



For the future of  
education and research



# Universities UK Research and Innovation Conference

10/12/25

# How technology and collaboration can support the sector's long-term sustainability and reduce burdens



Removing burdens and addressing legacy



Supporting more sector-wide shared approaches at scale and operating across spheres of influence



Placing focus on future digital, data and technology needs now

Critical to a sustainable and resilient research ecosystem



## Scope, scale and breadth of need for Jisc's research and innovation data, digital and technology capabilities

### Scale:

- 700PB/year of data from the Vera Rubin Observatory - 20% destined for the UK over the Janet network to UK sites involved

### Scope:

- Highly sensitive medical, commercial and socio-economic and otherwise secure research needs

### Breadth

- Advanced technologies for art and design, materials and 3D research and infrastructure for AI and quantum research using advanced networking methods



Significant need for Jisc to meet a range of research requirements



# Implementing the bureaucracy review digital recommendations



- Jisc offers a range of research management services and support: [Research management – Jisc](#)
- We are coordinating the approach to the digital recommendations of the Review
- More focused approaches to identifiable steps:
  - Position data, digital and technology as an enabler
  - Promote shared standards and common approaches
  - Utilise existing effective routes
  - Reduce fragmented systems and proliferated platforms

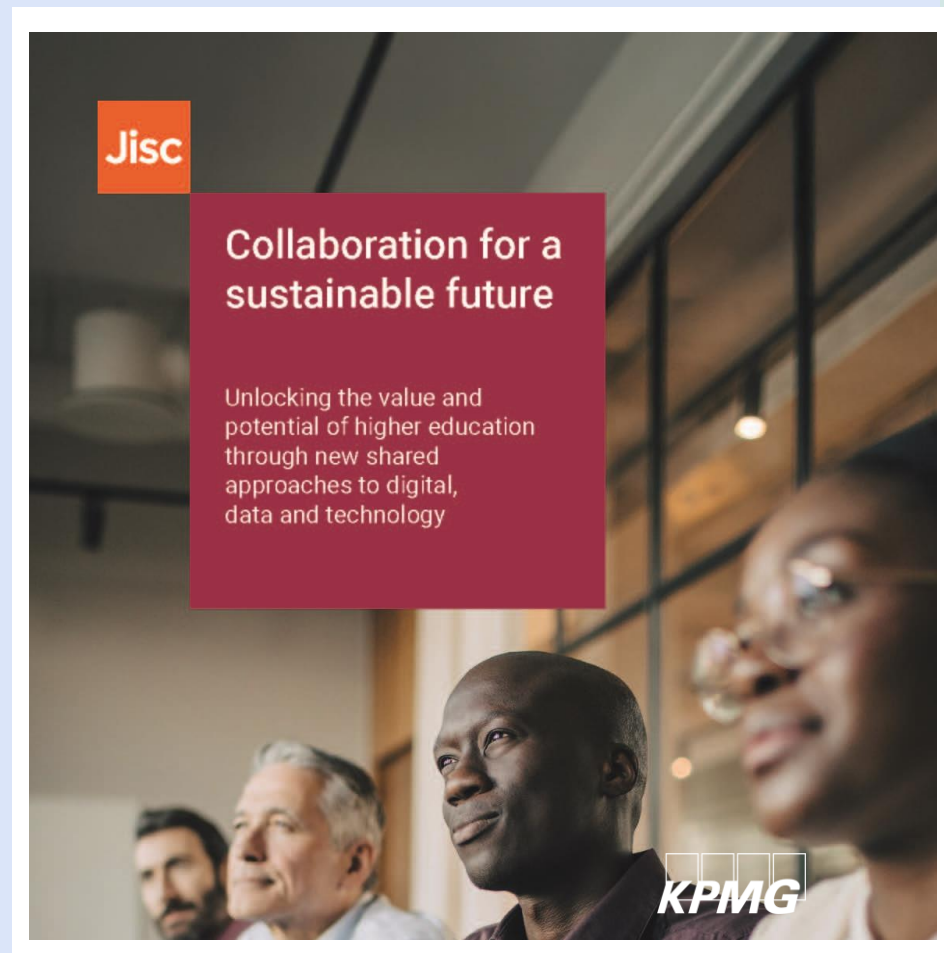
<https://www.jisc.ac.uk/reports/open-data-about-research-management-a-landscape-review>



