

# Finding the Balance Instrumentation vs. Infrastructure; Hardware vs. User Support

Constituting meeting  
Platform of National e-Science Centers in Europe (PLAN-E)

2014-09-24 Rene Belsø

# Presentation Structure

- **Danish e-Infrastructure Cooperation (DeiC) – Who Are We and What Do We Do**
- **Instrumentation vs. Infrastructure?**
- **Hardware vs. User Support**
- **Possible Future Directions ?**

# Danish e-Infrastructure Cooperation (DeIC)

For what might be termed e-Science and its add-ons:

- **Researchers in the driving seat, in terms of letting them get as well as control most of the funding**

The motivation for this, and how we still find room for and content in a national e-Science efforts, is what I intend to say something about:

- **I would like to address the core raison d'etre of a national e-Science effort.**



# Danish e-Infrastructure Cooperation (DeIC)

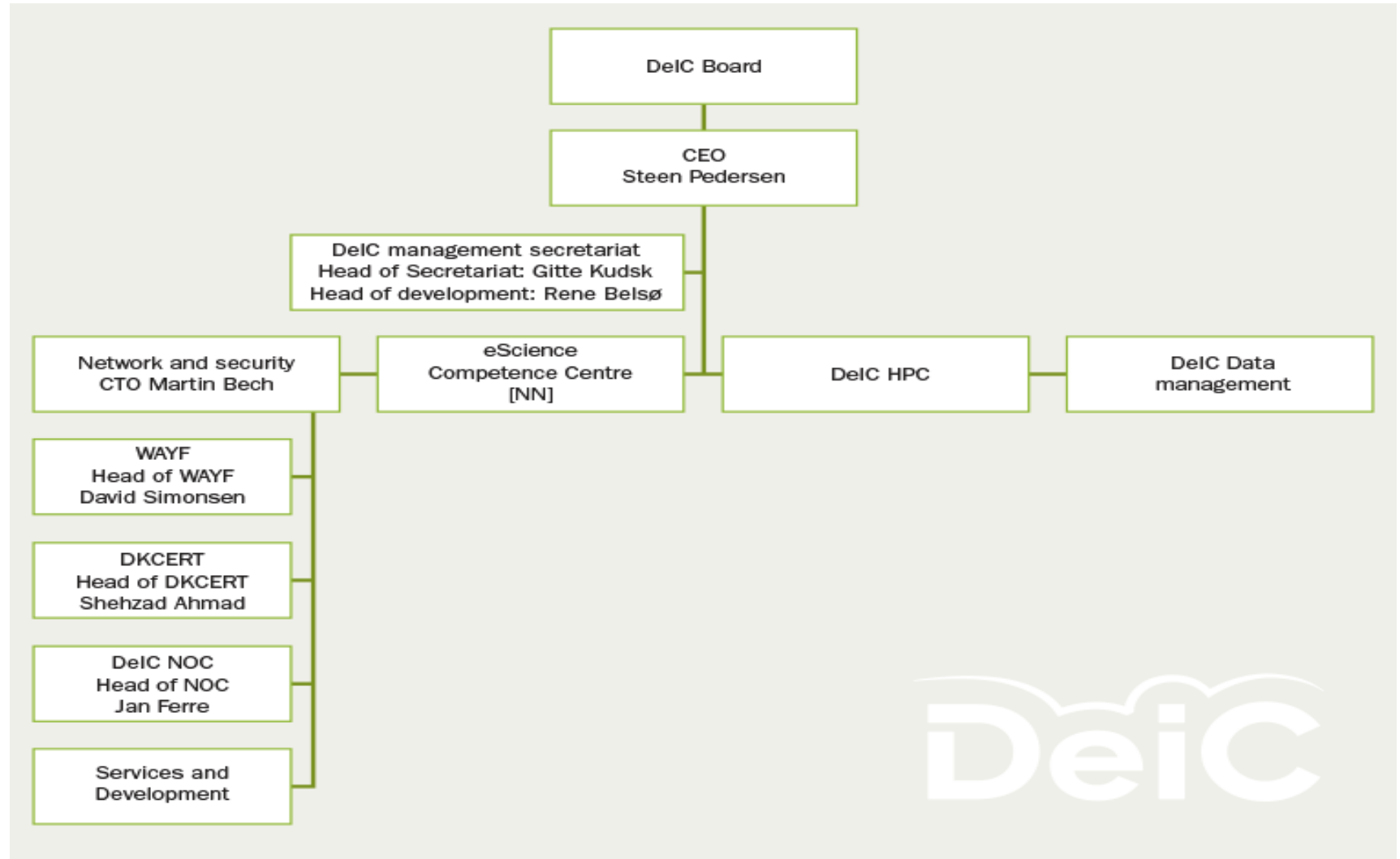
The **Danish e-Infrastructure Cooperation (DeIC)**, was created 2012 under the Ministry for Higher Education and Science, with the purpose to deliver e-infrastructures (computing, storage and network) to research and research based teaching.

