

Open Science vision

- Open Science is about facilitating the exchange of knowledge (open) during and after research and providing support for researchers throughout the entire research life cycle (science)
- The Open Science Cloud is a supporting environment for Open Science
- EOSC HLEG: secure and reliable access to services and systems and support the reuse of scientific data across disciplines and social and geographic boundaries
- Encompasses all aspects of Open Science support, including organisation, funding, governance, policy, engagement, skills and interoperability along with the related ICT facilities and/or e-infrastructure



The Commissioner's view



... we must create infrastructure. Europe's final transition must be one from fragmented data sets to an integrated European Open Science Cloud. By 2020, we want all European researchers to be able to deposit, access and analyse European scientific data through a European Open Science Cloud.

Speech by Commissioner Carlos Moedas in Amsterdam, Amsterdam, NL: "Open science: share and succeed", 4

Amsterdam Call for Action on Open Science

Removing barriers to open science

1. Change assessment, evaluation and reward systems in science6
2. Facilitate text and data mining of content8
3. Improve insight into IPR and issues such as privacy 10
4. Create transparency on the costs and conditions of academic communication 12

Developing research infrastructures

5. Introduce FAIR and secure data principles. 14
6. Set up common e-infrastructures 16

Fostering and creating incentives for open science

7. Adopt open access principles. 20
8. Stimulate new publishing models for knowledge transfer. 21
9. Stimulate evidence-based research on innovations in open science. 24

Mainstreaming and further promoting open science policies

10. Develop, implement, monitor and refine open access plans 28

Stimulating and embedding open science in science and society

11. Involve researchers and new users in open science 30
12. Encourage stakeholders to share expertise and information on open science 32



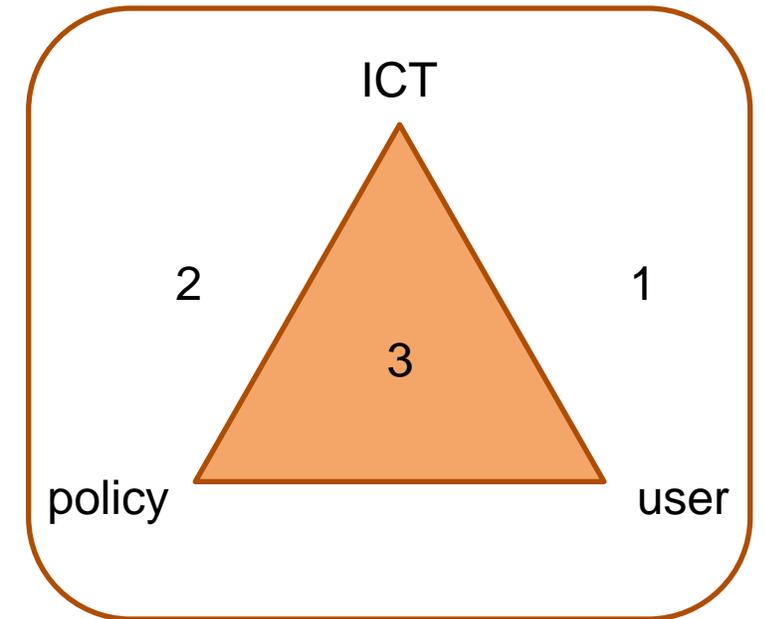
National Plan Open Science (December 2016)

- Key ambitions:
 - (1) **Full open access to publications in 2020**: continue Dutch approach for all Dutch research organisations and research areas
 - (2) **To make research data optimally suited for reuse**: set clear and agreed technical and policy-related preconditions to facilitate reuse of research data;
 - (3) **Recognition and rewards**: examine together how open science can be an element of the evaluation and reward system for researchers, research groups and research proposals
 - (4) **To promote and support**: establish a 'clearing house' for all information regarding all available research support
- → concrete ambitions, coalitions and timelines
- National Platform Open Science: joint responsibility for implementation
- Supported by VSNU (Association of universities in the Netherlands), KNAW (Royal Academy of Science), NWO (National Science Foundation), Vereniging Hogescholen (Universities of applied sciences), PhD network, Royal Library, NFU (Netherlands Federation of University Medical Centres), **SURF**, ZonMW (Netherlands Organisation for Health Research and Development), GO FAIR



Overall objectives of SURF in Open Science program

1. Effective alignment between the requirements of researchers and service development and support
 2. Effective alignment between Open Science policy and services and service development
 3. Increase in collaboration and knowledge in conjunction with Open Science support
- Addressing the connection between ICT and policy, between ICT and the users, and between various developments within the sphere of ICT



e-Infrastructures collaborating with research funders

Goal

- Help shape e-infrastructure requirements and funding at the proposal stage of research projects

