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 groningen

library



25-01-2016 | 1

University of Groningen Research Data Office



U4 Workshop Research Data Life Cycle

Session 1

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University of Groningen since 1614

30.000 students
5000 fte staff
2000 fte academic staff
9 faculties
covering all academic disciplines

Research Output Portal

With nearly 210.000 publications



University Medical Centre Groningen

Research Focus University of Groningen

- › Healthy Aging
- › Sustainability
- › Energy



- › International collaboration

Why all this attention to Research Data

- › To support the researcher
- › To enhance research quality (integrity, evidence based research)
- › Required by
 - Colleagues
 - Journals
 - Funders
 - Society
- › Responsibility of universities, research institutes and researchers
- › Visibility, cooperation, new research questions, solutions



Research Data Initiative Board of the University



- › Quality Programme in Research (Integrity, Audits)
- › Research Data Management Plans by Research Institutes (e.g. GELIFES)
- › Legal Issues (ownership, third party agreements)
- › Central Service and Information Desk for Research Data: RDO, researchdata@rug.nl

Research Data Office

Project by Center of Information Technology
and University Library

Goal

One (virtual) Central Service and Information Desk to
support researchers, research institutes and Graduate
Schools in the management of Research Data

Given good and best practices in relevant fields of research



Spider in the data-web
Knowledge broker
“Dating club”



Please,
help me!

Results: organisation and policies



- › www.rug.nl/researchdata
- › Collaboration between CIT, UL, Legal, Research&Valorization a.o.
- › Research Data Policy of the University
- › UMCG (with NFU): HANDS
- › National collaboration:
 - UKB team RDM
 - Landelijk Coördinatie Punt RDM
 - Data4LifeSciences

