

## **AUTOMATING FIBRE OPTIC SENSOR INSTALLATION**

**INEGI | Portugal**

SMART PO Proposers' Day - 10th Call  
8 Oct 2026 | Vienna, Austria



**SENFIBER**

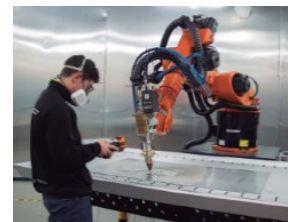


## Engineering research, translated into industry

- Institute of Science and Innovation in Mechanical and Industrial Engineering
- RTO in Porto, Portugal with +300 people
- +400 international partners

## Core capabilities

- Monitoring & digital twins
- Experimental testing & inspection
- Structural design & simulation

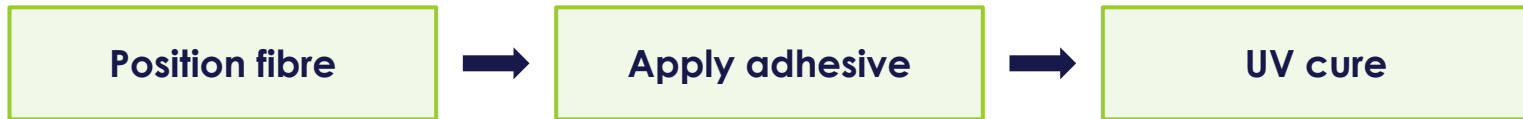


## Place, bond and cure - automatically

Manual installation is slow, variable and delicate

Solution is based on a commercial robot + dedicated deposition head

### Proposed autonomous process



On finished parts & between composite layers

# Repeatable sensing, useful condition data

## Expected benefits to validate

Less installation effort

Repeatable sensor  
layouts

Data for condition  
monitoring

## Expected outputs

**Integrated scope:** sensing, data analysis  
and digital twin

**Demonstration route:** drone and  
composite components

## Seeking an industrial sensor supplier partner

| Partner / sought profile                                           | Role                                                                                           |
|--------------------------------------------------------------------|------------------------------------------------------------------------------------------------|
| INEGI (PT)                                                         | Define and calibrate sensors; mechanical tests; validate embedded fibres                       |
| Fraunhofer ENAS (DE)                                               | Design and build the deposition machine; integrate the system                                  |
| Portuguese composites SME                                          | Manufacture composites; host the pilot line; provide an industrial use case                    |
| German drone SME                                                   | Provide the drone use case                                                                     |
| <b>Industrial sensor supplier sought (outside PT/DE) - Company</b> | <b>Provide optical interrogation; develop the acquisition chain; lead sensing exploitation</b> |

# Bring your sensing technology to SENFIBER

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**MEET ME AFTER THIS SESSION**

