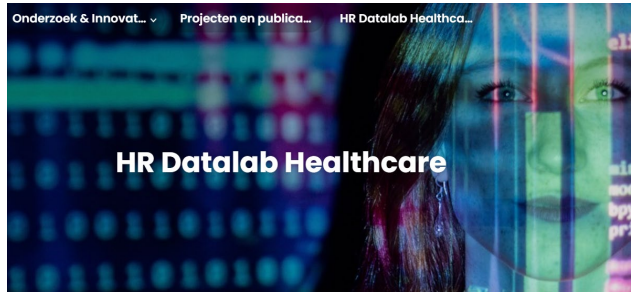
SURF Research Access Management

Toegangsport tot Data Science workflows & Toolchains



Rob van der Willigen
Lead-Tech
HR-DataLab Healthcare

Benutten van Onderzoeksdata vereist samenwerking

Onderzoekers besteden veel tijd aan het regelen van
toegang tot de systemen en diensten
die ze nodig hebben om hun onderzoek verantwoord te doen.

Onderzoekers kunnen vaak niet beschikken over een
directe toegang tot de systemen en diensten
(zoals virtuele samenwerking omgevingen)
voor het gebruik van SotA Data Science Tools.

Onderzoekers kunnen vaak niet beantwoorden
aan relevante regelgeving en standaarden
om veilig te kunnen omgaan met researchdata.

Data infrastructure drivers

People
Data Access & Dissemination
Knowledge Semination & Data Curation
Interoperability, Cyber Security & Standards
Cloud Computing Capabilities & Accessibility

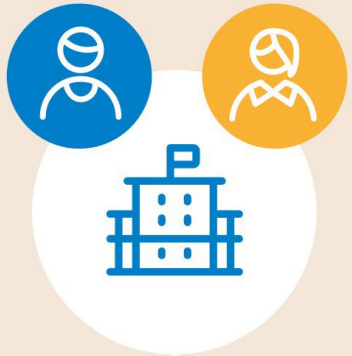
https://www.researchgate.net/publication/357933768_NO_MORE_SECRETS_AIRA_LivinG-Lab_AI_ETHICS

Context

Door verregaande Digitalisering in toegepast onderzoek is Data Science een belangrijk onderdeel geworden van de dagelijkse onderzoekspraktijk.

Samenwerking binnen het eigen vakgebied of multidisciplinair, binnen of buiten de grenzen van een instelling is een andere al langer bestaande trend om beter gebruik te kunnen maken van elkaars kennis en sneller tot resultaten te komen.

PARTICIPATING ORGANISATIONS IN COLLABORATION



UNIVERSITY
The collaboration was initiated by a researcher from this organisation

INTERNATIONAL COLLABORATORS
Researchers from abroad collaborate using the account from their institution through eduGAIN

COMPANY
Collaboration partners from companies join the collaboration using a guest account

RESEARCH INSTITUTE
Two researchers from this research institute join the collaboration

Context

Niet langer Excel-sheets naar elkaar mailen, maar een veilige en controleerbare manier om gemakkelijk data te verwerken binnen en tussen instellingen.

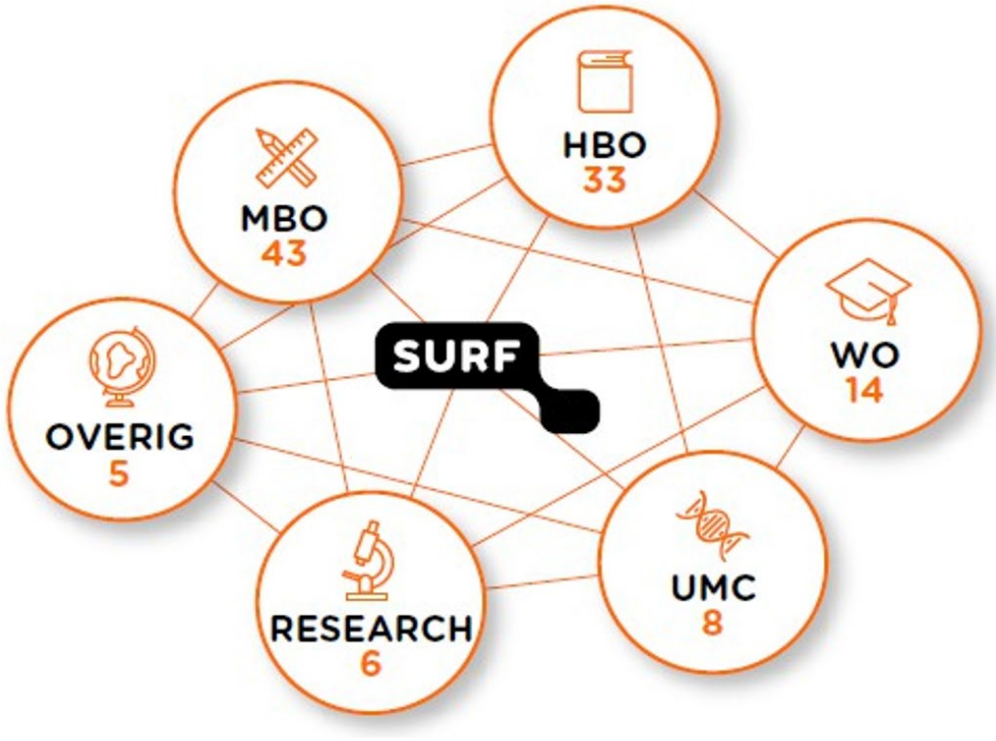
Onderzoekers vragen om virtuele onderzoekswerkruimten **[VREs]**

➔workspaces←

die laagdrempelig in het gebruik zijn;

waarbinnen ze FAIR, veilig, schaalbaar en automatiseerbaar kunnen samenwerken, over instellingsgrenzen heen.

Context



Driving IT innovation in education and research

Together with our members, we ensure that the education and research community has access to the best and latest IT facilities for top-level research and talent development.

https://nl.wikipedia.org/wiki/SURFsara

Wat is SRAM?

SURF Research Access Management

[SRAM] faciliteert onderzoekssamenwerking

door gebruik making van een 'modulaire componentstrategie' (een blokkendoos) in combinatie met een

op Data Science (DS) gebaseerde

IT (informatie technologie) infrastructuur.

SRAM

SURF Research Access Management (SRAM) is een beheerapplicatie om onderzoekers snel en veilig toegang te geven tot onderzoeksdiensten: een samenwerkingsverband (‘collaboration’) aanmaken, leden uitnodigen en onderzoeksdiensten koppelen.

SRAM zorgt er dan automatisch voor dat accounts worden aangemaakt in de gekoppelde onderzoeksdiensten. Onderzoekers van deze collaboration kunnen vervolgens met hun instellingsaccount inloggen bij de gekoppelde onderzoeksdiensten.

Wat kan SRAM?

