## People-Led Digitalisation

Professor Linda Newnes & Dr Susan Lattanzio

Energy Exports Conference – 12th June 2024

In 2016, the World Economic Forum estimated

\$100 trillion of value could be realised globally in a

decade through digital transformation.



However, the UK is not adopting digital technologies

as quickly as some of our competitors. (Made

Smarter Review, 2017)



## PEOPLE AND ORGANISATIONAL CULTURE ARE A BARRIER TO DIGITALISATION



# People-Led Digitalisation

Working together for the people-led digital manufacturing future we want.

With our partners we're investing £300m to develop digital ideas more quickly.







#### RESEARCH

Made Smarter Innovation has invested in 5 research centres to identify early stage, transformative innovation ideas. covering both technological and societal aspects.

Our InterAct project is a call to arms for academics from the social sciences to support the innovation and diffusion of digital technologies that will result in a stronger, more resilient UK manufacturing industry.



#### COLLABORATIVE R&D

So far over 320 participants and over 80 projects have been supported over multiple themes:

- Fast Start
- Digital Supply Chain
- Sustainable Smart Factory
- Robotics & Automaton Industrialisation (open early 2023)



#### **INNOVATION HUBS**

Together, the Smart Manufacturing Data Hub and the Digital Supply Chain Hub are a national network of facilities available to the manufacturing industry collaboratively developing novel digital solutions for key manufacturing challenges through a network of test beds. Their purpose is to drive innovation by enabling the testing of digital solutions.



#### DIGITAL ACCELERATORS

Connecting leading

UK manufacturers and

pioneering technology

innovative technology

the UK's manufacturing

start-ups to develop

solutions to many of

challenges.

#### **GLOBAL**

companies, working with leading industrial nations, to develop global innovation bridges and global collaborative research & development to increase exports and inward investment opportunities.



Supporting UK





Building a common

digital technologies

through workshops.

guides and helpful

challenges through

tools to address

interoperability

standardisation.

open standards

environment for

manufacturing





MADE SMARTER INNOVATION WAS A SMARTER WAS A SMARTER

## **People-Led Digitalisation:**

Aims to improve the outcome of the adoption of digital technologies through prior explicit consideration and planned appropriate action that prioritises human needs and working patterns in the design and implementation of digitalised work systems.



### **Research Areas**



Aida Garcia Lazaro Economist

Digitalisation impact on the labour market and skills.



Boroto Hwabamungu

Information
Systems
The impact
of stakeholders'
involvement on the
adoption of digital
technologies



Beate Ehrhardt Data Scientist

Expertise to support projects as required



Begum Kilic Ararat Management

Evaluating the factors affecting digital technology adoption in manufacturing



Fortune Nwaiwu

Economics & Management

Success metrics and measurements.



Karen Lancaster

Philosophy
Ensuring
employees' dignity
during the
digitalisation
process.



Rafael Roberto
Computer Science

High quality augmented reality applications in Manufacturing



Emily Carey
Mechanical
Engineering

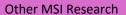
Methodology development to support data collection studies



Arsham Khoei

Management

Quantitative analysis of the factors affected by implementing digital technologies.



Industry identified challenges

Existing academic/ industry knowledge



## PLD Approach

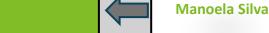












Knowledge transfer/translation for industry



Muhammad Basir

Management

Enablers to adoption of digital technologies – cross sector analysis



Claire Palmer
Manufacturing

Human interfaces for Digital Twins



Laura Smyth Policy

Education and Skills in Lagging Regions



Derry Hand
Manufacturing

Human Factors in the Manufacturing Process



Zihan Wang Management

New working spaces (coworking spaces & fab labs) impact on digital skills



Isaiah Nassiuma Manufacturing

Inclusive Design methodologies for industrial digital technologies.



Nigel Cooksley

Mechanical Engineering

Al and multisensor networks for Sustainable Manufacturing



## Matthew Punter

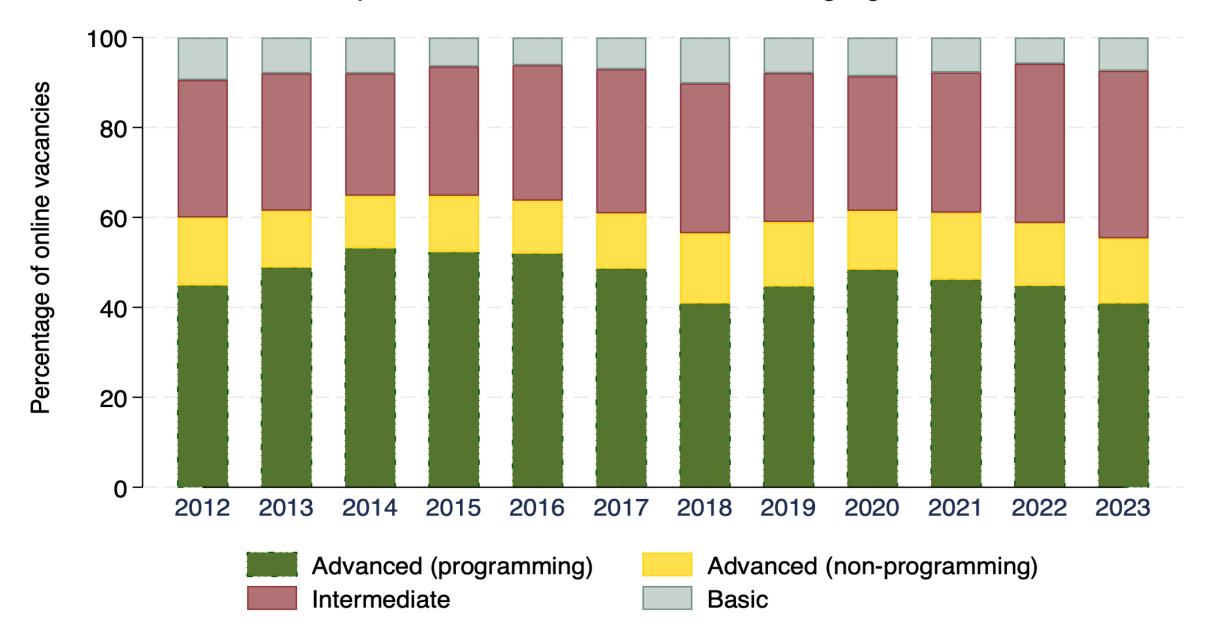
Psychology
Exploring digital
solutions to support
neurotypicalneurodivergent
workplace
collaboration



**Edison Chamba Ortiz** 

Business & management
Shared economy business models: their value to the future of automobile manufacturers

### Composition of online vacancies demanding digital skills



## How does the energy sector meet

its demand for digital skills?

