NATURAL ENVIRONMENT RESEARCH COUNCIL

NERC EXECUTIVE BOARD

NERC IT STRATEGY IMPLEMENTATION

Scope

1) This implementation plan affects the IT provision across the NERC wholly owned centres and NOCS, and the interface that NERC has with the HEI sector and other collaborators.
2) IT provision supporting both scientific and business systems
3) This plan responds to the NERC Business Information Strategy and Science Data Strategy – and the draft Information Strategy. The splitting of these documents is a problem however, in producing a holistic approach connecting the new NERC strategy to the IT requirements to support it. Thus although this plan has to stray into areas of Information Systems in order to provide a logic trail, in future these documents must be better integrated.

Summary of Drivers for Change

4) Internal:
    a. The NERC strategy stresses the importance of **collaborative** working across centres and between centres and universities / other partners. To enable this IT should provide **secure access to NERC wide projects and scientific data**, which is **not dependent on the user's location or access device.**
    b. NERC's strategy also recognises that advances in technology can lead to the development of new areas of scientific discovery (e.g. E-science). **Infrastructure and front line staff skills must be aligned to create symbiotic advances**.
    c. Strategy also drives **cost efficiency** to maximise the proportion of our income available for direct scientific spend. To achieve this we must maximise the value of past investment (e.g. in higher band width), and reduce hardware, software and support costs. Part of this will be achieved through reducing diversity or adapting technologies that can more effectively cope with necessary diversity.
    d. Special cases of c) are NERC's adaptation to the creation of the **shared service centre** (which will demand greater commonality of NERC interfaces / processes, supported by a reshaped, streamlined retained functional staff) and **FAB** (creating more similar business models across the centres).
    e. The strategy also calls for improved **environmental management**, recognising that business IT creates a similar carbon footprint as air travel.

5) External:
    a. Changes in **legislation and e-government agenda**
    b. Changing **staff culture and attitudes** with respect to the use of IT and technology

Approach

6) NERC will further clarify a 5 year vision of the future needs for information systems and the IT required supporting them. This vision has / will be driven by the requirement laid out previously, interpreted through thorough consultation with the research and collaborative centres and with the wider HEI community, and with appropriate challenge from leading

industry experts.

7) We will probably never reach this 5 year vision, as the pace of technological change will require refreshment of the strategy every 2 years – and as such implementation plans will not exceed 3 years, but will be consistent with an orderly, but flexible approach towards the vision.

8) To enable more detailed planning in later years we will:

    a. Investigate and fully understand our IT cost base, physical assets and cost drivers.
    b. We will meet with staff at leading HEI's to understand their current needs and future plans.
    c. Consider opportunities to share some infrastructure where we are co-located with other organisations.
    d. Launch certain detailed investigations to refine aspects of the vision.

9) One off costs of the changes identified will be met centrally, where they are over and above ongoing commitment by an individual centre to a current service. Resultant ongoing net savings made will be retained for reinvestment in their science / operations.

Vision

10) NERC will:

    a. Concentrate the efforts of front line research centre IT staff on value added work with scientists. This will require flexibility to react quickly and produce bespoke solutions to genuine user needs. All activities and physical assets not required for such direct support will be reviewed to assess whether common / central solutions would give short term cost advantages, service improvements, or provide longer term flexibilities.

    b. The requirement for server hardware will be reduced (by at least 33% over 3 years), and be located at a reduced number of sites provided network performance is adequate. This will reduce replacement cost, power needs, estates costs (in the longer term) and support costs. It will also have a major positive influence on environmental management – both through reduced power and disposal. "Virtualisation" will also be harnessed to improve disaster recovery across NERC.

    c. Microsoft will continue to be the dominant desktop operating system during the next 5 years, but we recognise the significant and growing requirement for Linux and other open-source products. NERC will adopt server based "Citrix" software to more effectively cope with this diversity, improving cost effectiveness of support and systems implementation. NERC will also consider open cross-platform solutions for new information systems and IT.

    d. Oracle will continue to be our preferred database product

    e. There will be significant development of web based services supporting communication and collaboration across the NERC community

    f. There will be a common secure access entry into NERC, for project collaboration and data access.

g. Adapt IT staff composition to adjust to the increasing trend within the market for outsourcing of technical services, and the balancing needs to improve sourcing / contract management skills, and meet business analysis requirements.

Governance

11) The implementation of the IT strategy (and later combined IS / IT strategy) will require governance on two levels:

    a. Customer side: Requiring community wide panel prioritising and refining development requirements. This would be composed of business level representatives (not IT), and meet infrequently (2-3 times per year).
    b. Supply side: Agreeing, monitoring and completing projects – to time budget and to meet predefined performance criteria

Management of the Implementation

12) This implementation will be managed via Director F&IS with advice from the IT Advisory Group (ITAG). The more technical studies will be steered directly by ITAG while activities leading to significant change for users will be managed through a Project Board that includes business representatives from Research Centres.