# Collaborating for a sustainable future

(Jisc is the) “poster child for sector partnership”

Vivienne Stern  
CEO, UUK



Collaboration for a sustainable future report:



Supporting federated approaches

Collaborative and sustainable digital research infrastructure is key to sustainability



- Jisc [Mapping federation journeys roadmap](#) - funded by UKRI
- UKRI response – supporting key recommendations
- Expanding solution focus in key areas for R&I



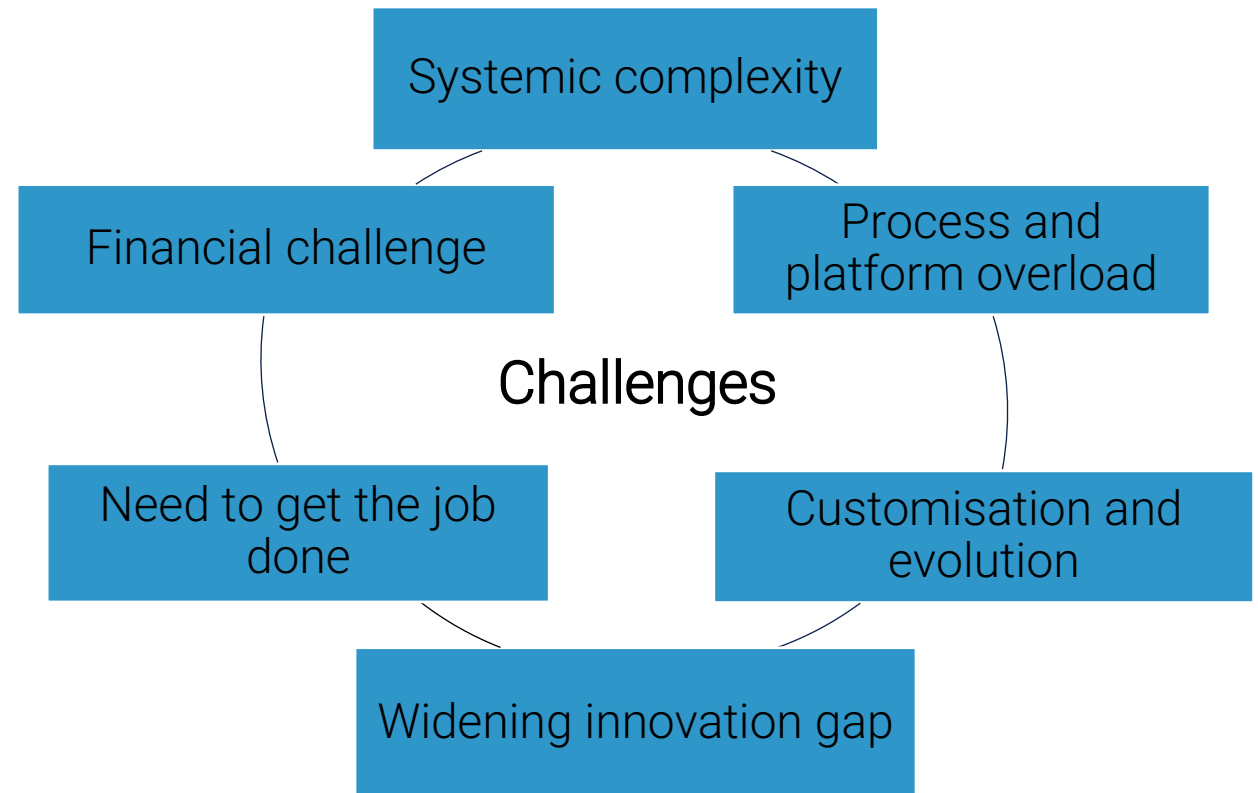
# Addressing technical legacy is key



The sector faces challenges to optimising data, digital and technical infrastructure to keep pace with technological change and innovation, impacting researchers and strategic impact

**OUTPUT:** We have undertaken research and are coordinating to understand and establish briefings and roundtables to set the ground for addressing technical legacy and debt in the HEI sector

**OUTCOME:** an evidential basis for advocacy and actions to establish the conditions for more sector-wide legacy-proofing, proving savings, innovation.



