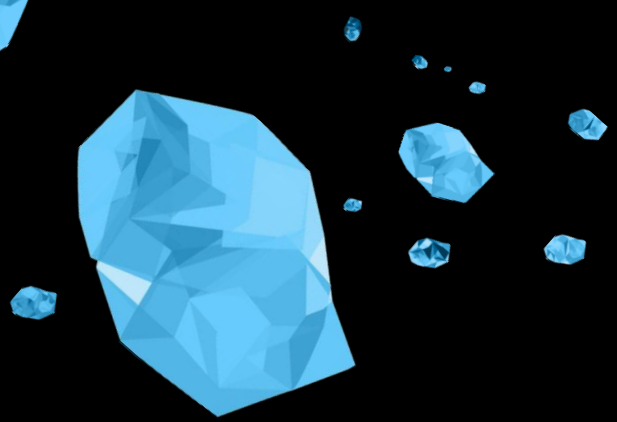
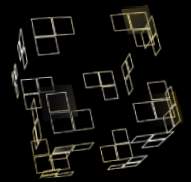


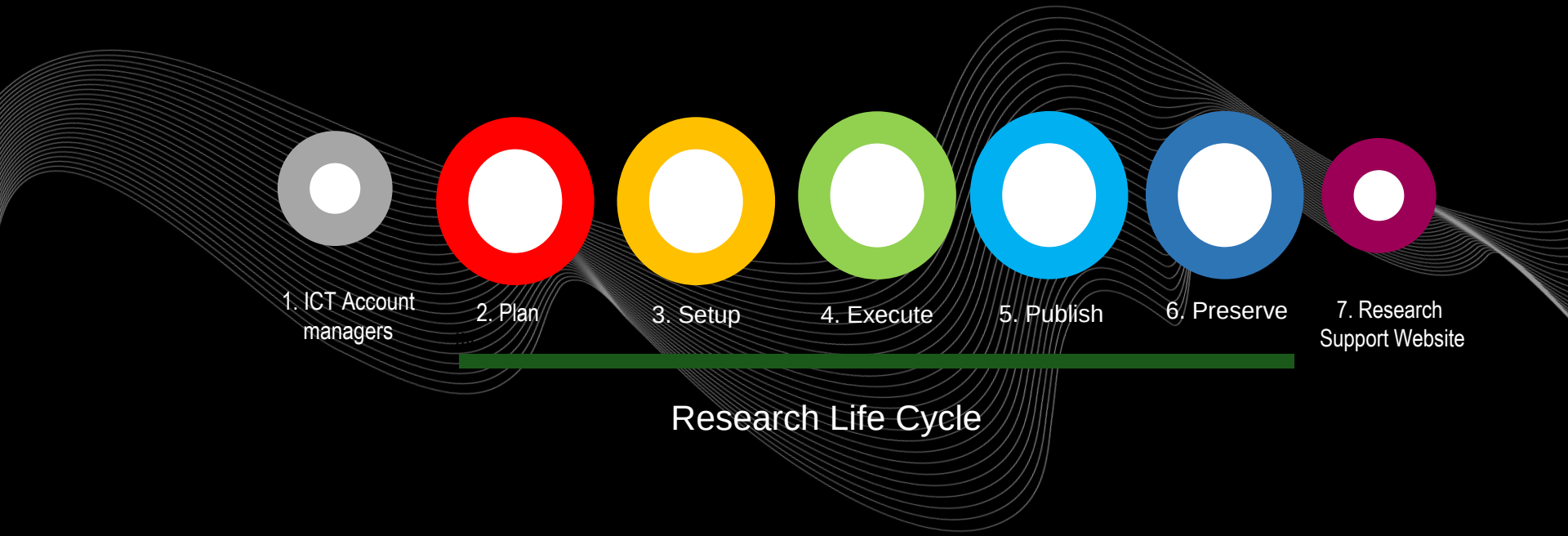
DCC Research Life cycle: ICT & Support

ICT Account managers
Peter Lasker & Hendri Hondorp

26-10-2021



AGENDA:



UNIVERSITY OF TWENTE.

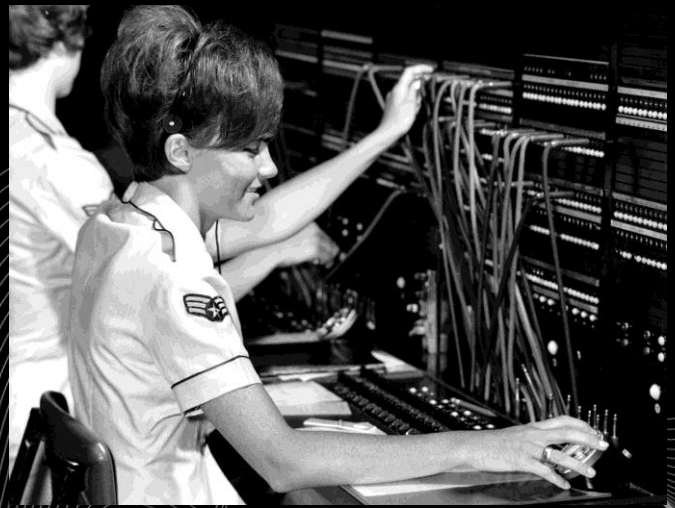
ICT ACCOUNT MANAGERS

- ICT Account managers are part of DCC team
- First point of contact for Research IT

