

NMIS

National Manufacturing
Institute Scotland

NMIS & 5G

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Research & Development Engineer

Digital Factory

28th October 2021

nmis.scot



National Manufacturing Institute Scotland

Opening dates:

Open now

Building now
From 2022

Core elements

Digital factory

Collaboration
hub

Manufacturing
skills academy

Outreach via NMIS Network

Specialist centres

Advanced Forming
Research Centre

Lightweight Manufacturing
Centre



Bridging a Critical Gap



Benefits of 5G for Manufacturing

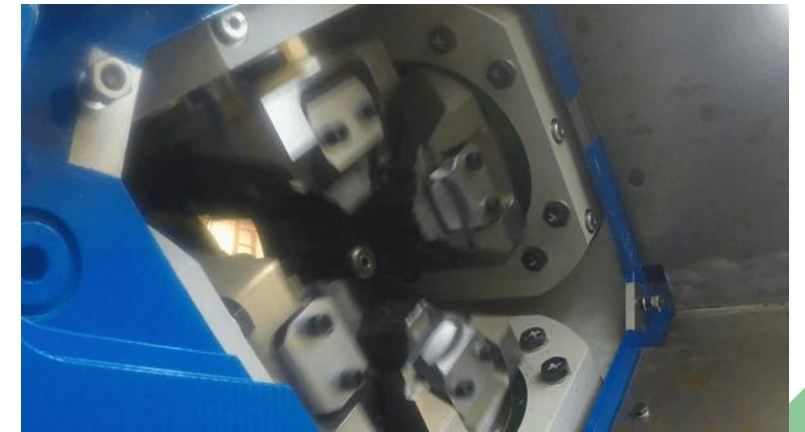
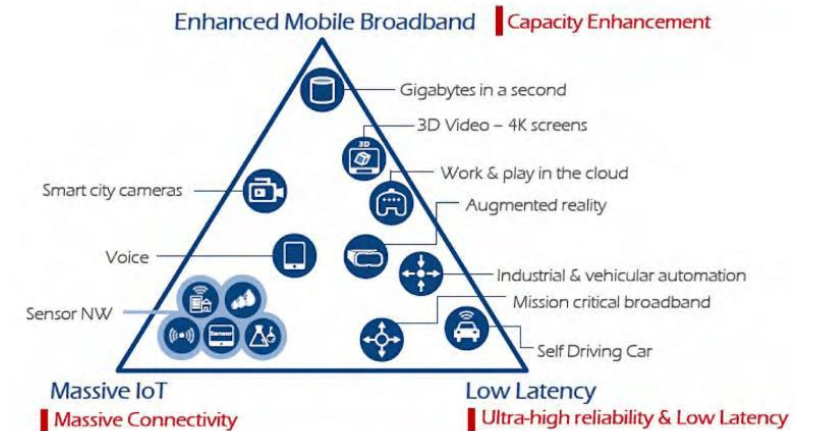
High Device Density – Manufacturing workshops are densely packed with all different types of equipment from stationary to handheld.

High Security – Data is the heart of manufacturing whether it be design documents, test results or real time machine data and needs to be kept secure.

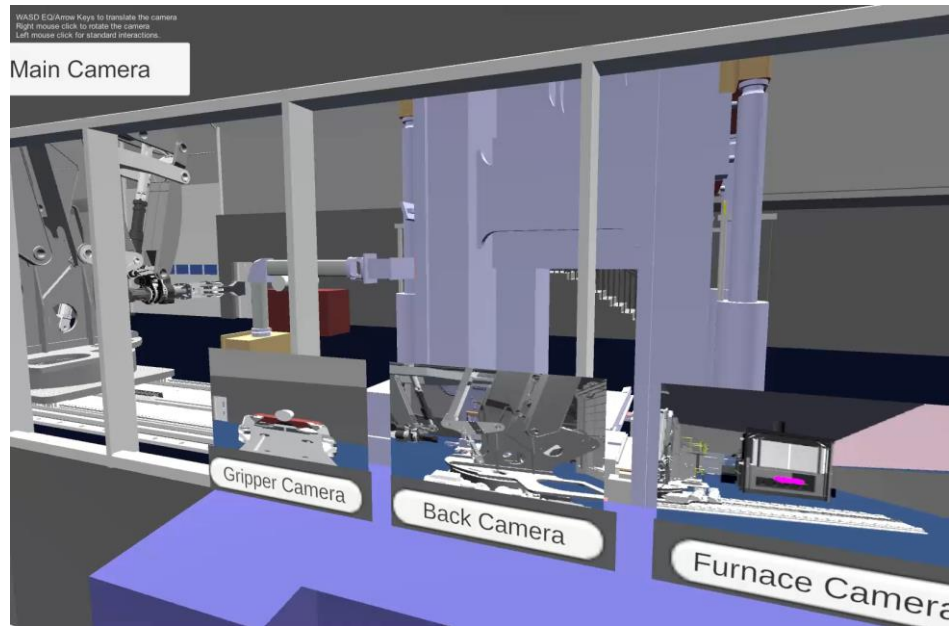
High Bandwidth – Manufacturing generates large volumes of beneficial and currently underutilised data.

Ultra-low Latency – Closed loop control of manufacturing process could improve yield and reduce wasted time on out of spec components.

Network Slicing – Segregate workshops into groups of high and low data requirements, making efficient use of bandwidth.



NMIS Private 5G Use Cases



RESuME & Digital Factory - Fully automated manufacturing, following the ISA-95 stack.

Reconfigurable Factory - Allowing businesses to rapidly change to meet market demands.

Autonomous Lab - Material testing with fully autonomous robotics.

VR/AR Simulation & Training - Digital twinning of manufacturing machines, processes and providing any & all information onto the workshop floor.



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