Gebruikersbeheer

Authenticatie

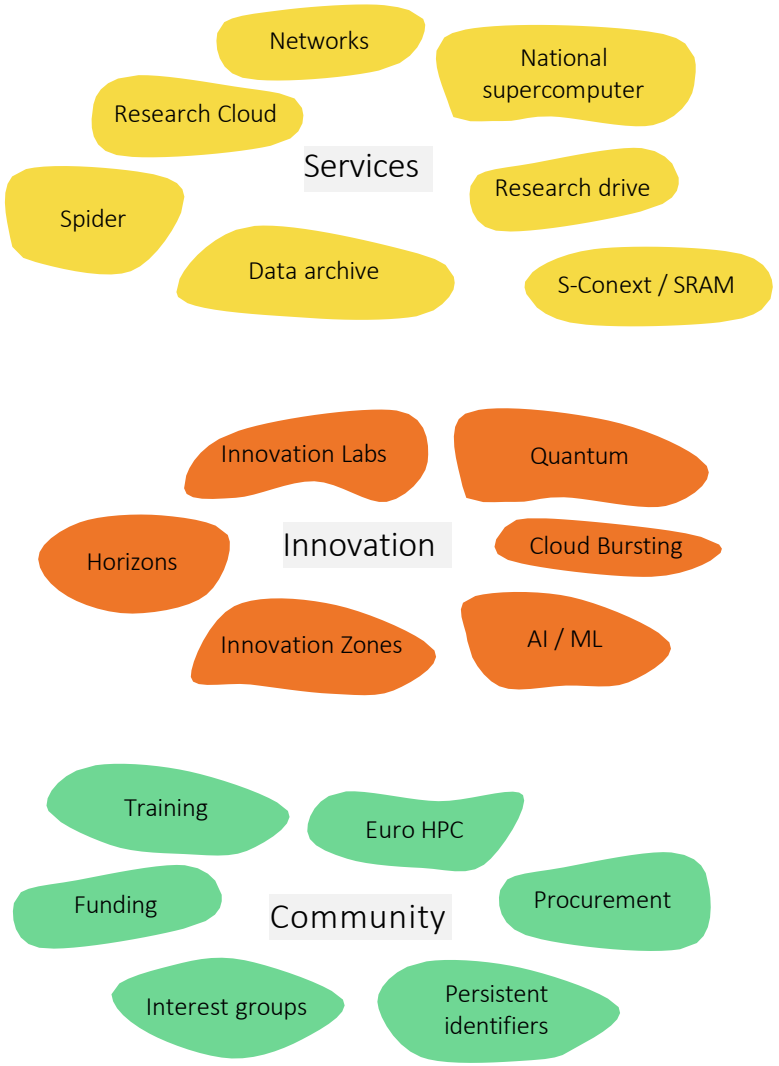
Koppelen van IT-diensten

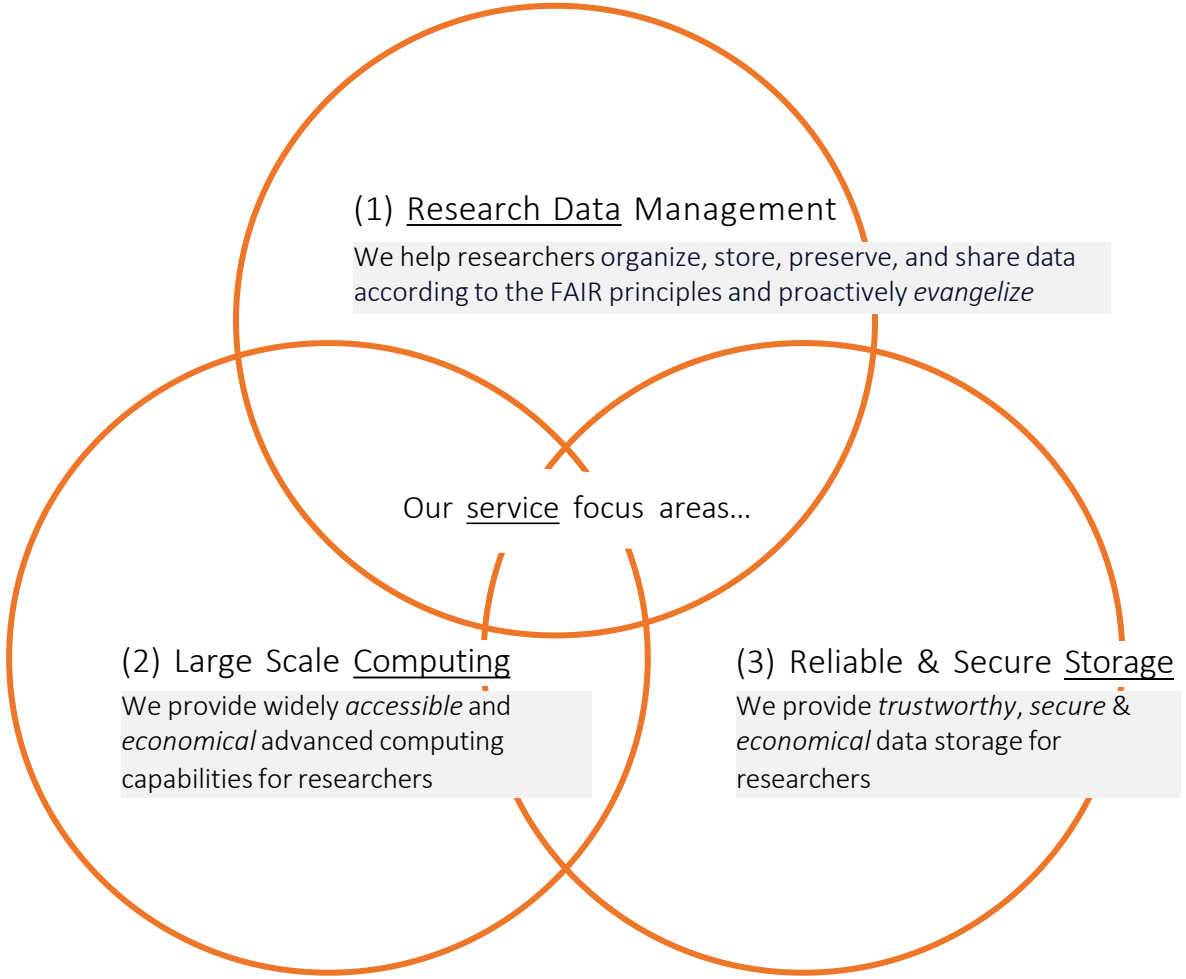
ABAC: Attribute Based Access Control

ABAC houdt in dat er geen autorisaties aan een persoon worden gegeven op grond van identiteit of plek in een organisatie, maar op basis van attributen van een identiteit.

SURF is / does many things to (help) research

Example building blocks…





ROLLEN + COLLABORATION

SRAM kent twee rollen:

Beheerders

Onderzoekers/leden

Wie / Rollen

Per onderzoek is er een medewerker die de **collaboration** beheert.
Om gebruik te kunnen maken van de **workspaces** van de HR en de extra ondersteuning van Team Research Support & IT is het aan te raden om een medewerker van dit team (Research Support & IT) admin rechten te geven binnen de collaboration.

SRAM kent twee rollen: beheerder en onderzoeker/leden.

BEHEERDERS VAN COLLABORATIONS IN SRAM KUNNEN:

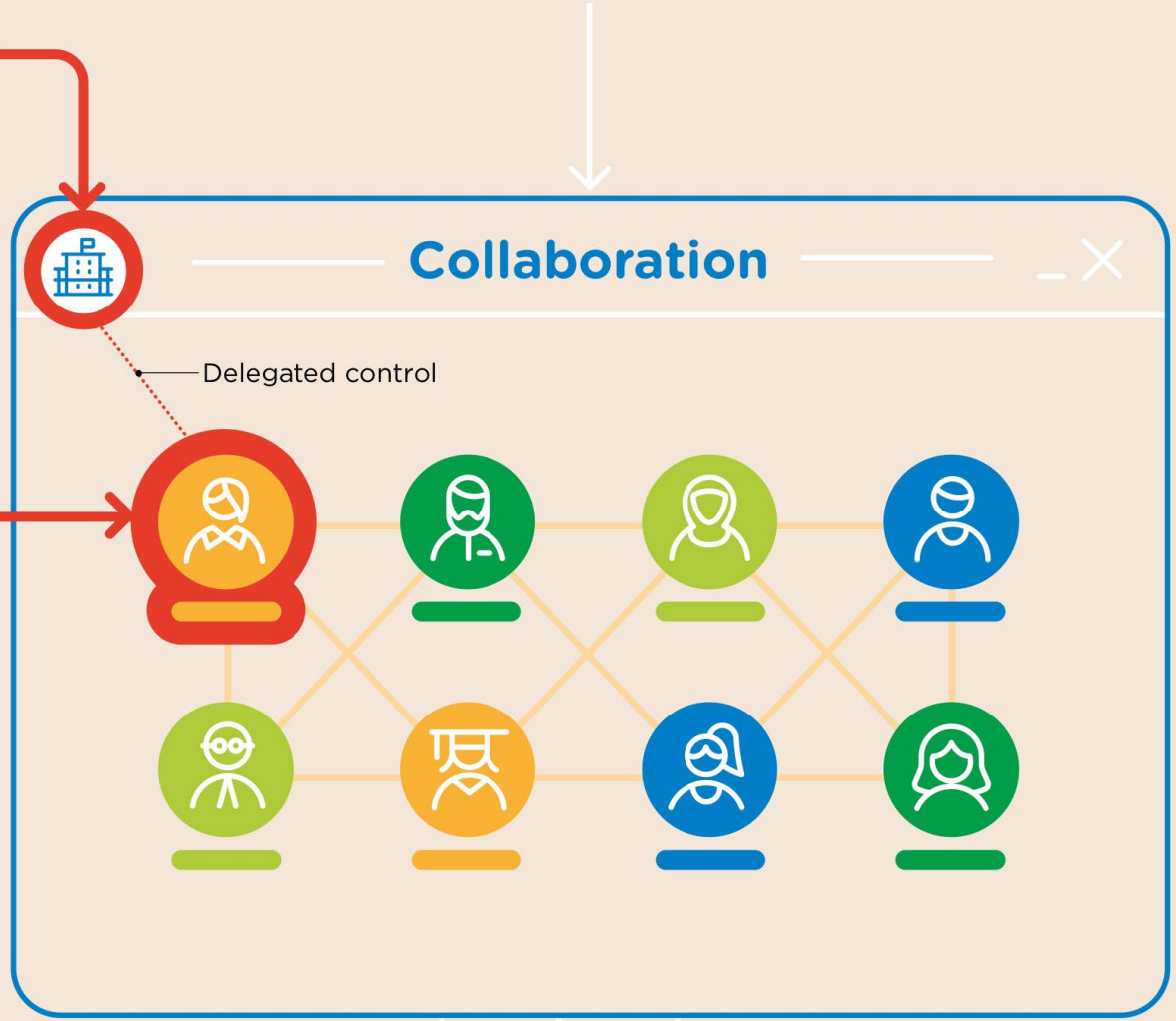
- eenvoudig het onderzoeksteam beheren;
- onderzoekers betrekken van binnen en buiten Nederland, zowel van instellingen als van bedrijven, overheid etc.;
- beheren welke onderzoeksdiensten gebruikt kunnen worden door hun teamleden;
- teamleden aan groepen binnen de CO (Collaborative Organization/Collaboration) toevoegen (b.v. voor autorisatie in gekoppelde onderzoeksdiensten);
- zien wie welke toegang wanneer heeft toegekend.

LEDEN VAN COLLABORATIONS IN SRAM KUNNEN:

- inloggen met hun instellingsaccount;
- gebruik maken van één van de gast-account-opties om in te loggen op de SRAM-omgeving;
- meer dan één gast uitnodigen via eduid;
- hun profiel beheren, zoals zien tot welke diensten ze toegang hebben en SSH-keys uploaden om automatisch te synchroniseren op alle betreffende systemen;
- snel toegang krijgen tot diensten die ze nodig hebben voor hun onderzoek(en).

COORDINATING INSTITUTION

The coordinating institution has signed an agreement with SURF to use SRAM for their collaborations. This institution acts as the data controller for these collaborations.



RESEARCH COLLABORATION

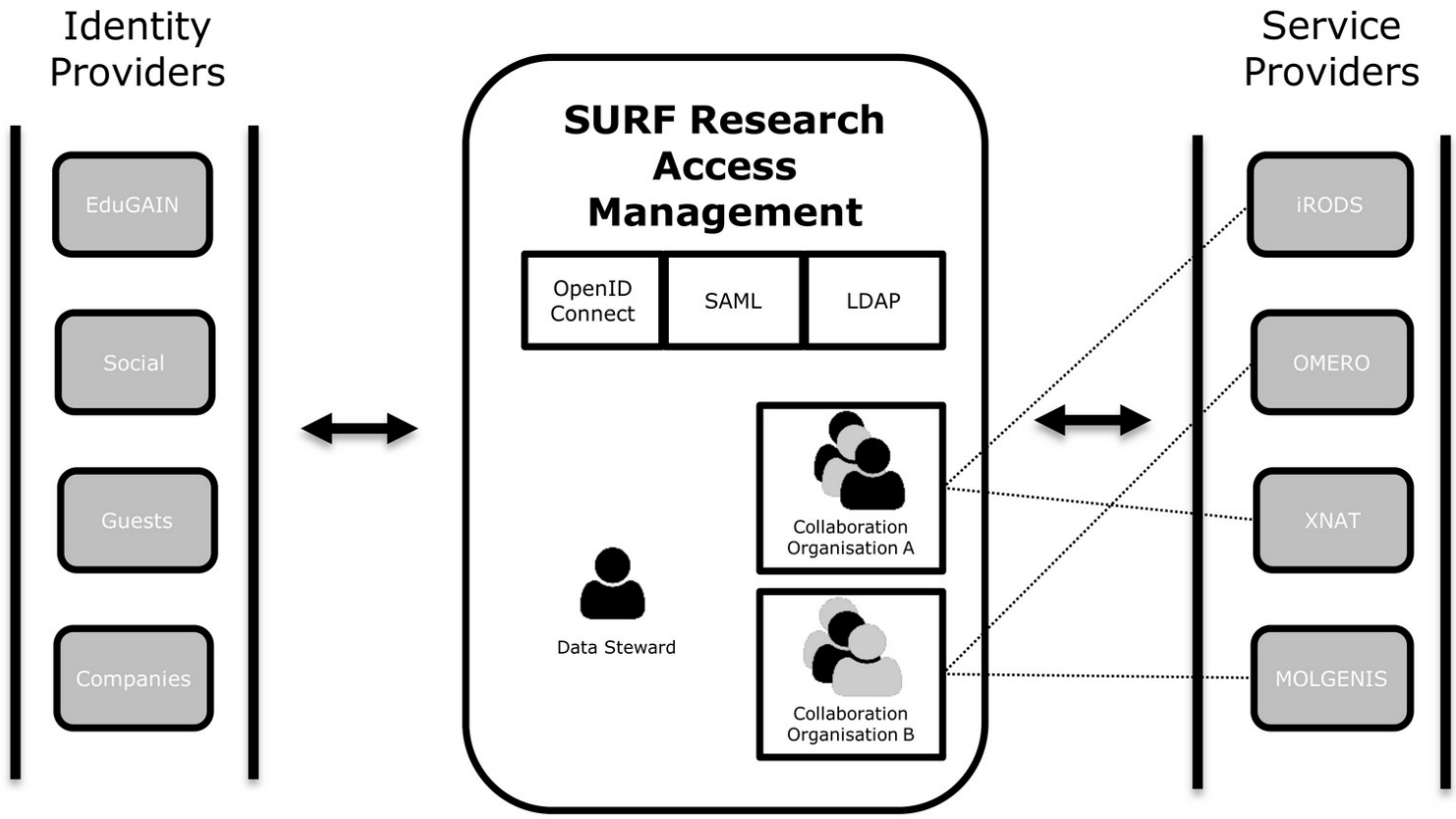
PRINCIPAL INVESTIGATOR

The principal investigator (P.I.) acts as collaboration administrator and:

- initiates the collaboration
- invites others to join
- makes services accessible for this collaboration after arranging necessary agreements
- can appoint other collaboration administrators

SERVICES+WORKSPACES

https://www.surf.nl/files/2022-07/in-het-kort-online-onderzoeksomgevingen-in-2027_v1.0.pdf


