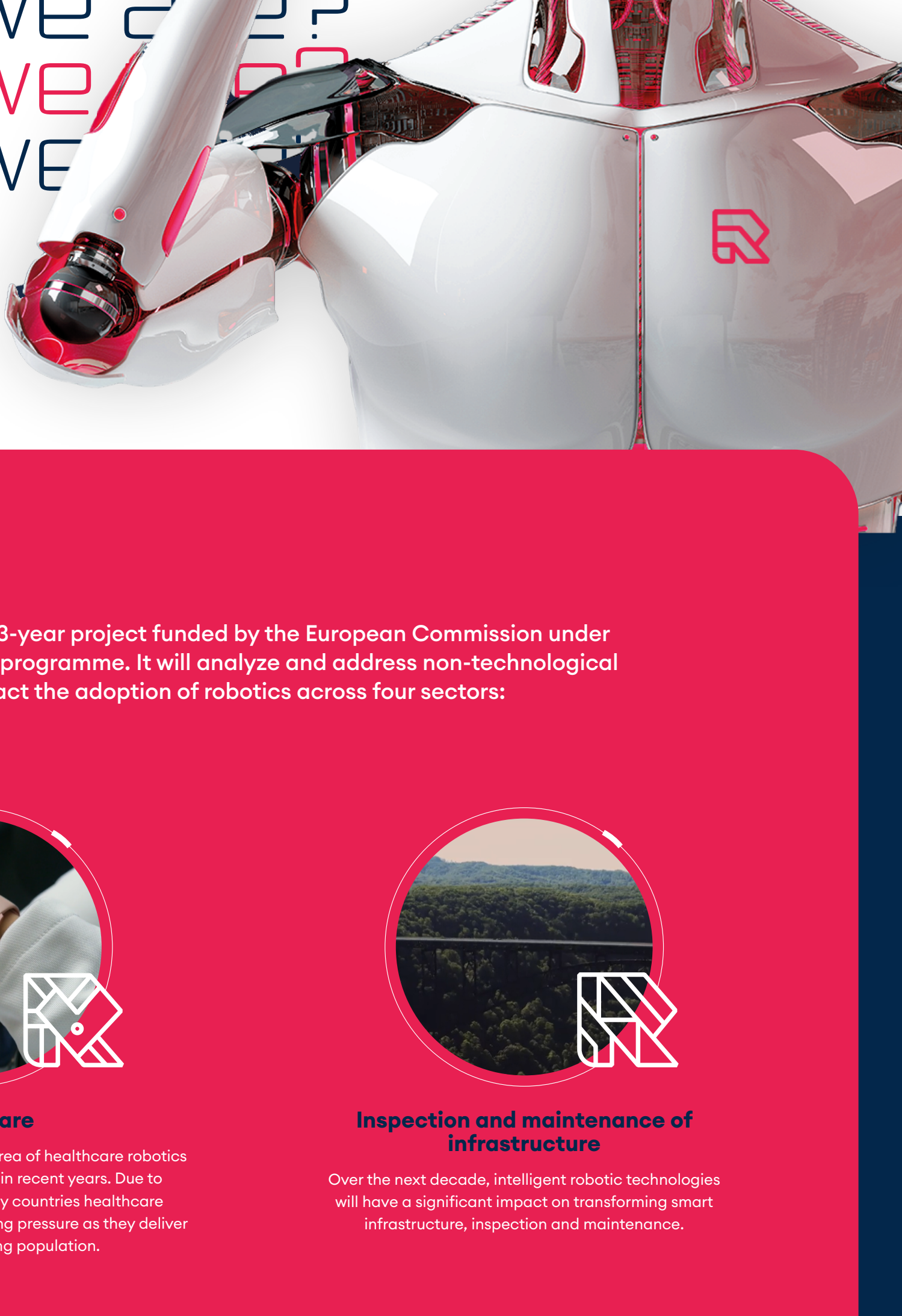


Factsheet #1.

Robotics4EU Societal Readiness Plan

This factsheet is based on research conducted for the Robotics4EU reports "Societal Readiness Plan of Robotics4EU project" (D1.1).

Who we are?
Who we are?
Who we are?
Who we are?

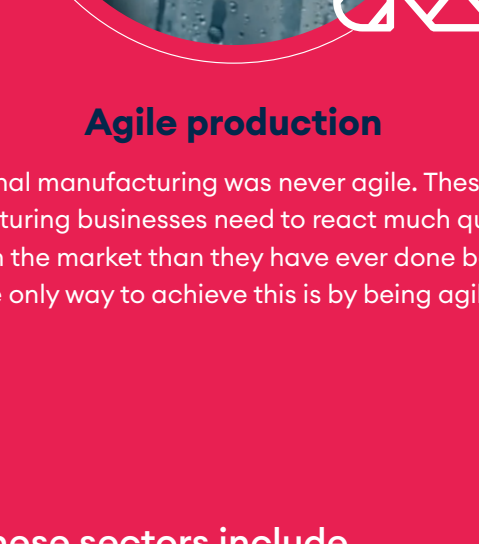


Robotics4EU is a 3-year project funded by the European Commission under the Horizon 2020 programme. It will analyze and address non-technological aspects that impact the adoption of robotics across four sectors:



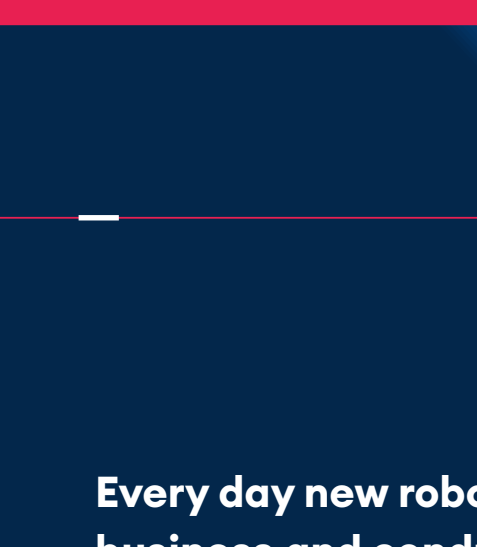
Healthcare

Research and innovation in the area of healthcare robotics has seen a significant growth in recent years. Due to demographic changes in many countries healthcare systems will come under increasing pressure as they deliver healthcare to an aging population.



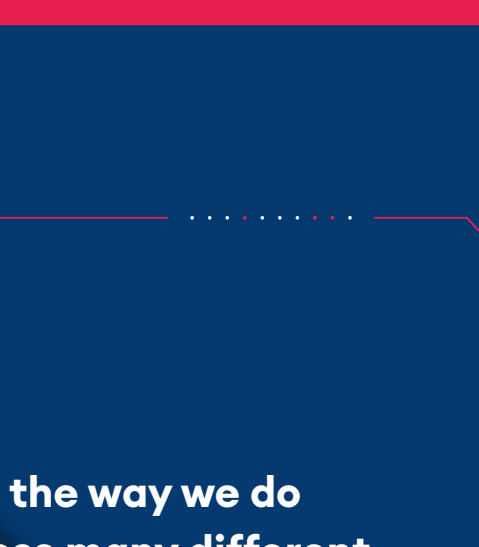
Inspection and maintenance of infrastructure

Over the next decade, intelligent robotic technologies will have a significant impact on transforming smart infrastructure, inspection and maintenance.



Agri-food

The agri-food sector needs to drive productivity, contribute to tackling climate change, address migration, urbanisation and population aging.



Agile production

Traditional manufacturing was never agile. These days, manufacturing businesses need to react much quicker to changes in the market than they have ever done before and the only way to achieve this is by being agile.

Potential societal and ethical concerns for robots in these sectors include cyber security, data protection, socioeconomic disparities, or privacy. Through extensive consultation and co-design sessions featuring robot producers, academic experts, and ordinary citizens, the project will chart a way towards the wider and more societally acceptable uptake of robotics, including the development of a Maturity Assessment Model that robot makers can use to estimate how socially acceptable their robot will be.

Every day new robots promise to change the way we do business and conduct our daily lives across many different areas. However, these technological marvels can only be fully realized if they are broadly accepted by society. If new technologies do not take into account ethical concerns or take into account a diverse user-base the most promising new technologies will not be used in practice.

What is SRL?

SRL is a concept proposed by the Danish Board of Technology, rating how ready technology is for widespread acceptance of a technology on a scale of 1-9.

Just as normal technology development involves multiple rounds of testing and refinement until the technology can perform the task it was designed to do, the SRL scale involves continual consultation with citizens and stakeholders about the ethics, desirability, or unintended consequences of technology that are taken into account as the technology is refined until it is fully ready to be broadly implemented.

Nine-stage SRL model

SRL 1.

Identifying the problem and identifying societal readiness.

SRL 2.

Formulation of the problem, proposed solution(s) and potential impact, expected societal readiness; identifying relevant stakeholders for the project

SRL 3.

Initial testing of proposed solution(s) together with relevant stakeholders

SRL 4.

Problem validated through pilot testing in relevant environment to substantiate proposed impact and societal readiness

SRL 5.

Proposed solution(s) validated, now by relevant stakeholders in the area

SRL 6.

Solution(s) demonstrated in relevant environment and in co-operation with relevant stakeholders to gain initial feedback on potential impact

SRL 7.

Refinement of project and/or solution and, if needed, retesting in relevant environment with relevant stakeholders

SRL 8.

Proposed solution(s) as well as a plan for societal adaptation complete and qualified

SRL 9.

Actual project solution(s) proven in relevant environment.

