Brian MacAulay
Digital Catapult, UK

Panel 5 - Intermediation in support of effective knowledge transfer – role of Catapults

CATAPULT
Digital

What are Catapults and what do they do?

Catapults…
- Bridge the gap between research and industry
- Foster collaboration between organisations and sectors
- Get new ideas and technologies to market quicker
- Break down barriers to success
- Help SMEs get concepts to market
- Anchor innovation and jobs in the UK

They are…
- Expert
- Trusted
- Open access
- Independent
- Led by industry professionals

Address big issues…
- Systemic failures and complex, cross-sector challenges
- Short-term investment cycles
- Slow growth in productivity and competitiveness
- Wider adoption of enabling technologies such as artificial intelligence, biotechnology and robotics

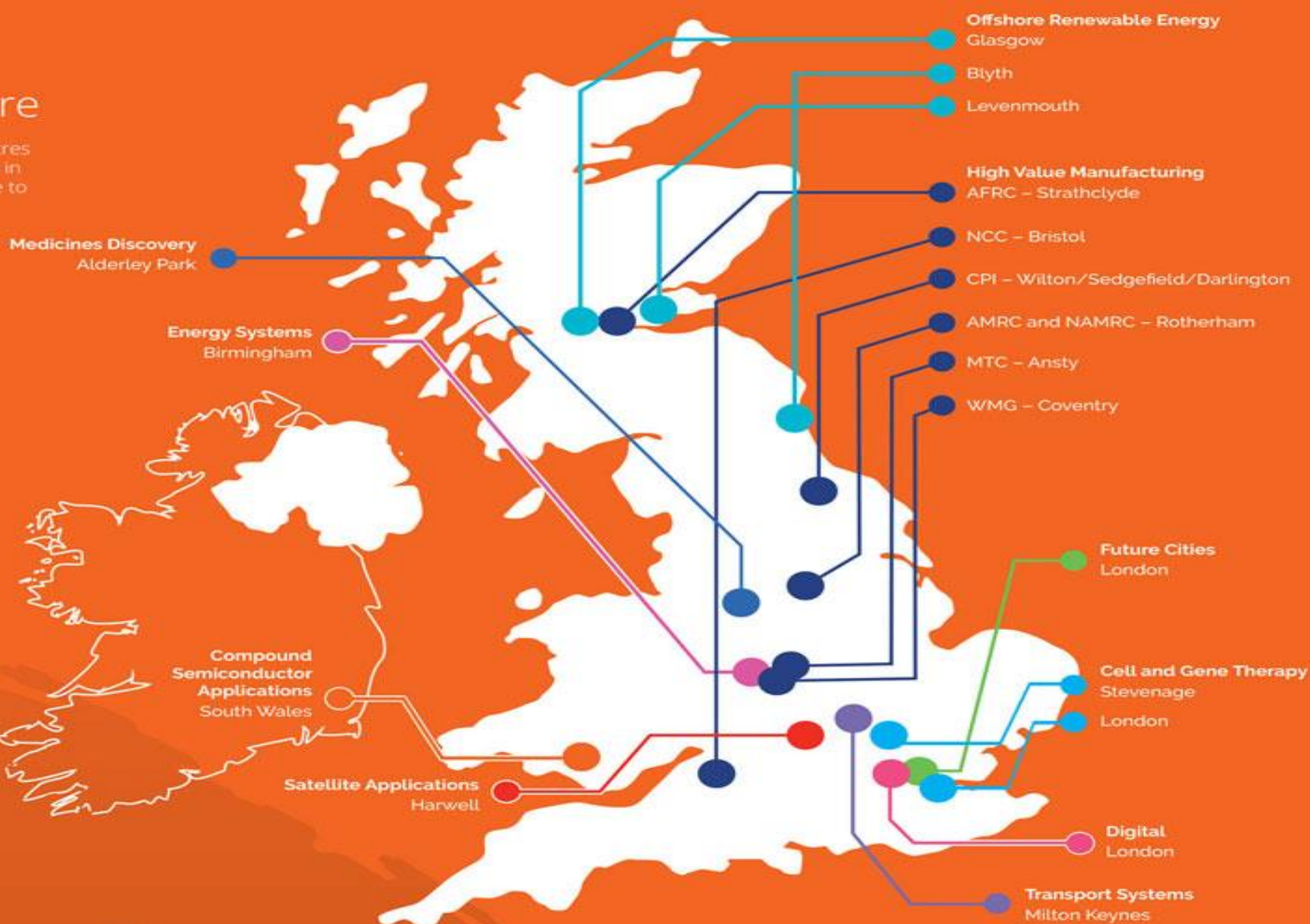## Stimulate demand by…
- De-risking innovation
- Testing new ideas and technology in real-world scenarios
- Pump-priming new markets
- Sharing ideas across sectors
- Bringing large and small businesses together Making regulation fit for purpose

Catapults: where they are

Our network of Catapult centres is located throughout the UK in areas of strategic importance to each sector.