Activities

- Presented SURF services during Netherlands eScience Center call information sessions
- Organised first national e-infrastructure session for NWO Roadmap (Dutch ESFRI) participants
- Assigned points of contact to projects

Impact

- Alignment of e-infrastructure needs early in the project planning phase

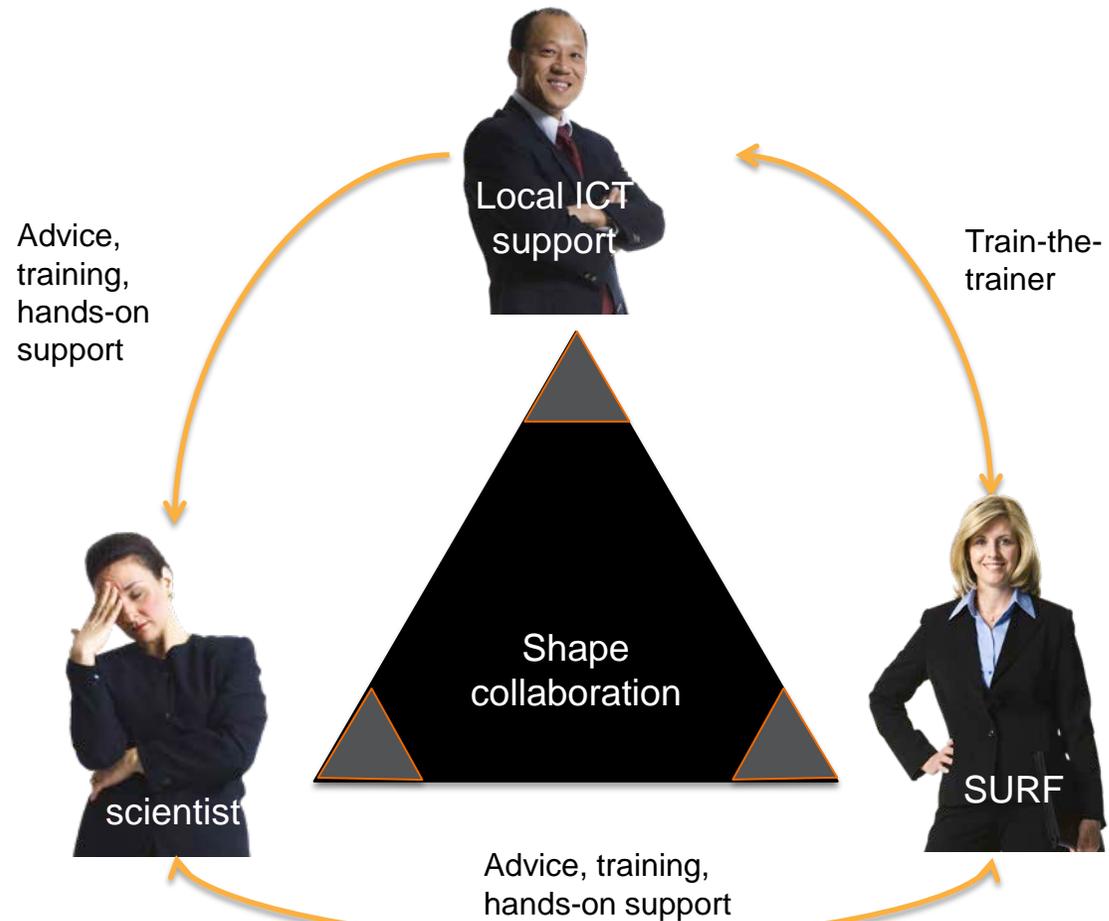


Go FAIR

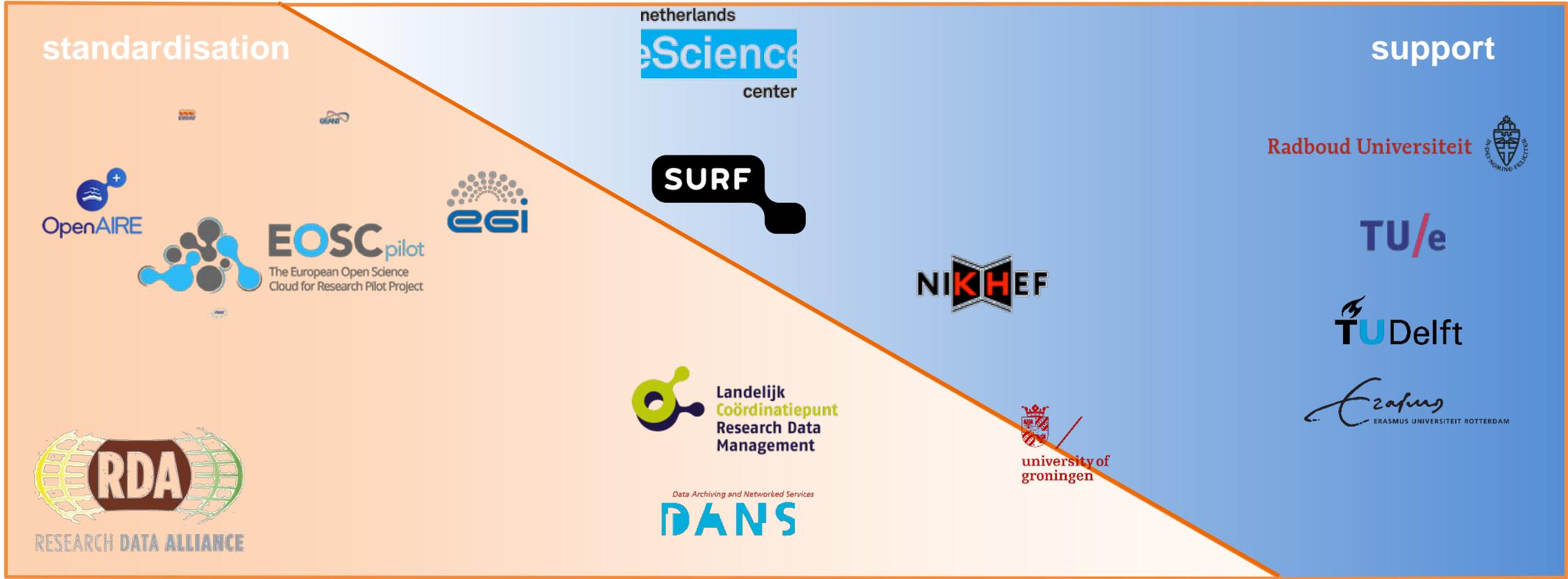
- Global Open FAIR
 - ... proposes a completely inclusive, open and practical implementation of the recommendations of the [EOSC High Level Expert Group](#) through a federated approach, liaising with initiatives and infrastructures that already exist in the EU member states.
 - The Netherlands has initiated and co-leads the early development of the GO FAIR initiative.
- Challenges
 - Grow beyond NL
 - Add additional disciplines



