

Fitfactory

Managing and analysing high-volume data



5G Case Study

Managing and analysing high-volume data capture



Supported by the
Getting Building Fund (GBF)

Synopsis

Fitfactory helps factories with digital transformation, supporting the manufacturing industry to adapt to the changing landscape – using digital, data-driven solutions to help the sector become more agile and productive.

Working alongside precision parts manufacturer AE Aerospace, Fitfactory are taking part in a 5G use trial to streamline the planning and production process. AE Aerospace are the first UK SME to deploy a private 5G network - working together with WM5G, Worcestershire 5G (W5G) and technology partner BT.

Fitfactory are deploying three 5G solutions at AE Aerospace to capture and manage the high-volume of data collected through the trials. The aim is to ensure the right data is shared with the right people, at the right time.

The Enterprise Resource Planning (ERP) system, working across the 5G private network, is an automated system aiming to streamline all projects. The ERP captures data from the factory floor, machines, devices and people.

Once a job comes into the factory, it is planned into the ERP. From this point, the production process is automatically scheduled, utilising each available machine and component required in the process. The ERP collects and analyses all available data in real-time, sending alerts as it progresses through production.

Fitfactory are also supporting further use trials at AE Aerospace, including asset tracking; using sensors and tags powered by 5G to locate tools and gauges required in specification checks, and monitoring machine quality; tracking what's going on inside machines and identifying upcoming fixes.

By gaining real-time data driven insights, the technology will enable AE Aerospace to take a proactive approach to asset maintenance – thereby minimising machine downtime.





Problem

Manufacturing planning processes often take place manually, disconnected from machines and a central system that is often used to plan operations.

5G technology has the ability to improve processes across the manufacturing industry through automation.

This means that many current manual processes, such as logging machine time, measuring parts to specification and inspecting machines can be automated. However, this creates large volumes of data that can be overwhelming to consume, analyse and utilise effectively.



Solution

The installation of the Enterprise Resource Planning (ERP) system, powered via the 5G private network will streamline all projects through an automated system. It collects data from the factory floor, machines, devices and staff to effectively plan projects, making best use of time and capacity in the factory.

Fitfactory are also deploying advanced business intelligence systems to bring together the information captured through the 5G network and analyse information in real-time, with rules and exceptions in place to manage information flows.



Benefit

With communication taking place between devices in real time over the 5G private network, Fitfactory and AE Aerospace aim to switch a reactive approach to a proactive one, identifying and solving issues as they emerge with minimal disruption.

Through Fitfactory's analysis and adding context to the data from the ERP, the system can send relevant alerts in real-time to the right people so they are able to take immediate action.

Fitfactory are also developing an intelligence platform to centralise the captured data, with the user managing what data they need to receive, and when.

“

5G is set to open more possibilities for manufacturers to digitalise, due to the quantity and speed of data that can be captured and communicated.

We play a key role in adding context to the data - presenting the right data, to the right people, in the right way to help them make informed decisions.

”

Alex Knight, Fitfactory



We're looking forward to exploring how the wealth of data - collected from the 5G private network - can be used to transform the manufacturing industry for the better.

The 5G use trials are much more than collecting high-volume data. It's important the data is scrutinised to ensure it effectively supports manufacturing operations and increases productivity, allowing manufacturers to make informed decisions.



Robert Franks, WM5G

Takeaways

Sustain



Through the shared vision to streamline and speed up manufacturing processes, the use of a 5G private network can capture high-volumes of rich data. Contextualising this data in practice will help to sustain progress made to improve operational efficiency.

Learnings



The learnings aim to support the shared vision from Fitfactory and AE Aerospace to provide better transparency to the planning process and operations across the supply chain. As the trials develop, digitalization will improve internal processes and provide an opportunity to share findings with the sector.

Contacts



West Midlands 5G Manufacturing Team
www.wm5g.org.uk/contact

More info



www.wm5g.org.uk



WM5G.org.uk

www.wm5g.org.uk/contact



HM Government

Supported by the
Getting Building Fund (GBF)