UKRI Networking and AAAI White Papers

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Networking White Paper / Roadmap

- **Vision**
  - maintain a world-class NREN capability
  - a NREN capability isn't just Janet
    - reach: campus ⇔ globally
    - for both data and people
  - a federation: campus/Janet/GÉANT etc.

- **Rationale**
  - dealing with data at increasing scale
  - leadership in research collaboration
  - aggregation and re-use of data
  - **NREN = capacity + resilience + security**

- **Roadmap/recommendations**
  - Janet investment roadmap
    - maintain fitness-for purpose out to 2030
  - increase campus networks capability
    - expectations, planning, e2e tuning
  - increase national capability
    - roaming, technology futures, testbeds
    - skills in new networking technologies

- **Asks of UKRI**
  - strategic participation in NREN
    - help maintain Janet investment
  - additional central funding (£5m p.a.)

Other White Papers/Roadmaps: fit with network WP

Supercomputing, Research Data Infrastructure • current connectivity in place • enhanced network bandwidth in future • Data Transfer Nodes and infrastructure	• strategic planning UKRI/Jisc • enhanced campus network capabilities • early identification of network needs of nationally significant R.(e-)I. • focus on making e2e business-as-usual

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AAAI White Paper / Roadmap

- **Vision**
  - straightforward and consistent access … by all researchers … from anywhere
  - with security/assurance appropriate to the resources being accessed

- **Rationale** (for a national federation)
  - security (consistent management)
  - cost reduction (in implementation)
  - portability (towards "single sign-on")
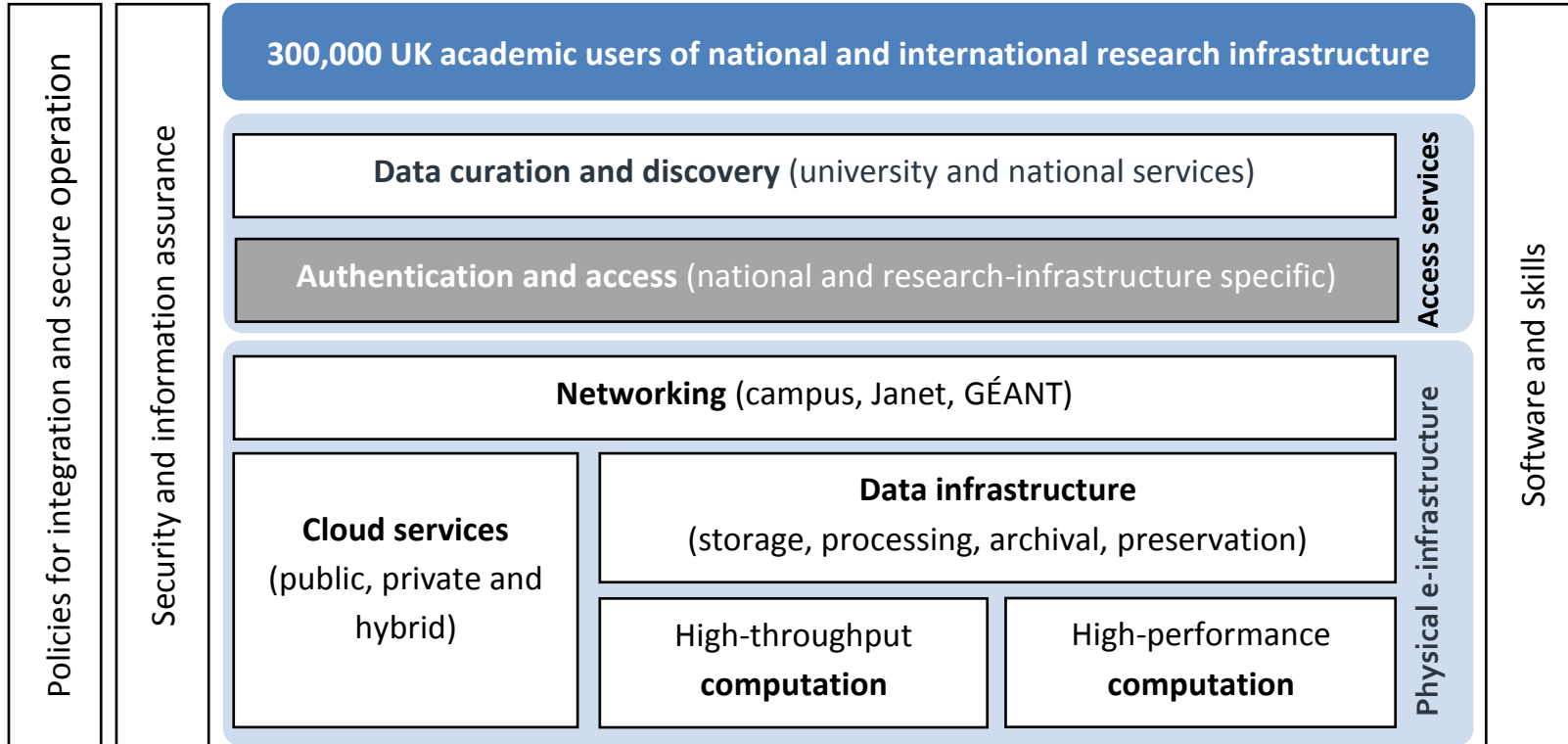 - return on investment (wider use of funded resources)

- **Roadmap** for a national federation
  - governance and engagement
  - development programmes
    - reference architecture the first step
  - integration into the federation
    - pathfinder phase needed
  - support and outreach

- **Asks of UKRI**
  - strong policy lead
    - through grant conditions etc.
  - modest central funding (£1-2m p.a.)

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Interaction with other parts of national e-infrastructure

Policies for integration and secure operation

Security and information assurance

300,000 UK academic users of national and international research infrastructure

Data curation and discovery (university and national services)

Authentication and access (national and research-infrastructure specific)

Access services

Networking (campus, Janet, GÉANT)

Cloud services (public, private and hybrid)

Data infrastructure (storage, processing, archival, preservation)

High-throughput **computation**

High-performance **computation**

Physical e-infrastructure

Software and skills

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