



***mtc***

Manufacturing  
Technology Centre

# INSPIRING

Great British Manufacturing



**WHO WE ARE**


WHAT WE DO



# BACKGROUND

- ▶ Opened in 2011
- ▶ Independent RTO
- ▶ To bridge the valley of death
- ▶ Prove innovative manufacturing ideas
- ▶ Manufacturing system solutions
- ▶ Training

UNIVERSITY OF  
BIRMINGHAM

 Loughborough  
University

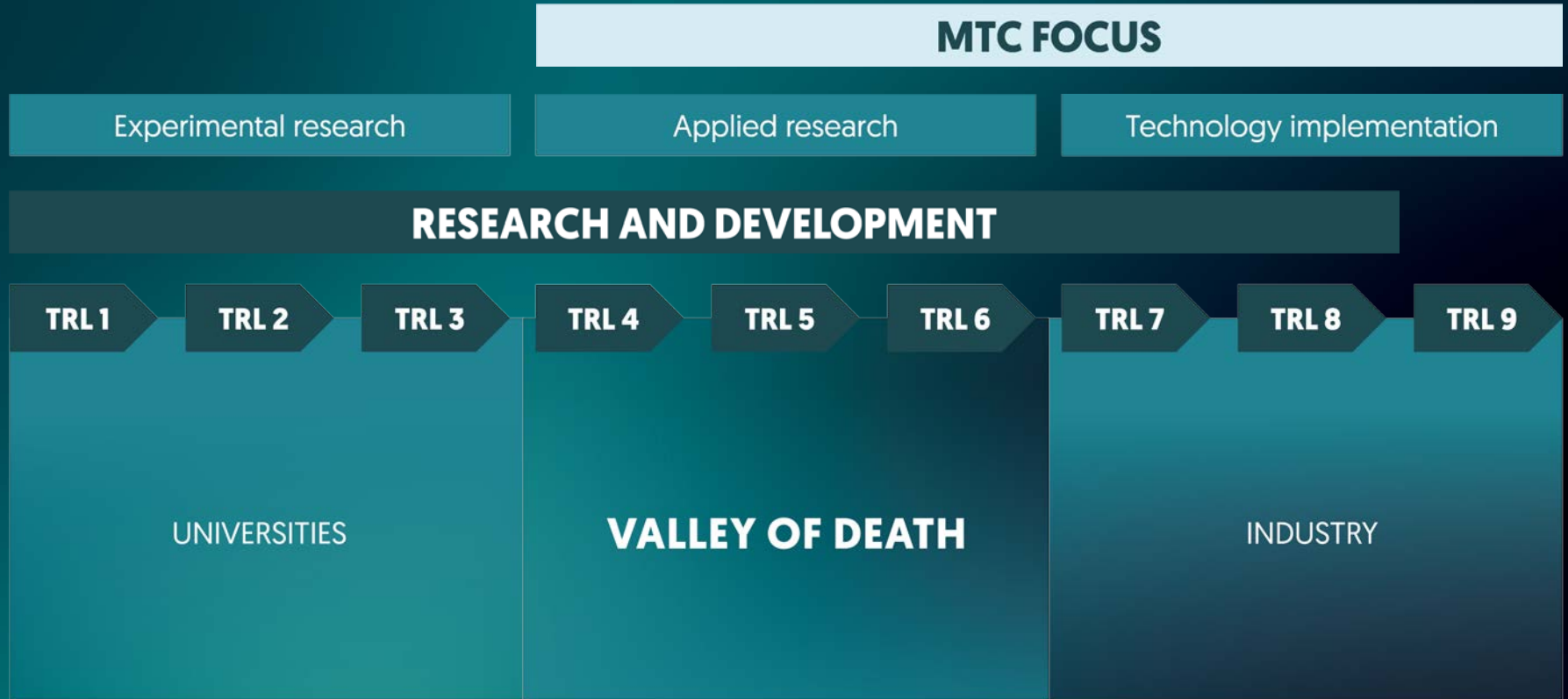


The University of  
Nottingham

UNITED KINGDOM • CHINA • MALAYSIA

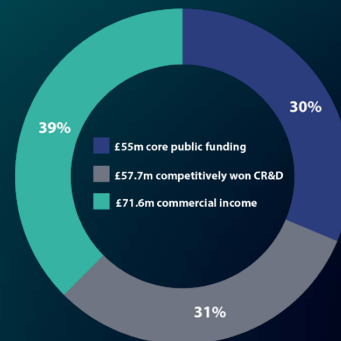
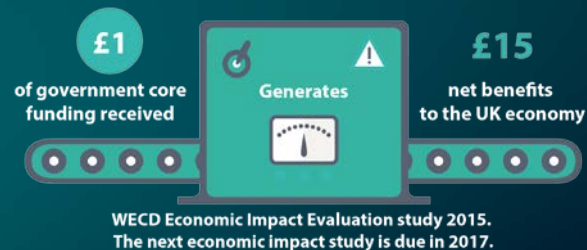


# BRIDGING THE VALLEY OF DEATH





# HVM CATAPULT



# OUR MARKETS



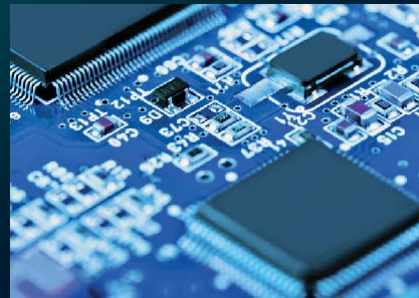
Aerospace



Automotive



Construction and Infrastructure



Electronics and Computing



Energy



Food and Drink



Military and Defence



Oil and Gas

# THE MTC APPROACH

## **ONE to ONE**

Single client project

Government backed  
collaborative  
**R&D**  
projects

## **MEMBERSHIP**

Collaborative R&D  
project funded by  
members



# TIER 1

- ▶ Five year commitment
- ▶ Access to research outputs across all themes
- ▶ Programme board seat *(with voting rights)*
- ▶ TAB board seat *(with voting rights)*



