

ARCHER CHAMPIONS

16TH / 17TH MARCH 2016

Dr Chris Johnson, eCSE Projects



ARCHER eCSE

- So far we've discussed...
 - ARCHER as a National resource
 - Support
 - Training
 - Outreach
- ...Software development is clearly very important too
 - This is where the eCSE (embedded CSE) programme fits in
 - Intended to broaden the work done by the CSE team out to ARCHER community
 - Previously dCSE on HECToR



Aims

- Programme provides funding to the ARCHER user community to develop software in a sustainable manner for ARCHER
- Objectives
 - To sustain key codes for the UK computational science community
 - To facilitate efficient use of ARCHER resources through enhanced code performance/functionality
 - To offer a not-for-profit service that provides value for money to the HPC user community and beyond
- Also
 - Develop and sustain codes and communities from new areas
 - Support and encourage early career researchers



eCSE examples

- Implementation of algorithmic improvements within an existing code
- Improving the scalability of software on higher core counts
- Improvements to code which allows new science to be carried out
- Porting and optimising a code to run efficiently on ARCHER
- Adding new functionalities to existing codes
- Code development to take a code from a Tier-2 (Regional) to Tier-1 (National) level bringing new communities onto Archer
- Funding cannot be used for scientific research



Scale and Eligibility

- Programme can fund
 - Staff at PI's institution
 - Staff at 3rd party institution
 - ARCHER CSE staff
 - Some combination of the above
- Projects expected to be 3-12 months in length



New Communities

- Funding is available for
 - established ARCHER communities
 - proposals from these communities are encouraged.
 - However, proposals from new scientific communities are also encouraged.
- New scientific communities
 - communities from **scientific** areas not currently exploiting the ARCHER system.
 - likely to have a scientific need for ARCHER and a need for greater computational power than available at a regional level.
 - Community wishing to exploit existing algorithms or code on ARCHER to carry out significantly different science from that currently being carried out on ARCHER
 - A science community wishing to add additional functionality to an existing ARCHER code, to carry out significantly different science from that currently being carried out on ARCHER
- New codes to ARCHER are not necessarily new scientific communities
 - New codes / users from existing communities can apply as an established community
 - Encouraged to contact / join existing appropriate consortia
- Panel will assess whether a project is from a new community based on the information provided
 - if not a new community, this will automatically be considered as an existing community proposal

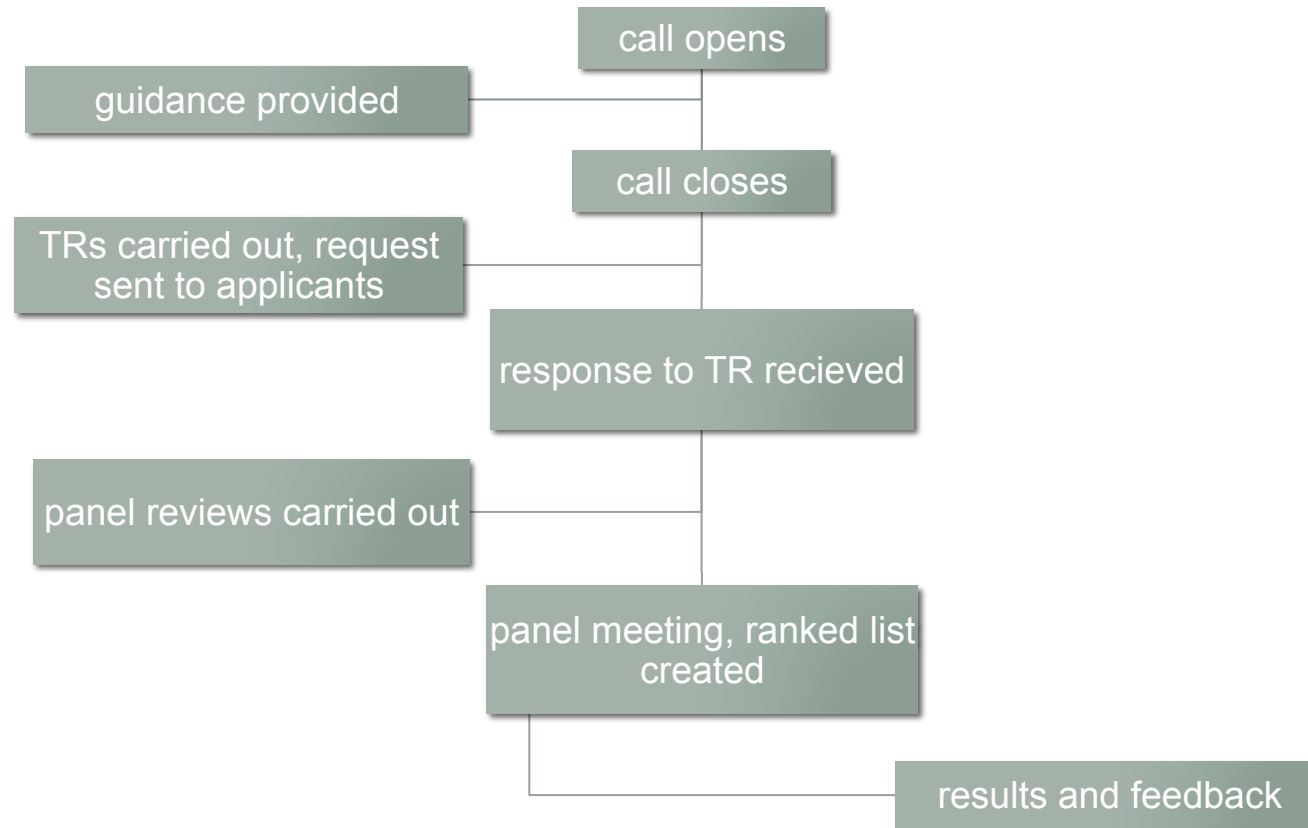


Logistics

- Programme runs for 4 years
- Run by a team of three:
 - Lorna Smith, Chris Johnson, Xu Guo
- Provides 14 FTEs effort throughout UK
- So far 7 calls awarding >570 PMs over ~24 institutions
- 3 calls per year at regular intervals
- We have two more calls planned
 - eCSE08: opens Tues 29th March 2016 and closes at 4pm on Tues 10th May 2016
 - eCSE09: opens Tues 2nd August 2016 and closes at 4pm on Tues 13th Sept 2016



eCSE process



Assessment criteria

- 1. The Applicants (Proposed Team Members)
- 2. New Communities Justification
- 3. Technical Context
- 4. Benefits
- 5. Pathways to Impact
- 6. WorkPlan
- 7. Overall



Publicising calls

- <http://www.archer.ac.uk/community/eCSE/>
- We advertise calls on ARCHER web site, mailing list, Twitter, etc
- Also advertise to HPC-SIG, Women in HPC, etc.
- Keen to get New Communities on board
 - Ideas?
 - Support channels around universities to assist with proposals?
- Sometimes funding required for codes which are not quite ready for an eCSE, e.g. still serial
 - Other calls appropriate?





EPSRC

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