



# EMPOWERING MANUFACTURERS THROUGH 5G

How 5G can support manufacturers to increase productivity gains,  
by Riccardo Weber, Manufacturing Project Manager at WM5G

Since joining West Midlands 5G (WM5G) only a few months ago, it has been great to see the interest and uptake of 5G technologies in the region across a variety of industries.

With each step of our progresses, the West Midlands becomes closer to working smarter and more efficiently by connecting to 5G networks. But we recognise there's still much more to realise our ambition for a fully connected region.

The fifth generation of mobile data, 5G, offers truly transformational opportunities for businesses. While undoubtedly faster than its 4G predecessor, 5G also brings with it greater capacity, built-in security and lower latency. This allows for a safe simultaneous connection of thousands of 5G enabled devices, and the rapid, secure and confidential transfer of huge amounts of protected data.

A significant part of our role at WM5G is to test the applications of 5G in real world scenarios which help us to discover real-world applications that can support the region's key economic sectors, such as manufacturing.

Manufacturing is a critical industry for the UK economy, accounting for £191 billion of UK output and providing over 2.7 million

jobs. The West Midlands sits at the heart of the sector, contributing over £22 billion output, equating to 16% of the regions output overall. Improving efficiency is important for all manufacturers to reduce waste and increase capacity.

To drive efficiencies, manufacturers need to work quickly with an increased reliance on their networks to save costs, enhance sustainability and increase outputs. It is the networks that will connect the devices and drive this efficiency gain, which is why 5G is proving to be so pivotal for manufacturers.

The adoption of digital technology in production facilities will result in significant manufacturing productivity improvements, with an anticipated increase in output of up to 35% by 2030.

We work hard to deliver 5G enabled manufacturing use cases to showcase the possibilities for organisations. Alongside this, we support West Midlands based enterprises on their journey to the implementation of Industry 4.0 – digitizing manufacturing processes through adoption of enhanced software solutions, enabling smart autonomous systems.

Working with our development partners, WM5G is undertaking a range of use cases to demonstrate how 5G can improve



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productivity in manufacturing environments.

Key among these is the testing at AE Aerospace, the first UK SME to deploy a 5G private network. They are using the network to understand how 5G will be able to maximise machine time, locate production assets and provide accurate assurance that components meet specification, allowing them to offer customers greater certainties on delivery and quality.

Working with WM5G Technology partners Worcestershire 5G (W5G) and BT, The Manufacturing Technology Centre (MTC) near Coventry is also installing a first of its kind Nokia 5G Stand Alone (SA) private network. The MTC will explore a number of use cases including a vision inspection system featuring an industrial mobile robot, a collaborative robot arm enabled by 5G connectivity and mobile-edge computing.

SMEs can access the SA private network at the MTC to test and deploy 5G solutions in a live testbed environment. Manufacturers interested in testing their 5G solutions at the MTC, reading the new how-to guide to find out if 5G is right for their organisation, or exploring current use cases should visit: [www.wm5g.org.uk/projects/manufacturing/](http://www.wm5g.org.uk/projects/manufacturing/).



AE Aerospace Factory Floor

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