13) There will be a rolling plan of actions devised for the resource level available and with consideration for other changes underway in the organisation

14) There must be good communication of this plan to those who will be affected, with opportunity for feedback. A progress report will be circulated on at least a quarterly basis.

15) The benefits gained by implementation of this strategy will be recorded and reported to the Customer Governance Group along with progress and key issues.

16) For each activity success criteria will be defined in advance and outcomes measured.

Implementation Activities

17) The activities are summarised in the following appendix. More detail will be available as each activity is initiated. Progress will be at a pace that achieves benefits without excessive demands on staff.

David Bloomer
Director Finance & Information Systems
July 2007

Appendix A - Implementation Activities for NERC IT Strategy

Title	Objective	Drivers	Approach	Priority
Corporate Email Implementation	To establish a more resilient and efficient email service across NERC, compatible with other Councils and a building block for future communication and collaboration tools.	Consistent communication layer to enable further enhancements; Resilience; Cost efficiency.	Implementation Project to be agreed by NEB; Address cultural change.	1. High, act soon.
Environmental Footprint	To reduce the environmental impact of NERC IT, partly by reducing number of servers while improving IT Continuity and system availability. Also reduce desktop power for users that do not require it.	NERC Strategy; Business needs; Continuity risks; Cost efficiency.	Identify systems needing high availability; Agree & implement vision for server distribution; Take other actions after ITAG agreement.	1. High, begin soon.
Client Access	To provide ease of access to IS/IT from a variety of client types, some remote and some not managed by NERC at a reduced cost.	Collaborative Science; Enable access to common systems; Cost efficiency; Greening.	Agree common NERC approach; Establish Citrix pilot to get greater benefit from current investment; Deploy Citrix more effectively; Monitor other longer-term solutions.	2. Important but action could be slightly delayed.
Collaboration Tools	To establish appropriate collaboration tools across the NERC community (and more widely if possible) that enable NERC science strategy.	Demand for multi-disciplinary science with organisational input to NERC research programmes.	Deploy quick wins to build experience; Collect requirements across NERC, HEIs and others; Establish robust solutions.	2. Important but action could be slightly delayed.

Best Practice for IT processes and management.	To secure more efficient, timely and value added results through implementation of government recommended best practice (ITIL)	Reliability of IT processes and systems.	Agree tailoring of phased ITIL rollout; Deliver solutions	3. Medium but early planning will give benefits.
Cost Efficiency	To enable maximum investment in NERC science while benefiting from value added IT activity.	NERC strategy; Gershon.	Capture baseline data; Monitor cost savings of other activities in this table; Implement cross cutting IT activities where effective and efficient; Recommend further action to Director, F&IS. Monitor SSC progress	3. Medium but early planning will give benefits.
Directory Enhancements	To consolidate NERC User Directory and ensure it continues to work with SSC changes	Consistent level of security; easy access to systems.	Monitor SSC plans and react.	4. Lower priority; benefits for NERC but progress should be balanced with available resource.
Information Security	To implement the NERC Information Security Policy at an appropriate level; To establish a consistent high level of security through process and architectural changes; To migrate to consistent security solutions across NERC.	Protect key assets while allowing easy access; Cost efficiency.	Complete gap analysis; Define 1st phase of activities; Establish Project.	4. Background task; benefits for NERC but progress should be balanced with available resource.

Title (3 year costs)	Priority	Non Labour Cost £k	Labour Cost £k	Total Cost £k	Estimated Start	Main Benefit
Corporate Email Implementation	1	£403k	£351k	£754k	Sep 2007	Common Communications layer that enables further functionality.
Environmental Footprint	1	£100k	£20k	£120k	Sep 2007	Reduce environmental impact and costs.
Client Access	2	£25k	£20k	£45k	Nov 2007	Gain benefits from existing investment including simpler IT support.
Collaboration Tools	2	£120k	£20k	£140k	Nov 2007	Enable collaborative science.
Best Practice	3	£200k	£24k	£224k	Jan 2008	Consistent approach giving more reliable IT services.
Cost Efficiency	3	£5k	£10k	£15k	Jan 2008	Release some IT costs for science.
Directory Enhancements	4	£25k	£72k	£97k	Apr 2008	Improve user id and password security.
Information Security	4	£170k	£88k	£258k	Apr 2008	Maintain adequate level of security in a consistent way across NERC.
Total		**£1048k**	**£605k**	**£1653k**		

Notes:

1) Priority 1 is highest
2) Estimates for “Corporate Email” and “Directory Enhancements” from Project PID for next phases.
3) Other estimates are provisional and will be refined as project documentation for an activity is agreed.
4) Actual progress will be limited by the funding and staff resource available and will be planned ahead year by year.
5) Progress will also be limited intentionally where the volume of other change in NERC is high.