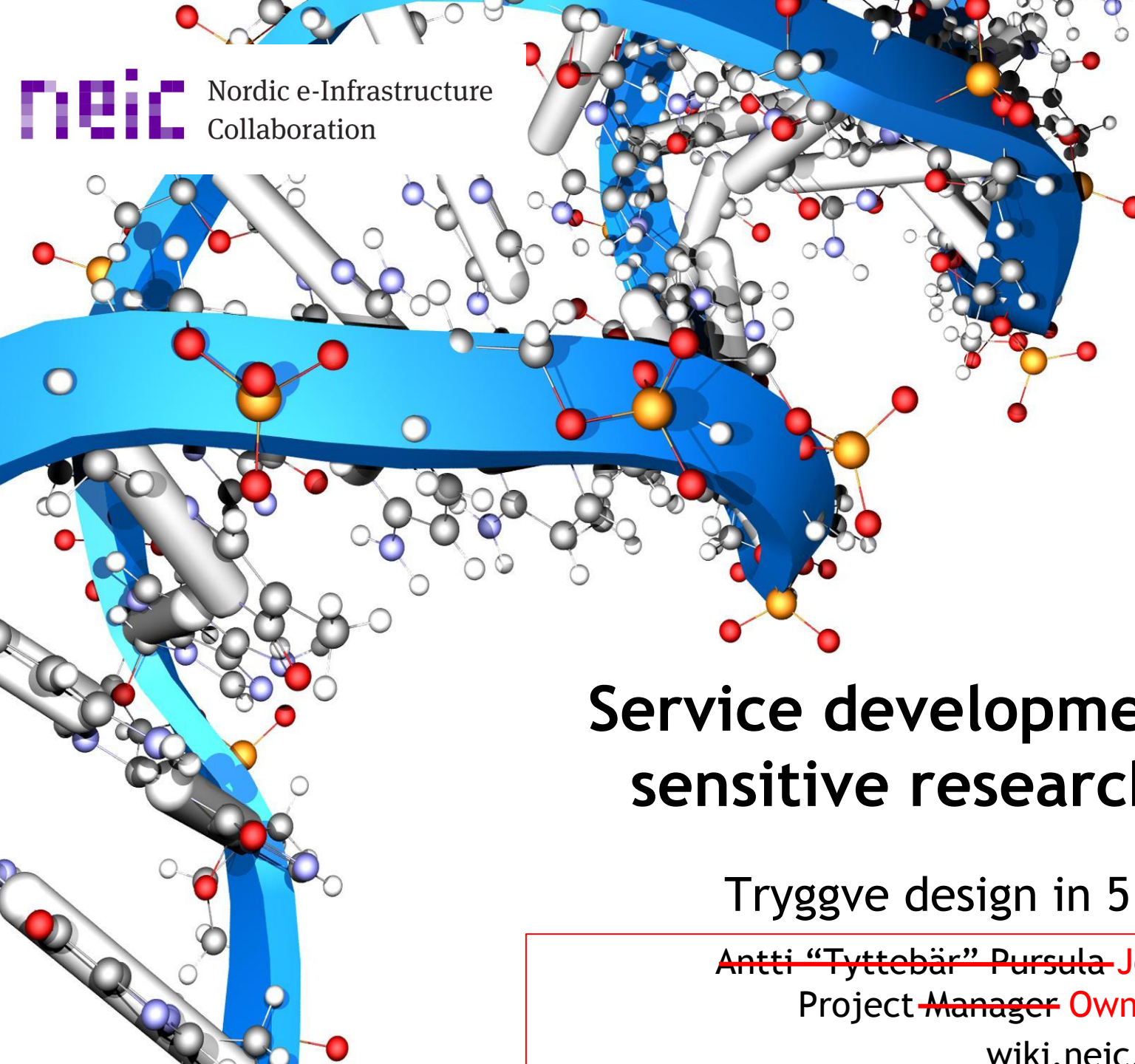




Nordic e-Infrastructure
Collaboration



Service development for sensitive research data

Tryggve design in 5 minutes

~~Antti “Tyttebär” Pursula~~ Joel Hedlund
Project ~~Manager~~ Owner, Not Sick

wiki.neic.no/Trvggve



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Tryggve design in 1 slide

Find means to facilitate distributed, cross-border collaborative e-science research on sensitive biomedical data.

This will be accomplished by facilitating mobility of:

- Users
- Data
- Software
- Workflows
- ...

The Nordics are a testbed and a springboard.

The end product will be global.



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Tryggve governance & style

- Shared governance
- High trust density
- Few partners
- High goal consensus
- **High need for network competences**
-

Tryggve - collaboration for sensitive biomedical data

- Project aims to strengthen Nordic biomedical research by facilitating use of sensitive data in cross-border projects
- Collaborators and funders are NeIC and ELIXIR Nodes in Denmark, Finland, Norway and Sweden
- Project will build on strong existing capacities and resources in Nordic countries



Tryggve works on 6 themes

1. Technical development
2. Interoperability of systems
3. Process development
4. Legal framework
5. Use cases
6. Communication and outreach

1. Technical development

- Purpose: *Provide secure computing environment for analysis of sensitive data.*
- “Building blocks”
 - TSD 2.0 service at USIT, Norway
 - Mosler service at BILS, Sweden
 - ePouta IaaS at CSC, Finland
 - Computerome at DTU, Denmark
- All of the above have been launched for users
- Variety in the systems involved offers flexibility to handle different user demands





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Tryggve tech

Tech:

- Virtualization; OpenStack, VMWare
- Remote desktop; ThinLinc
- Dockers & kubernetes
- sFTP Beamer
- Workflow generation; Galaxy
- Operations Orchestration - Compliance Engine
- Bare metal provisioning of servers



Tryggve principles and solutions

Principles:

- Security by isolation
- Strong authentication (2-factor auth)
- Tools Interoperability (VM & Dockers)

Solutions:

- Interconnected secure systems (sFTP Beamer)
- Bio tools registry
- Sensitive data wizard (Registry)
- Mobile device apps.



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Issues that we would like to talk to NeIC about

- GSIFTP to transfer large amounts of sensitive data?
- Security workshop for penetration testing?
- Identity federation system available to tryggve deliverables?
- Portable software installations? With Dockers? EasyBuild?
- Portable workflows?
- Workflow generation?
- Big data.
- Mitigate high latency issues for storage use.



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End of presentation



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Thank you
Get well buddy!



Likes
Tyttebär!

Finnish Hockey Proudness



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wiki.neic.no/Tryggve

Good PM.

"What a great guy"