- Every faculty has an ICT account manager
  - EEMCS: Tonnie Tibben
  - ITC: Ralph Mettinkhof
  - BMS + UT Services: Hendri Hondorp

ET: Peter Lasker

TNW: Tonnie Tibben



Connect Demand and Supply of ICT

ICT SERVICES FOR RESEARCH

RESEARCH LIFE CYCLE

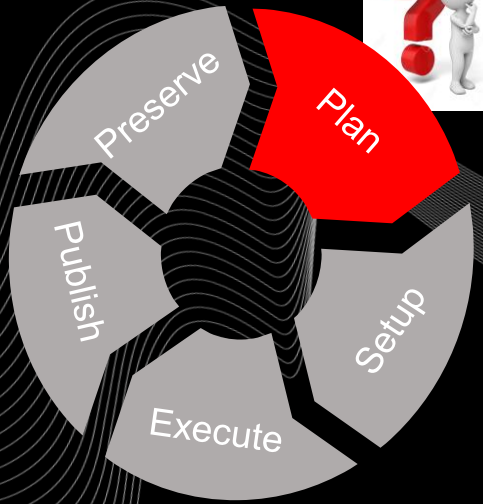
1. Plan your research
2. Setup your research
3. Execute your research
4. Publish your research
5. Preserve your research

In all parts ICT services are present.
All information can be found at the serviceportal/researchsupport website.

ICT SERVICES FOR RESEARCH

RESEARCH LIFE CYCLE

1. PLAN YOUR RESEARCH
2. Setup your research
3. Execute your research
4. Publish your research
5. Preserve your research



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ICT SERVICES FOR RESEARCH

PLAN YOUR RESEARCH (1/3)

Tasks during Planning your research are:

- Determine your research approach
- Design your research infrastructure
- Plan your research data management
- Arrange adequate funding.

The DMP tool helps you create a Data Management Plan (DMP).

An online course is available and it is given by the Data Stewards.

ICT SERVICES FOR RESEARCH

PLAN YOUR RESEARCH – DMP tool (2/3)

webapps.utwente.nl/dmp/fr/UT-DMP-GDPR/UT_DMP-GDPR-v3-4/new#

Datastorage | FlightRadar-24 Pi's | Sharepoint | Prive | Testsite | UT | off-campus access | Shared Notes... Documenten | VPN-scripting | DSCC IN_Man...

UNIVERSITY OF TWENTE. DMP and/or GDPR Registration

Introduction

Welcome to the UT tool for writing your data management plan (DMP) and the notification of processing of personal data in research in compliance with the General Data Protection Regulation (GDPR registration).

This DMP form has a generally accepted structure which complies to the policy of funders like NWO and ZonMw. The EU allows you to deliver a DMP based on this form as well.

When filling in the answers, please check data policies and guidelines of your research group, department, or faculty and/or the UT research data management policy. Also the website of these organization units may contain relevant information.

This DMP form can or must be reviewed. When your draft version is ready for review press "Save and Review" to start/continue this review process. An e-mail message is sent to the Reviewer. The same holds for GDPR registration.

Choose your form

What do you want to do?

- DMP
- DMP with GDPR Registration
- GDPR Registration

*When you will **process personal data*** in terms of the European General Data Protection Regulation (GDPR), choose option 2 or 3, the latter for instance in case you have already a DMP. UT bachelor or master students are not obliged to make a DMP but in case of processing personal data should do a GDPR registration (option 3). More information.*

** **processing** means any operation or set of operations which is performed on personal data or on sets of personal data, whether or not by automated means, such as collection, recording, organisation, structuring, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment or combination, restriction, erasure or destruction.*

***personal data** means any information relating to an identified or identifiable natural person ('data subject'); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person;*

Do you write this DMP in the context of the RDM course?

Yes No

Information about review process and buttons at the bottom of this form

Summary | Save & Review | Save draft | pdf

UNIVERSITY OF TWENTE.

ICT SERVICES FOR RESEARCH

PLAN YOUR RESEARCH – DMP tool (2/3)

webapps.utwente.nl/dmp/fr/UT-DMP-GDPR/UT_DMP-GDPR-v3-4/new#

ation

Datastorage | FlightRadar-24 Pi's | Sharepoint | Prive | Testsite | UT | off-campus access | Shared Notes... Documenten | VPN-scripting | DSCC IN_Man...

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Do you write this DMP in the context of the RDM course?

Yes No

- General
- Data collection
- Data documentation
- Data storage
- Data security
- Data selection and preservation
- Data availability for reuse
- Information about review process and buttons at the bottom of this form

Summary | Save & Review | Save draft | pdf

Data collection

The answers to the following questions should be entered in the table below.

