

The AMRC DIH

Professor Rab Scott
Head of Digital

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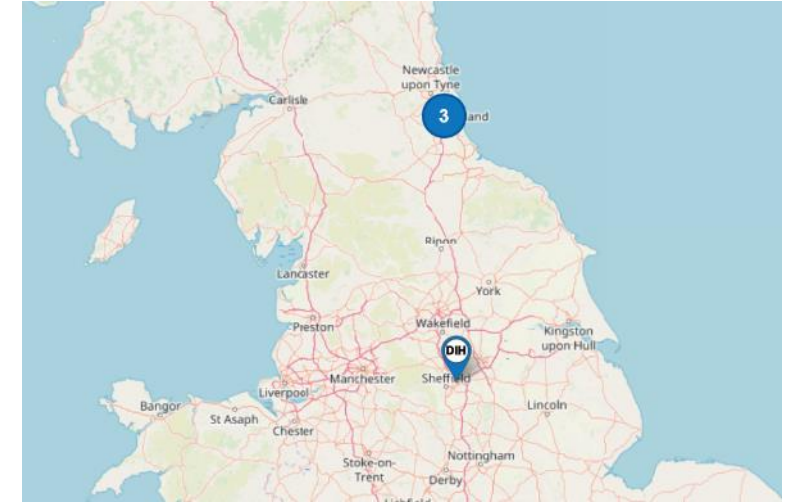
AMRC



Who Are We?

A world-class centre for advanced manufacturing

- Established in 2001 as a collaboration between Boeing & the University of Sheffield.
- Helps manufacturers of any size to become more competitive by introducing advanced techniques, technologies and processes.
- 700+ researchers, technicians and support staff.
- Over 120 member companies – from global giants to local SMEs.
- Over £200 million investment brought to former coalfield.
- Part of Rolls-Royce & Boeing global research networks.



