



# Aerospace Inspect and Sort

An AI vision system for aerospace  
precision machined part identification



**SMART**   
advanced manufacturing

## ORGANISATION PROFILE

Irish Manufacturing Research is a non-for-profit RTO that helps Irish manufacturing companies to innovate. IMR has 83 employees of which 60 are researchers, working in Data Analytics, IIoT, Energy efficiency, Cobotics, Circular Economy and Software Engineering.



**IRISH  
MANUFACTURING  
RESEARCH**

# PROPOSAL INTRODUCTION (I)

**Vision:** The key objective will be to evaluate if it is possible to develop and automate the inspect and sorting process to (i) inspect parts, compare specific criteria against required specifications – engraving presence, surface conditions, features presence, part identification and then (ii) once parts conform to requirements, sort parts accordingly by part number/type.

**Motivation:** To **reduce the amount of time** spent identifying individual parts and visual inspection postproduction processes and subsequently **reduce errors during assembly** a processes.

## **Content:**

1. Clearly map the limits and attributes of Aerospace parts to be inspected.
2. Identify challenges around Aerospace value stream to be addressed
3. Identify potential vision system and software solutions, if they exist.
4. Identify potential sorting system solutions
5. Integrate key parts into a Minimum Viable Product

## PROPOSAL INTRODUCTION (II)

### **Expected outcome:**

An MVP capable of identifying and sorting Aerospace parts once they have completed all manufacturing processes.

### **Impacts:**

- Reduced manual operations throughout value stream
- Improved quality of products to assembly lines
- Reduce potential risk of an incorrect final assembly being used

**Schedule:** duration 24 months



## PARTNERS

### **Current Consortium:**

- IMR (coordinator, data analytics, automation)
- Takumi Precision Engineering

**Partner search:** experts on intelligent based vision systems.



## CONTACT INFO



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