Identity Providers
EduGAIN
Social
Guests
Companies
SURF Research Access Management
OpenID Connect
SAML
LDAP
Collaboration Organisation A
Collaboration Organisation B
Data Steward
Service Providers
iRODS
OMERO
XNAT
MOLGENIS

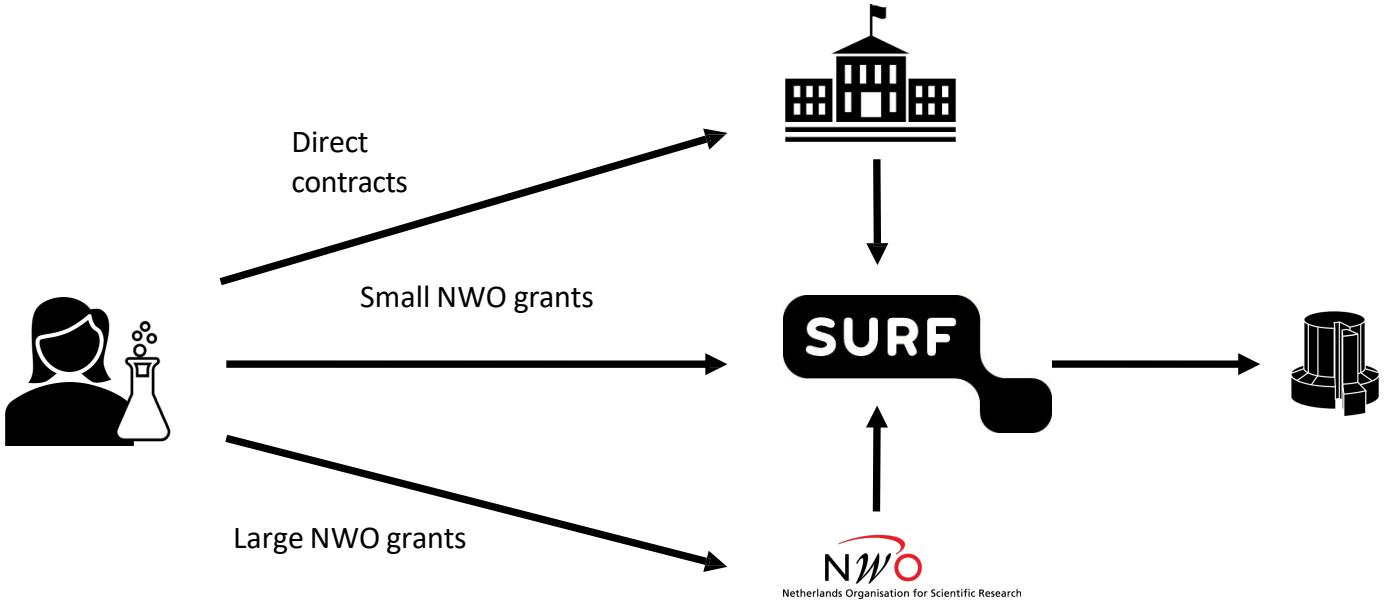
Access routes to research services

Direct contracts, such as RCCS Give organisations direct access to SURF compute facilities on a contract basis.

Small NWO grants To run a pilot project (1/year), you can apply for limited amounts of compute, storage and support directly via SURF.

Large NWO grants for large scale* research projects need to apply via NWO.

Open calls for public cloud access.



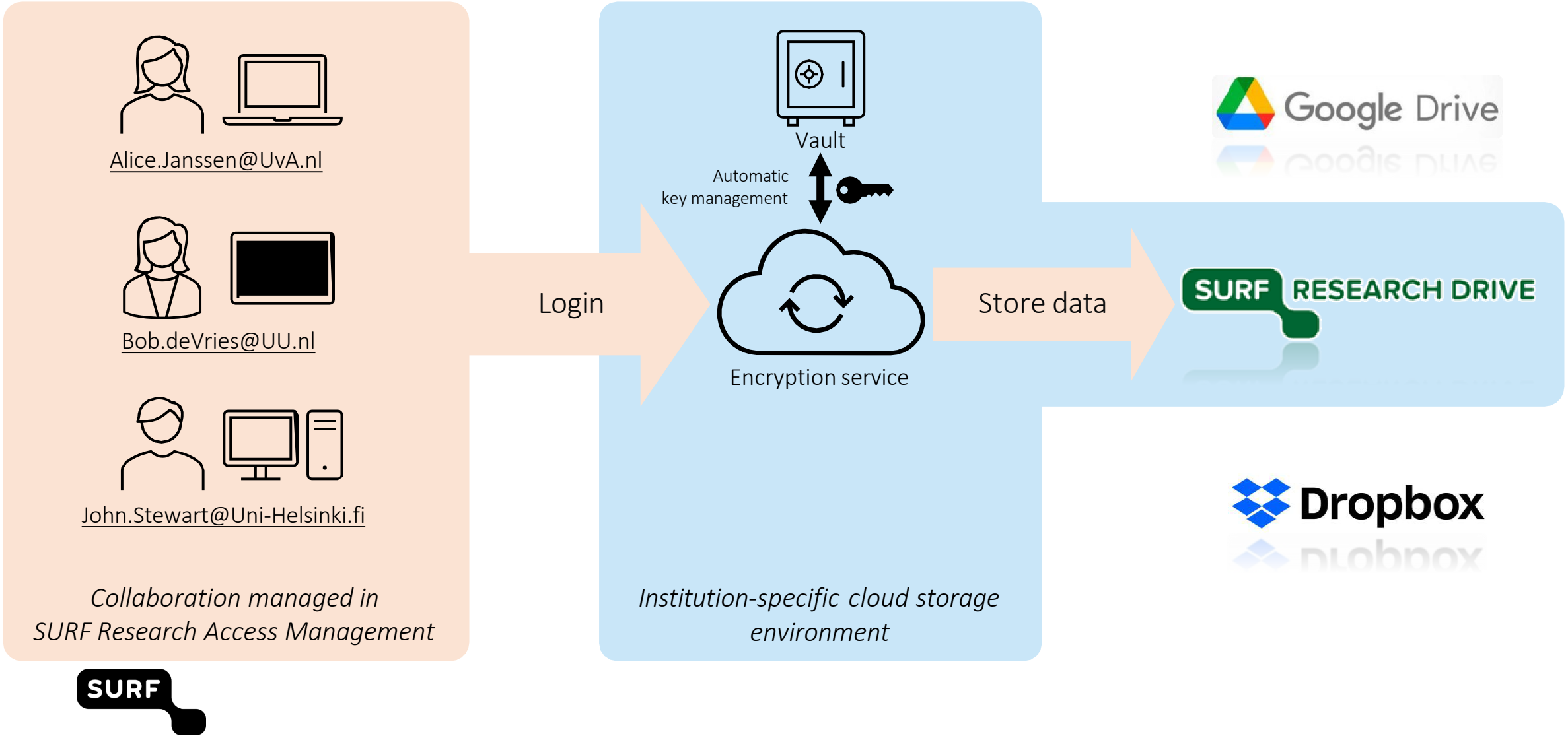
***Large Scale Defined:**

+1.00.000 CPU of GPU SBU **Snellius Supercomputer**
+50.000 CPU core-hours **HPC Cloud (Research Cloud)**
+5.000 GPU-hours **HPC Cloud (Research Cloud)**
+500.000 CPU core-hours **Grid/Spider**
+10.000 GPU-hours **Grid/Spider**
+100.000 CPU core-hours **Cloud Research Consultancy (MS4/CCS)**
+10.000 GPU hours **Cloud Research Consultancy (MS4/CCS)**

Incl. varying amounts of disk-, tape-storage, research drive and support.

