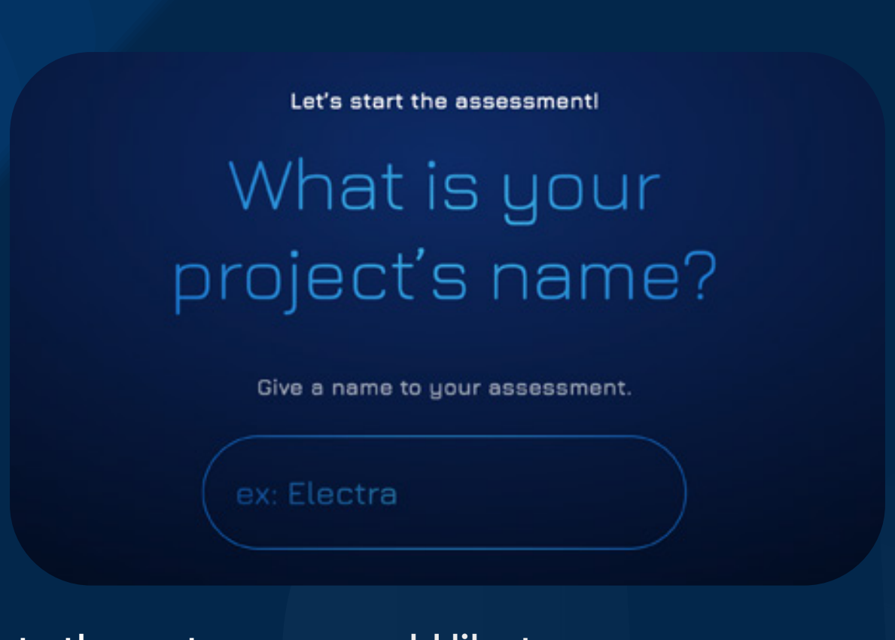
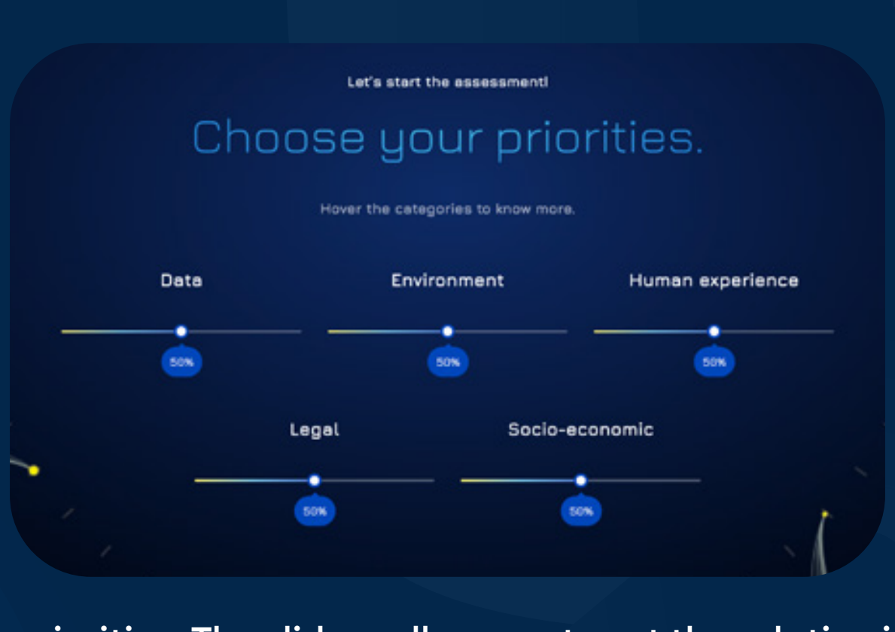
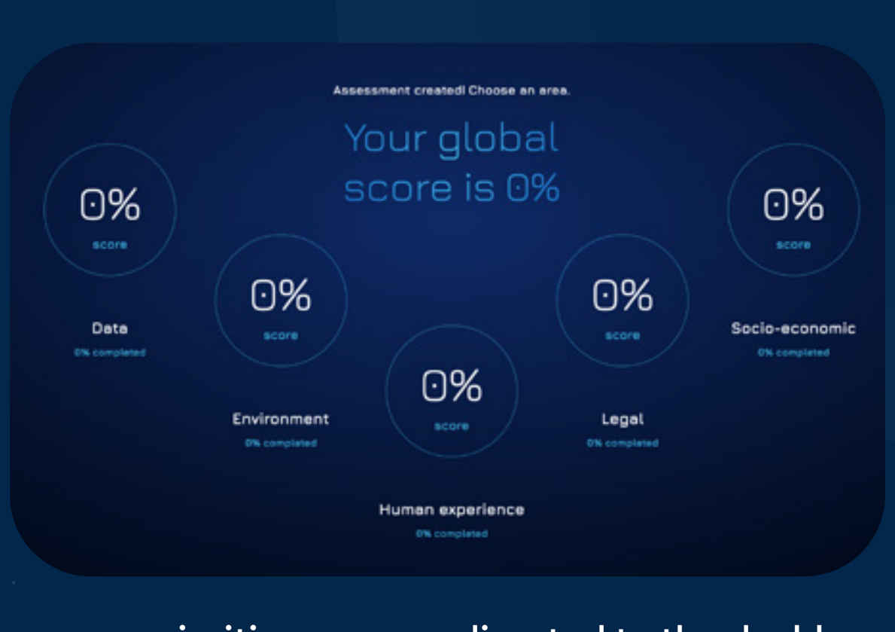