Offshore Renewable Energy
Glasgow
Blyth
Levenmouth

High Value Manufacturing
AFRC – Strathclyde
NCC – Bristol
CPI – Wilton/Sedgefield/Darlington
AMRC and NAMRC – Rotherham
MTC – Ansty
WMG – Coventry

Medicines Discovery
Alderley Park

Energy Systems
Birmingham

Future Cities
London

Regional Centres

Satellite Applications
· North East
· Scotland
· South West
· South Coast
· East Midlands

Digital
· North East and Tees Valley
· Yorkshire
· Brighton
· Northern Ireland

Compound Semiconductor Applications
South Wales

Cell and Gene Therapy
Stevenage
London

Satellite Applications
Harwell

Digital
London

Transport Systems
Milton Keynes

Delivering the value of applied research to the market

Rapid digital innovation can disrupt businesses or lead to new growth and opportunity.

Digital Catapult believes in helping scale-ups and traditional businesses access the best academic research and digital innovation to transform existing businesses and create new ones.

"From R&D to production, from supply chain to point of delivery, we work with companies to capture the benefits of digital transformation."

**Dr Marko Balabanovic
CTO, Digital Catapult**

Digital Catapult's broad network helps UK firms deliver better products and services to market at home and abroad

Digital Catapult has centres in Brighton, North East & Tees Valley, Northern Ireland and Yorkshire in addition to its London headquarters. Each of the Catapult centres has a unique focus and is aligned with local digital innovation initiatives.

Legend:
- ● Digital Catapult Centres
- ● University Partnerships
- ● 5G & Internet Test Beds
- ● LPWAN
- ● IoT
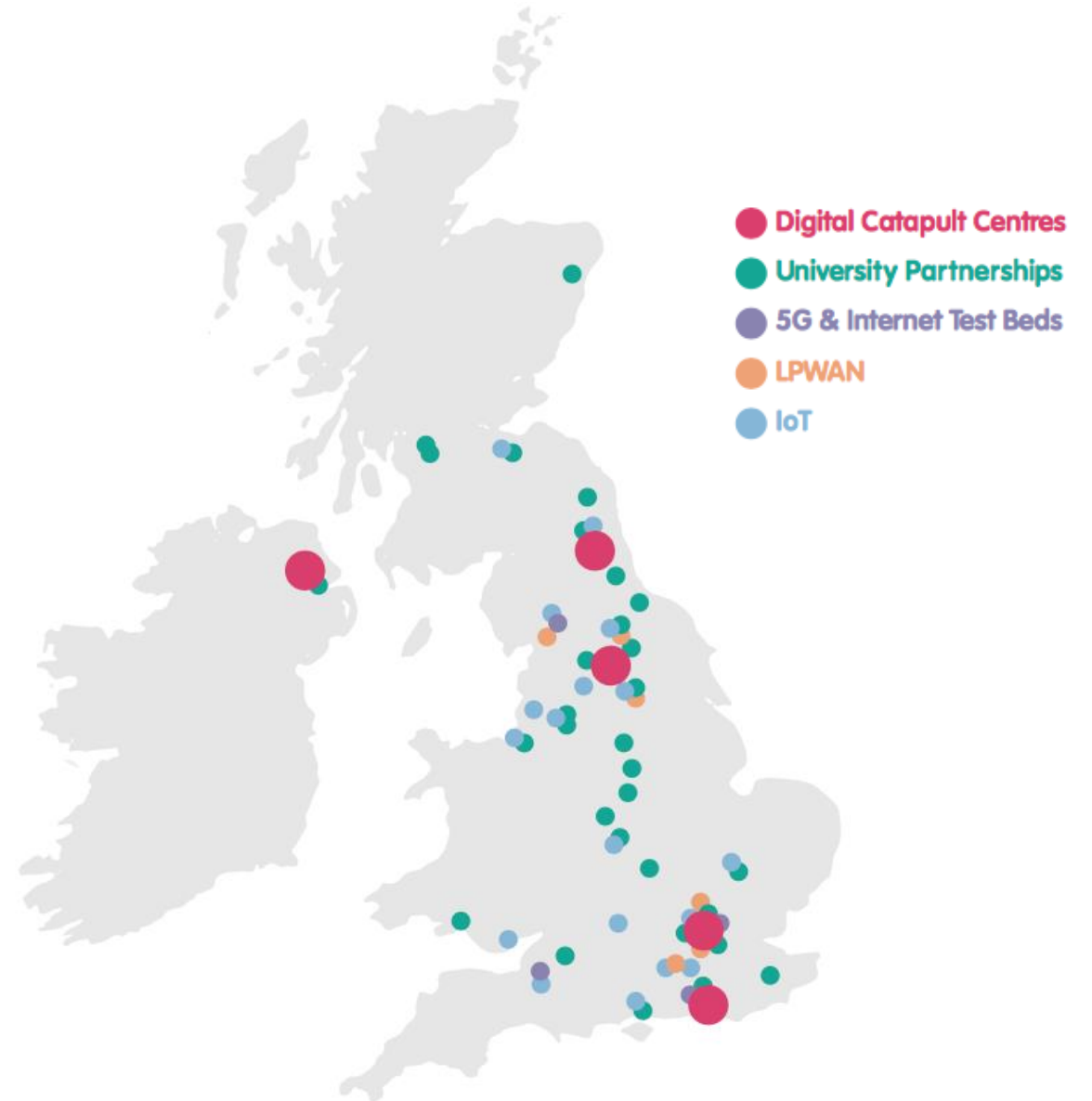
Digital Catapult works with SMEs and large corporates and collaborates with leading universities and researchers