# TIER 2

- ▶ Three year commitment
- ▶ Access to research outputs within two themes
- ▶ Programme board seat  
*(with no voting rights)*
- ▶ TAB board seat  
*(with voting rights)*



KUKA

+GF+

RENISHAW  
apply Innovation™

Nikon

SPiRiT  
AEROSYSTEMS

Delcam

London Underground

NATIONAL INSTRUMENTS



KENNAMETAL

esi  
get it right®

IPG  
PHOTONICS

AUTODESK

THALES

babcock  
trusted to deliver™

DONCASTERS

Matsushita

Parker Aerospace

SKANSKA

Panasonic BUSINESS

Johnson & Johnson

# TIER 3

- ▶ One year commitment
- ▶ Opportunity to get engaged in collaborative projects
- ▶ Opportunity to engage with major OEMs and other members

GÜDEL



Prodtex



BROWN & HOLMES (Tamworth) LTD  
Precision Workholding and Machining



HumiSeal®







WHO WE ARE

**WHAT WE DO**

Apprentice  
training

Engineer  
upskill training

Conferences  
& Events

Technical  
solutions

Projects

Business  
incubation

Research &  
Development

Operational  
efficiency

SME support



# WE WILL CONTINUALLY WORK TO:

1

Accelerate the UK's  
industrial growth

2

Deliver innovation

3

Change the way  
businesses compete

4

Create and embed  
future skills

5

Maximise synergies  
within supply chains



# STRENGTHEN THE UK'S GLOBAL POSITION AND EXPORT POTENTIAL



Improve productivity

Invest more in R&D

Address the skills gap

Develop new market opportunities

Implement new technologies

# INDUSTRY CHALLENGES



You want to make something

at a lower cost  
better quality  
quicker  
in higher volume  
you've never made before



You want to assemble something to

minimise reject rate  
improve reliability  
improve consistency  
reduce waste  
reduce errors



You want to use data more effectively for

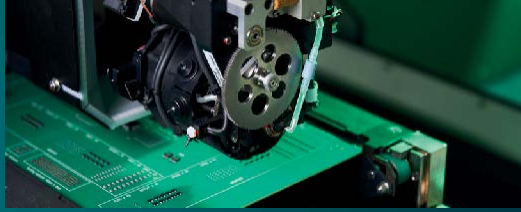
improved design  
better quality  
efficient logistics  
new business models

# MANUFACTURING INNOVATION

## Component Manufacturing



Additive Manufacturing

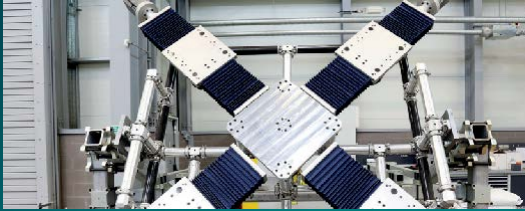


Electronics Manufacturing



High Integrity Fabrication

## Assembly Systems



Advanced Tooling and Fixturing



Non-Conventional Machining



Robotics and Autonomous Systems

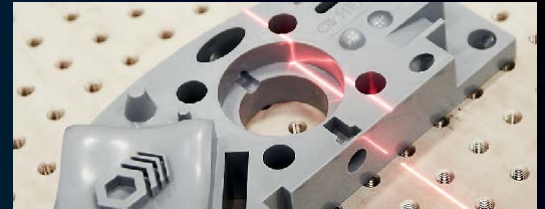
## Data Systems



Design and Simulation



Manufacturing Informatics



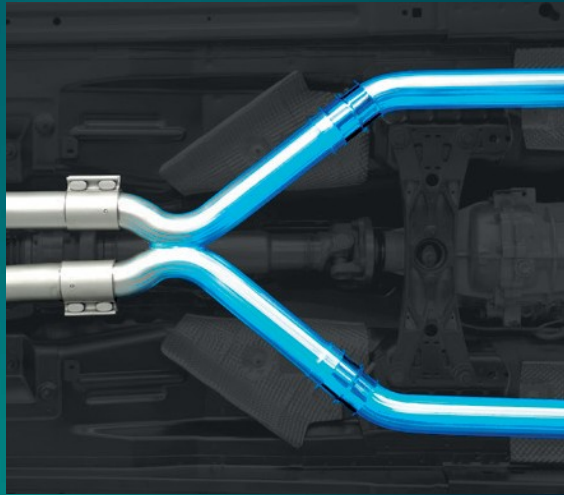
Metrology and NDT



# MANUFACTURING OPERATIONAL EFFICIENCY



Improving operational efficiency



Launching new businesses



SME REACH programme

# TRAINING AND DEVELOPMENT



Advanced engineering apprenticeship



Seeding UK employers



Engineer upskilling



# SEEDING UK EMPLOYERS



- ▶ Unique programme, reducing risk of:
  - ▶ Recruiting
  - ▶ Training
  - ▶ Employing
- ▶ Committed to developing engineering careers
- ▶ Business-ready apprentices, skills to make immediate impact
- ▶ Supporting future business aspirations





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**CATAPULT**  
High Value Manufacturing