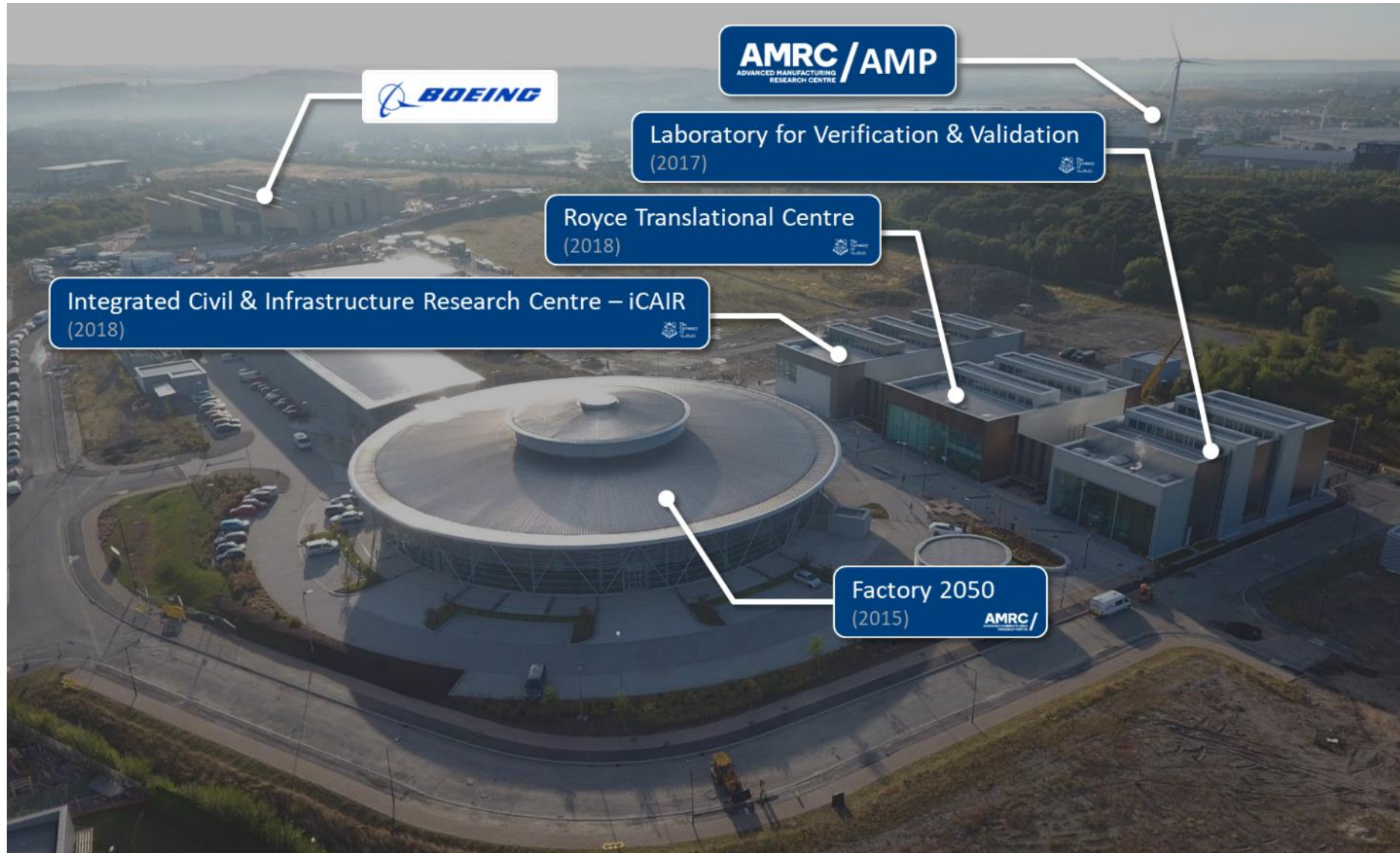


Orgreave - A Brief History

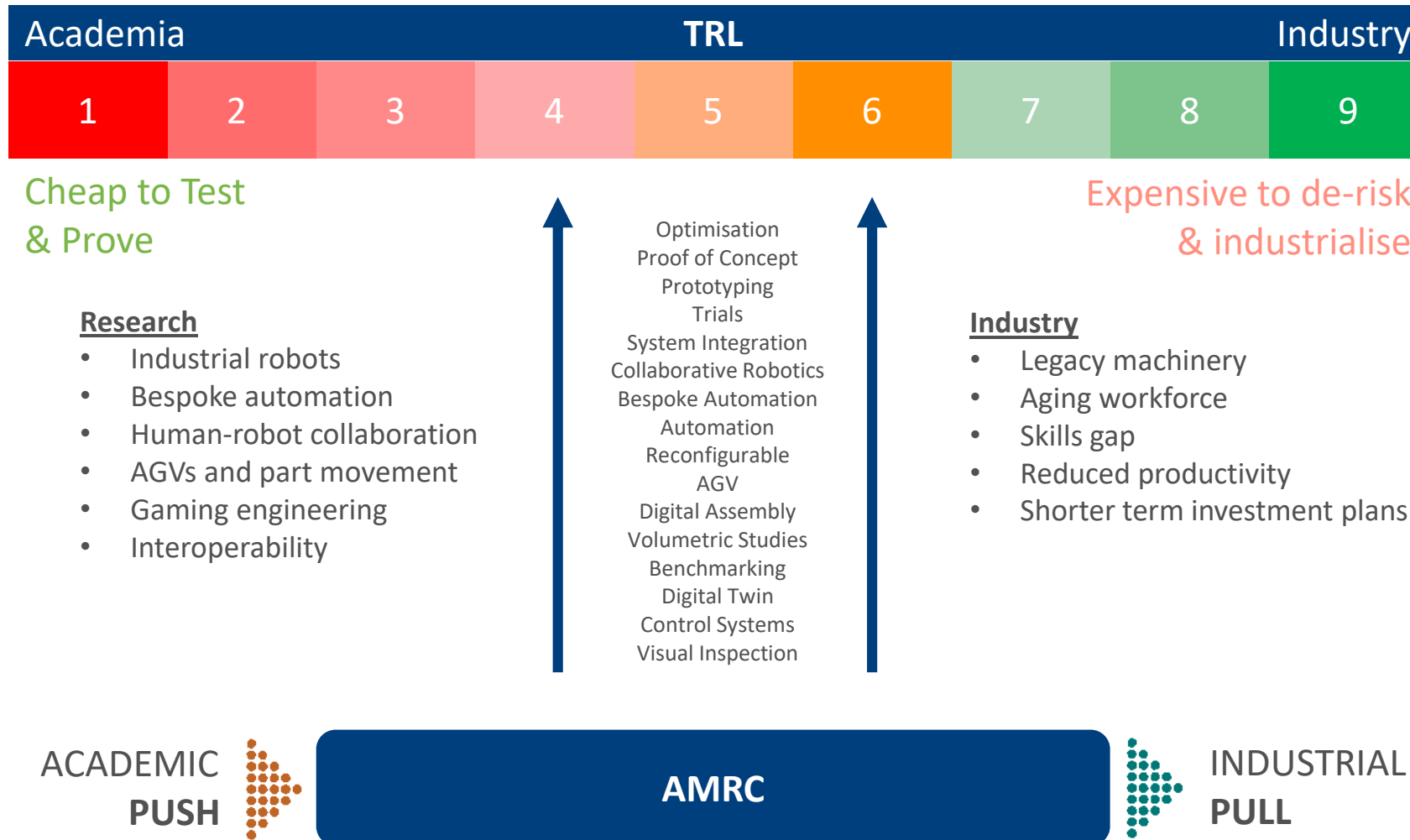
Advanced Manufacturing Park (Site 1)



