A Croatian SME seeking R&D partners for AI-driven sensor based optimization in agriculture, for Eurostars, Horizon Europe or similar programmes.

Summary

Profile type	Company's country	POD reference
Research & Development Request	**Croatia**	**RDRHR20250829007**
Profile status	**Type of partnership**	**Targeted countries**
PUBLISHED	**Research and development cooperation agreement**	**• World**
Contact Person	**Term of validity**	**Last update**
Enrico FRANZIN	**29 Aug 2025** **29 Aug 2026**	**29 Aug 2025**

General Information

Short summary

Fruk FinTech is a Croatian tech company developing intelligent platforms for agriculture and agri-food sectors. The company aims to create a modular AI-driven system for silo automation, real-time monitoring, predictive maintenance, and pest detection. The company is seeking partners for Eurostars, Horizon Europe, or similar programmes.

Full description

Fruk FinTech is a Croatian tech company developing intelligent platforms for agriculture and agri-food sectors. The company aims to create a modular AI-driven system for silo automation, real-time monitoring, predictive maintenance, and pest detection.

The proposed project aims to develop an intelligent, AI-powered platform for the automation and optimization of silo-based storage processes in agriculture. This system will combine IoT sensor networks, real-time analytics, and AI/ML models to enable predictive monitoring, autonomous control, and active protection of stored grain and oilseeds.

A portion of the solution has already been prototyped and tested in operational environments, where we collected valuable knowledge and technical know-how through collaboration with local agribusinesses. This early-stage

implementation has proven the relevance and technical feasibility of our approach and forms a solid foundation for broader-scale development.

Project objectives include:

- Predictive maintenance and fault detection of silo machinery (ventilation, motors, etc.)
- Pest and contamination detection through sensor fusion and AI classification models
- Automated responses including targeted spraying, ventilating, and drying operations
- Smart environmental control based on temperature, humidity, CO_2 levels, and grain quality parameters
- Remote management dashboards with alerts and AI-based decision support
- Data integration with ERP systems and full traceability of grain quality and storage conditions

The main goal is to build a new generation of “smart silos” by digitally upgrading existing silo infrastructures, making them intelligent, autonomous, and data-driven – without requiring full replacement or reconstruction.

Fruk Technology will contribute expertise in:

- AI/ML model development and implementation
- Real-time sensor data acquisition and automation logic
- Custom software platforms with intuitive user interfaces
- Cybersecurity to ensure safe and resilient digital operation
- Rapid prototyping of hardware modules via in-house 3D modeling, 3D printing, CNC, and laser engraving

Advantages and innovations

- The company's greatest advantage lies in their deep understanding of the challenges in the agricultural sector. It is from this knowledge that they develop ideas and solutions that are aligned with the specific needs of farmers and buyers.
- Fruk FinTech develops intelligent software platforms that combine AI/ML algorithms, sensor-based automation, and real-time data processing for use in agriculture and agri-industry. Their focus is on transforming traditional infrastructure into smart, self-optimizing systems.
- They are currently developing an AI-powered platform for smart silos, enabling predictive maintenance, pest detection, and automated control of ventilation, drying, and spraying. A functional prototype has already been deployed with local partners, giving them a validated knowledge base and implementation experience.
- Their solution is modular and adaptable to existing silo infrastructure, reducing the need for new construction and enabling cost-effective digital transformation. By integrating sensor networks with AI logic, they enable real-time risk prevention, data-driven grain quality control, and remote monitoring.
- They operate an in-house 3D prototyping lab (3D modeling, printing, CNC, laser engraving) allowing rapid hardware adaptation to field conditions. Additionally, they provide cybersecurity services to ensure data protection and operational safety.
- The company works closely with farms, cooperatives, and agribusinesses across Croatia, and are recognized for their innovation through awards such as the Digi Award, Zlata Bartl Award, and Top 10 Young Innovators in Croatia. The founder of the company also completed international training at Pfizer UK.
- This solution addresses urgent needs in agriculture: reducing spoilage, improving safety, cutting operational costs, and making traditional storage infrastructure smart and sustainable.

Technical specification or expertise sought

The company is looking for research institutions, SMEs, and universities interested in developing advanced software systems, applying sensor technologies, and using AI in industry and precision agriculture.

Stage of development

Already on the market

IPR Status

Secret know-how

IPR Notes

Sustainable Development goals

- **Goal 3: Good Health and Well-being**

Partner Sought

Expected role of the partner

Ideal partners:

- Organizations operating in the agricultural sector (e.g. producer associations, cooperatives, food industry, clusters)
- Research institutions and universities with expertise in agriculture, mechatronics, sensor systems, and applied AI
- Companies with experience in pilot testing, field validation, or impact assessment of agri-tech

Type of partnership

Research and development cooperation agreement

Type and size of the partner

- **SME 11-49**
- **University**
- **R&D Institution**
- **SME <=10**

Call Details

Framework program

Horizon Europe

Call title and identifier

The company is interested in finding partners in Horizons Europe, Eurostars or similar programmes.

Submission and evaluation scheme

Anticipated project budget

Coordinator required

Yes

Deadline for EoI

28 Aug 2026

Deadline of the call

28 Aug 2026

Project duration in weeks

Web link to the call

Project title and acronym

Dissemination

Technology keywords

- **01003003 - Artificial Intelligence (AI)**

Market keywords

- **02007006 - Other system software**

Targeted countries

- **World**

Sector groups involved

- **Digital**