SMEs
Priority is to help accelerate sustainable growth and development in digital innovations to make the UK economy stronger.

Larger corporates
Digital Catapult strengthens the culture of innovation and drives collaboration with the UK's brightest digital innovators, industry experts and applied research.

Universities and researchers
Collaborations on R&D projects to accelerate the commercialisation of research and amplifying the impact to the economy.

"Doing the Pit Stop means our ideas have gone from conceptual to practical – we've been able to take steps towards developing solutions with partners."

Julian Kirby
Director, PwC

Universities and researchers

- **to provide industrial context back into research and development and increase the impact of research;**
- **to increase the speed and breadth of commercialisation of research.**
- **Broad base of engagement that feeds into higher impact activities**

People	
Researchers in Residence	**Placements**
- Increase the impact of the research - Access to industry network and catapult expertise (technical, business development, commercial, etc.) - All backgrounds – technical, law, sociology, business, arts, … Outcomes include : Publications, Development of new commercial and non commercial solutions, Proof of concept and more	Various roles including placements within SMEs, PhD researchers, Centres for Doctoral Training (CDT) and Impact Acceleration Accounts (IAA) Benefits: For SMEs - Access to hard to find technical talent - Relationships with top research groups For Universities - Access to relevant real world projects - Work experience and training for their students or research staff - Relationships to the SME ecosystem

Universities and researchers

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- **to increase the speed and breadth of commercialisation of research.**

- **Broad base of engagement that feeds into higher impact activities**

Facilitation

Role as neutral convenor

- Events - Pit Stops, workshops, hackathons

- Advisory boards, including IAA

- SME connections

- Showcasing university research and spinouts

- Publications

- Secondments

- Other facilities – labs.

Universities and researchers

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Collaboration

Expert partner

- CDT partnerships x 5
  - Mentor students and sit on advisory boards
  - Digital Economy Network
- IoT UK – From research hub of 9 universities tp testbeds in Manchester and NHS
- 5GIC with Surrey involvement –Full time 5G expert
- R&D funding – RCs applications, letters of support
- Provide access to data and problems.
- Testbeds - e.g.:
  - 5G as partners with Brighton
  - Things connected – ask to set up network

University Collaboration - examples
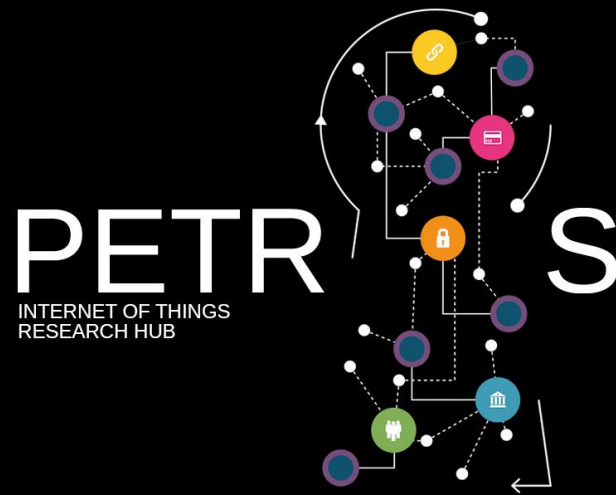
PETRAS stands for privacy, ethics, trust, reliability, acceptability, and security. They work with Digital Catapult's IoTUK programme, sharing new and relevant knowledge with businesses and Government.

