

French underwater imaging SME seeks 3D reconstruction software partners for subsea infrastructure integrity inspection solutions

Summary

Profile type

Technology request

Company's country

France

POD reference

TRFR20260907008

Profile status

PUBLISHED

Type of partnership

**Research and development
cooperation agreement**

Targeted countries

• All countries

Contact Person

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Term of validity

**7 Sep 2026
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Last update

7 Sep 2026

General Information

Short summary

A French SME specialized in high-performance cameras for underwater imaging seeks a partner with proven expertise in 3D reconstruction software (photogrammetry, stereovision, SLAM). The goal is to co-develop a solution converting camera video streams into precise 3D models of submerged structures for integrity inspection of offshore assets. An R&D cooperation agreement or a commercial agreement with technical assistance is sought, with a target availability within 18 months.

Full description

The French SME is a pioneer and technology leader in high-quality imaging systems, with deep expertise in designing high-performance cameras specifically engineered for underwater and industrial applications, including operations in highly turbid or low-visibility waters.

As part of its strategic expansion to deliver advanced subsea inspection capabilities, the company is seeking an expert partner in software-based 3D reconstruction. The collaborative goal is to co-develop a robust 3D modeling and reconstruction software solution specifically adapted to challenging underwater optical conditions and designed to ingest the video streams produced by the French company's proprietary cameras.

The ultimate ambition is to market a distinctive, non-intrusive solution enabling high-precision integrity monitoring and wear control of submerged offshore infrastructure. Targeted application areas include anchor chains, flexible joints on pipelines, immersed metallic structures, fittings, and specific corrosion or wear zones on marine assets.

To successfully achieve this, the sought software solution must meet the following criteria:

- Exploit the raw video streams from the SME's cameras (with a strong technical preference for a mono-camera setup, though stereovision/dual-camera systems can be considered);
- Reconstruct highly accurate 3D models of the inspected objects or underwater zones;
- Reach millimetric accuracy, depending on water turbidity and acquisition geometry;
- Deliver clean, processed 3D data directly compatible with standard asset integrity software and inspection workflows.

The project is structured around an 18-month roadmap to bring the joint solution to the commercial market. Depending on the partner's technology maturity, cooperation will be established through a Research and Development Cooperation Agreement or a Commercial Agreement with Technical Assistance.

Advantages and innovations

The proposed joint solution offers significant innovations for the marine and offshore energy markets:

- **Distinctive Synergy:** Combines world-class underwater hardware and image processing in turbid water with cutting-edge 3D reconstruction algorithms, delivering superior model accuracy compared to standard photogrammetry tools.
- **Simplified Deployment:** Prioritizes a mono-camera setup, avoiding the cost, weight, and operational complexity of heavy multi-camera rigs or structured light scanners on Remotely Operated Vehicles (ROVs).
- **Market Acceleration:** Addresses a critical, underserved demand for accurate, cost-effective, and non-intrusive structural monitoring in sectors such as offshore wind, ports, aquaculture, and maritime defense.

Technical specification or expertise sought

The prospective partner must possess proven software engineering capabilities and advanced algorithmic expertise in 3D reconstruction, photogrammetry, stereovision, or SLAM (Simultaneous Localization and Mapping).

Technical requirements include:

- Algorithms already adapted to, or capable of being optimized for, challenging low-visibility, low-light, and turbid aquatic environments;
- Demonstrated capability to achieve millimetric to sub-millimetric resolution from video tracking;
- Experience in integrating 3D processing pipelines with physical camera hardware and industrial video streams;
- Willingness to engage in active co-development with the French SME's R&D team to bring a collaborative product to market within 18 months.

Stage of development

Under development

IPR Status

IPR granted

IPR Notes

Sustainable Development goals

• **Not relevant**

Partner Sought

Expected role of the partner

The French company is seeking innovative software companies (SMEs of any size), R&D institutions, or universities specialized in computer vision.

Expected role of the partner:

- Provide and adapt proprietary 3D reconstruction software or algorithmic frameworks to the specific parameters of the French SME's camera systems;
- Collaborate closely with the company's internal engineers to test, validate, and optimize the 3D model accuracy on physical subsea targets;

- Depending on the cooperation model, either co-develop the tool under a Research and Development Cooperation Agreement or supply the core software components backed by technical support under a Commercial Agreement with Technical Assistance.

Type of partnership

Research and development cooperation agreement

Type and size of the partner

- **SME 50 - 249**
- **SME 11-49**
- **SME <=10**
- **Big company**
- **R&D Institution**
- **Other**
- **University**

Dissemination

Technology keywords

- **09001008 - Other Non Destructive Testing**
- **01003012 - Imaging, Image Processing, Pattern Recognition**
- **01006012 - Description Image/Video Computing**
- **09001007 - Optical Technology related to measurements**

Targeted countries

- **All countries**

Market keywords

- **02002008 - 3D**
- **08002002 - Industrial measurement and sensing equipment**
- **02007011 - Manufacturing/industrial software**
- **08002005 - Machine vision software and systems**

Sector groups involved