Danish SME seeks laser technology partner to co-develop compact weed-control module for autonomous garden robot and apply for Eurostars funding

Summary

Profile type	Company's country	POD reference
Research & Development Request	**Denmark**	**RDRDK20260513021**
Profile status	**Type of partnership**	**Targeted countries**
PUBLISHED	**Research and development cooperation agreement**	**• All countries**
Contact Person	**Term of validity**	**Last update**
Enrico FRANZIN	**13 May 2026** **13 May 2027**	**13 May 2026**

General Information

Short summary

A Danish SME developing an autonomous garden robot for non-chemical weed control seeks an SME partner for a Eurostars project. The partner should have expertise in compact laser modules, optical design, safety-compliant power output and prototype testing. The aim is to co-develop a miniaturised laser-based module that can identify and disable weeds in private lawns.

Full description

A Danish SME is developing a new autonomous robot for non-chemical weed control in private lawns. The company has worked on the concept for several years and has previously developed and tested a functioning prototype based on mechanical weed removal. This earlier work demonstrated that automated weed control in lawns is technically feasible, but the mechanical approach is not considered optimal for the next product generation.

The company is therefore developing a new concept based on laser technology combined with artificial intelligence and computer vision. The intended solution is a stand-alone consumer-oriented garden robot that can distinguish grass from unwanted plants and target the weed at root level using a compact laser module.

Laser-based weed control is already known from larger agricultural machinery, but existing solutions are too large and unsuitable for private garden robots. The main research and development challenge is to miniaturise the laser module and adapt it to a mobile consumer robot while meeting relevant safety, regulatory, power-output and system-integration requirements.

The company is looking for an SME partner to join a Eurostars project. The project would focus on the research, design, development and testing of a compact laser-based weed-control module. The partner is expected to contribute with specialist know-how in laser technology, optical engineering, thermal design, electronics, safety design and testing.

The Danish SME will contribute the overall product concept, market insight, user requirements, previous prototype experience and knowledge of the intended robotic application. Both parties are expected to jointly define the technical requirements, build and test a prototype module and prepare the basis for further integration into an autonomous garden robot.

Advantages and innovations

The partner should have expertise in one or more of the following areas:

Compact blue diode laser modules
Optical and mechanical design for miniaturised laser systems
Laser safety and regulatory compliance for consumer applications
Thermal management and power optimisation
Electronics and control systems for laser activation
Testing of laser exposure on biological material
Integration of laser modules into mobile robotic platforms
Prototype development for compact hardware systems

The final technical parameters should be developed jointly. Detailed technical information may be shared under a confidentiality agreement.

Technical specification or expertise sought

The company is looking for an SME with strong technical expertise in laser technology and applied product development. The preferred partner should be able to act as an active R&D partner rather than a standard supplier. The partner should be willing to participate in a joint Eurostars application and contribute to defining, developing, testing and validating the compact laser module.

Partners from EU and Eurostars countries are relevant. There is particular interest in partners from Poland, Germany, Eastern Europe, the Baltic countries and the Netherlands, but suitable partners from other eligible countries are also welcome.

Stage of development

Concept stage

IPR Status

Secret know-how

IPR Notes

Sustainable Development goals

• Goal 11: Sustainable Cities and Communities

Partner Sought

Expected role of the partner

See detailed partner requirements and technical specifications in the sections above

Type of partnership

Type and size of the partner

Research and development cooperation agreement

- **SME <=10**
- **SME 50 - 249**
- **SME 11-49**

Call Details

Framework program

Eureka

Call title and identifier

Eurostars Call 11 — to be confirmed before publication

Submission and evaluation scheme

Anticipated project budget

Coordinator required

No

Deadline for EoI

1 Sep 2026

Deadline of the call

21 Sep 2026

Project duration in weeks

Web link to the call

Project title and acronym

Dissemination

Technology keywords

Market keywords

- **07004006 - Garden and horticultural products**

Targeted countries

- **All countries**

Sector groups involved