## DeIC Strategic Goals:

- Ensure national development of e-Infrastructures at an international level
- Facilitate international cooperation and knowledge transfer in e-Science
- Disseminate e-Science to new research groups
- Create new funding possibilities for e-Science
- Coordinate solutions concerning Data Management and large amounts of data
- Ensure that DeICs activities are known and widely used



# Danish e-Infrastructure Cooperation (DeIC)



# Structural trends

Consumption vs. Specialisation

Infrastructure vs. Instrument

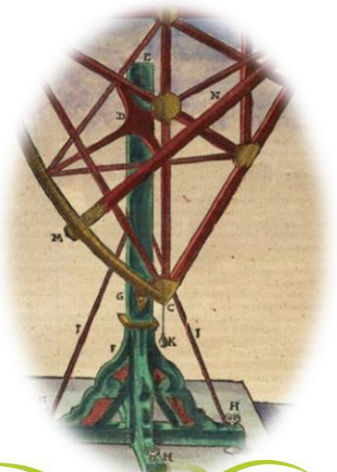
## Infrastructure – Consumption

General purpose

vs.

## Instrument – Specialisation

Specialised architectures (typically controlled by big R&D communities, e.g. within ESFRI).

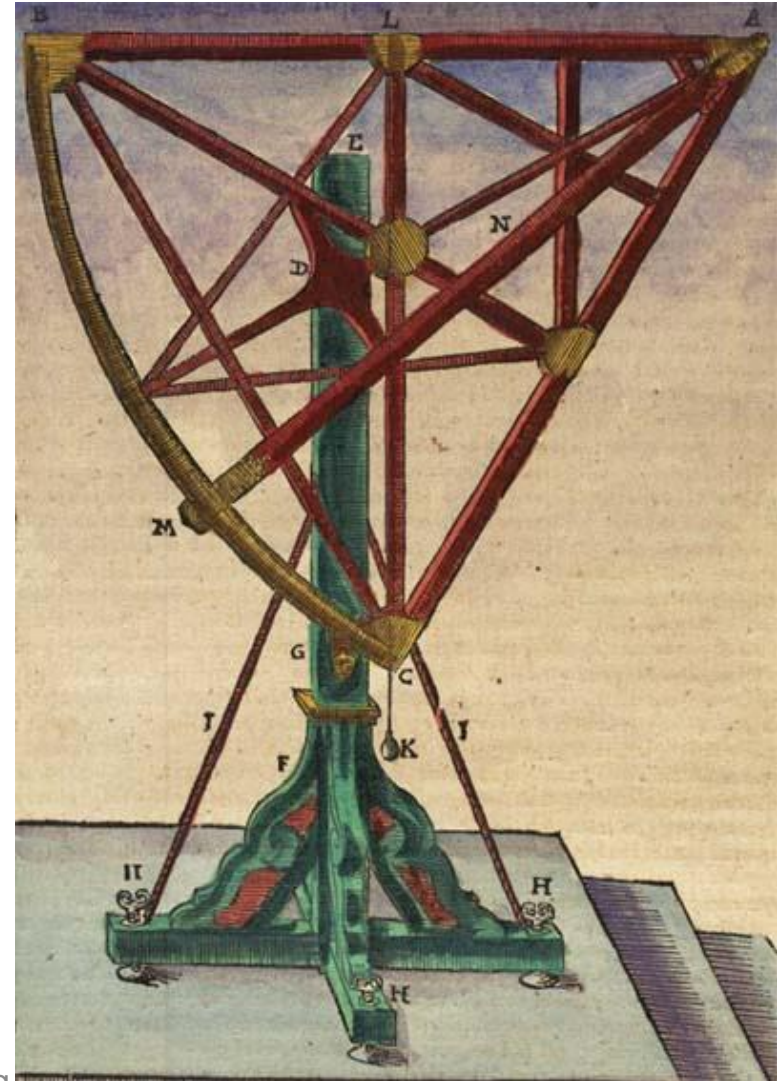


# Structural HPC trends

Specialisation: From infrastructure to instrument

Some researchers need:

- to build specialised e-Science stuff
- to have instrument-proximity
- to have control (root password, complete middleware and software dictatorship)
- To “own” the system administrator



# Structural HPC trends

Consumption: From instrument to infrastructure

Other researchers need:

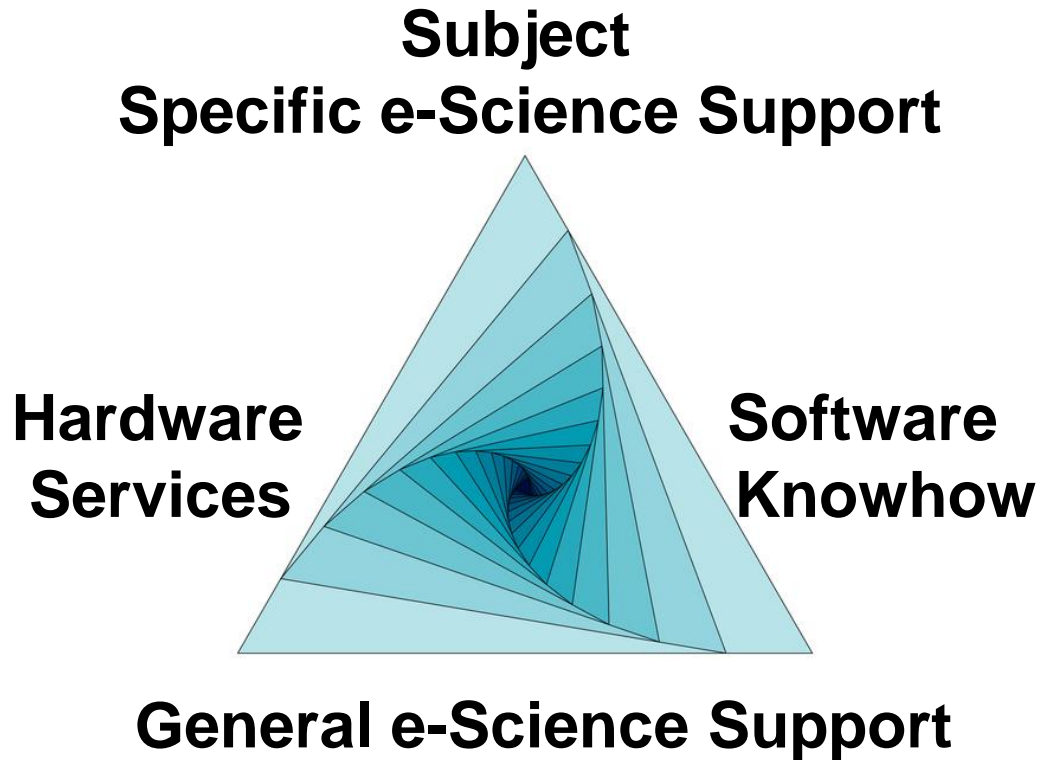
- to just compute, store etc...  
Anywhere, with whatever (e.g. cloud), as long as it works, and is affordable
- to have a nice *User Interface*; no voodoo, command line scripts
- to have no hassle with a local system administrator or computer centre boss





