Manufacturing Made Smarter

An Industrial Challenge Strategy Fund (ISCF) programme

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Made Smarter Landscape & Manufacturing Made Smarter (MMS) challenge

- Overall work was properly launched after **2017 Made Smarter report**
  - Recognised criticality of digitalisation to achieve more productive, flexible, sustainable manufacturing – and now resilient too!
  - 4 Focus areas: Innovation, Leadership, Skills, Adoption
- **MMS Challenge was launched mid 2019, focus on innovation agenda**
  - Covers all sectors including: Aerospace, Automotive, Pharmaceutical, Food & Beverage
  - Scope: Manufacturing and Supply Chain
  - Technologies underpinning: Artificial Intelligence (AI), Robotics & Automation, Additive Manufacturing, Industrial Internet of Things (IIoT), Augmented/Virtual Reality (AR/VR)
  - Innovation themes: Smart Factory, Connected Supply Chain, Design Make and Test, Adaptable Flexible Manufacturing
- **MMS Activities**:
  - Launched 2019: CR&D Competition 1 (4 Innovation Themes)
  - Launching now: CR&D Digital Supply Chain competitions, Research Centres
  - Launching soon: Technology Accelerators, Innovation Hubs & Standards

MMS Outcomes – What we will achieve

"Creation of fully connected, dynamic Manufacturing ecosystems – to shape how the world works"

How will the manufacturing world be a better place?

- **Leading productivity** aligned to environmental performance and resource efficiency
- UK manufacturing leading in **high value manufacturing solutions and performance**
- **Interconnected, dynamic manufacturing supply chains**
- Translation of **innovation concepts into digital reality**
- **Networks** spanning early stage research right through to large scale industrial applications – **line of sight from ideas to exploitation**
- A **world leading technology sector** which export digital solutions across the globe

Digital Supply Chain competitions

Collaborative Research & Development (CR&D)

Competition Overview

2 linked Digital Supply Chain competitions – Feasibility Study; Industrial Research

- Feasibility Study [FS] competition - to **explore early stage ideas***
  - total project value £250k to £500k; up to 6 months
  - grant funding per applicant up to state aid limits
  - *plus plan to run follow-on IR competition for successful projects in 2021
- Industrial Research [IR] competition – **developing a concept** for industrial application
  - total project value £1m to £3m; up to 24 months
  - maximum** grant funding per applicant up to state aid limits
  - **however maximum project funding must not exceed 50% of total project costs
- **Any manufacturing sector** (single sector ok); Must be **across a supply chain** (not internal)
- Collaborative (min 2 partners); business led consortia – must include 1 SME
- Project: can cover either supply chain **design** or supply chain **execution**
- Aim: innovation of **digital technologies** to develop **connected, resilient, flex efficient and sustainable** UK manufacturing supply chains

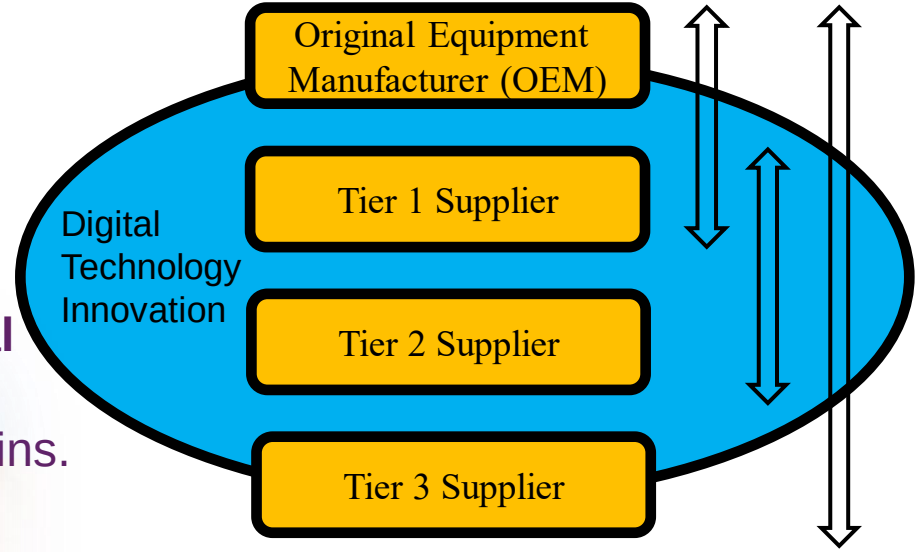
Competition Focus

Your project must help UK manufacturing supply chains to **develop digital technologies** to become **more efficient, productive, flexible, resilient & sustainable**.