## Digital infrastructure to support research: Scale is key

**Our footprint and specialist focus:** Influencing at scale to meet research use cases

**Trusted and secure research as an innovation benefit:** Address security challenges posed by a complex landscape of trusted research environment

**New infrastructure at scale:** Effective sector-wide facilitation of trust and identity AAI - AAI infrastructure

**Policy:** Develop the unique capability of the network to support efficiency and collaboration

Insights from a Jisc-hosted forum on advancing strategic approach to research environment (TRE) ecosystems reveal why collaboration is key to making TREs a core part of institutional digital strategies.



<https://www.jisc.ac.uk/blog/why-trusted-research-environments-should-be-at-the-centre-of-digital-strategies-to-fuel-innovation-sustainability-and-growth>

# Supporting the ambitions of the UK's AI for Science Strategy

Working with DSIT, UKRI and the UK's research-intensive institutions to explore the feasibility of a system that enables federated coordination of compute downtime and capacity across the JANET network

The image displays two overlapping screenshots of the GOV.UK website. The top screenshot shows the 'AI for Science Strategy' policy paper page, published 20 November 2025. The bottom screenshot shows the 'UK Compute Roadmap' policy paper page, published 17 July 2025. Both pages are from the Department for Science, Innovation & Technology.

**Top Screenshot (AI for Science Strategy):**

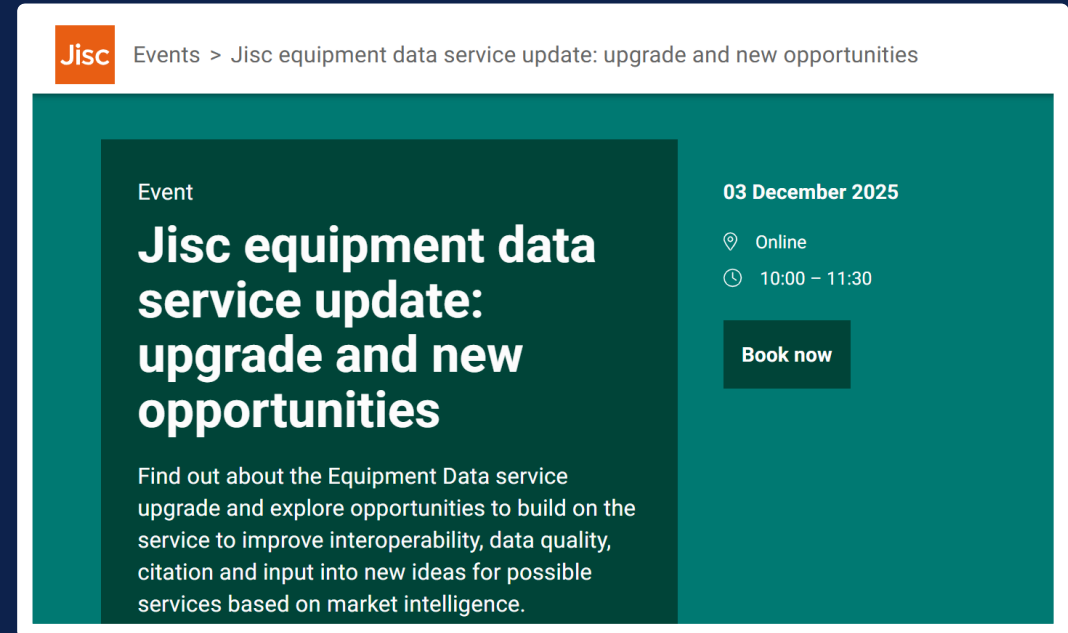
- Header: GOV.UK
- Navigation: Home > Business and industry > Science and innovation > Artificial intelligence > AI for Science Strategy
- Department: Department for Science, Innovation & Technology
- Section: Policy paper
- Title: AI for Science Strategy
- Date: Published 20 November 2025