1. **Add for each set of data you will collect or generate a descriptive title and the type of data. Types of date are observational data, experiment data, simulation data and/or derived or compiled data. Also mention materials, such as lab notebooks, field diaries, informed consent, or algorithms, scripts, etc. Add physical data or materials, like samples, as well. Make separate items for personal data.** *Indicate whether it concerns secondary data (pre-existing data collected or generated by other people or organizations)*
2. **Which form will these types of data have (e.g. text, numbers, tabular data, survey data, models, software, audio, video, physical samples)?**
3. **Which file format will the types of data have (e.g. pdf, xls, doc, txt, rdf)?**
4. **Which software or tools are needed to create, process and/or visualize these types of data?**
5. *Personal data is set to "No" and can not be changed, because you have chosen not to use the "GDPR Registration" (see first question of this form).*

DC1. Descriptive title / type of data	DC2. Form	DC3. File format	DC4. Software/tools	DC5. Personal data
First data collection	Text	.txt		Yes / No
Second data collection	Movie	.mp4	Moviemaker	Yes / No

DC6. In case you use secondary data which source will be used?

Secondary data can be used from very different sources, such as data available in your own research group, from databases managed and offered by (inter)national institutes, e.g. statistical offices; commercial parties or clinical data from hospitals.

DC7. Is copyright on data owned or claimed by a third party?

Yes No

This question is about rights and control regarding the research data. Although legally incorrect, this is often referred to as data ownership. In case of primary data, intellectual-property rights ('database right') is vested in the University of Twente (see UT research data policy, section 4).

DC8. What will be the estimated total costs (€) involved in the collection, generation and/or use of data?

€

Think of costs for acquiring, processing or analyzing the data or for getting informed consent. Use cost estimations which possibly are available in the research project budget. For more information, see Guide Research Data Management and Costs.

ICT SERVICES FOR RESEARCH

PLAN YOUR RESEARCH – DMP tool (2/3)

webapps.utwente.nl/dmp/fr/UT-DMP-GDPR/UT_DMP-GDPR-v3-4/new#

ation

Datastorage | FlightRadar-24 Pi's | Sharepoint | Prive | Testsite | UT | off-campus access | Shared Notes... Documenten | VPN-scripting | DSCC IN_Man...

What do you want to do?

- DMP
- DMP with GDPR Registration
- GDPR Registration

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*** processing** means any operation or set of operations which is performed on personal data or on sets of personal data, whether or not by automated means, such as collection, recording, organisation, structuring, storage, adaptation or alteration, retrieval, consultation, use, disclosure by transmission, dissemination or otherwise making available, alignment or combination, restriction, erasure or destruction.*

***personal data** means any information relating to an identified or identifiable natural person ('data subject'); an identifiable natural person is one who can be identified, directly or indirectly, in particular by reference to an identifier such as a name, an identification number, location data, an online identifier or to one or more factors specific to the physical, physiological, genetic, mental, economic, cultural or social identity of that natural person;*

Do you write this DMP in the context of the RDM course?

Yes No

- General
- Data collection
- Data documentation
- Data storage
- Data security
- Data selection and preservation
- Data availability for reuse
- Information about review process and buttons at the bottom of this form

Summary | Save & Review | Save draft | pdf

Data storage

Use the table below to answer the the following questions for each type of data you collect or generate. If you want to add or change an item, please return to the table Data Collection.

1. **What storage medium will you use for the master files of the data?**
2. **In case of non-UT central storage media, what will be the backup frequency and location?**

It is UT policy to store the original files (master files) from which you make work copies of the research data on UT network file servers, such as the 'Home directory' or the 'Project and organization directory'. Data files on UT network servers are stored in the UT data centre and backed up daily. Have a look at the UT options for storing your research and the backup procedure. For questions and more information, contact the ICT Account manager in your faculty.
If you are, by third-party agreement, bound to store the master files on another medium, be aware of adequate backup frequency and location. Storing master files of data on laptops, stand-alone hard drives or portable storage devices such as USB-sticks, is not in compliance with the UT data policy.

Type of data	DS1. Storage Medium	DS2. Backup Frequency	Backup location
First data collection	UT Network Storage / Non UT Network Storage (Cloud services such as Surfdrive or OneDrive (with @utwente.nl login) are non UT network storage)	Please select:	
Second data collection	UT Network Storage / Non UT Network Storage (Cloud services such as Surfdrive or OneDrive (with @utwente.nl login) are non UT network storage)	Please select:	

DS3. In case of storing master files (also) on other media than the UT network file servers, what are the reasons of this?

If (master files of) data must be (also) stored on servers of external parties, please refer to the contract or agreement.

DS4. If other storage media for work copies of the data files will be used, specify this here.

Although not recommended, copies of data files can be kept on remote, cloud and/or portable storage. Please, keep in mind confidentiality and security requirements.

DS5. What are the estimated total costs (€) for storage of the data, both on UT network servers and other locations?

€

When you need to store more than 10 GB of data on UT network servers, ask the ICT Account manager in your faculty for information about costs.

