

YOU CAN BE PART OF IT: PARTNERSHIPS FOR THE ORGANISATION OF EUROPEAN ROBOTICS COMPETITIONS (METRICS)

INNOVATE FOR THE FUTURE
GAIN ACCESS TO THE BEST TALENTS IN EUROPE



Robotics Competitions are a **proven and cost-effective** method to quickly develop **new disruptive technologies** for new markets and enthuse and train new generations of students, researchers and engineers.

The **METRICS** project, led by the **National Metrology and Testing Laboratory (LNE)** unites under one umbrella most of the existing robotics competitions in Europe with a strong focus on rigorous and quantitative evaluation of intelligent systems.

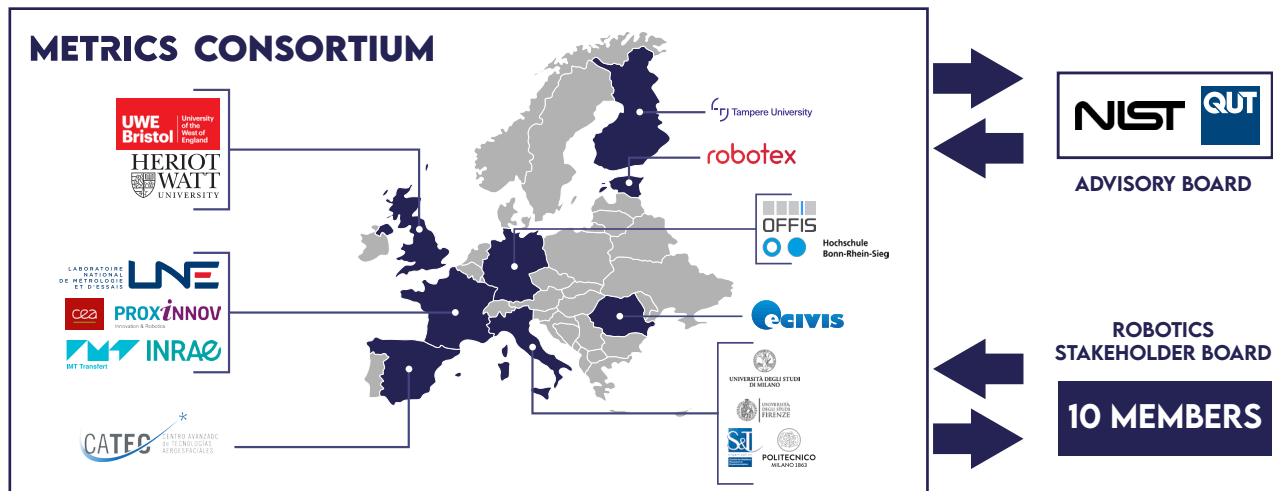
We will organize robotics competitions in four priority areas identified by the European Commission: health, agri-food, inspection and maintenance of infrastructure and agile production. Our priority is to make these **competitions relevant to the needs of industry** and we need **early engagement** from businesses to help us shape the challenges based on your technology roadmaps and strategic needs. Competitions are also an excellent vehicle to attract young talents that can be nurtured and recruited in a very competitive robotics market.

Bringing together Unique European Competences in robotics and systems testing, METRICS also intends to build a sustainable structure to address the critical needs for evaluation of intelligent systems, which is an essential condition for their adoption.

WHAT'S IN IT FOR YOU?

The **METRICS** provides a one-stop shop to access talent and innovation across Europe:

- **Sixteen European organizations** specialized in the evaluation of intelligent systems and the main European players in the organization of competitions ([Sciroc](#), [Echord++](#), [Rockin](#), [Euron](#), [Euroc](#), [Rockeu2](#), [euRathlon](#), [ERL](#) and [Robocup](#)) across **European countries** : France, Germany, Italy, Spain, United Kingdom, Estonia, Finland, Romania;
- Direct links to large clusters representing over **Ten thousand members**, in particular [AI4EU](#) with a strong focus on trust in AI based systems;
- Connections to the most important European **Digital Innovation Hubs (DIH)** for the four application areas of the call: [Rima](#), [Hero](#), [DIH2](#), [Trinity](#), [Midih](#) and [Agrobofood](#);
- International associate partners, including the **National Institute of Standards and Technology (NIST)** of the United States and the **Queensland University of Technology (QUT)** of Australia.