Societal Readiness Plan in Robotics4EU

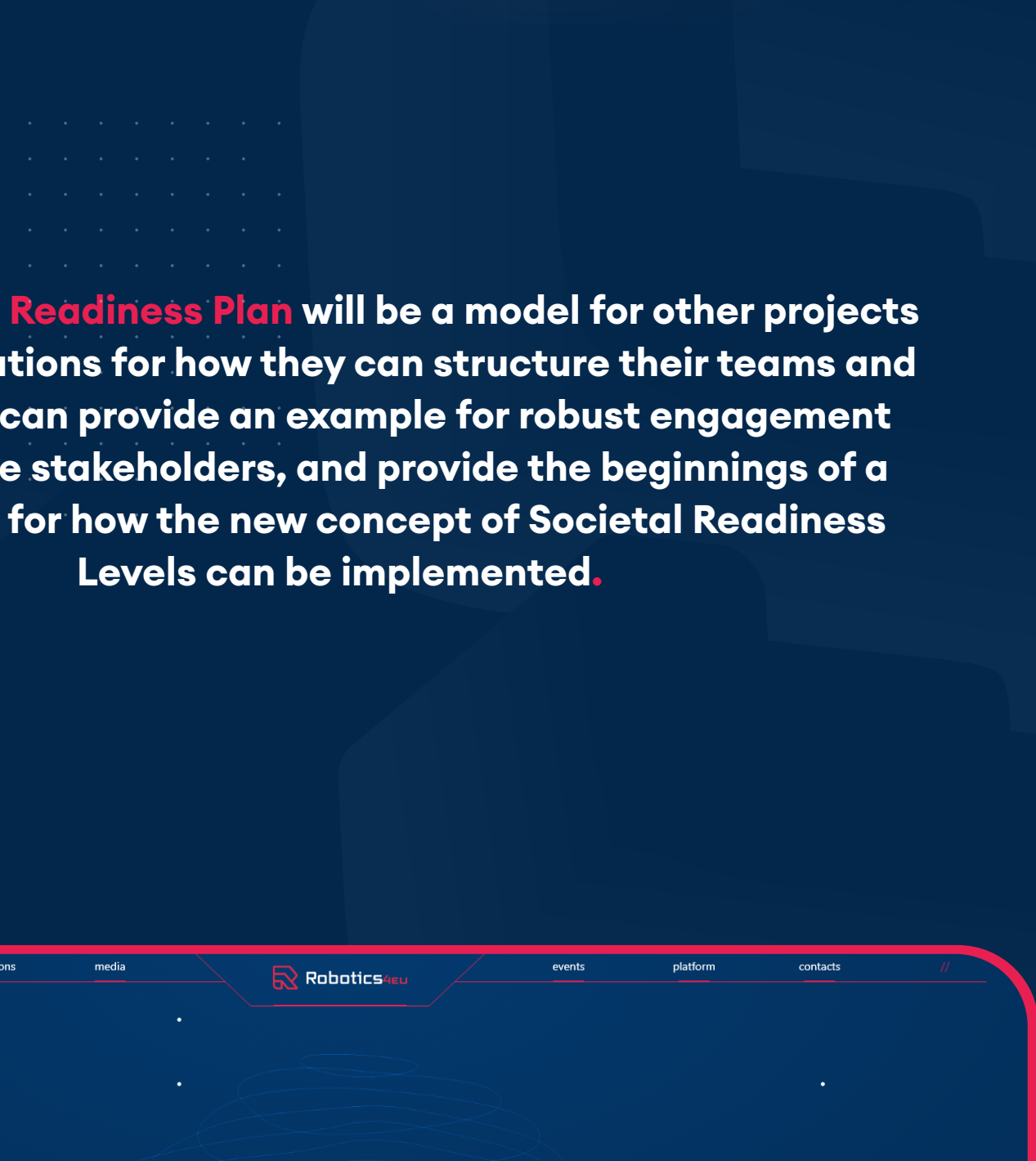
One of the first activities of the Robotics4EU project was to develop a Societal Readiness Plan. This helped us think critically about the broad concept of Societal Readiness Levels as they relate to robots in our four sectors. Robotics4EU will explore how the SRL scale can work in practice and advise robot makers about how specifically they can use it to improve their products, and thus, society as a whole. This is important because, although the concept of SRL is becoming more widespread, there still isn't an agreed upon methodology to measure it.

So, we will ask these questions of new robotic technology:

- Does the robot address a problem that has been identified by society as needing to be solved? How does it solve the problem?
- What aspects of the solution might hinder its societal acceptance, and does the solution address these concerns?
- Are there any unforeseen societal consequences that are created by the solution?
- How might the solution effect diverse constituencies differently? How are the concerns of diverse constituencies incorporated into the solution?

- How diverse are the groups of people—both citizens and experts—that we engage along multiple axes: age, gender, ethnicity, sexuality, career stage, seniority?
- How effectively are members of diverse groups engaged at our events—do underrepresented groups speak up to share their views, or remain on the sidelines?
- How are these comments taken into consideration by us as we engage in our practices, such as the creation of the Maturity Assessment Model?
- How do these dynamics play out in our own internal meetings? How can we ensure that all the diverse viewpoints on our project team are heard?
- What are our own preconceived notions about robotics and the innovation process, and how can we ensure that this does not interfere with our engagement with citizens and stakeholders?

Technology
Technology
Technology
Technology



This **Societal Readiness Plan** will be a model for other projects and organizations for how they can structure their teams and their work, can provide an example for robust engagement with diverse stakeholders, and provide the beginnings of a framework for how the new concept of Societal Readiness Levels can be implemented.