RDO Network

Existing organisation

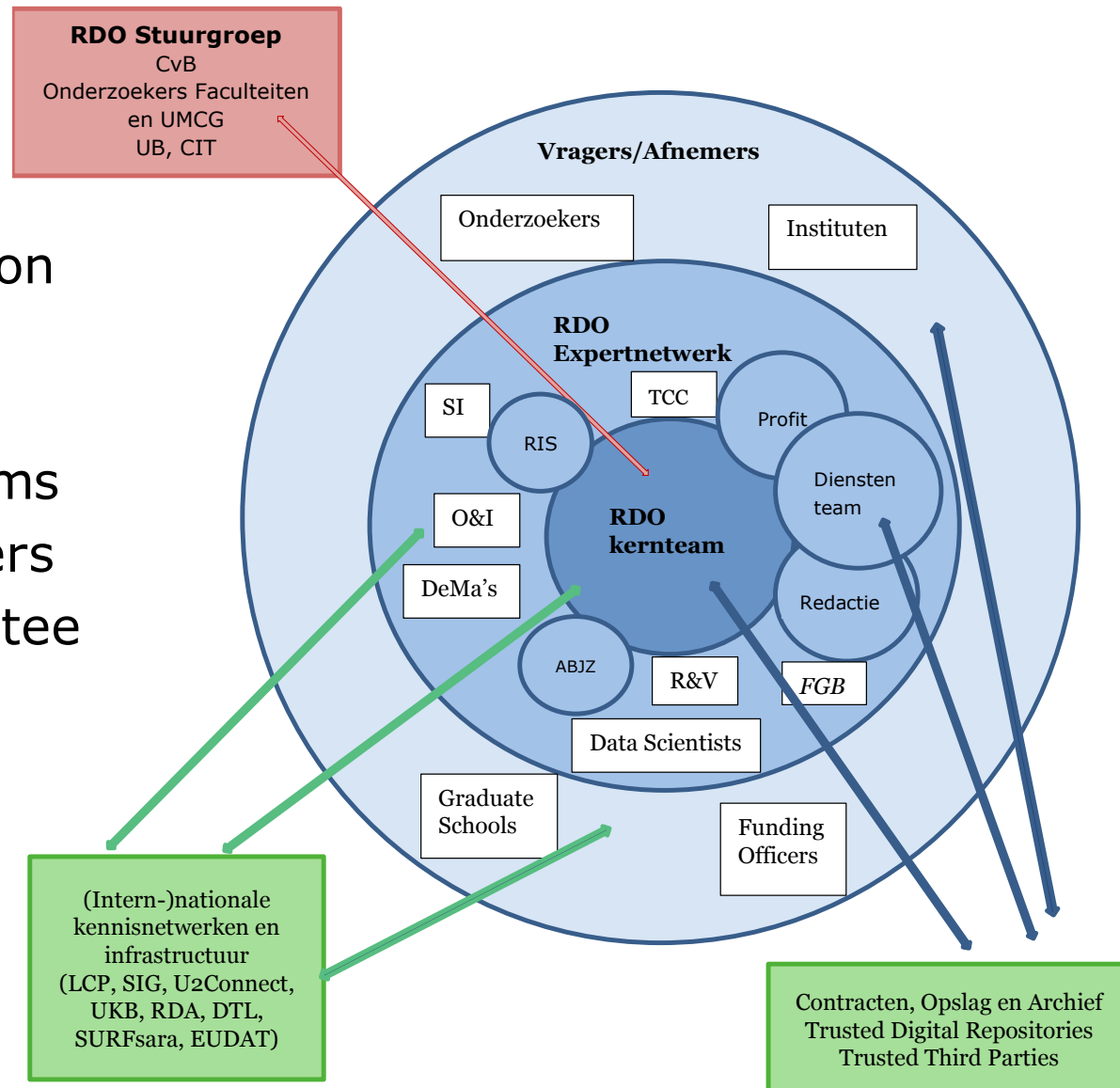
Kernel RDO

Ring of expert teams

Ring of Clients/users

"Steering" Committee

External links

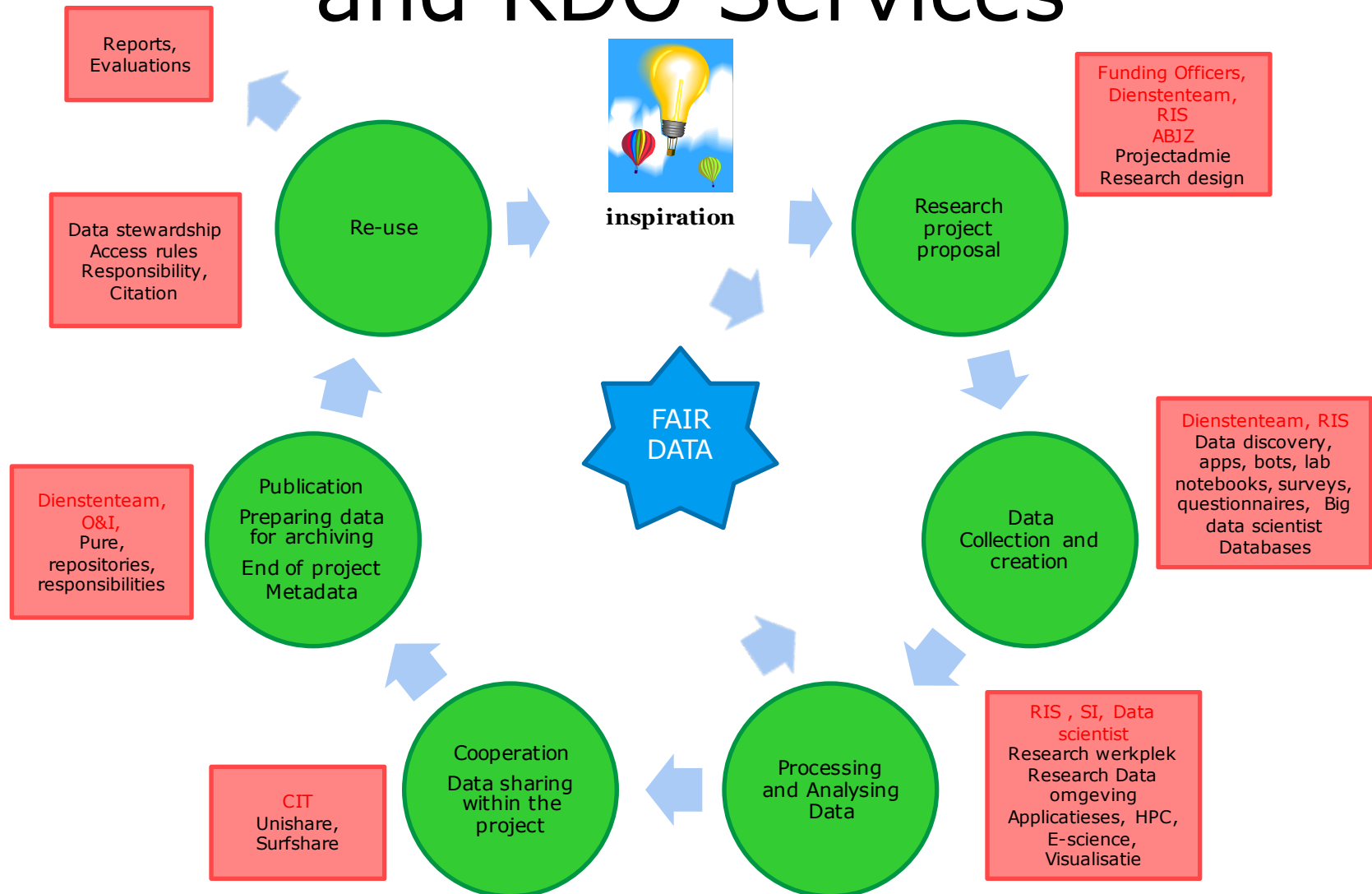


Results:

Services and Tools and Data

- › Support RDMP, PhD's, grant proposals
- › Wiki Research Data Ownership
- › Publishing and finding data
 - DataverseNL
 - Datarepositories (GIA KNA at ELAG)
 - Other e.g.
 - Penn World Tables
 - Sound Toll Registers Online
 - Lifelines
- › National Archives:
 - DANS (DansEasy and other services)
 - 3TU

Research Data Life Cycle and RDO Services



Services and Tools

Existing services/tools in the Spotlight
Public website
(rather than intranet)

New services in development
with FAIR and PbD in mind

- Safe and secure storage

- Stewardship

- Archiving

- Metadata

- Registration in CRIS (Pure)

- ...



Challenges

- › Fluent Workflow with researchers in mind
- › Financing infrastructure
 - Project
 - Sustainable infrastructure
- › Interoperability (RDA)
- › Law, soft law, regulations
- › Protection of interests of all parties involved
- › Proper deletion of data
- › Quality of data and services
 - short term and long term
- › ...





**Make your data FAIR: Findable Accessible
Interoperable and Reusable!**

THIS MUST BE A
21ST CENTURY
NAS, BUT WHERE
IS THE DATA?





Policy

- [Principles of data management](#)
- [Responsibilities](#)
- [Developments in Research Data Management](#)
- [Privacy by Design](#)
- [‘Not objections but clear boundaries!’](#)
- [Legal Aspects of Data Management](#)

Policies on Research Data Management

Scientific research is a responsible job. The researcher should therefore carefully and honestly deal with research data.

In the spring of 2015, the [memorandum on research data policies](#) was established by the Board of the University.

