

Swedish engineering SME seeks technology partner for autonomous hybrid solar cocoa drying system.

Summary

Profile type

Technology request

Company's country

Sweden

POD reference

TRSE20261009029

Profile status

PUBLISHED

Type of partnership

Research and development cooperation agreement

Targeted countries

- Poland
- Croatia
- France
- Netherlands
- Finland
- Austria
- Germany
- Luxembourg
- Belgium
- Lithuania
- Latvia
- Liechtenstein
- Czechia
- Denmark

Contact Person

[**Enrico FRANZIN**](#)

Term of validity

9 Oct 2026
9 Oct 2027

Last update

9 Oct 2026

General Information

Short summary

A Swedish engineering SME is developing an autonomous solar-powered cocoa bean drying system for regions with high rainfall, humidity and limited access to reliable electricity. The company seeks a technology partner with expertise in electronics, sensors, automation, embedded systems and IoT to jointly develop, prototype and validate the solution.

Full description

A Swedish engineering SME is developing an innovative cocoa bean drying solution aimed at improving post-harvest processing in tropical regions where weather variability, high humidity and limited access to reliable electricity often affect product quality and production efficiency.

The concept combines solar energy utilisation with automated process management and digital monitoring technologies. The objective is to create a system capable of maintaining reliable drying conditions while reducing dependence on manual intervention and conventional energy sources.

The project is currently at concept stage and the company is seeking a technology partner to participate in the development of the system architecture, technical specifications, prototype creation and validation activities.

The company offers strong expertise in mechanical engineering, machine design, CAD development, manufacturing engineering and system integration. The sought partner is expected to contribute complementary expertise in areas such as electronics, sensors, embedded systems, automation, communication technologies, IoT solutions and prototype development.

The cooperation may lead to joint prototype testing, pilot deployment and future market introduction. The company is looking for a long-term technology partner interested in contributing to the development of innovative, sustainable and digital solutions for the agricultural sector.

Advantages and innovations

The proposed solution introduces an autonomous hybrid cocoa drying system that combines natural solar drying, automated weather protection and digital monitoring in a single integrated platform. Unlike traditional sun-drying methods, the concept is intended to automatically respond to changing weather conditions, protecting cocoa beans from rainfall while enabling controlled drying to continue during unsuitable weather.

The system is expected to integrate sensors, automated controls and remote monitoring capabilities, reducing the need for continuous manual supervision and supporting more consistent drying conditions. The concept also aims to reduce dependence on reliable grid electricity through the use of renewable energy technologies.

Additional innovative aspects include:

- * Automated switching between solar drying and controlled drying modes.
- * Weather-responsive operation with automatic rain protection.
- * Integration of environmental sensing and process monitoring.
- * Potential remote monitoring and notification functions.
- * Modular design suitable for different scales of cocoa production.
- * Focus on energy-efficient and sustainable post-harvest processing.

The project offers opportunities for the joint development of a technology that combines mechanical engineering, automation, electronics and digitalisation to improve drying reliability and reduce post-harvest losses in cocoa-producing regions

Technical specification or expertise sought

The company is seeking a technology partner with proven expertise in one or more of the following areas:

- * Embedded electronics and control systems
- * Environmental sensors and monitoring technologies
- * IoT and remote monitoring solutions
- * Automation and actuator control
- * Communication technologies and data acquisition
- * Energy-management systems for solar-powered or off-grid applications
- * Prototype development, testing and system validation
- * Integration of mechanical and electronic systems

Experience in agricultural technology, drying systems, renewable energy solutions or equipment designed for demanding outdoor environments would be considered an advantage. The partner should be interested in collaborative product development and willing to contribute to system architecture, technology selection, prototyping and validation.

Stage of development

Concept stage

Sustainable Development goals

- **Goal 9: Industry, Innovation and Infrastructure**
- **Goal 8: Decent Work and Economic Growth**
- **Goal 7: Affordable and Clean Energy**

IPR Status

Secret know-how

IPR Notes

Partner Sought

Expected role of the partner

The company seeks a technology partner that can contribute expertise in electronics, sensors, embedded systems, automation, IoT and communication technologies for the joint development of an autonomous hybrid solar-powered cocoa drying system.

The partner is expected to contribute to the design and development of the sensing, control and communication architecture, including environmental monitoring, actuator control, energy management and remote monitoring functionalities. The partner should also support prototype development, system integration, testing and validation activities.

The cooperation is envisioned as a long-term partnership aimed at jointly developing, validating and potentially commercialising the technology.

Type of partnership

Research and development cooperation agreement

Type and size of the partner

- **Big company**
- **University**
- **SME ≤ 10**
- **SME 50 - 249**
- **R&D Institution**

Dissemination

Technology keywords

- **09003 - Electronic measurement systems**
- **08002003 - Safe production methods**
- **08001004 - Food Processing**
- **09004 - Recording Devices**

Market keywords

- **08002002 - Industrial measurement and sensing equipment**
- **08002003 - Process control equipment and systems**
- **08002001 - Energy management**
- **06003001 - Solar/thermal energy**
- **02007014 - Other industry specific software**

Targeted countries

- Poland
- Croatia
- France
- Netherlands
- Finland
- Austria
- Germany
- Luxembourg
- Belgium
- Lithuania
- Latvia
- Liechtenstein
- Czechia
- Denmark

Sector groups involved