

eScience

Nordic and International Outlook

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Nordic eScience Globalisation Initiative

National eScience Initiatives . Nordic countries



Sweden - Strategic Research Area Initiatives

” 2010 . 2015 →

” eSSENCE, SERC

Norway . The eVITA Program (also eInfrastructure)

” 2006 . 2015

” On-going discussion on how to continue

Finland . The LASTU (Computational Science) Program

” 2010 . 2016

Denmark . Support to individual groups

” Re-structuring of eInfrastructure (DeIC)

Iceland - Support to individual groups

” National eInfrastructure established through the NHPC project



National eScience Initiatives . Europe and Globally



- ” Revival of eScience in the UK (www.stfc.ac.uk/e-science)
- ” National Centers emerging, e.g. in NL (www.esciencecenter.nl)
- ” Centers of Excellence on scientific software in H2020

- ” Roles and relations to eInfrastructures debated
 - ” e-IRG White Paper 2013
- ” Big Fuzz on Big Data
- ” Focus turning towards competence (people, education)
- ” Method development for complex problems and decision support

- ” USA: New NSF program Computational and Data-Enabled Science and Engineering
- ” Countries like China and Brazil: Major interest in eScience



dreamstime.com

Nordic eScience



NordForsk

Way back

Activities in the Nordic countries

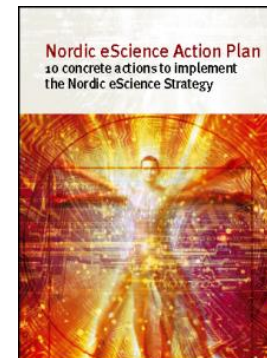
” e-Science research

” e-Science education

” e-Infrastructure

The eNORIA group (a NORIA-net)

2008



Nordic e-Science Globalisation Initiative - NeGI

Nordic e-Infrastructure Collaboration - NeIC

Collaborative efforts, and joint/coordinated participation in e.g. EU initiatives

Now

Update of the Nordic eScience Action Plan

Near future



eNORIA Action Plan

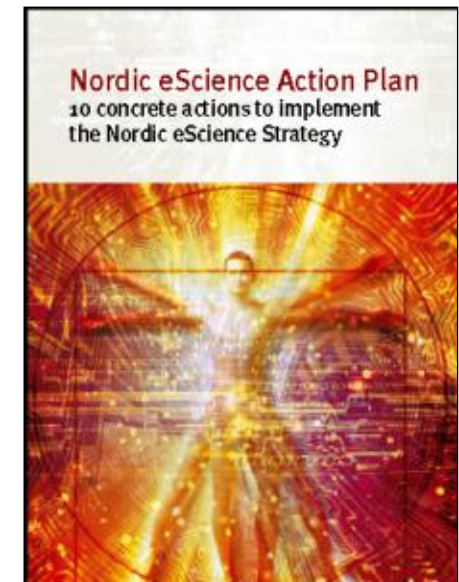


NordForsk

- . **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 Æ NeGI (research, graduate education)**

Initial funding 12,5 MEUR for five years

National agencies in FI, NO, SE, NordForsk, Nordic Council of Ministers

Governed by a Steering Committee with repr. of the funders + observers from DK and IS

- **Nordic e-Infrastructure Collaboration - NeIC (e-Infrastructure for computing and storage)**

Initial funding 1,68 MEUR per year

National agencies in DK, FI, IS, NO, SE (+ NordForsk for NeGI support)

Governed by a Board with repr. of the funding agencies and national computing/storage initiatives

Inherits the operations of Nordic LHC Tier-1 from NDGF

- “ Grand Challenge **Research Programs** on eScience in
Climate and Environmental Research
Health and Social Preconditions for Health
- “ **Graduate Education** on eScience Tools and Techniques
- “ **Research Projects** on eScience Tools and Techniques
- “ Outreach and international collaboration

- “ Research fields selected by funding stakeholders
- “ Input by research communities at pre-call workshops
- “ The calls: 40 MNOK, for *developing advanced models, simulation tools and tools for data analysis for [topic]*
- “ **+eClimate/Environment+ 6 consortia applied**
 - Two NCoE supported (total 4,5 MEUR). Groups from DK, FI, FR, GL, IS, NO, SE
- “ **+eHealth+ 5 consortia applied**
 - One Nordic Centre of Excellence funded (total 4,5 MEUR). Groups from DK, FI, EE, IS, NO, PL, SE

NeGI is initiating an effort on **eScience Tools and Techniques**

“ Appointing **Expert Group** that will

“ Define **Nordic Curriculum**

“ Set up a **list of existing courses** of high quality . NeGI funding for participation of Nordic PhD students

“ Potentially propose **new courses** focussing on NeGI NCoE topics (+eClimate/eEnvironment+, +eHealth+)

Also, organisation of annual **Nordic Young Investigators Symposium** in eScience

- Facilitate communication and collaboration between eScience initiatives - Nordic and others (workshop etc)
- Set up relations to eInfrastructure efforts (NeIC, national initiatives and others). How can the eInfrastructure needs of **NeGI activities** be met?
- Explore potential synergies with other Nordic activities - NordForsk involvement in EC processes on Open Access and Open Science

”_Background: **Evaluation of Nordic research collaboration** (+Vilja till forskning?+)

mentions the progress in eScience/eInfrastructure as success story

” Late 2012: **Mandate from Nordic Council of Ministers** to produce a **new version of the eScience Action Plan**

” **Project leader** at NordForsk (SH) + **Reference Group**: Roar Skålin, Juni Palmgren, Pentti Pulkinen, Peter Sloth, Kostas Glinos, Gudmund Höst, Rene Buch, Steen Pedersen, Helge Holden, Daniel Melin, Pauli Kousmanen, Eva Stensköld