

The Nordic e-Science Globalisation Initiative

An example of regional coordination/support/funding
to large scale research projects

Sverker Holmgren

Program Director

Summary



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Activities in the Nordic countries

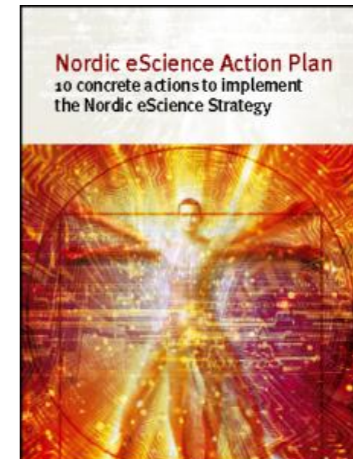
- e-Science research
- e-Science education
- e-Infrastructure

Collaborative efforts,
e.g. NDGF

Joint/coordinated
participation in e.g.
EU initiatives

Way back

The eNORIA group



Now

**Nordic e-Science
Globalisation Initiative**

Nordic collaboration on
computing and storage

Great future!

e-Science – Changing the Fabric of Science



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Computational science is now indispensable to the solution of complex problems in every sector, from traditional science and engineering domains to such key areas as national security, public health, and economic innovation. Advances in computing and connectivity make it possible to develop computational models and capture and analyze unprecedented amounts of experimental and observational data to address problems previously deemed intractable or beyond imagination. [2005 report from the US President's Information technology Advisory Committee (PITAC)]

eScience, promises to revolutionise the scientific discovery process, as did the 'Scientific Renaissance' in laying the basis for modern science. [2009 communication from the European Commission to the European Parliament on ICT Infrastructures for eScience]

“e-Science is about developing and applying advanced tools within information and communication technology (ICT) in order to exploit a new mode of advancing research, complementing theory and experiments. e-Science is also about global collaboration within key areas of science, and about the next generation of infrastructures that will enable it.”



The e-Science Globalisation Initiative - History



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A bottom-up + top-down approach!

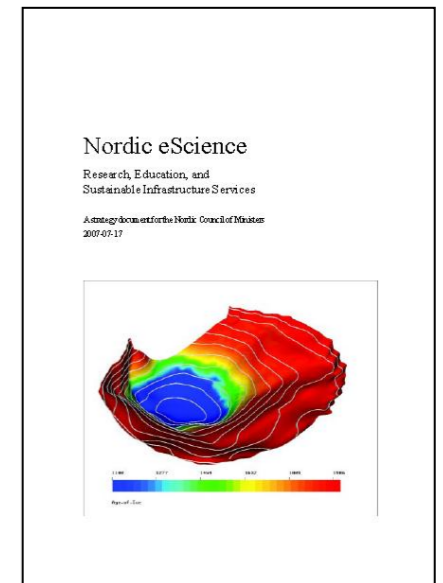
The “Nordic e-Science ad-hoc group”

- **Nordic e-Science report** (2007)

The NordForsk Noria-NET on e-Science (eNORIA), commissioned by Nordic Council of Ministers (NCM)

- **Nordic e-Science Action Plan** (2008)

Proposal for the **Nordic e-Science Globalisation Initiative** by the Nordic Council of Ministers (2009)



The Nordic e-Science Globalisation Initiative



A twin-organisational framework:

- **The e-Science Globalisation Initiative (research, education)**
- **The Nordic Collaboration on Computing and Storage**

Builds on

- The eNORIA action plan (and work by eNORIA Task Forces)
- Strong national activities
- Existing and emerging Nordic collaborative frameworks

Initial funding **12,5 + 6,5 MEUR** for 2011-2015 (National Agencies, NordForsk, Nordic Council of Ministers)

Both the Nordic e-Science Globalisation Initiative and the Nordic Collaboration on Computing and Data are hosted by NordForsk



NordForsk is a platform for joint Nordic research and research policy development

The aim is to facilitate cooperation in all fields of research, higher education, and research driven innovation when this adds value to what is being done nationally