3 Give a name to the system you would like to assess.



4 Choose your priorities. The sliders allow you to set the relative importance of different categories in the assessment of your system and this selection is up to you. Adjust them based on your customers' requirements and use case.



5 After choosing your priorities, you are directed to the dashboard, where your assessment takes place and where you can find the global score and the score per each category.

Do you use datasets external to the robot?

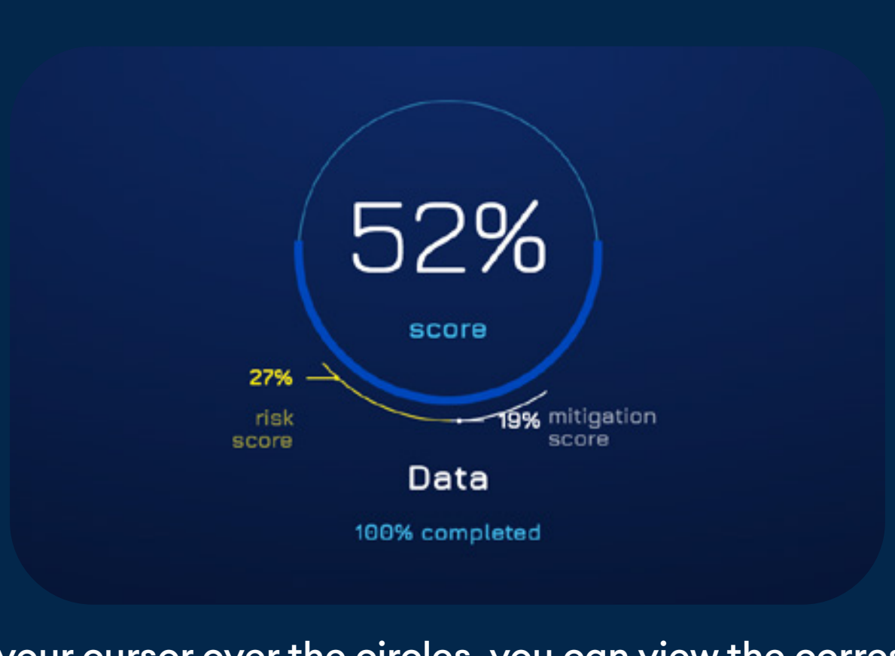
☑ Some data used for training and/or testing of algorithms has an external provenance
☐ Some external data is sensitive (personal or identifying information)
☐ External data comes from a single source

How are the risks caused by external data mitigated?

