

In Collaboration with:



Delivered for:



Smart Nano NI
A Strength in Places Fund project

Funded by:



**UK Research
and Innovation**

CATAPULT
Digital



FUTURESCOPE

What Happens Next? Smart Nano Acceleration Programme : *Smart Manufacturing*

The Opportunity & How to Apply

September
2023

Convergence of technology and application areas

Virtualisation & cyber physical systems

Digital and resilient supply chains

Open and interoperable digital Infrastructure



Future Networks – 5G - IoT



Immersive technologies



Artificial Intelligence and
machine learning



Distributed ledger
technologies and distributed
solutions

We are part of the ...

Smart Nano NI Consortium

The Smart Nano-Manufacturing Corridor Consortium (Smart Nano NI) led by data storage company Seagate Technology, in collaboration with five other leading companies and Northern Ireland universities, has been created to develop game-changing advance prototyping and smart manufacturing methods to deliver new technologies.



Introducing the
Consortium



In collaboration with...

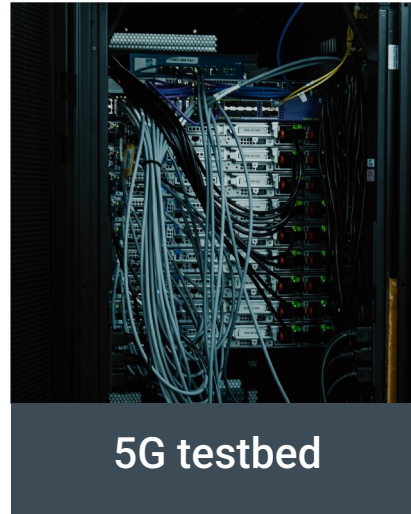


Digital Catapult: Smart Nano NI Goals

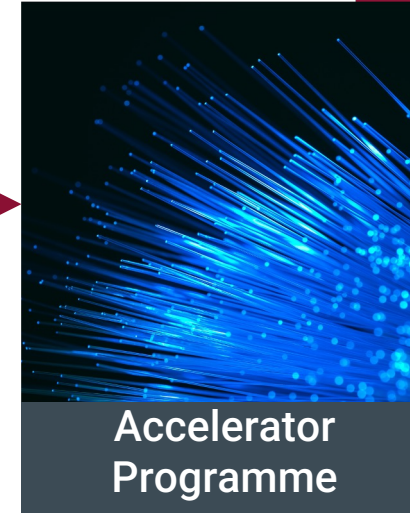
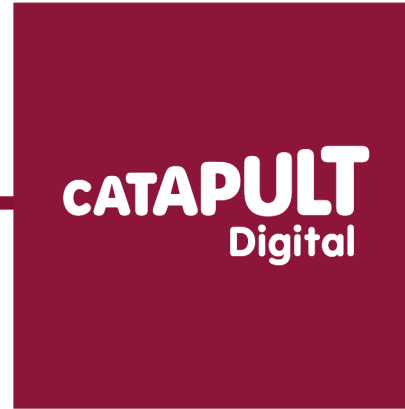
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5G testbed



Accelerator
Programme

New Capabilities

Explore & demonstrate industrial capabilities of Future Networks and 5G

Expand photonics and nanotechnology capabilities

Upskill Sector

Expand knowledge base

Encourage and facilitate collaboration: academia, large companies and start-ups

Expand Ecosystem

Cement reputation as centre of excellence: Innovation Hub

Promote SNMC
Link to wider UK ecosystem

Increase adoption of smart technologies

Drive forward smart manufacturing
Facilitate access to 5G testbed & Smart Nano photonics lab

End of project goal – significant, sustainable economic and social impact: jobs and revenue resulting from new capabilities, upskilled sector, expanded NI ecosystem and increased smart technology adoption

