E-Infrastructure Leadership Council

6th November 2012 1400-1700
BIS Conference Centre, 1 Victoria Street, London, SW1H 0ET.

Attendees

Joint Chairs:

Rt Hon David Willetts MP	Minister of State for Universities and Science
Dominic Tildesley	University of Blaise Pascal, Clermont Ferrand, France

Industry Members:

Paul Best	Frazer-Nash/CFMS
Andy Grant	IBM
Darren Green	GlaxoSmithKline
Prof Tony Hey	Microsoft
Sean McGuire	Intel
Andy Searle	Jaguar Land Rover
Kaitlin Thaney	Digital Science

Academic Members:

Prof Peter Coveney	University College London
Prof Robert Glen	University of Cambridge
Prof Richard Kenway	University of Edinburgh
Dr Oz Parchment	University of Southampton
Prof Mike Payne	University of Cambridge

Public Sector Members:

Dr Stuart Bell	Met Office
David Bott	TSB
Dr Bob Day	JANET
Michael Gleaves	STFC
Prof Douglas Kell	BBSRC
Dr Lesley Thompson	EPSRC

Secretariat/Observers:

Graeme Reid	BIS
Dr Martin Ridge	BIS
Dr Jatinder Singh	BIS
Prof Michael Wilson	BIS
Dr Anne-Marie Coriat	RCUK

Apologies

Ed Vaizey	Minister for Culture, Communication and the Creative Industries
Ian Dix	AstraZeneca
David Docherty	Digital Media Group

Substitution

Michael Gleaves substituted for Prof John Bancroft	STFC

1. Welcome, Previous Minutes and Actions

David Willetts took the Chair, and welcomed everyone to the third meeting of the e-Infrastructure Leadership Council.

The Agenda for E-Infrastructure Leadership Council 03 was accepted by the council.

The meeting minutes from the ELC 4th July meeting were accepted.

The ELC Secretariat presented the Actions Register to the Council.

2. European Technology Platform for High Performance Computing

The Chair introduced Oz Parchment of Southampton University, to discuss the ETP 4 HPC.

It was reported that the UK is now engaged with PRACE. The UK is getting 10% of the available resources as a result of European peer review of project proposals, which is a significantly greater proportion than it contributes financially. The UK is negotiating a funding model more appropriate to the UK requirements for PRACE phase 2, which would involve paying a subscription that more closely reflects the UK consumption of resources. It was agreed that the UK's active role in PRACE should be widely disseminated.

It was reported that the ETP 4 HPC are trying to define the technology agenda for European HPC. The EC are expecting European HPC expenditure to double over H2020 period - from €600M to 1.2 billion. They want European money to be spent in Europe. The EC are proposing pre-competitive procurement as an investment route for HPC. The EPCC and several UK companies are involved in the ETP. It was noted that UK companies need to be aligned with ETP plan, in order to benefit from any pre-competitive procurement procedures.

The chair thanked the speaker.

3. ELC Awareness Activities

The Chair introduced Michael Wilson to discuss ELC awareness activities.

It was agreed that the ELC secretariat should define a communications strategy, which should not set up new structures, but collate what is already happening was transparent about points of conflict, to listen to users and stakeholders, incorporated the e-infrastructure academic user forum organised by Peter Coveney and David de Roure; address industrial

community; promoted awareness of the existing capability in HPC to improve their business; use the TSB KTNs as one route to industry; important to communicate to SME, and up to global headquarters of large companies so they know to invest in UK.

4. Business Case Overview

The chair opened a discussion on the business case by noting that the ELC is working well and reminding the Council that since HPC is fundamental to scientific research in the future and to the big important sectors in UK industry, the business case needs to address co-investment from business partners in response to public funding. The first funding in 2011 was an emergency injection because the UK was in danger of falling behind others. A second injection has to focus on business needs. It will be easier to get capital spend than recurrent spend. If the public sector provides the capital and then business pays the recurrent then it will make the case for the public sector investment stronger. The document from the Research Councils "Investing for growth" gives a shape for where we are going. We need to create an e-infrastructure which is not just HPC, but also addresses big data and software.

The ELC commented that:

We need a 5 to 10 year forward look on the availability of capital so that we can then sort out the regulations and apply them through normal practices.

When the US undertake big projects, a third is spent on each of software, boxes and running costs. In the UK its 90% hardware, 10% running and no software. If investments are capital only then the existing funded box runners will all start competing with each other for the same market.

The plan could use public capital investment in universities which was attached to company funding of training of people, to be followed by those companies hiring the trained staff. Alternatively, companies could get free access to machines purchased with public capital funds in return for them funding training or software development. Another option is to sell cycles on publically funded machines to industry, and the income can be used to cover running costs.

In order to increase the investment in software, if only capital funding is available, then software development could be treated as a capital investment. Since software is an asset, then it can be put on the balance sheet as such and depreciated. This is normal practice in industry. Capitalisation of software assets will need to address IPR issues when development is collaborative.

Business development investments have been crucial in attracting eight companies a month to come to the Hartree Centre for early stage discussions, but that it takes them a year from first contact to a contract. It was noted that the business development angle was weak in business plan.

In many companies the business case for HPC usage needs to be established within the company. To do this requires collaborative projects involving both the company and academia to show how productivity improves as a result of HPC usage.

The secretariat should abolish the use of the term "HPC" because it's so loaded, and its narrow definition will stop sustainable funding; it's too dated to put into a forward thinking document. We need an agile e-infrastructure that will accommodate HPC and big data computing, and the development of things that might occur.

The Australian national data service infrastructure was proposed as a model which the UK could follow, although industry would have to be involved.

David Willets thanked the ELC members, passed the Chair to Dominic Tildesley and left the meeting.

5. Working Group Reports - Q&A

The Chair thanked the Working Groups for their work and invited Kaitlin Thaney to present work so far on The ‘missing middle’ / SME.

The Chair and invited Douglas Kell to present the view of the Research Councils on e-infrastructure. Douglas Kell reminded the Council that 3 months in the lab can save an afternoon on the computer, and summarised the e-infrastructure activities of the Research Councils, ending with the view that open data and open source software are the future for validatable science.

The Chair thanked the speakers

6. AOB

The Chair invited Peter Coveney from University College London to discuss how work on Formula 1 cars by McLaren was having an impact on the NHS.

This noted that major challenge is fragmentation with different groups promoting their own directions. McLaren F1 cars are optimised by computer simulation and include monitoring technology with substantial data transfers. The modelling & simulation, and monitoring technologies are having an impact in healthcare (not life sciences - don't conflate the two). This is an example which overcomes the fragmentation by using the same approach in two distinct domains.

The Chair thanked Peter Coveney for his contribution.

7. Next steps and meeting dates

The Chair thanked the ELC for its participation. The focus will now be on developing the software and data centres proposed in the Business Case for submission in time for the next Budget. A well developed version was required by Minsters in late January.

The Chair emphasized the need for the proposals to take a rigorous approach backed with evidence for submission to Ministers. It should address both capital and recurrent requirements. Expert groups to work by e-mail and phone should be commissioned for each of the six industrial sectors identified to specify: *what are the recurrent and capital needs of the centres; what are the training needs; what is the payback; what is the input from various companies.*

Next meeting: After the budget in March, location and time to be determined