

# Through-life Engineering Services: Maintenance 4.0

**CATAPULT**  
High Value Manufacturing



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The High Value Manufacturing Catapult (HVMC) are leveraging experience in Industry 4.0 technologies to realise more reliable, less disruptive and better connected services for maintenance.

Working with industrial partners from all sectors, the HVMC are developing innovative techniques for increased through-life value.

## The Project: Augmented Reality for Routine Maintenance

### Problem

Quick and easy to understand instructions are important for accurate and efficient maintenance processes. Traditional maintenance instructions are often lengthy paper directions with 2D images and diagrams, which can at times be difficult to understand, or slow to follow.

### The Process

This project focused on understanding the needs of both the maintenance operators and asset owners in order to improve productivity. In order to improve task performance and reduce errors it is imperative that information can be provided when and where users require it. The challenge was to create a system that would allow all these issues to be addressed.



### The Solution

The AMRC, WMG and AFRC have worked together to build an application based on the needs discussed with rail experts from Govia Thameslink Railway (GTR) and Bombardier. The solution provided GTR with an intuitive application for the generation and deployment of augmented reality work instructions.

### The Outcome

The proof of concept application integrated digital work instructions with an unprecedented level of tractability. Further work in this direction could enable fault finding and real time data updates to be integrated into this software. The rail network hopes to continue development of this software to realise its potential for time saving, productivity, and safer work environments.

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**Innovate UK**

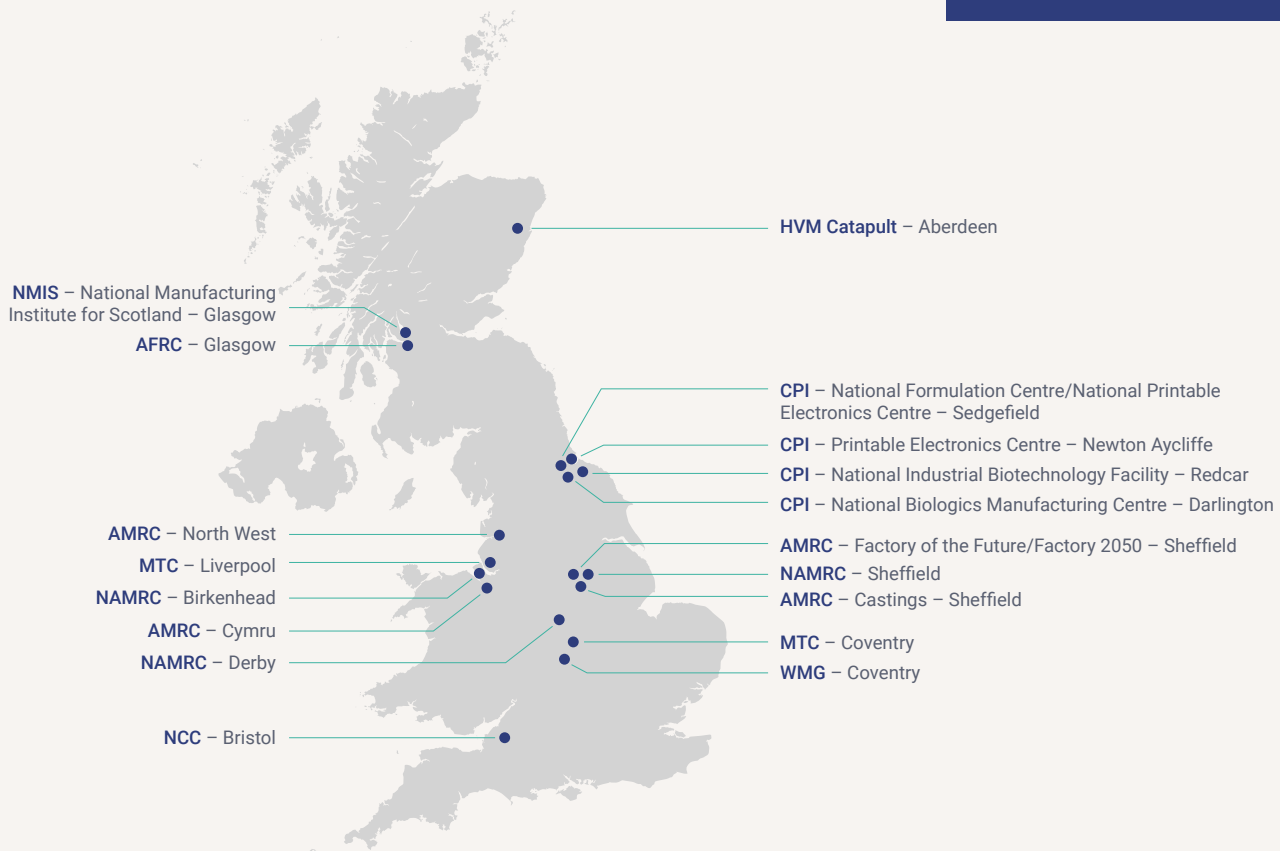


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Through-life Engineering Services:  
Maintenance 4.0 – a collaborative project  
by AFRC, AMRC, NAMRC and WMG.