Sheffield Business Park (Site 2)



The **Push** of Research and the **Pull** of Industry



Case Study: Clarks Vehicle Conversions

- Clarks Vehicle Conversions (CVC), based in Doncaster, kits out vehicles such as welfare vans, lifestyle vehicles and crew carriers to clients' individual specifications.
- Currently, when a job comes in for CVC, a skilled team of fitters, electricians, engineers, mechanics and designers has to build a physical prototype to show the customer.



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ADVANCED MANUFACTURING
RESEARCH CENTRE

User: J.Smith

Virtual Build

Objectives Not Met

Shelves

Hygiene

Containers

Misc

Explosives
Box

Flammable
Box

Jerry Can

Lin Bin (1)

Lin Bin (4)



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ADVANCED MANUFACTURING
RESEARCH CENTRE

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Virtual Build

Objectives Not Met

Totals

Mass: 8.40Kg
Voltage Required: 0.00v
Install Time: 1.25hrs
Cost: £326.91

Bill of Materials

Qty	Part Name	Cost
1	1134x324mm Shelf	50.00
2	648x216mm Shelf	80.00
6	Lin Bin (4)	75.60
1	Flammable Box	79.34
1	Explosives Box	41.97

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Case Study: Clarks Vehicle Conversions

- VR technology was used to transform the design stage of a conversion by allowing the customer to wear a VR headset and 'build' a virtual prototype to their own specification.
- The use of VR technology to help with design and prototyping slashed the 'order to manufacture' turnaround time from up to six weeks down to 30 minutes.
- The company has now invested in their own kit and are using the system.



Lessons learned

- Focus on the challenge to be addressed, not the technology
- Educate about the digital architecture required for adoption and for further development
- Articulate the value (financial, social, environmental)
- Articulate the cost and risks
- Enable access to skills
- Ensure leadership buy-in

National Adoption Program

**MADE
SMARTER**

- Made Smarter National Adoption Program
 - Aiming to increase the uptake of IDTs nationally
 - Currently being trialled in the NW of England
 - Working with local Growth Hubs
 - 3 part process
 - Business Advisors, Digital Technology Advisors, Digital Technology Specialists
 - Digital Diagnostics
 - Digital Strategy and Road Map
 - Support for adoption
 - Other interventions
 - Leadership awareness
 - Student support and placements

Questions...

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