

STFC AI Strategy Development

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Overview

- Why we're writing the strategy
- Process
- Key findings
- Strategic Themes

Why an AI Strategy

- Mission-led obligation to advance cutting-edge AI to carry on delivering world-leading science and innovation
- Latest AI has the potential to transform how we perform science and deliver discovery
- To make AI pervasive across STFC, need to take a strategic, organisation-wide approach to advancing AI
- Position ourselves as key contributors of sovereign AI capability
- Produce a well-informed Spending Review Bid, for the next multi-year SR

Key aims

- Galvanise STFC's communities to embrace potential of AI, as integral to delivering our mission and create mechanisms to achieve this.
- Help shift perceptions across UKRI and HMG about the nature of the relationship between STFC and AI
 - realise the transformative benefits of AI across STFC investments and advance the state of the art of AI.
- Enable potential funders to clearly see the value of advancing AI across STFC.
- Position STFC as credible delivery partner for HMG across the AI ecosystem.

Process

Four primary phases:

Dec-March: Initial Planning and landscape analysis

Apr-June: Data gathering with a focus on community engagement

July-Aug: Data analysis, stakeholder engagement; delivery of draft strategy

Sept-Nov: Stakeholder engagement; strategy iteration; delivery of strategy

These phases are not strictly linear and there is cross-over in activity.

Key findings (External)

- Foundations of a healthy AI ecosystem have been laid at national level albeit with a focus on safety rather than opportunity/AI solutions
- Key competitor/collaborator nations are investing heavily in AI, particularly in people and software
- A healthy AI ecosystem requires data, compute, people and software
- Sovereign competitive advantage in AI will be derived from the development of cutting-edge tools that will transform scientific practice as a tool for discovery, maintain UK international standing on the science and innovation stage and generate economic growth

Key findings (Internal)

- STFC and AI : we need AI and through this mission-led obligation we develop and apply AI solutions across our science.
- Mission-led adoption of AI means we are transforming the science of AI as a key contributor to development of sovereign AI capability
- AI is the latest tool for science at scale: our role in science at scale means that we already deliver across the AI ecosystem
- We are also delivering AI solutions that are transforming core national missions (healthcare, materials, space, energy, catalysis and business supply chains and logistics)
- Advancing AI at scale and pace is integral to our reputation as a world-leading science and innovation organisation

Key findings (Internal)

- We have depth and breadth of AI expertise: we must get better at exchanging science outcomes and skills across as dynamically as possible
- We need to use our decades worth of experience in designing and exploiting large scale infrastructure to drive national capability in order that our scientists have access to what they need
- Our success is dependent on the whole system pulling together to deliver the data and compute requirements and invest in people

Strategic vision

Our vision is that STFC advances science-led AI, at scale and pace, to maximise the value of data across research and innovation system, thereby unlocking the potential of AI to accelerate scientific discovery, develop sovereign AI capability and resilience and create economic growth and impact across society.

Realising the vision

We will realise our vision by:

- Creating an optimum internal ecosystem.
- Working in partnership across an interconnected, AI-skilled R&I ecosystem, both within UKRI and internationally
- Combining a scientific approach to the development and application of AI with near-term impact will be critical to our endeavours.
- Translating our skills, expertise and capabilities and taking a leadership role in advancing AI across other data intensive and at-scale science domains within the UKRI portfolio and those that underpin core national missions.

Strategic Themes

4 core themes:

- Placing AI at the heart of STFC
- Advancing STFC science and driving sovereign AI capability
- Delivering mission-led AI solutions
- Environmental sustainability and efficiency

1 cross-cutting theme: Partnerships

Interdependencies: National compute and data capabilities/investment

Your input needed

- STFC AI strategy is currently being developed
 - Provide examples of where AI is (or will be) essential to your work
 - Don't assume that someone else in your field is responding.....
- Comment on what you've seen in this talk
 - Highlight concerns/risks
- Provide feedback on strategy when circulated
- Engage with the delivery plan development process which will follow