AAI Labs

Eurostars project ACORN introduction

About Eurostars

Eurostars is an international funding programme for collaborative research and development (R&D) projects led by innovative small- and medium-sized enterprises (SMEs). At the moment, Eurostars call 11 is open for submissions.

Proposal submission deadline: 10 September 2026
Project duration: 24 months

Project idea

A precision livestock monitoring system for early detection of calf health issues, combining computer vision with wearable sensors. The system tracks temperature, activity levels, and location to flag signs of illness (e.g. weight loss, diarrhea) before they become visible to farm staff.

The system would employ hardware:

- Cameras (visual + infrared): identify individual calves, monitor temperature trends over time, detect body-shape changes indicating weight loss, and flag symptoms such as diarrhea.
- Ear tags with accelerometers: track movement and activity levels throughout the day.

(Potential extension): tagging mother cows as well, to monitor time calves spend with their mothers as an additional indicator of feeding behavior and health.

Current consortium

- **LSMU** (Lithuanian University of Health Sciences) – the leading veterinary university in Lithuania. LSMU ensures the health indicators the system tracks (temperature patterns, weight loss, diarrhea, feeding behavior) are clinically sound and grounded in real veterinary science.
    - Its Faculty of Veterinary Medicine combines domain expertise in animal health with an active track record of EU Horizon-funded research (livestock microbiome science, antimicrobial resistance in animal systems, agricultural innovation systems).
- **AAI Labs** – provides the AI engine that turns camera and sensor data into actionable health flags.
    - The company has completed projects utilizing similar technologies: CNN-based image analysis to detect wood defects invisible to the naked eye in the timber sector, and using sensor-data classification for health diagnostics, e.g. analyzing spectral data to identify kidney stone composition.

– extracting signal from visual data that humans can't reliably interpret by eye, and turning diagnostic data into fast, actionable health assessments.

- **UAB Terekas** – commercialization partner, with strong on-the-ground connections to farmers and deep knowledge of the market, plus commercial execution experience and a strong operational team to bring the solution to market.

We are seeking a hardware partner able to manufacture ear tags with extended signal range for identifying cows on camera. Current commercially available RFID options only reach 38-46 cm, which is insufficient for reliable tracking in a farm setting.

UAB Taikomasis dirbtinis intelektas (AAI Labs)

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