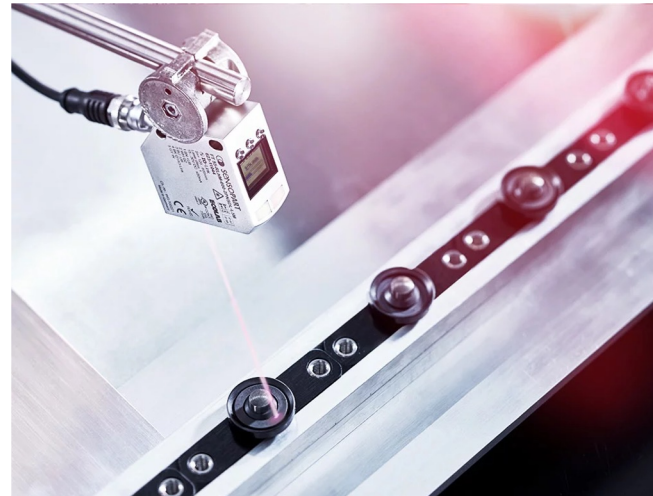
Industrial Photonics

Manufacturing



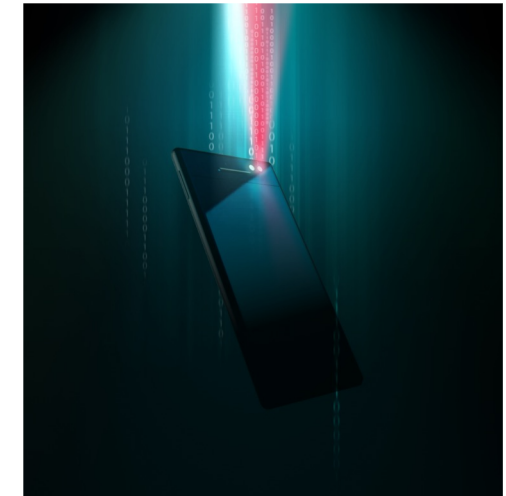
Laser-based material processing,
Photolithography,
Stereolithography

Monitoring



Machine Vision, 3D Scanning, Hyperspectral Imaging,
Thermal Imaging, Fibre Optic Sensing

Connectivity

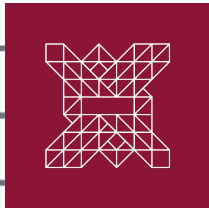


Fibre Optic communication,
Free Space Communication

Exploiting Smart Technologies

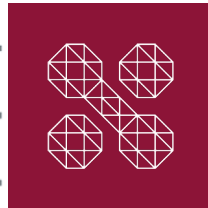
Get Information

Photonics & Nanotechnology



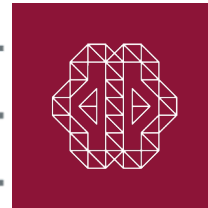
Connect and Move Information

IoT Future Networks



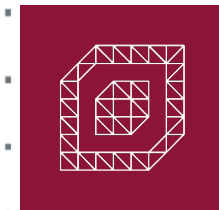
Process Information

Artificial Intelligence
Data Science

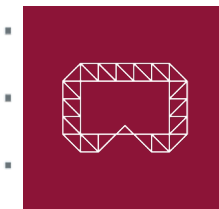


Use Information

Digital Twin

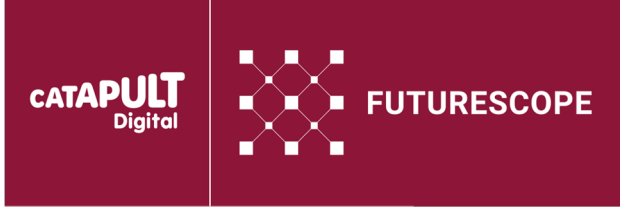


Immersive Technologies



Smart Nano Acceleration Programme : *Smart Manufacturing*

Smart Manufacturing Accelerator



Cost: Free

Type: Innovation Practice Project-based Learning

Who: Start-ups, SMEs & Corporates in or adjacent to Manufacturing

Entry Criteria: UK registered Companies involved with, adjacent to, or intending to support UK manufacturing sector within next 12 months

Time Commitment: 8 week long programme - Fortnightly Sessions interspersed with self-paced learning, consultation and investigation

Success Criteria: Plan and present a validated smart manufacturing challenge solution “Technical Development Plan”

- Offering:**
- | Training in Smart Technologies, their industrial application, use cases & market potential
 - | Training in innovation methodologies, tools & business challenge mapping
 - | Individual project mentor support & open-office hours
 - | 6hrs with global experts in smart technologies
 - | Identify and plan an industry challenge solution
 - | Peer Review
 - | Cross-sector Networking

Overview & Format

- Approach
- Programme & Events
- Tools & Resources

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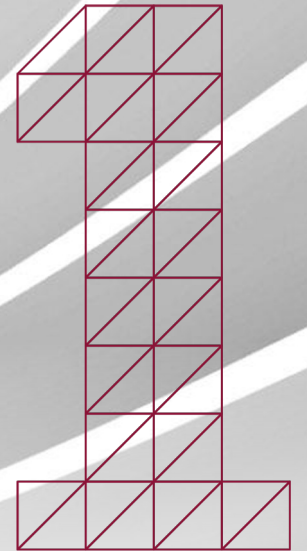


