e-Infrastructures for Science in the Digital Age

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Europe 2020

Smart	Sustainable	Inclusive
Innovation *« Innovation Union »*	**Climate, energy and mobility** *« Resource efficient Europe »*	**Employment and skills** *« An agenda for new skills and jobs »*
Education *« Youth on the move »*	**Competitiveness** *« An industrial policy for the globalisation era »*	**Fighting poverty** *« European platform against poverty »*
Digital society *« A Digital Agenda for Europe »*		

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Digital Agenda for Europe (DAE)

- Contribute to the Europe 2020 Strategy by exploiting the potential of ICT

- How? By making the virtuous circle of the digital economy work

- Attractive content and services stimulate demand, which creates the business case for investment in faster networks
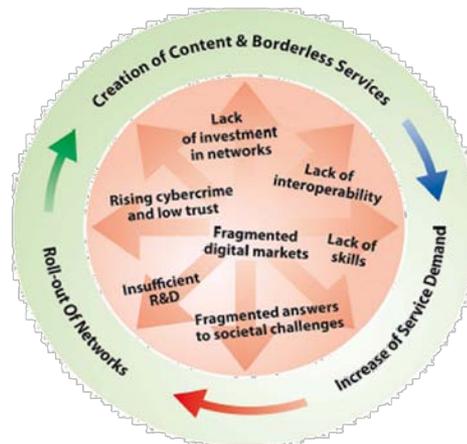
every European digital

"The Digital Agenda for Europe outlines policies and actions to maximise the benefit of the digital revolution for all. Supporting research and innovation is a key priority of the Agenda, essential if we want to establish a flourishing digital economy."

Neelie Kroes

Vice-President of the EC, Digital Agenda

changing the discovery process

The emergence of new research methods that exploit advanced computational resources, data collections and scientific instruments, in other words e-Science, changed the scientific discovery process.

what can science do for us
what we can do for science

what are we doing for Science...

Innovating the scientific process:
global virtual research communities

Accessing knowledge:
scientific data

Designing future facilities:
PRACE - High-Performance Computing

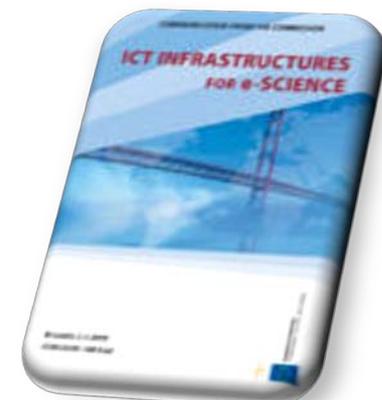Sharing the best resources:
e-Science distributed computing

Linking the ideas at the speed
of the light: GÉANT

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ICT Infrastructures for e-Science

- 2009 Commission Communication to Council and Parliament
- Importance of embracing the e-Science paradigm shift
- Strategic role of e-Infrastructures as a crucial asset underpinning European research and innovation
- Request reinforced and coordinated efforts between European Commission, Member States and the scientific communities at large

ICT Infrastructures for e-Science
http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2009:0108:FIN:EN:PDF

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Horizon 2020, a new cycle of R&D&I

- The European Framework Programme for 2014-2020
- Good opportunity to launch new ideas, new challenges and new collaboration frameworks…
- Research Infrastructures and e-Infrastructures as key elements for excellence in Science base

creating industrial leadership and competitiveness

tackling societal challenges

excellence in science base

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...just some areas for cooperation...

- From peta-scale to exa-scale computing
  - Discuss roadmaps for architectures, software infrastructures and application requirements
- Global framework to develop an open and interoperable data infrastructure
  - Joint participation in groups such as the G8+O5 working group on data
  - Help research communities to work together on interoperability, access policies, standards,...
- Others...

Thanks for your attention

transforming common perspectives into effective collaborations

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