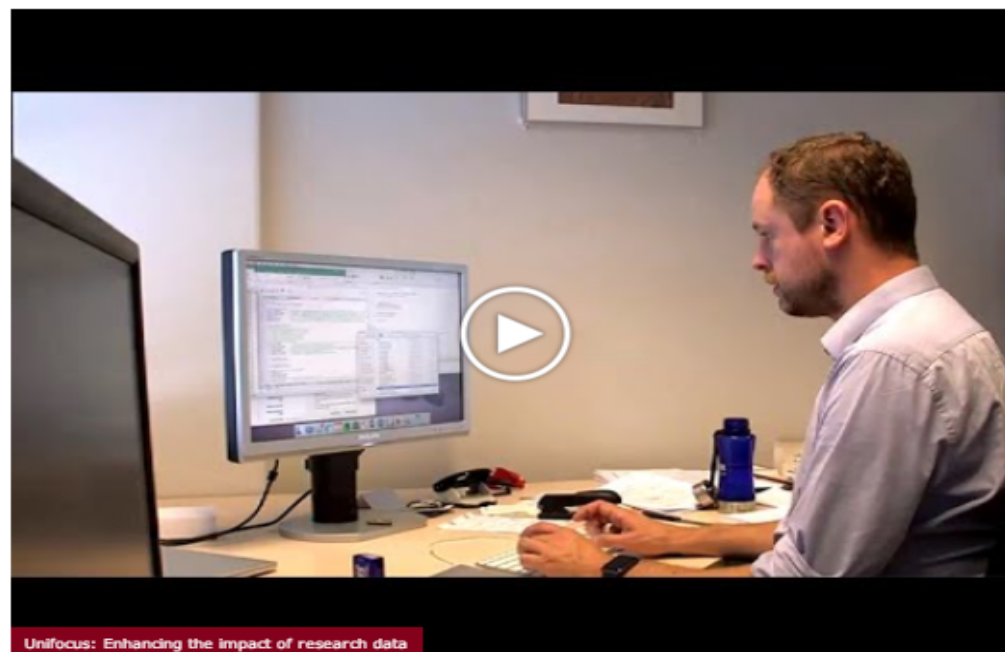
As follow up, all institutes have been asked to create their own institute data management plan based on this policy. This institute plan then acts in general as data management plan for all the research at the institute.

As soon as institute data management plans are established, you will find them on this website.

More information:

[2015 Research Data Policy](#) (PDF, memorandum in English)

[2015 RUG Researchdatabeleid](#) (PDF, memorandum in Dutch)





University Library





University Library Front Office and Development & Innovation

FO: Teams of information specialists
('discipline teams')

- Arts and Humanities
- Law, Behavioral and Social Sciences
- Economics, Spatial Sciences and Natural Sciences
- Medical Science



Liaison Librarian

All members of a 'discipline team' have tasks for

- Acquisition (books)
- Information literacy training
- Support on library resources (databases) and Information retrieval



Liaison Librarian (2)

Some team members of a 'discipline team' are also member of a 'specialist team'

- Bibliographic management (Refworks, Mendeley etc.)
- Publication strategies (Open access, Pure)
- Library training (courseware)
- Research Data Management



RDM team services

- Awareness
- Metadating
- Archiving (DANSEasy, DataVerseNL)
- Data Management Plans /Paragraphs
- Training (Ph.D.; Research Master)
- Liaison with other specialists (RDO, UMCG TCC, Legal Affairs)



RDM team services (2)

Metadating

- Advising on thesaurus use (for instance Eurovoc, LoC, DSM);
- Advising on contents description



RDM team services (3)

Archiving

- Advice and assistance in converting files
Finding suitable archives
- Calculating necessary storage space
(depending on conversion)
- *'Post research' archiving*



RDM team services (4)

- RDM Paragraphs with funding proposals, e.g. FOM (Physics)
- Research Data Management Plans
- Advice on RDM Plans during research
- PROFIT-Toolbox UMCG
- UMCG-Zon-MW funding proposals:
DMP-online



RDM team services (5)

Awareness regarding RDM

Liaison with other experts

- Legal issues (privacy, intellectual property, third party agreements)
- Technical issues (storage, security)
- Funding Officers



RDM team services (6)

Training: *work in progress*

- Developing courseware for Ph.D students (in alignment with forthcoming research institutes data management plans)
- Participation in training programme for Research Master students



Front Office RDM team

Information Specialist	Library Liaison for
<u>Annet Kranenborg</u>	Arts; Philosophy; Theology and Religious Studies
<u>Bert Huizing</u>	Economic and Business; Spatial Sciences
<u>Guus van den Brekel</u>	Medical Sciences (UMCG)
<u>Jitka Vavra</u>	Medical Sciences (UMCG)
<u>Maarten Goldberg</u>	Mathematics and Natural Sciences
<u>Tiemen Folkers</u>	Behavioral and Social Sciences; Law



University Library Development and Innovation

Back Office Services in Research Data Management:

- Special Purpose Repositories e.g.
 - Groningen Institute of Archaeology (GIA)
GIA-KNA: GIA KNA
 - Digital Plant Atlas
- Pure: www.rug.nl/research/portal
 - In progress: datasets, databases
- DataVerseNL: local management, advice and support

Christina Elsenga , Johannes Nicolai,
Willem Struiksma, Konstantin Ignatov



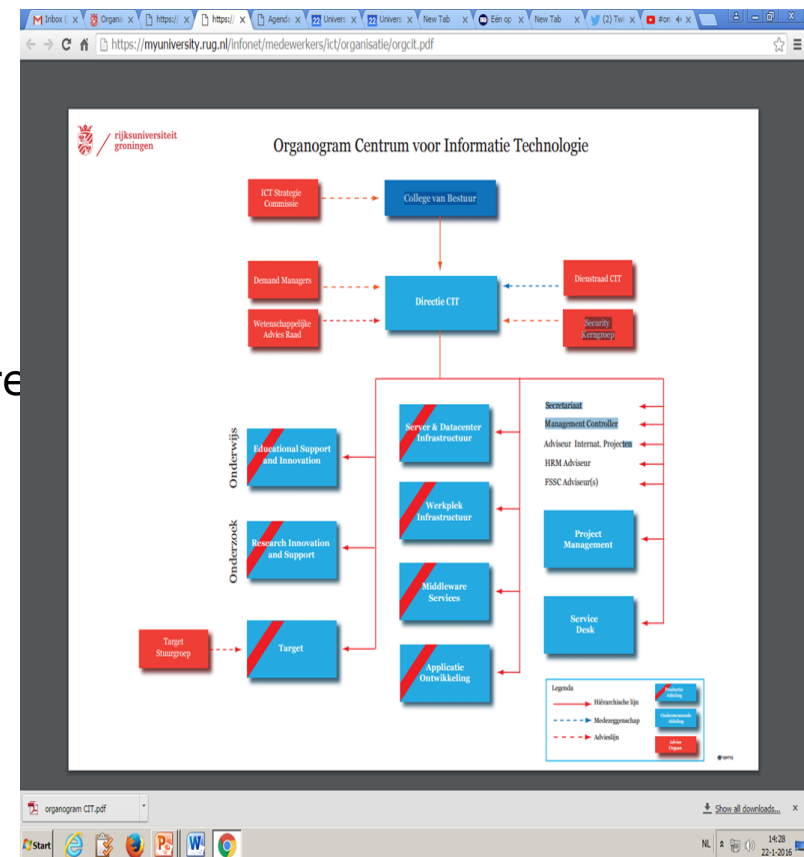
IT Research and Innovation Support

Center for Information Technology (CIT)



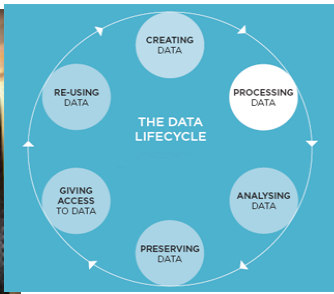
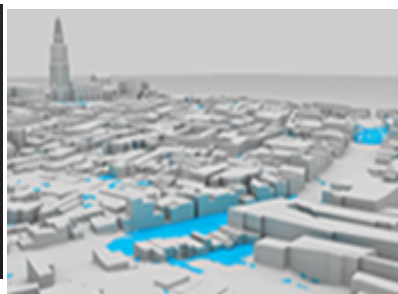
Facts and Figures CIT

- CIT is a the IT shared service center of the UG
- Staff: 220 employees
- Units
 - > Osi, Esi, RIS
 - > Server en Datacenter Infrastructure
 - > Middleware services
 - > Workplace and infrastructure
 - > Application Development
 - > Service Desk
 - > Project Management



Research and Innovation Support

Bridging the gap between Research and IT

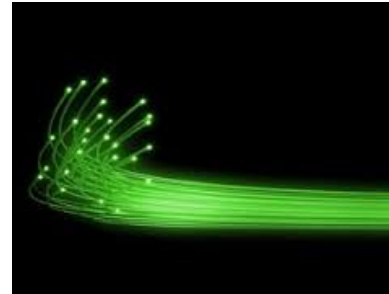


- Entry point for researchers with IT questions
- since september 2013
- 15 employees, 8 students
- Not an island