ICT SERVICES FOR RESEARCH

PLAN YOUR RESEARCH (3/3)

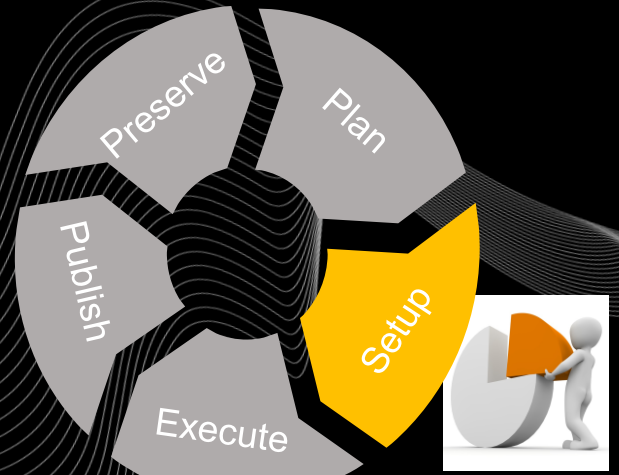
NWO, EU and ZonMW accept the DMPtool output for their proposals.

Datastewards will review your Data Management Plan.

ICT SERVICES FOR RESEARCH

RESEARCH LIFE CYCLE

1. Plan your research
2. SETUP YOUR RESEARCH
3. Execute your research
4. Publish your research
5. Preserve your research



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ICT SERVICES FOR RESEARCH

SETUP YOUR RESEARCH (1/11)

IT Infrastructure:

- Use generic UT solutions
- Use research group facilities (ICT contact person)
- Purchase extra needed IT facilities with assistance of the ICT Account manager

ICT SERVICES FOR RESEARCH

SETUP YOUR RESEARCH (2/11)

Software and licenses:

- Generic UT software for Windows computers available in Software Center
- UT licenses for generic research tools
- Research groups have special licenses. Contact your ICT-contactperson
- Extra needed software/licenses:
  - LISA has contract managers
  - Also privacy / GDPR contract aspects

ICT SERVICES FOR RESEARCH

SETUP YOUR RESEARCH (3/11)

Store, share, transfer and collaborate with research data

UT policy on storing research data during a research project:

"All collected research data, including related materials (e.g. protocols, models or questionnaires), must be stored in the ISO 27001- and NEN 7510-certified facilities. Certified data facilities are offered by the UT-ICT services (LISA). If applicable, terms of use of data suppliers are leading."

ICT SERVICES FOR RESEARCH

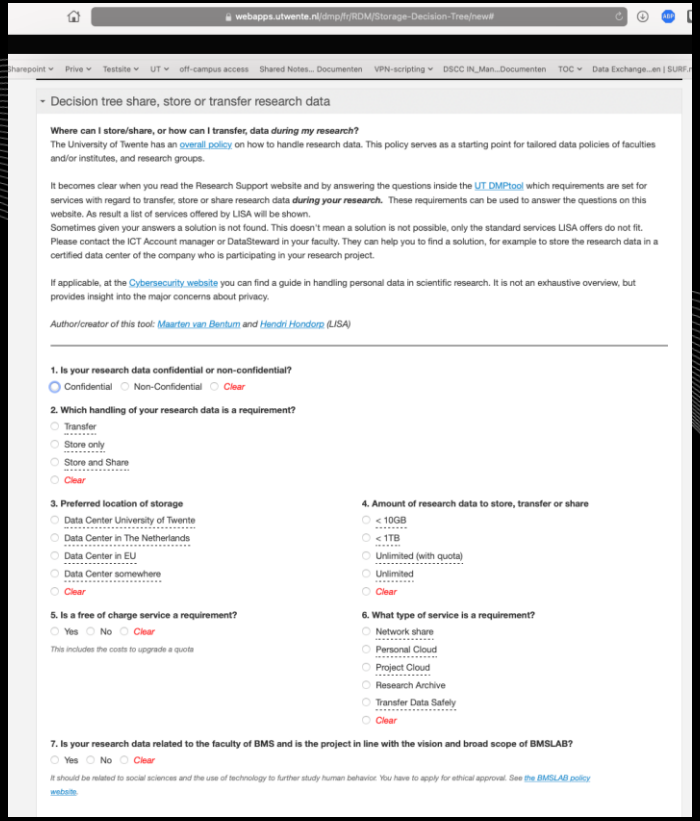
SETUP YOUR RESEARCH (4/11)

Depending on the requirements for your research data, multiple solutions are possible for storing/sharing/transferring data and collaborating with your research partners.

Find your solution with the Research Data Decision tree.

ICT SERVICES FOR RESEARCH

SETUP YOUR RESEARCH (5/11)– Decision Tree



webapps.utwente.nl/dmp/fr/RDM/Storage-Decision-Tree/new#

Decision tree share, store or transfer research data

Where can I store/share, or how can I transfer, data *during my research*?
The University of Twente has an overall policy on how to handle research data. This policy serves as a starting point for tailored data policies of faculties and/or institutes, and research groups.