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A programme with Two Arcs



“Smart Technologies” in Manufacturing

Delivery formats

Fortnightly Wednesday Tech Sessions

- Manufacturing/adjacent focussed
- Concise & focussed Tech 101 Talks
- Live demonstrations
- Q & A

In - Person

Wednesdays 10am - 3pm*

Send 2-3 attendees - **let us know****

RSVP (Calendar)

Masterclasses

- Deeper, longer form and more technical detail
- Voluntary attendance, but valuable!

Remote (Zoom webinar)

Weeks between fortnightly sessions

Additional colleagues

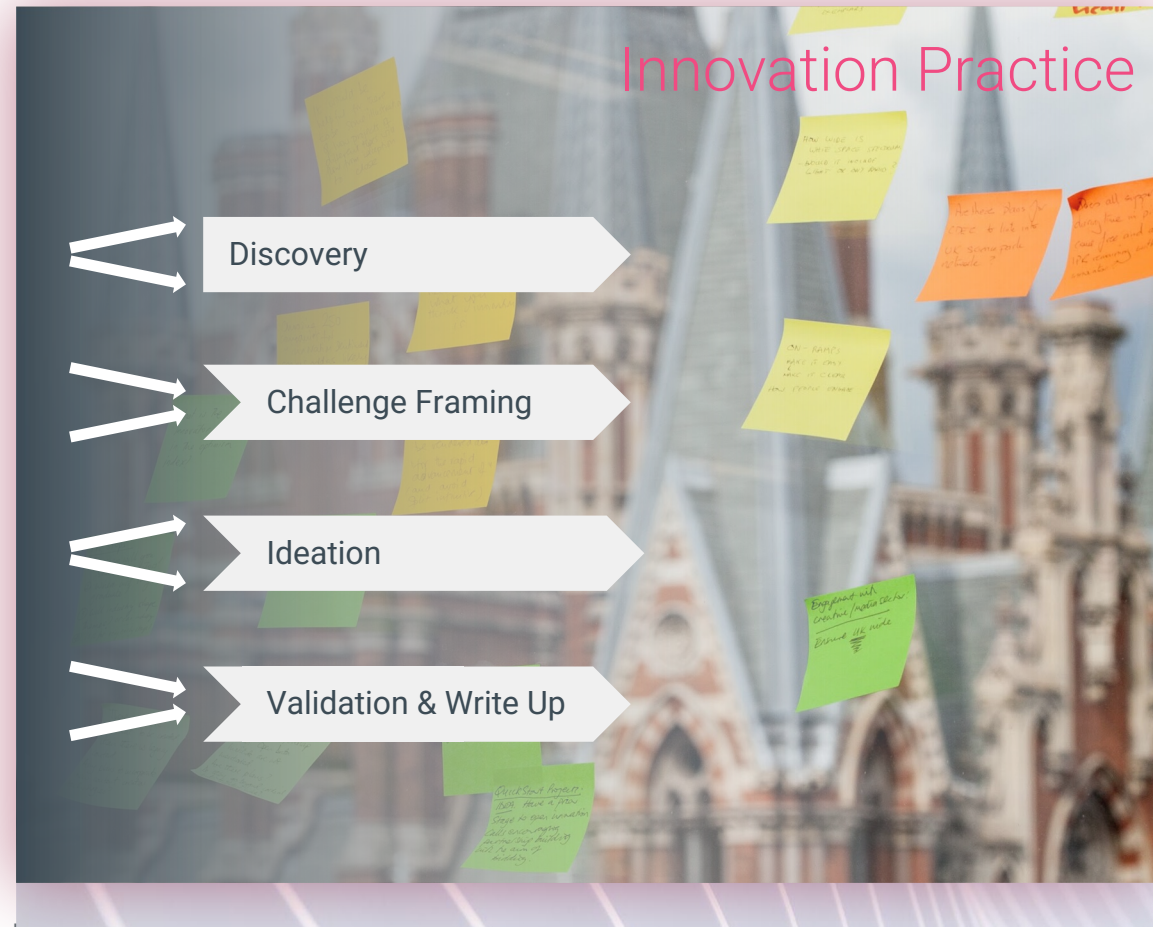
