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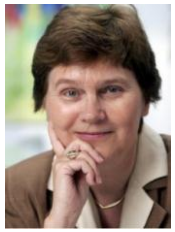
e-Infrastructures

Chair: Gudmund Høst, Research Council of Norway



Speakers

Kostas Glinos, European Commission
Dorte Olesen, Technical University of Denmark
Florencio Utreras, Latin American Cooperation of Research Networks
Satoshi Matsuoka, Tokyo Institute of Technology
Monica Marinucci, Oracle
Guy Levesque, Canada Foundation for Innovation
Rhys Francis, Australian eResearch Infrastructure Council
Brian Vinter, University of Copenhagen

Rapporteurs:

Carlos Morais Pires, European Commission
Juan Bicarregui, Science and Technology Facilities Council.

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What is an e-Infrastructure?

Why do I need one?

What are the benefits?

e-Infrastructure programmes coincide across the world:

- Network
- Compute
- Data
- Software

User needs coincide also:

- Research is global, global collaborations need global infrastructure
- Efficiency from virtualised resources
- Remove obstacles to scientific collaboration

Benefits are in every field:

- Infrastructure is essential to innovation (but is only one necesary part)
- e-Infrastructure is hard to quantify as it is invisible (when successful)
- but IT is an enabler with transformational effect – works from ground up
- e-Infrastructure is essential to deliver promised new science, eg personalised medicine

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What should it look like?

Global and *Open*

Global

- Must support deep global coollaborations because disciplines are global
- Must support data enabled science (e-Science)
  - Google can track spread of flue virus in real time (from people's searches)

Open - the conversation has changed

Principles unchanged:

- Reproducibility was always fundamental principle of science (Avoid errors)
- Extract maximal value from data (Data reuse - collector might not be optimal analyser)

- Conversation is now about how far can we go..... whilst:
  - Respecting Privacy
  - Maximising Innovation
  - Protecting IP
  - Lots of discussion about The Commons and The Tragedy of the Commons
    - data is non-rivalrous, and should be non-excludable.

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How do we build it?

People, Time and Money

People *"may all your problems be technical ones"*

- Heard many success stories of what is built already
- Have been big changes in tools and practices in many domains
- Major policy changes across domains also
- But need ease of use to remove bariers to sociological change

Time

- Heard about 5 year period from funding to operation, with lots of consulation.
- Also heard about *"just do it, when they see it, they will agree"*

Money

- Lots of discussion!
- Boundary between research and infrastructure
- Openness may be an extra cost to projects (but not to programme)

Don't need money but do need courage!

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How will we know when we have it?

"The longest journey starts with a single step"

How do we transmit knowledge to future generations?

- Research results – through the publication system
- Expertise – through the education system

Now will also transmit:

- Data and Software – through the e-Infrastructure