It becomes clear when you read the Research Support website and by answering the questions inside the UT DMPtool which requirements are set for services with regard to transfer, store or share research data ***during your research.*** These requirements can be used to answer the questions on this website. As result a list of services offered by LISA will be shown.
Sometimes given your answers a solution is not found. This doesn't mean a solution is not possible, only the standard services LISA offers do not fit. Please contact the ICT Account manager or DataSteward in your faculty. They can help you to find a solution, for example to store the research data in a certified data center of the company who is participating in your research project.

If applicable, at the Cybersecurity website you can find a guide in handling personal data in scientific research. It is not an exhaustive overview, but provides insight into the major concerns about privacy.

Author/creator of this tool: Maarten van Bentum and Hendri Hondorp (LISA)

1. Is your research data confidential or non-confidential?
Confidential | Non-Confidential | Clear

2. Which handling of your research data is a requirement?
Transfer
Store only
Store and Share
Clear

3. Preferred location of storage
Data Center University of Twente
Data Center in The Netherlands
Data Center in EU
Data Center somewhere
Clear

4. Amount of research data to store, transfer or share
< 10GB
< 1TB
Unlimited (with quota)
Unlimited
Clear

5. Is a free of charge service a requirement?
Yes | No | Clear
This includes the costs to upgrade a quota

6. What type of service is a requirement?
Network share
Personal Cloud
Project Cloud
Research Archive
Transfer Data Safely
Clear

7. Is your research data related to the faculty of BMS and is the project in line with the vision and broad scope of BMSLAB?
Yes | No | Clear
It should be related to social sciences and the use of technology to further study human behavior. You have to apply for ethical approval. See the BMSLAB policy website.

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A solution is the UT Group/Project drive.

- Available for: Only employees have access to UT Group/Project drive
  - Student can be invited to share the data.
  - X-accounts can be created for external people (via selfservice portal LISA). X-account can be invited to share the data.
  - LISA ICT Service-desk can help to set these permissions.
- Discontinues when projectleader gives permission to delete the data.
- Type of service: Project network share, connections outside UT-network need a VPN connection.
- Amount of storage: size of quota depends on number of employees in research group, quota can be extended with costs.
- Place: UT data center. Located at UT. ISO 27001/NEN 7510 certified.
- Storage time for backup is 28 days.
- Costs: extra storage € 140 TB/year (Normal Quality) and € 600 TB/year (High Quality).

UNIVERSITY OF TWENTE.

A solution is the UT BMSLAB.

Important: Research data must be related to the faculty of BMS and the project must be in line with the vision and broad scope of BMSLAB.

- Available for: Only UT employees with BMSLAB-contract
  - Student must be invited to share the data.
  - X-accounts can be created for external people (via selfservice portal LISA). X-account can be invited to share the data.
  - BMSLAB Service-desk can help to set these permissions.
- Discontinues: when projectleader gives permission to delete the data.
- Type of service: Project network share, connections outside UT-network need a VPN connection.
- Amount of storage: size of quota depends on research projects.
- Place: UT data center. Located at UT. ISO 27001/NEN 7510 certified.
- Costs: free of costs.

A solution is SURFdrive.

- Available for UT-employees. They can login at SURFdrive with @utwente.nl.
- Externals with SURFconext connection can use their SURFdrive account to share the data and work together.
- Students and other externals (Non-SURFconext) must be invited to share the data with SURFdrive, no personal SURF-drive account for them.
- Discontinues when owner of the data (employee) leaves UT. The data will be removed after grace period.
- Type of service: Personal Cloud and collaboration tool for Office documents
- Amount of storage: max 500 GB
- Place: data center SURF-SARA. Located Amsterdam, The Netherlands. ISO 27001 certified
- Costs: free of costs
- Backup & recovery of 30 days
- Only for UT-employees: data on own computer can be automatically synchronized with client software.
- In general, **LISA's support of cloud services** depends on the support provided by the cloud supplier. This may be of a different nature than what you are used to from LISA.

Google Workspace ***A solution is Google Workspace***

- Available for: Students and Employees. They **must** login with @student.utwente. nl and @utwente.nl account, respectively. Employees can use this link to get an @utwente.nl account at Google Suite.
- Discontinues when owner of data (employee or student) leaves UT. Data will be removed after grace period.
- Type of service: Personal Cloud and Collaboration tool for Google Open Data documents (compatible with Office)
- Amount of storage: Unlimited storage.
- Place: data center Google. Located in EU. ISO 27001 certified.
- Costs: free of costs.
- Data on own computer can be automatically synchronized with client software.