The PETRAS IoT Hub is led by UCL and includes Imperial College London, and the universities of Lancaster, Oxford, Warwick, Cardiff, Edinburgh, Southampton, and Surrey.

EPSRC - INITIATE

- **£1.6M ESPRC funding + £1.3M Industrial funding**

  BBC, BT, Cambridge Wireless, CORSA, Dante, F5 Networks, Huawei, InterDigital, Keysight, Konica, NI, Ofcom, Thales, pureLiFi, Zeetta

- **February 2017-January 2021**

- **Interconnects 4 of the leading UK research laboratories through the UK's first SDN exchange**

- **Will establish a unique UK facility for fully end-to-end large-scale future internet experimentation**

- **Multi-technology 5G and beyond, IoT, optical transport, data centre and cloud**

- **Will enable innovation across all areas of networking:**
  - **Technologies, Architectures, Services, Applications,**
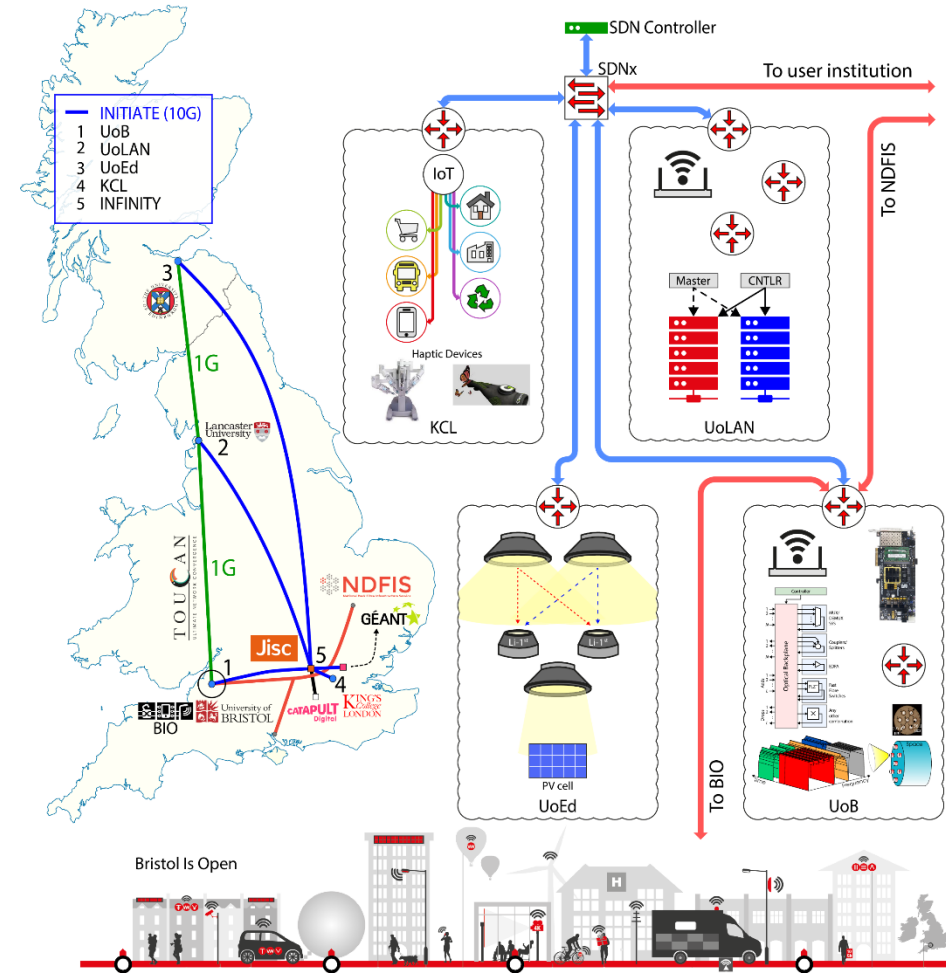
SME engagement with Advanced (Experimental) Digital Infrastructure

Thank You

Contact: brian.macaulay@digicatapult.org.uk

www.digicatapult.org.uk

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