One of the priorities is to initiate and participate in multidisciplinary programs formulated in response to Grand Challenges

The Nordic e-Science Globalisation Initiative



Features:

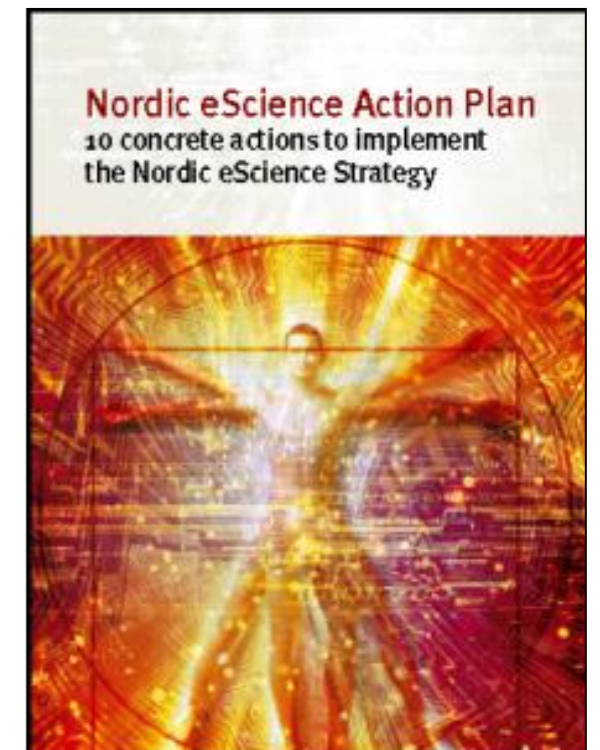
- Coordinated effort e-Science research – education – infrastructure
- Governed by national funding agencies (activities aligned with national strategies)
- Common pot funding (no "juste retour" principle)
 - e-Science research and education: Calls for proposals open to all Nordic countries
 - Infrastructure for computing and data: Coordinated by the Nordic Steering Group
- Focus on supporting leading e-Science research and education
- Exploit "regional added value"
- Outward-looking activities – coordinated efforts within e.g. EU-initiatives

eNORIA Action Plan



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- Training Researchers in e-Science Tools and Methods
- A Nordic e-Science Masters Education
- Sharing and Specialising Nordic e-Science Educational Modules
- Fostering Nordic e-Science Collaboration through Mobility
- A Nordic e-Science Program for Research into Grand Challenges
- Strengthening National e-Science Initiatives
- Open Access to National Data Repositories
- Facilitating Sustainable Grid Infrastructure Collaboration
- Implementing Cross-Border Sharing of Resources
- Environmentally-Friendly Nordic High Performance Computing



Nordic e-Science Globalisation Initiative - Contents



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Climate/
Environ
ment

Health

Other
strategic
area?

e-Science methods and tools

PhD education

e-Infrastructure (computing, data)

Computing and Storage – European Dimension



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EGI – European Grid Infrastructure. Participation by DK, FI, NO, SE. Nordic Collaboration on Computing and Storage coordinates the participation of the Nordic National grids in EGI.



PRACE – Partnership for Advanced Computing in Europe. ESFRI-project for massive-scale HPC. Participation by DK,FI, NO, SE



European Data Initiative – Led By FI. Participation by NO, SE

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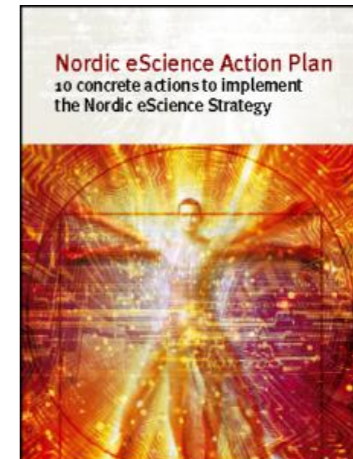
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Thank you for your attention!

<http://www.nordforsk.org/>

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