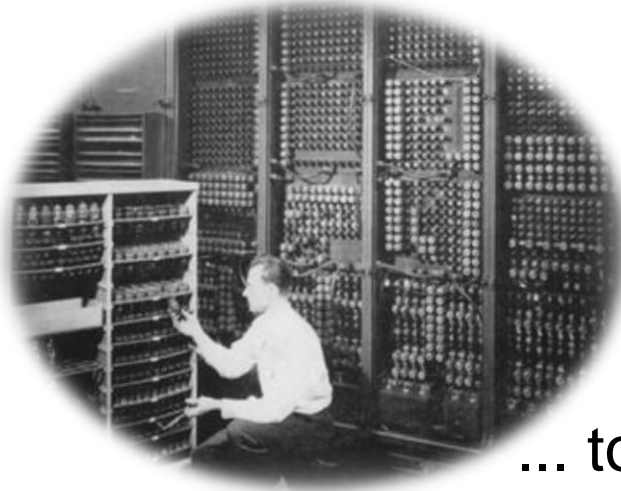
# Hardware vs. Software/Knowhow

Is aid a “grant” to the few or help to all?



# Help the Researchers to not need your help

*More value for money and know-how advancements*



## ***Motivation:***

One needs to move (not all)  
national e-Science assistance  
from national infrastructure ...

... to the gobble  
commodity market ...,

... So as to:

- A) get better service more value  
for money
- B) advance national competence and  
competitiveness



# Approaching the right challenges at the right level:

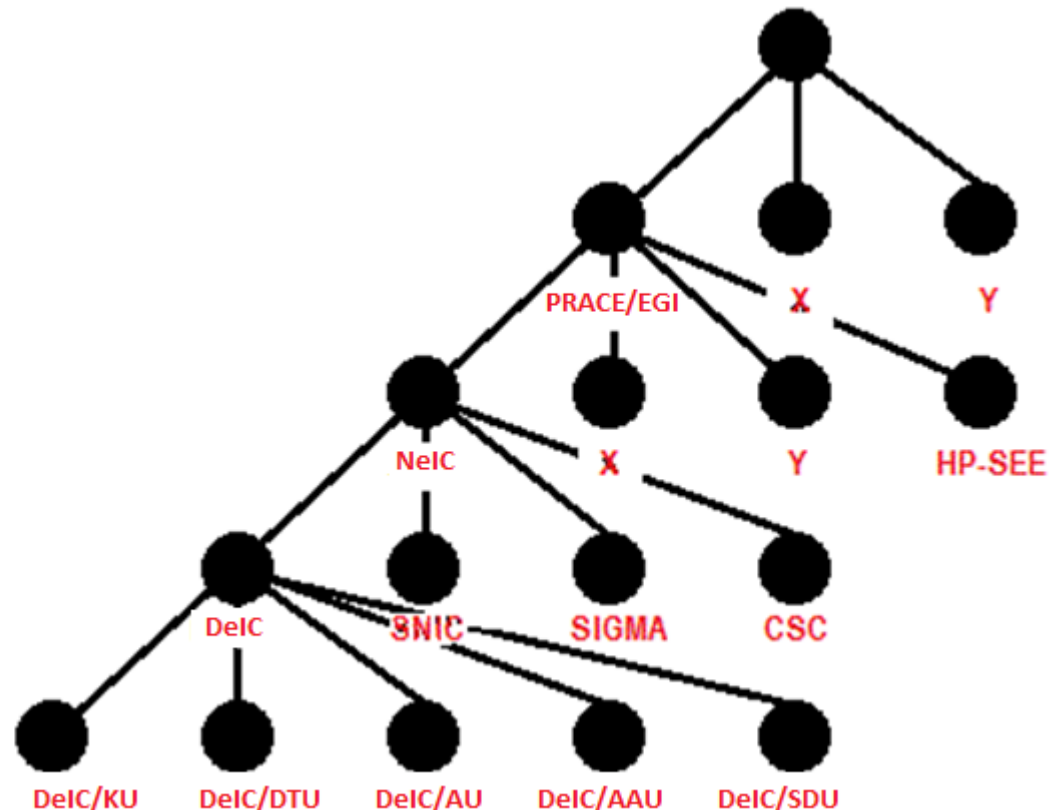
International

European

Nordic

Danish national

Danish regional



# Thanks, for listening...



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