SBU = System Billing Unit

User-friendly encrypted cloud storage



SURF Research services

Compute

We provide accessible and economical computing capabilities for researchers

High performance computing	Data Processing / HTC	Cloud Computing
The National Supercomputer Snellius	SPIDER	SURF Research Cloud
OSSC / Confidential computing	GRID	HPC Cloud
JupyterHub for Education		Public Clouds
		SANE / Confidential Research Cloud

Consultancy on HPC, HTC, AI / ML, Cloud & Visualization

We help both high demand, large scale users through Snellius, Spider and GRID, as well as provide accessible plug-and-play services through Research Cloud and Public Cloud providers.

Data

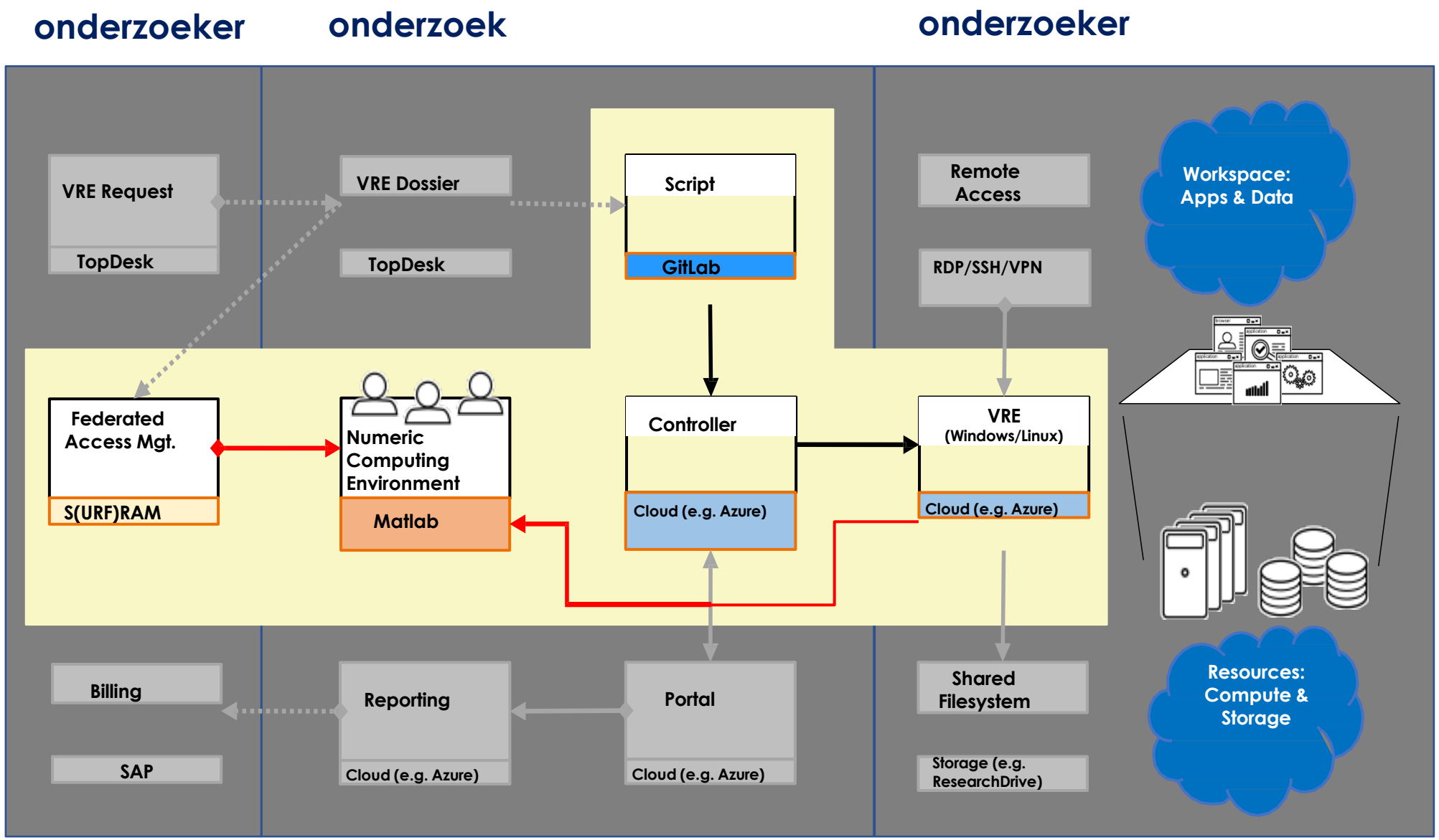
We help researchers organize, store, preserve and share data

Sync & Share	General Storage	Long-term Storage	Research Data Management
Research Drive	Object Store	Data Archive	Yoda Hosting
SURF Drive	dCache		RDM Scale-out
SURF FileSender			iRODS hosting
			ICE

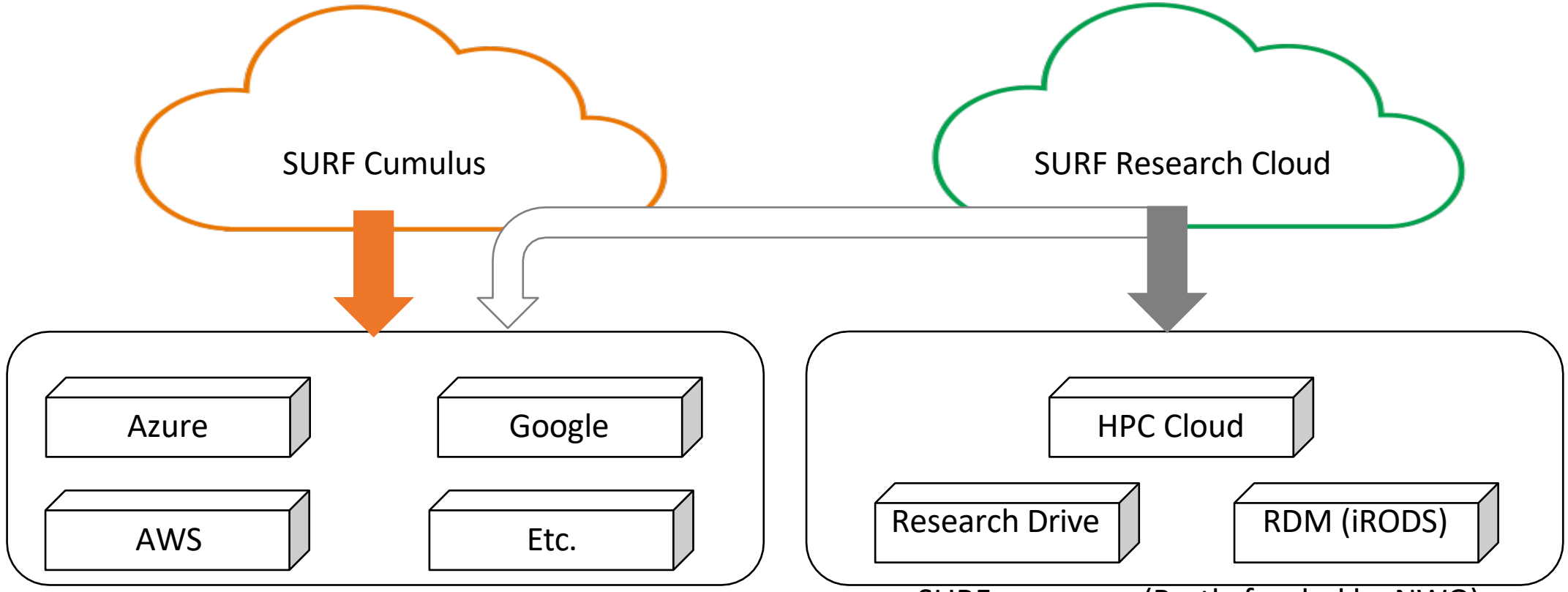
Consultancy on Storage, Preservation & Research Data Management

We provide trustworthy, secure & economical data storage for researchers through Research- & SURF Drive, Object Store and Data Archive. And promote data management according to the FAIR principles.