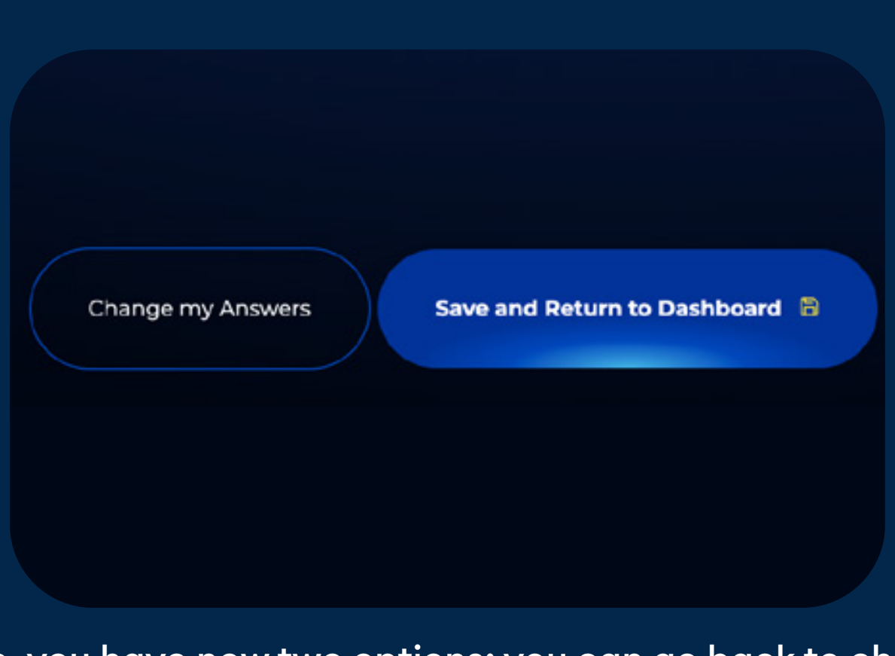
6 Once you click on a category, the real assessment starts. You are asked different questions, divided into two parts:

- The risk assessment questions, that aim to identify the social risks associated with the different robot's dimensions.
- And the mitigation assessment questions, where you are invited to identify the measures you have implemented to improve the social acceptability of your robot.

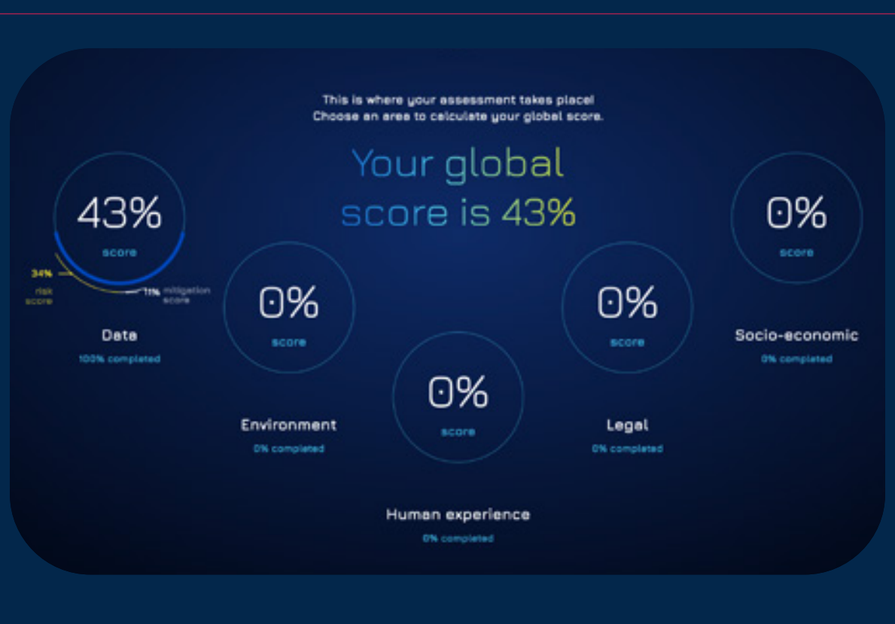
7 Once you have completed answering the questions in a specific category, you will be directed to a dashboard that displays the scores generated for that category and its related subdomains. In this example, for the "Data" category, you will also find the scores for its subdomains: External Data, Usage, Storage, and Collection.