**Bottom Screenshot (UK Compute Roadmap):**

- Header: GOV.UK
- Navigation: Home > Business and industry > Science and innovation > Artificial intelligence
- Department: Department for Science, Innovation & Technology
- Section: UK Research and Innovation
- Section: UK Compute Roadmap
- Date: Published 17 July 2025

# Equipment data latest

- Creates DataCite Digital Object Identifiers (DOIs) for research equipment
- Uses the Research Data Alliance (RDA) work on schema for Persistent Identifiers for Instruments (PIDINST)
- Enables links between equipment investments and their resulting research outputs and publications
- Potential for expansion to schemas for facilities and associated infrastructure including compute eg GPU capability



The screenshot shows a Jisc event page. At the top left is the Jisc logo. To its right is the breadcrumb 'Events > Jisc equipment data service update: upgrade and new opportunities'. The main content area has a dark teal background. On the left, it says 'Event' followed by the title 'Jisc equipment data service update: upgrade and new opportunities' in large white text. Below the title is a short description: 'Find out about the Equipment Data service upgrade and explore opportunities to build on the service to improve interoperability, data quality, citation and input into new ideas for possible services based on market intelligence.' On the right side, the date '03 December 2025' is shown, along with location 'Online' and time '10:00 - 11:30'. A 'Book now' button is positioned below the date and time.

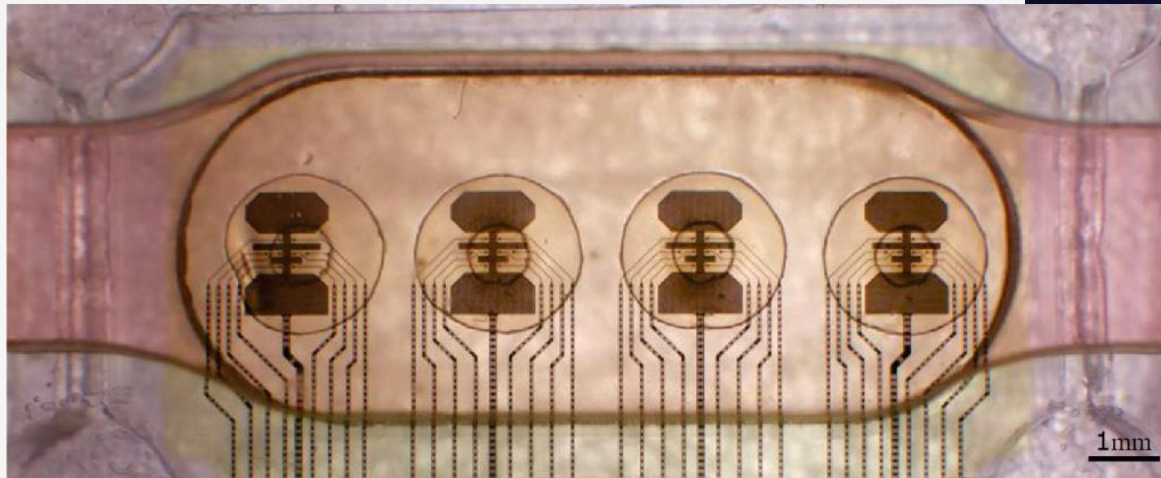
Focus on  
future  
needs  
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National Quantum  
Computing Centre

## National Quantum Computing Centre

The NQCC is the UK's national lab for quantum computing. We work with businesses, government and the research community to deliver quantum computing capabilities for the UK.