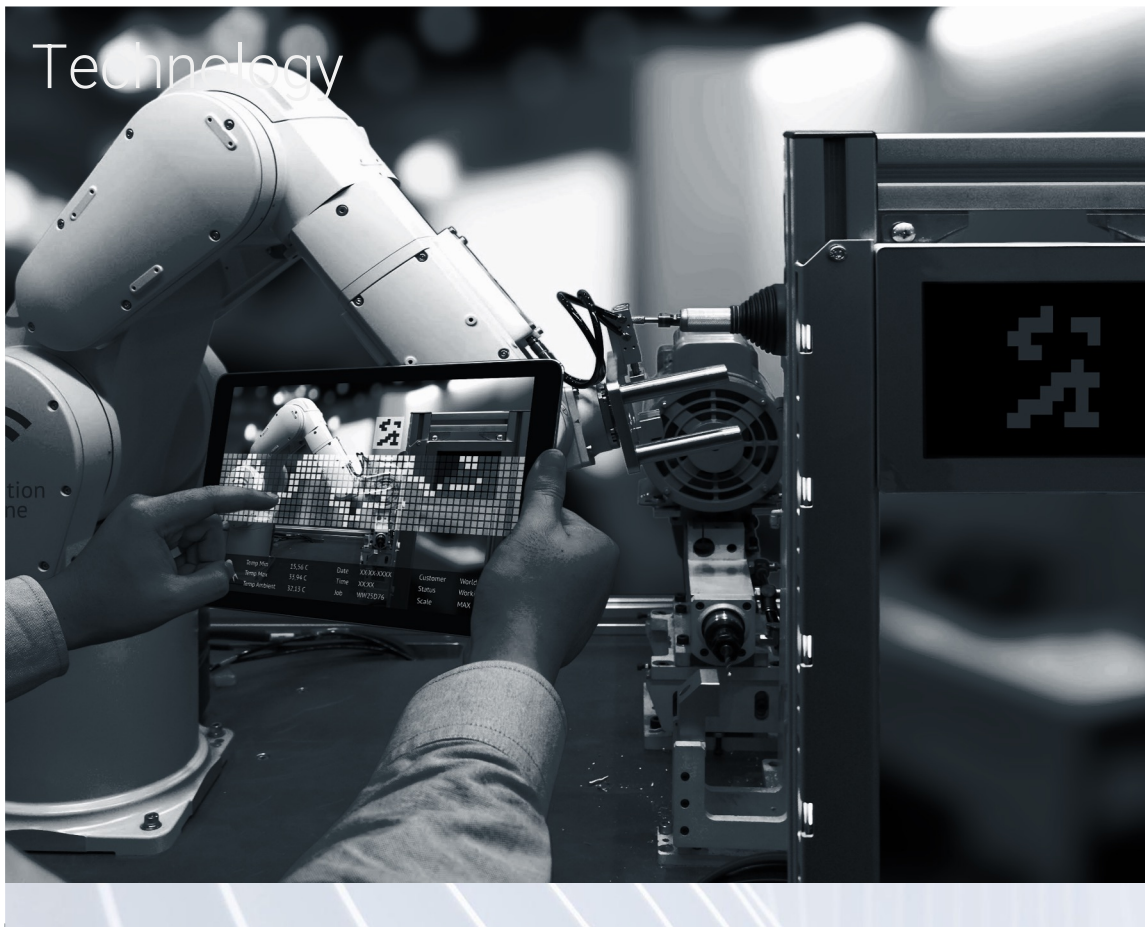
Online Resources

- Multiple levels of complexity
- Links to resources, tools and updates
- Can use to track progress and tasks

Access any time and as needed

Private to each company

Two Arcs



Innovation Practice Workshops

- In-Person Workshops
- Energetic and quick
- Introduction and initial groundwork with a tool
- Companies can pick up and continue outside the workshop

In - Person

Wednesdays 10am - 3pm*

ideally 3 attendees/company

Remote Meetings

- Get help and guidance
- Set objectives and check in
- Chat 1-2-1 company to facilitator

Remote (Zoom)