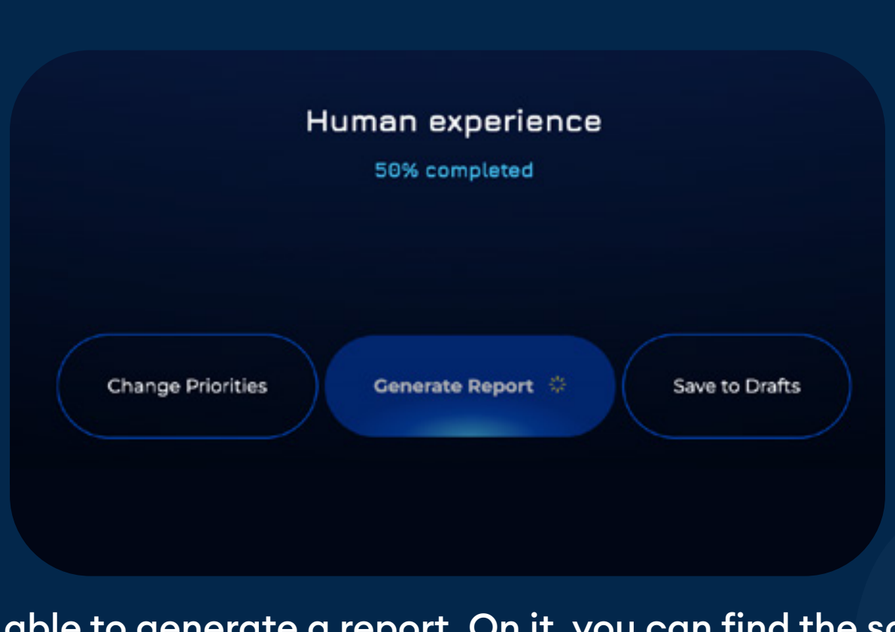
8 If you move your cursor over the circles, you can view the corresponding risk & mitigation scores.



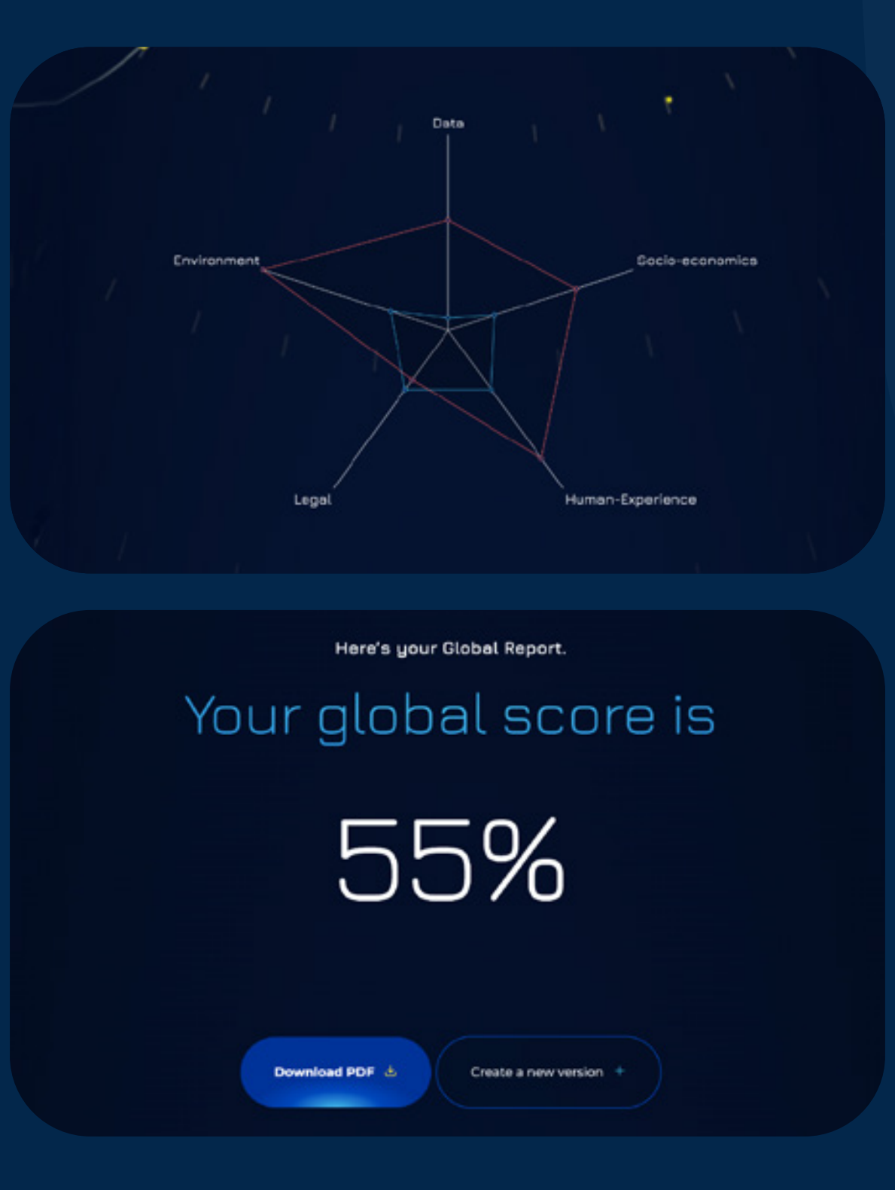
9 At this stage, you have now two options: you can go back to change your answers, or you save and return to Dashboard. Your answers will always be editable.