The bioprocessor with eight electrodes attached to four arrays housing a cluster of brain cells. (Jordan et al., *Frontiers in Artificial Intelligence*, 2024)

Systematic approaches to  
understanding and meeting  
future needs viably and  
effectively for our sector



# Thank you

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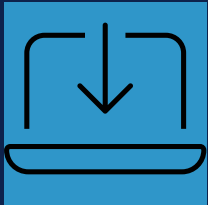
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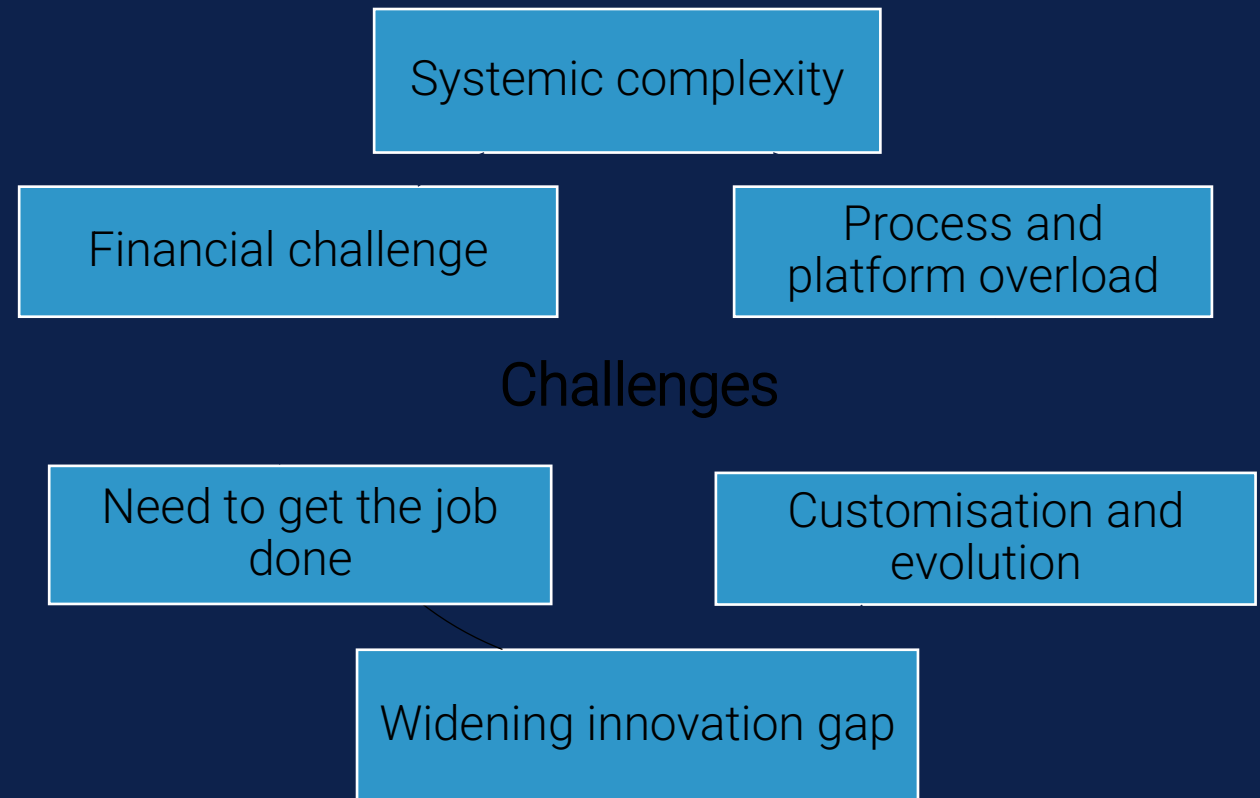
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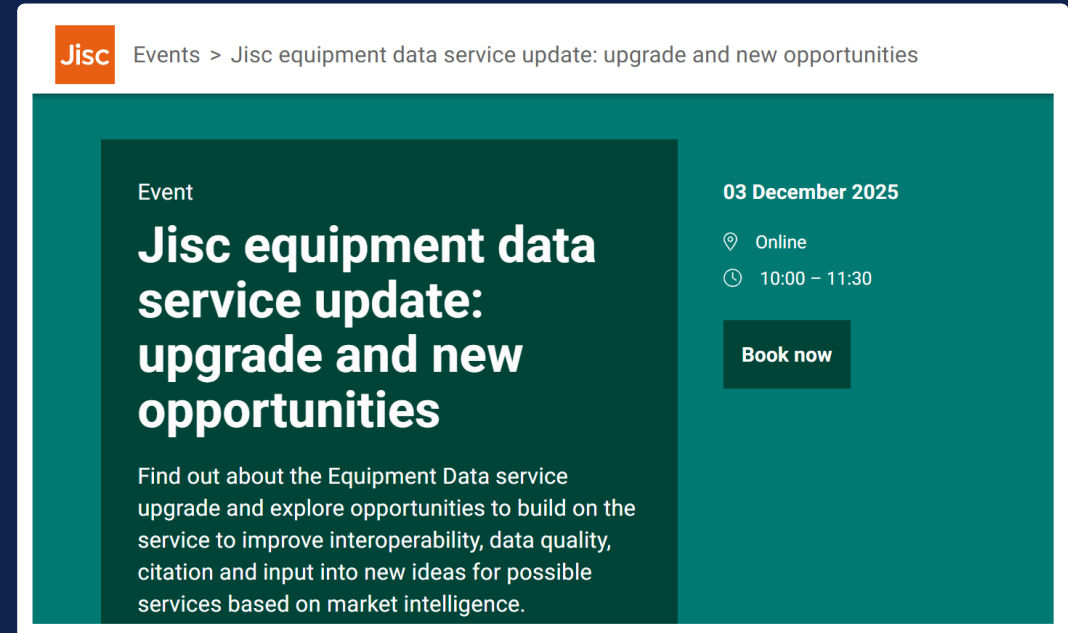
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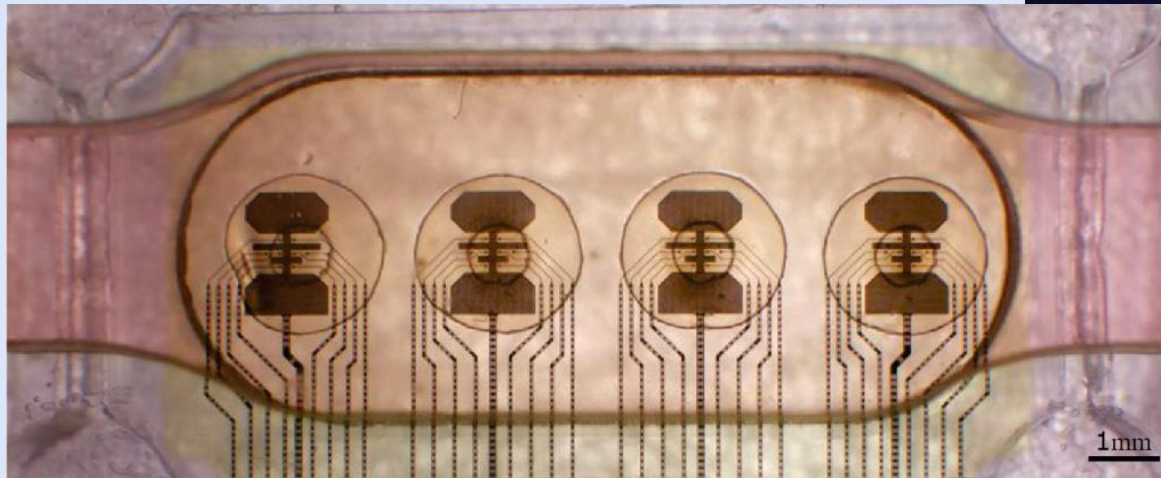
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