smart
advanced manufacturing

Automatic Inspect and Sort

AI vision system for precision manufacturing


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ORGANISATION PROFILE

Irish Manufacturing Research is a non-for-profit RTO that helps Irish manufacturing companies to innovate. IMR has 120 employees of which 85 are researchers, working in Data Analytics, IioT, Energy efficiency, Robotics, 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 manufacturing 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.

Content:

1. Clearly map the limits and attributes of manufacturing parts to be inspected.
2. Identify challenges around the 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 inspecting, identifying and sorting manufacturing parts once they have completed all manufacturing processes. The successful development of this AI vision and sorting system will result in a significant leap forward in manufacturing precision and efficiency. It will not only bolster the competitiveness of participating manufacturers but also set a new standard for quality control in the industry.

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, computer vision)

Partner search:

We invite industry partners, technology developers, and research institutions to join this initiative. Collaborators will be pivotal in providing expertise, resources, and testing environments necessary to bring this vision to fruition

CONTACT INFO

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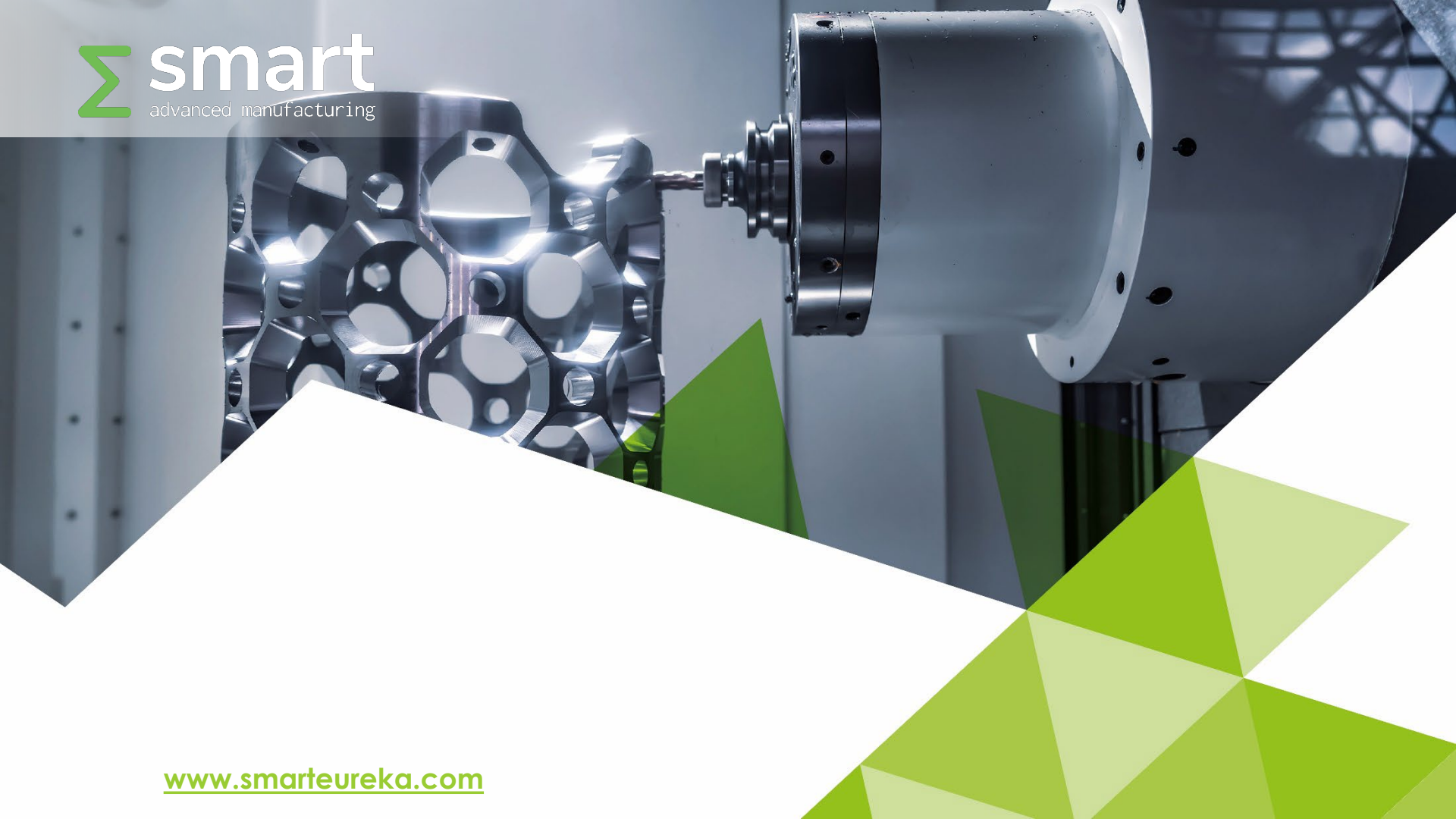

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