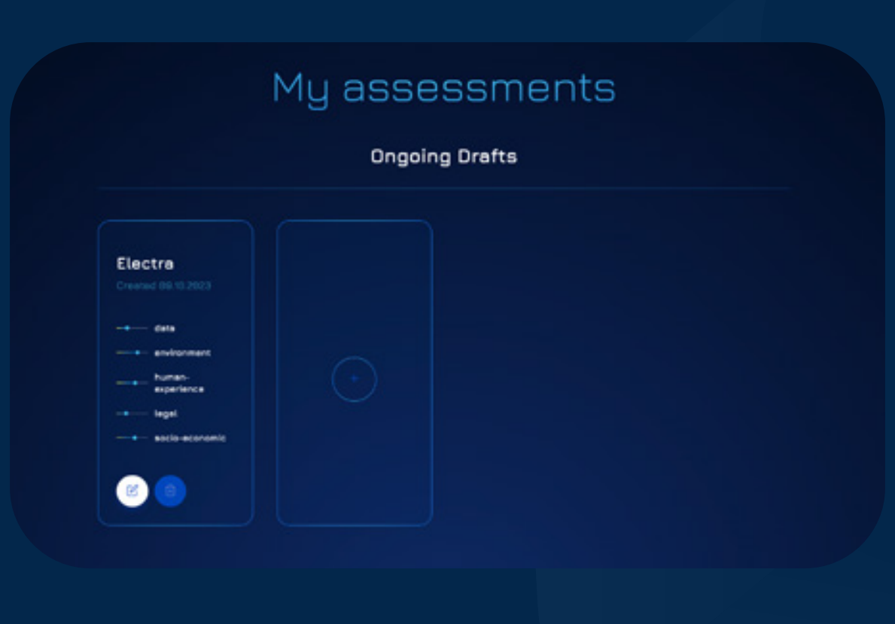
10 If you return to Dashboard, you have an overview of your general score.



11 You're now able to generate a report. On it, you can find the score for each category and subcategory, together with performing diagnostics and assessments. In addition, RoboCompass also provides personalised recommendations to improve your system. This means that, for each category, you find a list of advices and resources related to your risks and mitigation actions.



12 You can view the report online, or download the PDF.



13 RoboCompass was made for you to track your progress and see the improvements you have made by applying the recommendations given to you. So, we encourage you to do more than one assessment and monitor your evolution over time. All your assessments and generated reports are available in your individual dashboard.