Support Triangle



Standardization vs Support



International

National

Local

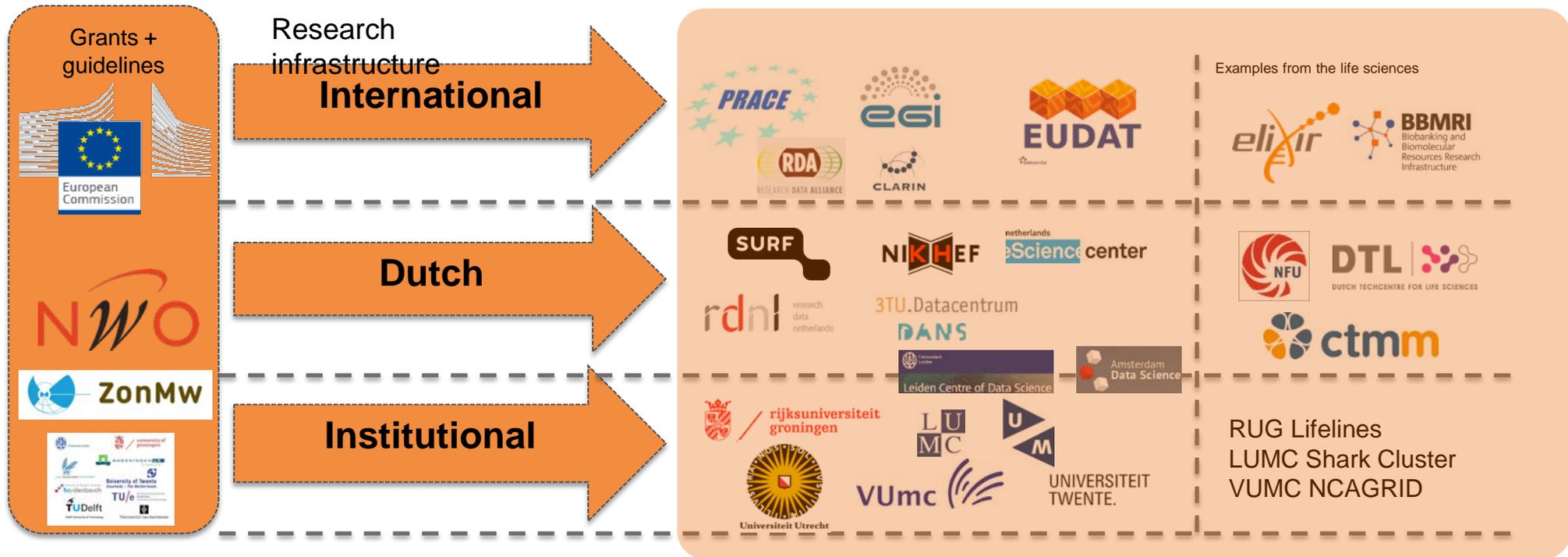
Some lessons learned in NL

- Research ICT support needed
 - Degrees of funding and proficiency vary
- Local ICT groups are central in providing e-infrastructure support (and should therefore be involved)
 - Stick to 'local first' principle
 - Institutes with own e-infrastructure see a role for themselves on the (inter-)national level
- Focus on service integration: e-infrastructure should be offered as a whole with a single helpdesk
 - Viable alternative: no-wrong-door policy
- The perceived value of (inter-)national e-infrastructure providers is in expertise, not in machines