IT-facilities UG

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- › Flexible Bandwidth (100 GB)
- › High Performance Computing
- › Geo data infrastructure
- › Visualisation
- › Data storage
- › Three datacenters (1MWatt)
- › Virtual UWP and RWP
- › Virtual server cluster (1000+)
- › Multidisciplinary



Flexible bandwidth

- › 2x 100 GB to SURFnet (wired)
- › 10 GB between RUG-buildings
- › MSP: 100 GB lightpaths
- › Bandwidth on demand, 1, 10, 20, 40 dedicated
- › Eduroam: wireless access from > 90 universities with own ID.

High Performance Computing

Peregrine: Linux cluster (Multi Purpose)

162 standard nodes,

- 24 Intel Xeon 2.5 GHz cores
- 128 GB internal memory

6 nodes with special accelerator cards

4 with 2 Nvidia K40 GPU cards

2 with 2 Intel Xeon Phi 7120 cards

7 nodes for jobs that need extra memory

- 48 Intel Xeon 2.6 GHz cores
- 1536 GB internal memory

6 domain specific clusters



Reality Center



8,5 m wide curved touchscreen

Interactive 3D-presentations



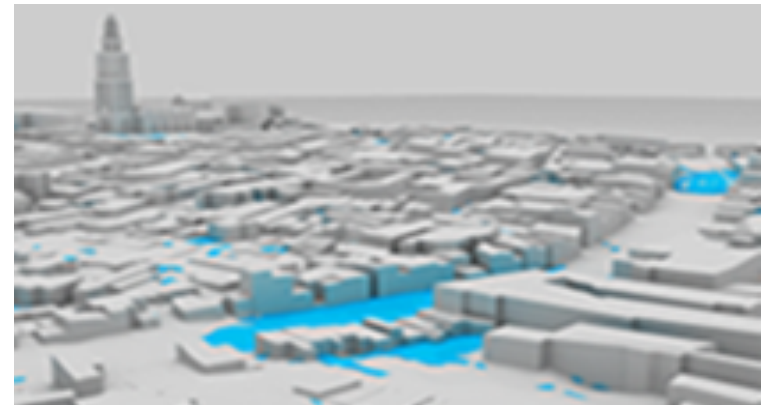
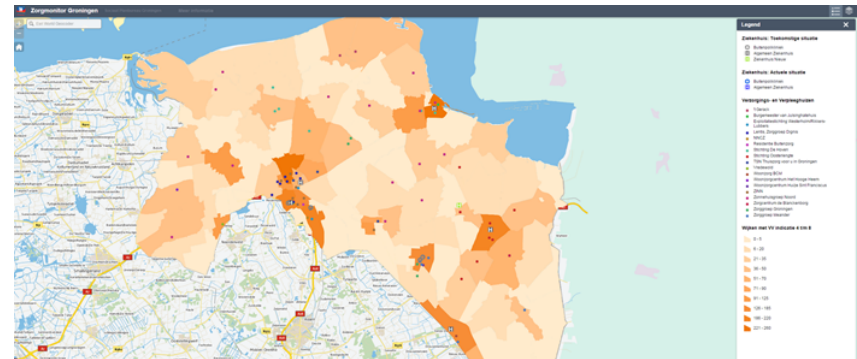
3D Reality Cube

Oculus Rift and zSpace

Geo Services

- › Support use and analysis of spatial data
- › Visualisation
- › Innovation
- › Courses
- › Open dataportal