ICT SERVICES FOR RESEARCH

SETUP YOUR RESEARCH – UT DATA CENTERS (6/11)

Datacenter protection:

- Theft
- Power failure
- Fire
- Temperature

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ICT SERVICES FOR RESEARCH

SETUP YOUR RESEARCH – CLOUD STORAGE (7/11)

Cloud storage (when UT storage limits research needs):

- Data synchronization

- Project Cloud versus Personal Cloud:
  - Sharing data
  - Continuity upon departure of researcher

ICT SERVICES FOR RESEARCH

SETUP YOUR RESEARCH – CLOUD STORAGE (8/11)

- If a personal Cloud is needed:

OneDrive

SURF DRIVE

Google Workspace

PROJECTS IN PROGRESS

SETUP YOUR RESEARCH – CLOUD STORAGE (9/11)

CCP (Content Collaboration Platform):

A platform that has the following features:

- Intuitive interface
- On-Premise storage
- Self-service (create own groups, set rights, restore of data etc.)
- Easy sharing with research groups
- Multiplatform support (Windows/Linux/MacOS/iOS/Android)
- Synchronization using Clients
- Office online

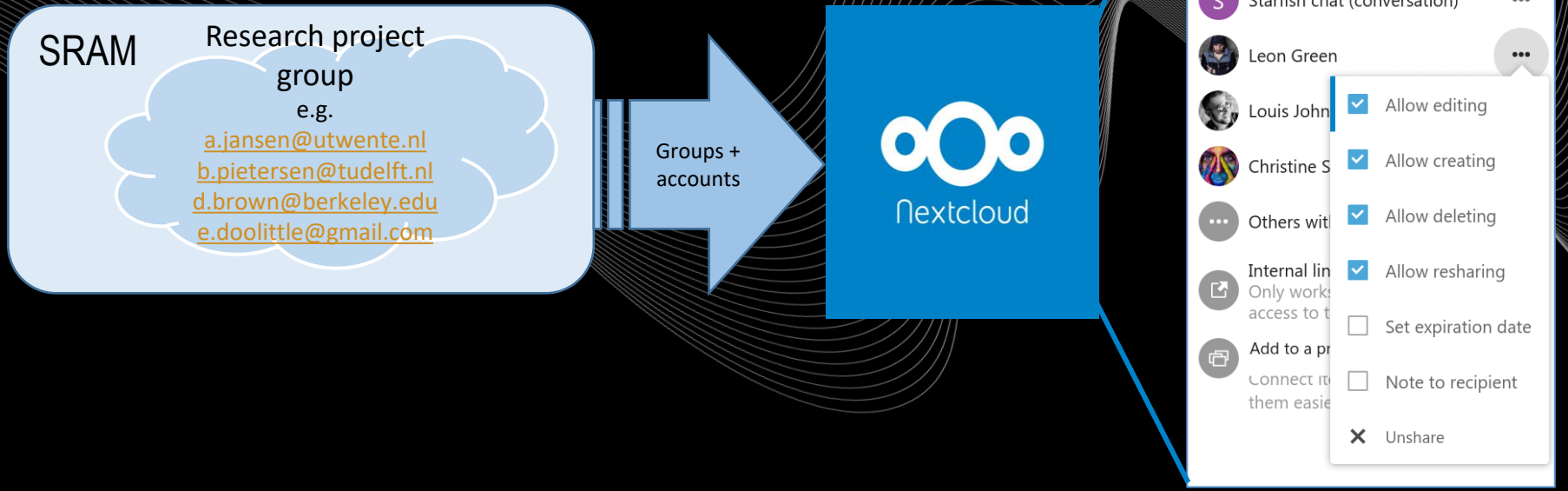
Nextcloud

UNIVERSITY OF TWENTE.

PROJECTS IN PROGRESS

SETUP YOUR RESEARCH – CLOUD STORAGE (10/11)

CCP (Content Collaboration Platform):