The **METRICS** competitions will be world leading in the field of robotics. They act as a focal point for industry, young talents and the academic robotics research in Europe. They will also attract a large media attention, thus resonating with the general public. They will showcase Europe's know-how in robotics and artificial intelligence and will address the scientific and technological barriers identified in partnership with our competition sponsors. **This is your opportunity to shape the competition challenges, rules and evaluation criteria to make them meaningful to your business current and future needs in robotics.** It is also a unique opportunity to exchange, influence and establish links with researchers and students interested in solving problems in the real world and with a practical focus. Finally, it is an excellent recruitment ground of young talents in robotics.

WHAT WE WILL PROVIDE

The **METRICS** project, funded by European Commission's H2020 program, enables the 17 partners of project to bring together their broad collective expertise and facilities to organize robotics competitions on demand:

EXPERIENCED EXPERTS IN THE FIELD OF ROBOTICS COMPETITIONS

- Strong experience in designing and organising robotics and AI competitions;
- Strong scientific and technological background in the evaluation of aerial, marine and ground robots;
- Wide transnational participation and stakeholders support (including DIH);
- Numerous facilities and testbeds available (total investment of over €100M);
- High dissemination and communication capacities (established links with DIH, clusters, ongoing robotics projects, etc.).

A LEADING-EDGE APPROACH TO ORGANISE ROBOTICS COMPETITIONS

- **METRICS** develops a common methodological framework across priority areas based on metrological evaluation tools;
- Competitions are organised as successive evaluation campaigns based on repeatable, reproducible and objective evaluation of robots;
- In addition to evaluation campaigns in the physical environments, **METRICS** organises databased campaigns ("cascade evaluation campaigns") maximising the involvement of the AI community.
- **METRICS** contributes to the standardization of testing facilities and methods in the four priority areas addressed and beyond.

HOW CAN YOU ENGAGE?

METRICS competitions can only be meaningful if they are relevant to industry and public stakeholders. Whilst **METRICS** will provide the framework and some public funding to organize, evaluate and disseminate the results of the competitions, we are looking for private partners willing to help us drive the competition. This includes financial contributions through sponsorship as well as an active involvement in the definition of the scenarios, evaluation criteria and judging of the competitions. Your level of involvement (cash or in-kind) will determine your influence on the various aspects of the competition and your media exposure in the marketing campaigns run by **METRICS**. Therefore, several levels of sponsorship have been defined in table 1 below.

Table 1: Partnership options and associated benefits regarding the sponsored competition

Benefits to METRICS sponsors	Principal > €300k or in-kind contrib. / competition	Patron > €20k or in-kind contrib. / year*	Trusted Visitor > €6k or in-kind contrib. / year*	Support > €3k or in-kind contrib. / year*
Sets the scientific and technical objectives of the competition; lead the definition of the benchmarks	✓			
Participates in the Steering Committee meetings (integration of the sponsor's needs in evaluation plans)	✓	✓		
Transfer of the METRICS methodology (training session for the AI software evaluation tool, personalised assistance with direct explanation of the metrics and methods used, etc.)	✓	✓		
Participates in METRICS dissemination meetings (restitution meetings, workshops, etc.)	✓	✓		
Advanced communication package (website, social media, workshop, etc.)	✓	✓	✓	
Free attendance to the evaluation campaigns	✓	✓	✓	✓
Logo on the METRICS communication material (website, flyers, posters)	✓	✓	✓	✓

* These contributions concern the sponsorship of a specific competition and a year, which includes an evaluation campaign in physical environments and a cascade campaign; a preferential rate will be applied for sponsors who commit themselves over the three years of the project and/or for different competitions.

All the contributions mentioned above can also be made in kind, by providing testing facilities (production lines, agricultural plots, infrastructures subject to maintenance and inspection operations, test databases, etc.), robotic platforms and technological bricks (sensors, actuators, etc.). The sponsor will benefit from the advantages granted under the "Principal", "Patron", "Trusted Visitor" or "Support" status depending on the extent of the in-kind contribution.

The project's sponsoring partners will also benefit from high visibility at high-level and widely mediatized meetings (during evaluation campaigns and workshop co-organised with partner DIHs and clusters) as well as from a reference framework for measuring and implementing intelligent systems, enabling the sponsors to control their full impact. The METRICS project will thus contribute to the competitiveness of manufacturers of intelligent systems, by giving them the opportunity to better control the characteristics of their products and their commercial communication, as well as that of users by promoting optimal use of their acquisitions. It contributes de facto to structuring and codifying the future supply of intelligent systems in the four priority areas addressed and beyond.

Finally, the competitions offer a unique opportunity to engage with the next generation of engineers and researchers in Europe, establishing a privileged rapport, shaping their interest and ultimately attracting the best talents to your businesses in what is a very competitive market.



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 871252.