- Training is required, both for research supporters and scientists
 - e-Infrastructure related
 - Generic ICT skills (basic programming, version control, Unix proficiency, *etc.*)
- Direct involvement of research funders is critical
 - RI proposals should include e-infrastructure plan and budget which can be checked by e-infra experts

e-Infrastructure landscape NL

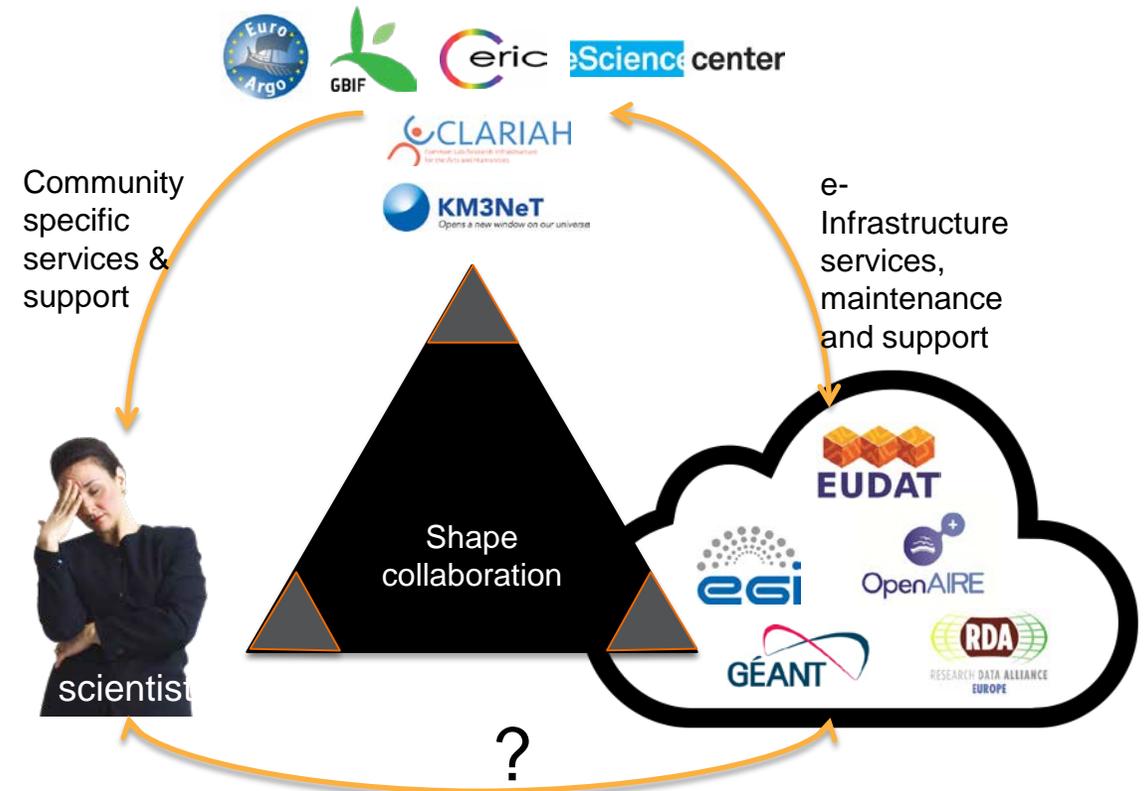


Where to get facilities?
Where to get training, support?



Local, regional and European support

- Service uptake higher when it comes with dedicated support
- Support is best delivered locally
- What is the role of local & regional RIs and e-infrastructure providers in EOSC?



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WHAT **SURF** CAN DO