In production | In development | Consultancy


onderzoeker
onderzoek
onderzoeker
VRE Request
TopDesk
VRE Dossier
TopDesk
Script
GitLab
Remote Access
RDP/SSH/VPN
Workspace: Apps & Data
Federated Access Mgt.
S(URF)RAM
Numeric Computing Environment
Matlab
Controller
Cloud (e.g. Azure)
VRE (Windows/Linux)
Cloud (e.g. Azure)
Billing
SAP
Reporting
Cloud (e.g. Azure)
Portal
Cloud (e.g. Azure)
Shared Filesystem
Storage (e.g. ResearchDrive)
Resources: Compute & Storage

Clouds at SURF

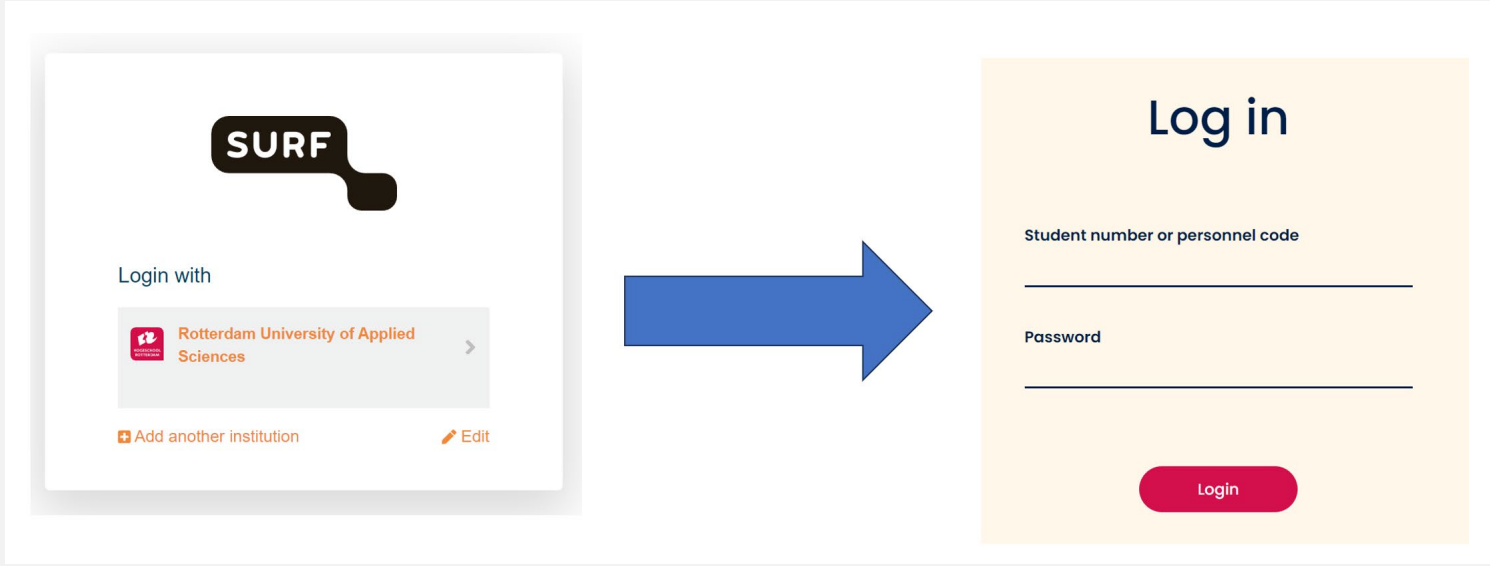


Access to public clouds (available through your central IT)

SURF resources (Partly funded by NWO)

More info: Research Cloud

ZELF INLOGGEN OP SRAM



LOGIN

SURF Research Access Management

SECURITY

All users log in with 2-factor authentication

DELEGATED ACCESS CONTROL

The collaboration admin manages members and authorisations

GDPR

All privacy info in one place, easily accessible to researchers and organisation admins

SURF Research Access Management

Easy and secure access to research services for research collaborations

Log in

New to SURF Research Access Management? Log in and create a collaboration with your institution.

SURF Research Access Management

Easy and secure access to research services for research collaborations

Log in

New to SURF Research Access Management? Log in and create a collaboration with your institution.

Create

admin function

Administrators create a collaboration page for their community.
They then select services from the catalog to make them available to collaboration members.

Invite

admin function

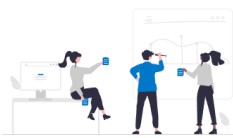
Administrators invite fellow researchers to their collaboration page.
They can also ask other administrators to help manage the collaboration.