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Data storage

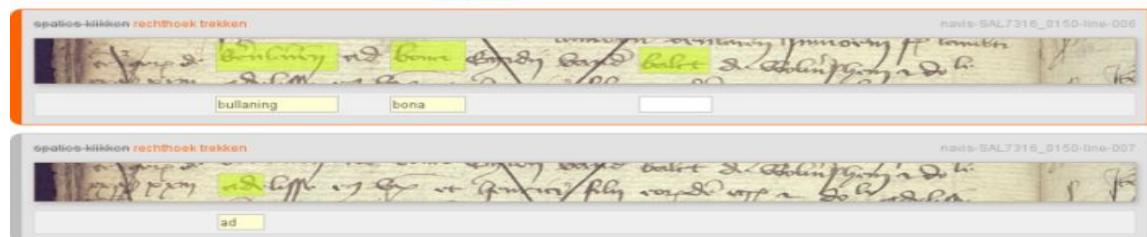
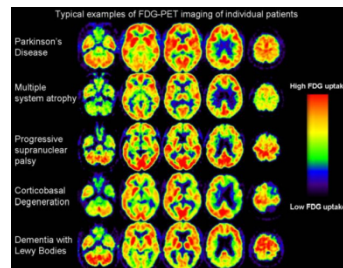
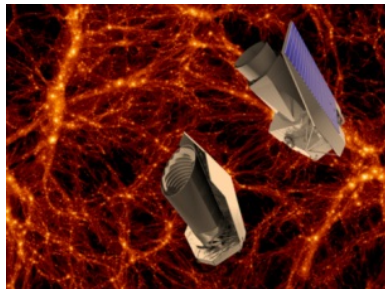
15 to 20 petabyte research data

- › Unishare: sharing data researchers with students and others outside university
- › Wiki's/webhosting
- › Excel sheets
- › Databases: Access, Oracle, MySQL, Nosql,etc Interfaces
- › Tailormade solutions

Big Data with partners

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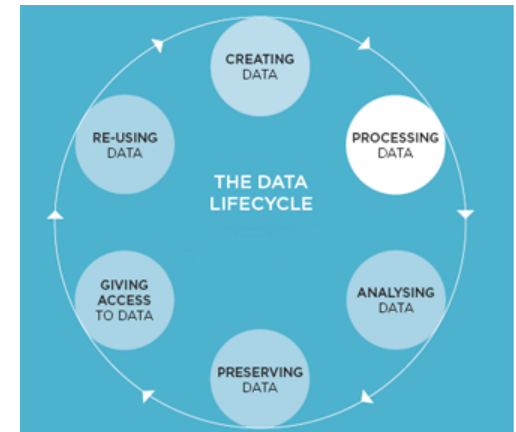
- Lofar/Astron, Lifelines, Monk, Glimps, Euclid
- Energysense



Work in Progress (1)

PoC Storage and archiving research data

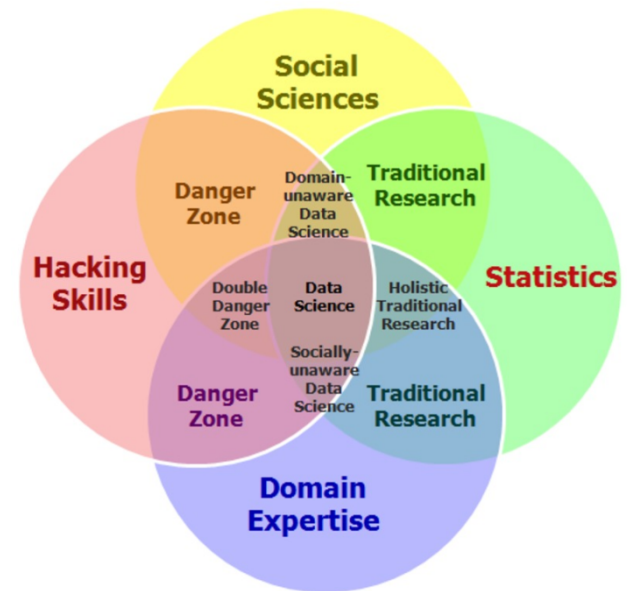
- Easy accessible
- Scalable
- Implementing privacy and security policies



Work in Progress (2)

Partners

- Digital Humanities
- Center for Data Science and Systems Complexity (FMNS)
- IT research UMCG



More info

Research and Innovation Support

- > RIS: www.rug.nl/cit/ris
- > ris@list.rug.nl
- > www.twitter.com/CITresearch

Big data projects with partners

- > <http://tinyurl.com/guxg9nn>
- > www.energysense.nu