Between fortnightly sessions

Additional colleagues

Assigned Facilitators

Asynchronous and As Needed

- Self scoped and paced work
- Additional & alternative tools provided

Independent

Participants' time

Use tools/worksheets to help

Talk to facilitators in open office hours

Dates & phases

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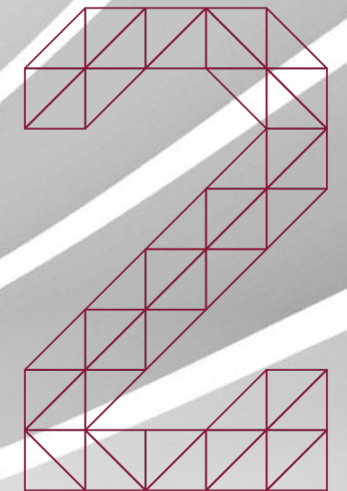


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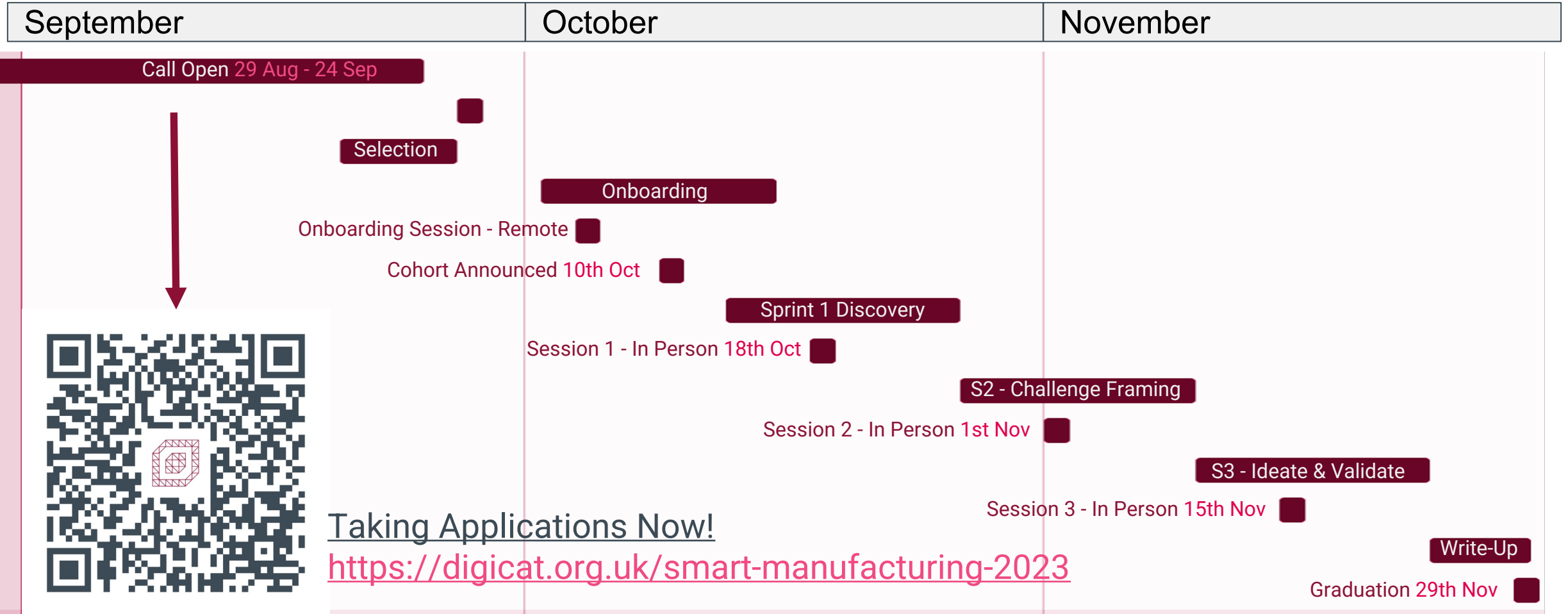
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Smart Manufacturing Accelerator Dates and Phases



Come talk to us Innovation Practitioners and Technologists



Caragh McMenamin
Innovation
Coordinator



Ash Watson
Innovation Partner



Cillian McPolin
Nano-Photonics
Technologist



Emin Ogur
IoT Architect



Damar Mahmood
5G Technologist



David Pugh
Head of
Sustainability



Mark Boyle
Head of Technology
NI

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Digital Catapult Smart Nano Acceleration Programme Smart Manufacturing

Applications are Open!
Register your interest
and [Apply Now](#)



<https://digicat.org.uk/smart-manufacturing-2023>

Enquiries: ash.watson@digicatapult.org.uk

Thank you

digicatapult.org.uk