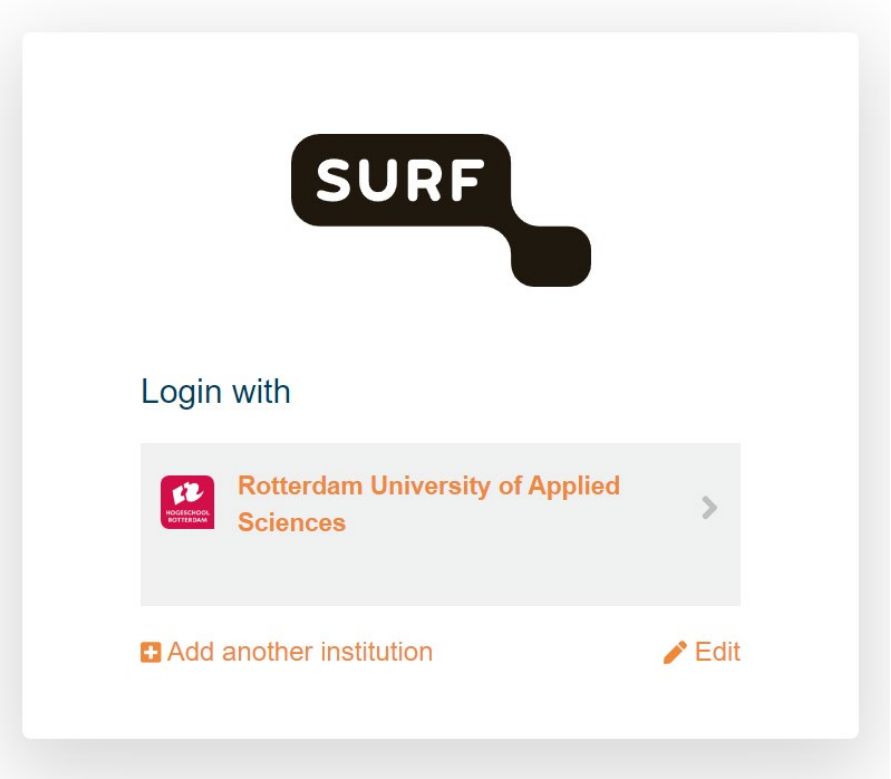
Join

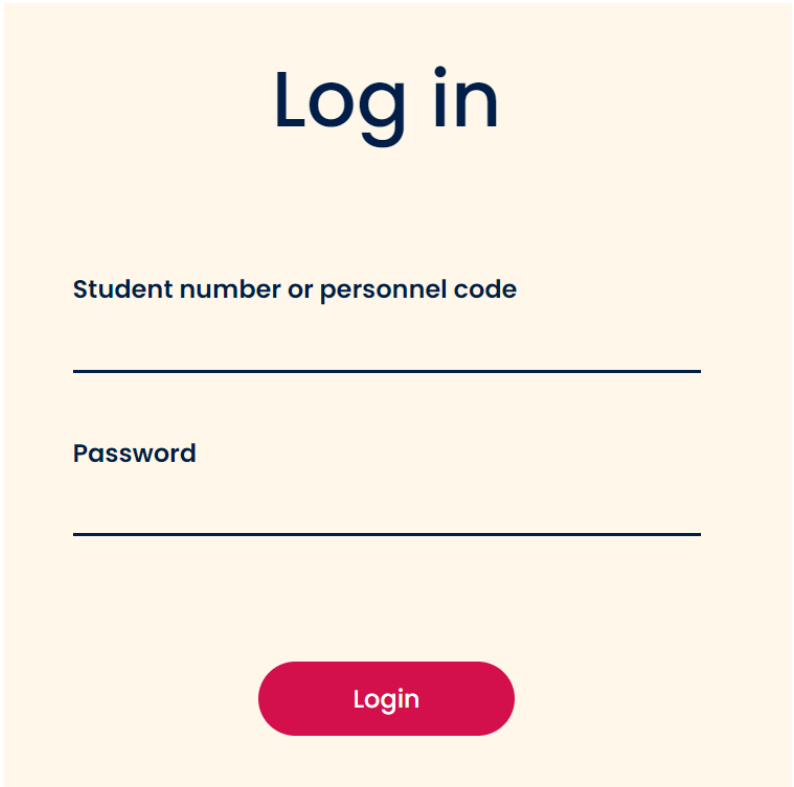
Invited researchers join by logging in with their institutional account or eduID.nl.

Collaborate

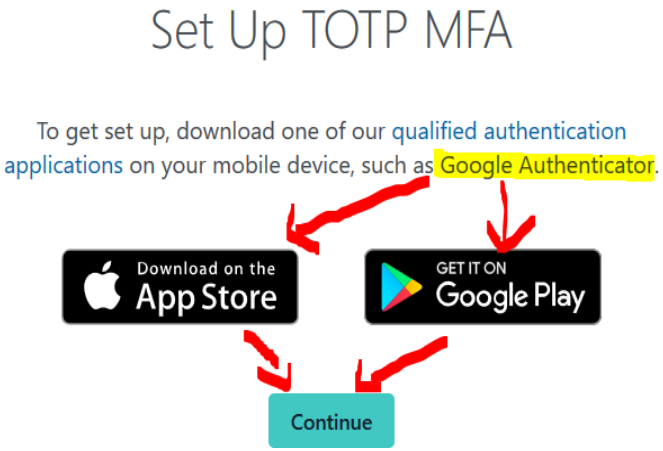
The secured collaboration page shows its members and gives access to the research services.

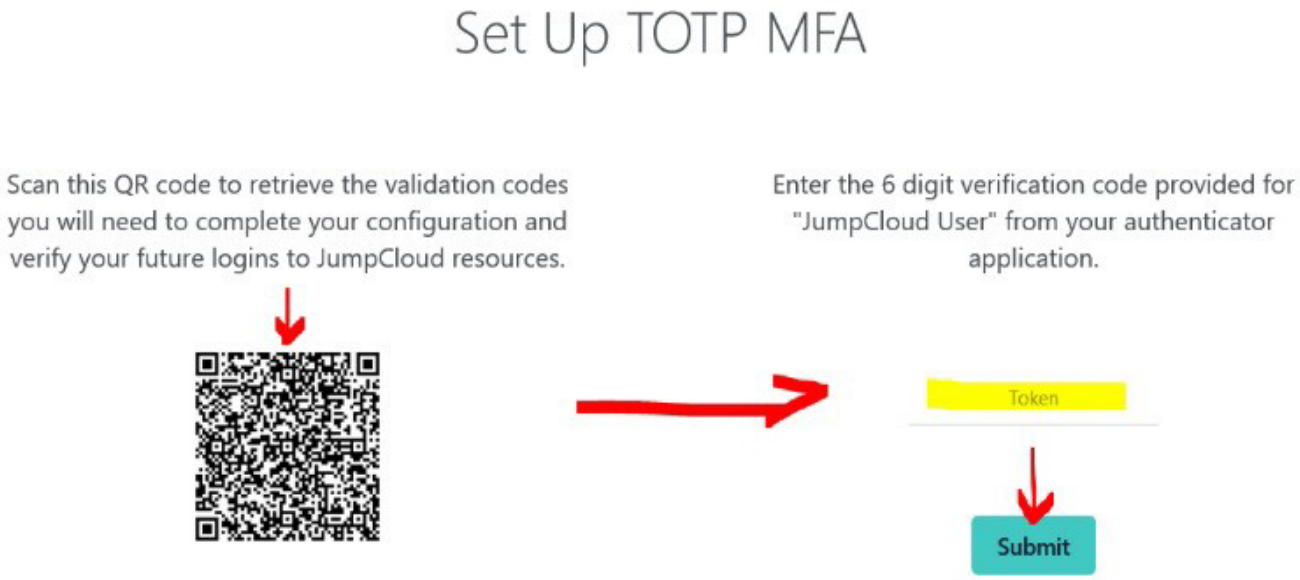



SURF
Login with
Rotterdam University of Applied Sciences
Add another institution
Edit


Log in
Student number or personnel code
Password
Login

Log in to your workspace





https://servicedesk.surf.nl/wiki/display/WIKI/Log+in+to+your+workspace

SURF Research Access Management

Enter your verification code

Enter the verificatie code from your authenticator app for **SURF Research Access Management** to verify your identity.

Verify

Can't log in?

Reset your verfication code

Use a reset code

SURF Research Access Management

Rob van der Willigen
Admin

This collaboration has reached its expiration date of February 29, 2024. Revert expiration

Home > demo Willigen HR

demo Willigen HR

SURF Research Cloud

1 member & 5 groups

Membership request

Expired

Edit

View as member

History

About | Admins | Members | Groups | Services | Join requests | Service tokens

Demo/workshop with SRC and Python for Rob van der Willigen from Hogeschool Rotterdam

We collaborate in 1 services

SURF Research Cloud

Open

Research Cloud allows researchers to easily collaborate in so-called workspaces. These workspaces are virtual research environments which provide data-processing power as a service. By working

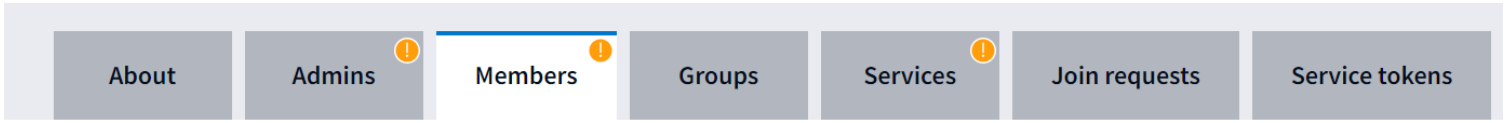
More

Policies & Support | My Tokens

Labels
start_account

Short name
demowilligenhr

Contact an administrator
Rob van der Willigen



Members (36)

All groups

Hide invitations

Search fo

	Name / email	Institution	Role
	Rob van der Willigen You r.f.van.der.willigen@hr.nl	hro.nl	Admin
	- aajmj.derene@avans.nl		Member
	- Elvira.leufkens@inholland.nl		Member
	- karin.chavezcaballero@surf.nl		Member
	- ingrid.kars@zuyd.nl		Member
	- lilian.vandeburgt@zuyd.nl		Member

About | Admins | Members | Groups | Services | Join requests | Service tokens

Groups (5)

D

Add group

Name	Description		For Service	Members	Auto provisioning
src_co_admin	The SRC administrator role can be used to grant a user SUDO or administrator privileges in workspaces started for a collaboration. Ev…		SURF Research Cloud	0	Off
src_co_developer	A "developer" member in your collaboration is authorised to create and share Applications on behalf of the collaboration. User…		SURF Research Cloud	0	Off
src_co_wallet	Members of this group will have access to the project wallet automatically. User documentation:…	Member	SURF Research Cloud	1	Off
src_no_ext_apps	Any user that is added to this group will only be able to use applications that have been explicitly allowed for this collaboration. The…		SURF Research Cloud	0	Off
src_ws_admin	Any collaboration member that is added to this group will be able to pause, resume or delete the workspaces in this collaboration.…		SURF Research Cloud	0	Off

About | Admins | Members | Groups | Services | Join requests | Service tokens

Services

Connections

Available services

Connections

Search services...