These must **encourage the use of digital approaches** to better **integrate and optimise the performance** of supply chains.

Supply chain focus?

small or large span



Example Project Consortium:

- A typical project consortium might comprise a mix of **technology developers** and **manufacturing companies**.
- It may also include a **university or research organisation**

Project Aims

INDUSTRIAL STRATEGY

UK Research and Innovation

Your project

- Your project must **develop a supply chain integration or optimisation idea** *and design [Feasibility Study]* or *carry out [Industrial Research]* **a project to test the concepts**.
- It must **focus on a digital application.**
- Your project **must investigate one or more problems that your specific supply chain is experiencing** and develop ideas for digital technology solutions to address these problems.
- For example:
  - real-time tracking of products throughout the supply chain using digital technologies such as low-cost sensors, Near Field Communication (NFC), real-time data capture and data analytics
  - improved track and trace capabilities may help companies optimise inventory management and/or establish clear and accurate demand signals to help them eliminate waste.

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Project Areas

Supply Chain Maturity	Supply Chain Design	Supply Chain Execution
improve and optimise existing networks	effective risk management sustainable supply chains for increased flexibility warehouse & logistics optimisation confidence in shared data new business models that affect the configuration of the supply chain	demand management proactive use of use of demand data for supply chain performance optimisation delivery performance improved decision-making through analytics production planning or scenario modelling track-and-trace technologies
re-design or re-engineer existing networks		
design new networks both for new products and processes		

SMARTER

Outputs Expected

Feasibility Study [FS]:

- increased understanding of the problems faced by the specific supply chain
- ideas for digital solutions to address these problems
- proposal for an industrial research project to test the solution

Industrial Research [IR]:

- increased understanding of the problems faced by the specific supply chain
- tested proposal for digital solutions to address these problems
- case study outlining the proposed digital solution, the results of the project, and qualitative and quantitative evidence of benefits identified

And, where possible, provide open access to the set-up of the project as a digital solution demonstrator.

Project results must be reported by consortia during and after the project – including impacts expected, benefits/evaluation analysis, case studies & (where relevant) demonstrator access.

To further support the knowledge share objectives, we plan to periodically run cohort events to bring project teams together to accelerate dissemination and sharing of learnings.

Summary

- **Up to £20m** across the 2 competitions will allow multiple projects to be funded
- Projects must investigate one or more problems that the specific supply chain is experiencing - and **develop ideas for digital technology solutions** to address these problems
- We **welcome a wide range of supply chain design or execution topics** - examples include:
  - demand management, inventory optimisation, data trust, new business models, etc
- **Projects must be business led and collaborative**, with **all consortia involving at least one SME** - projects led by SMEs are encouraged.
- We will use a portfolio approach to achieve a balance
- Applicants will be **notified of outcome by end Dec 2020**
- All projects must be **ready to start on or before 1 April 2021**
- Opened 06 July - **Close 07 October (11am)**

KTN support for applicants

Knowledge Transfer Network (KTN) can support as follows:

- make the right connections - technology providers, manufacturing partners
- build compelling consortia
  - Register at https://manufacturingmadesmarter2020.meeting-mojo.com/
- signposting – for example application guides
  - https://ktn-uk.co.uk/news/the-good-application-guide-and-more
- inspiring case studies – e.g. Autocraft Drivetrain Solutions (video)
  - https://ktn-uk.co.uk/case-studies/autocraft-drivetrain-solutions
- review applications before submission (free of charge)


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We look forward to seeing lots of innovative applications!
Thank you
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