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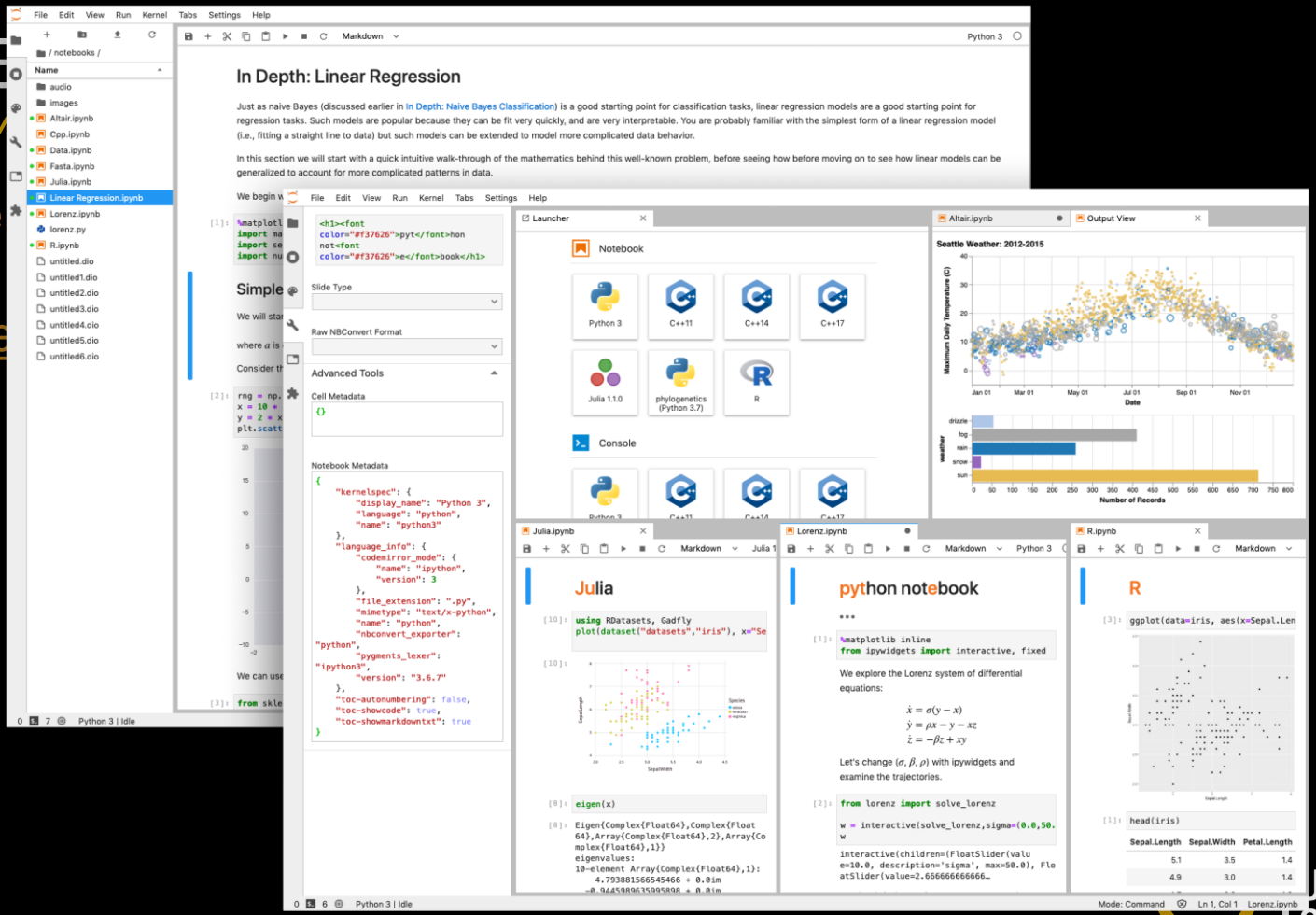
ICT SE

SETUP Y

Compute

- Jupyte



ICT SERVICES FOR RESEARCH

SETUP YOUR RESEARCH – COMPUTE (11/11)

Compute Solutions:

- Jupyter platform (pre-production)- picture
- Virtual Server –(VM)
- VRE (Virtual Research Environment)- FILM

Virtual Research Environment

Introduction

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ICT SERVICES FOR RESEARCH

SETUP YOUR RESEARCH – COMPUTE (11/11)

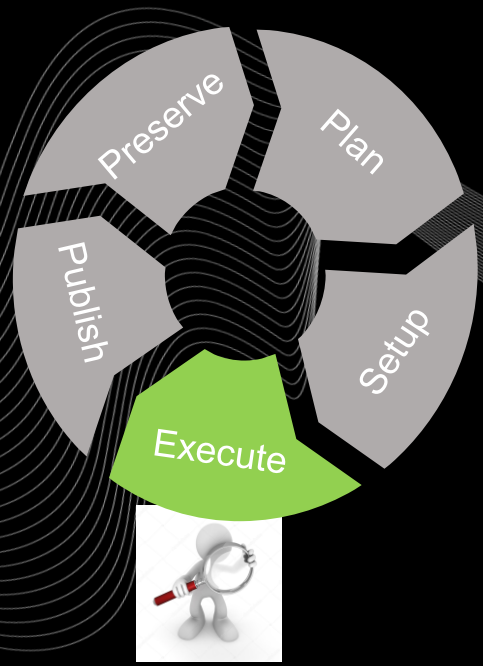
Compute Solutions:

- Jupyter platform (pre-production)
- Virtual Server –(VM)
- VRE (Virtual Research Environment)
- High Performance Computing (HPC):
    - Research group facility
    - SURFSara
- Buy your own compute server
    - Advice for setup/configuration
    - Housing and maintenance in UT datacenter

ICT SERVICES FOR RESEARCH

RESEARCH LIFECYCLE

1. Plan your research
2. Setup your research
3. EXECUTE YOUR RESEARCH
4. Publish your research
5. Preserve your research



ICT SERVICES FOR RESEARCH

EXECUTE YOUR RESEARCH

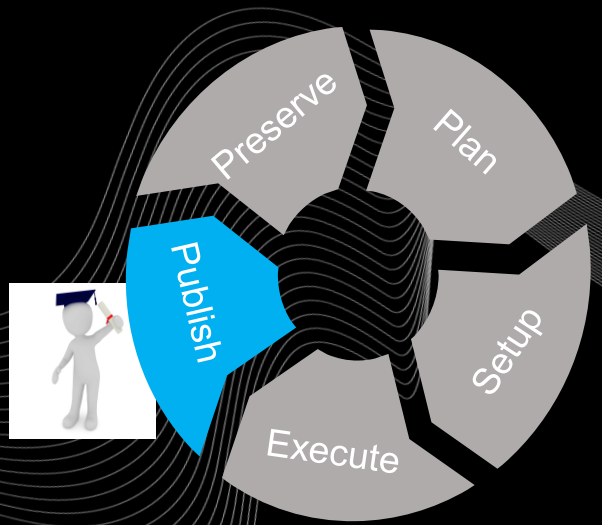
The fun part: enjoy doing your research!