SURF Jupyter Test

Pending

Retract

Service connection request made by Rob van der Willigen on May 16, 2024 for collaboration demo Willigen HR

Policies & Support

SURF Research Cloud

Disconnect

Open

About | Policies & Support

Welcome to SURF research cloud

LOG IN

If you have your credentials ready, you can log in. If you do not have access to this portal, you can find out how to request access through our documentation pages

Set up a workspace

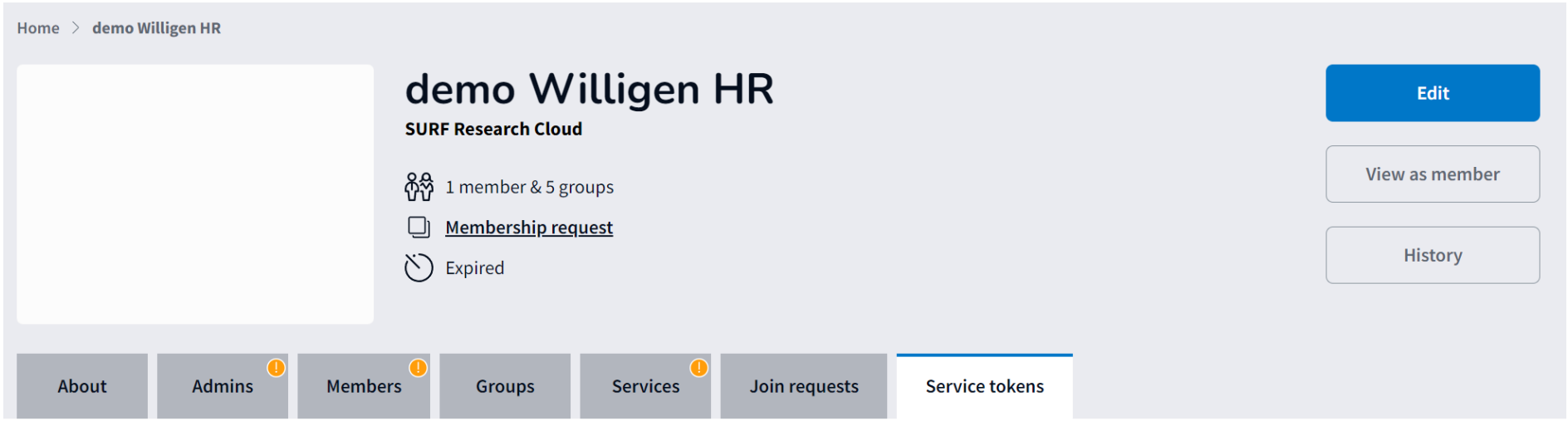
Workspaces are the environments which you run to process your data in. Within your workspaces, you can run catalog items and datasets from our catalog or use your own software.

Collaborate with others

You can create collaborative organisations where you can invite your fellow researchers to work as a team in a specific workspace. Each team member can share their own data, wallet or catalog items.

Documentation

Read more about Research Cloud on our documentation pages


Home
demo Willigen HR
demo Willigen HR
SURF Research Cloud
1 member & 5 groups
Membership request
Expired
Edit
View as member
History
About
Admins
Members
Groups
Services
Join requests
Service tokens
Service tokens (1)
Search for service token...
Create service token
Name
Description
Service
Expiry date
Last used
test01
SURF Research Cloud
May 16, 2025
-

SRAM CLOUD FUNCTIONALITY

For ease of use and plug and play compute: go to Research Cloud.

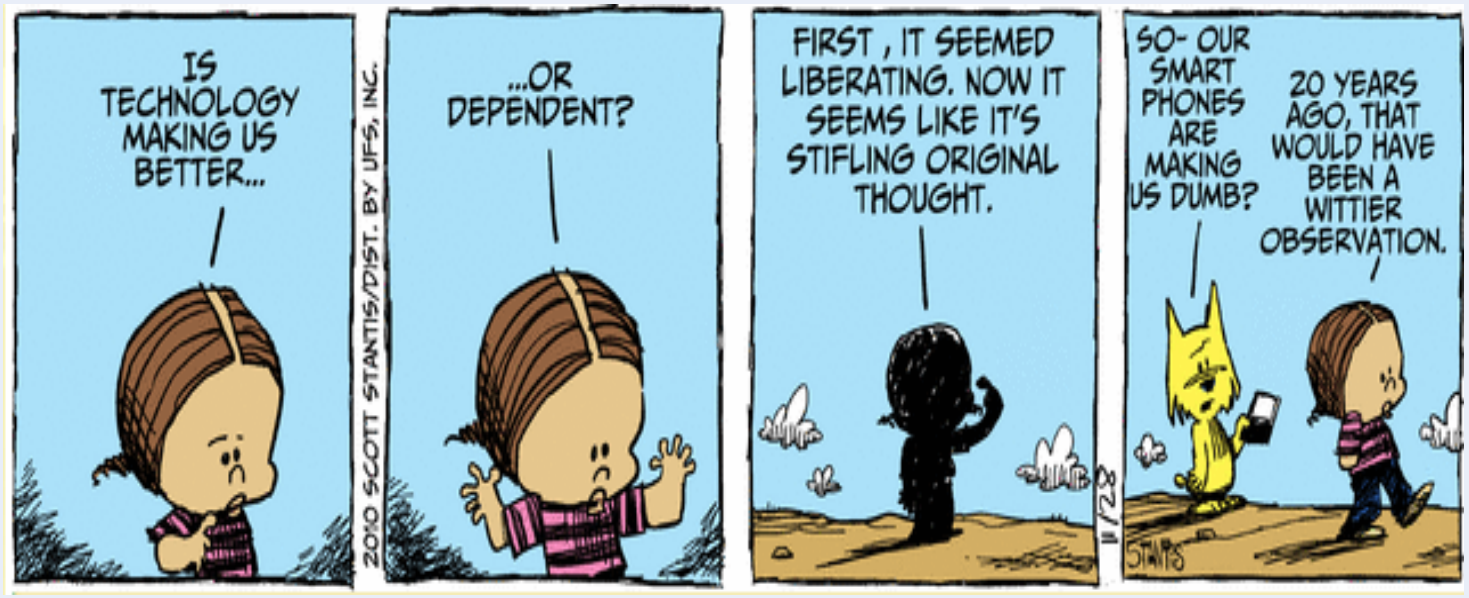
For very powerful parallel computing; go to Snellius.

For structurally processing very large amounts of data: go to Spider.

For easy storage and data sharing; go to Research Drive.

For economical long-term storage; go to Data Archive.

For advice and POC's on public clouds; go to our Cloud Consultancy team.



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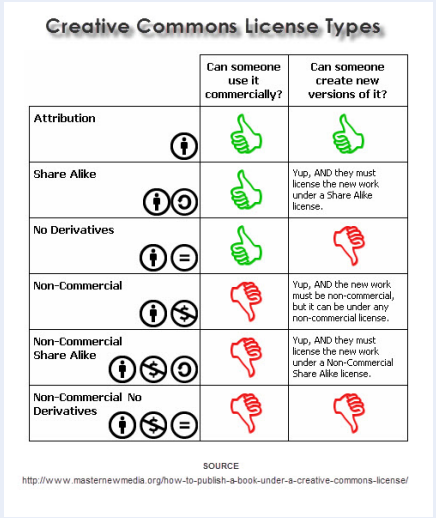

This seminar was developed by:
Prometheus Data Science lab in het kader van het HR-brede *AI* & Ethiek

Rob van der Willigen
Oktober 2023