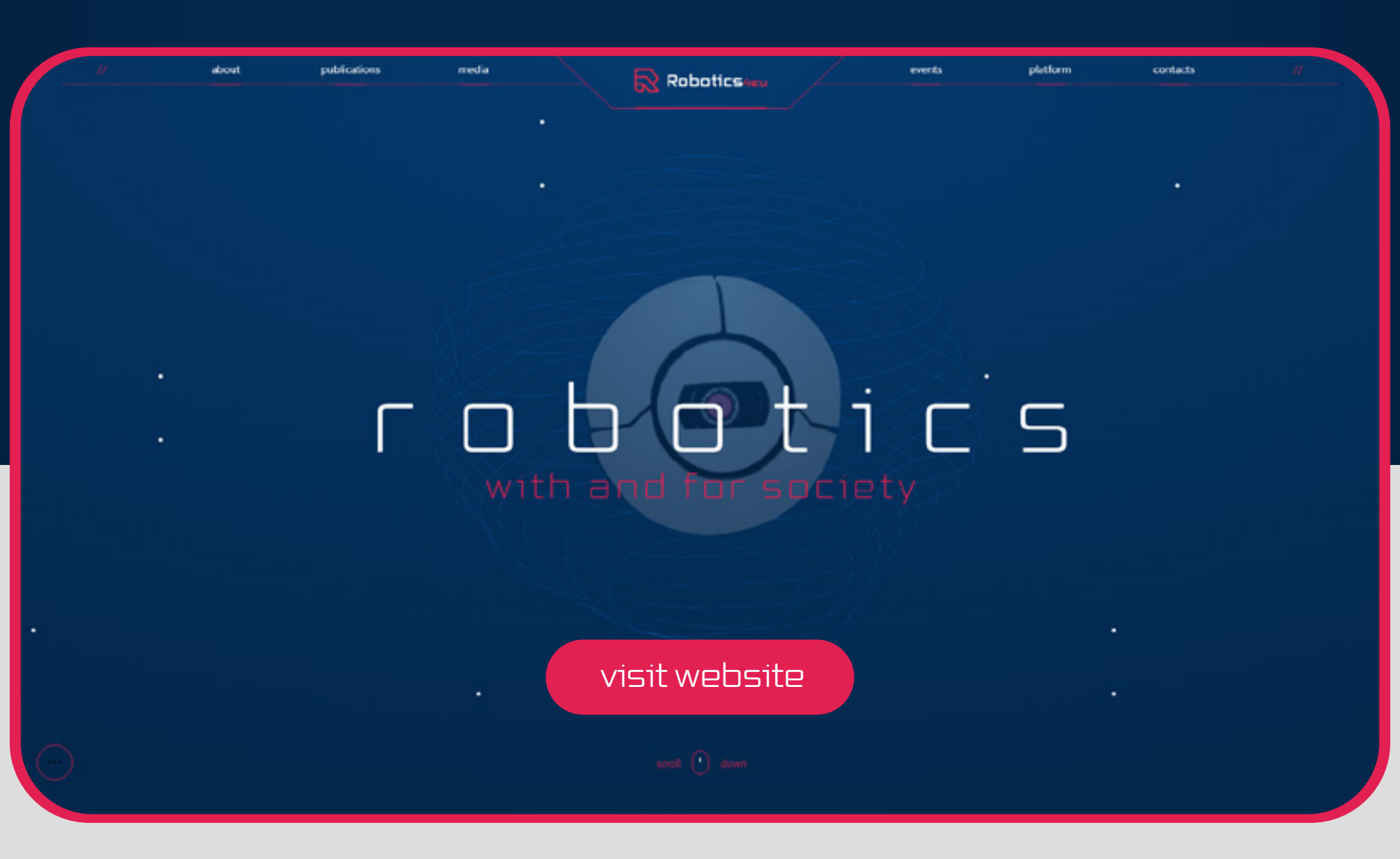
Where can you find this tool?

Under the Innovation section of the AI-on-Demand platform.

Now you have everything you need to contribute to a responsible future of robotics.

Assess your robots' societal readiness by exploring RoboCompass on the AI-on-Demand platform and take your innovation to the next level.

Your feedback and opinions are important for the continuous improvement of this tool. Reach out to Robotics4EU and assist us in testing the tool through this form.



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This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 101017283