When necessary, go back to a previous state

ICT SERVICES FOR RESEARCH

RESEARCH LIFECYCLE

1. Plan your research
2. Setup your research
3. Execute your research
4. PUBLISH YOUR RESEARCH
5. Preserve your research



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ICT SERVICES FOR RESEARCH

PUBLISH YOUR RESEARCH

Publish essential research data when a research project is finished at

4TU. CENTRE FOR RESEARCH DATA

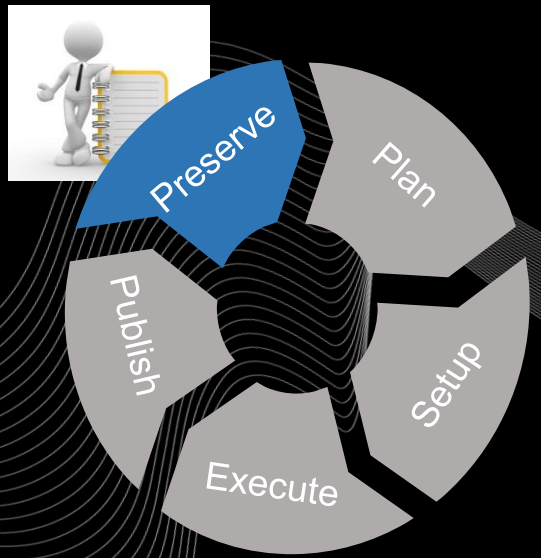
Data Archiving and Networked Services
DANS

- Register articles / publications in ris.utwente.nl (Pure)
- For more information contact your Data Steward

ICT SERVICES FOR RESEARCH

RESEARCH LIFECYCLE

1. Plan your research
2. Setup your research
3. Execute your research
4. Publish your research
5. PRESERVE YOUR RESEARCH



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ICT SERVICES FOR RESEARCH

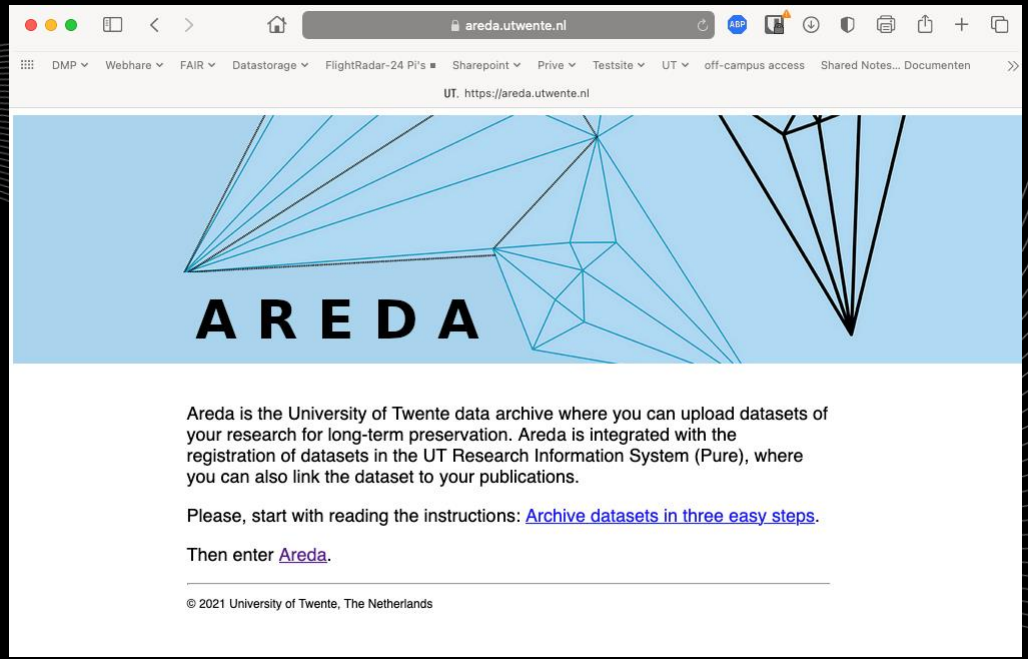
PRESERVE YOUR RESEARCH (1/2)

Preserve essential research data when a research project is finished at AREDA (Archive REsearch DAta).

AREDA is Long Term storage for Research data. Pure is being used to add metadata to the preserved research data.

ICT SERVICES FOR RESEARCH

PRESERVE YOUR RESEARCH (2/2)



1. Preparation and upload
2. FAIR: Add metadata in Pure
3. Review and final check

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RESEARCH SUPPORT WEBSITE:

For more information regarding research support visit:

https://www.utwente.nl/researchsupport

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