

The SURF logo is a black speech bubble with the word "SURF" in white, bold, uppercase letters. The background of the slide is a photograph of a woman with long blonde hair, wearing a brown knitted sweater, smiling and resting her chin on her hand. She is in a modern office or meeting room with large windows and other people working at desks in the background.

SURF

Sharing data in a multi-system multi-role environment centered on iRODS

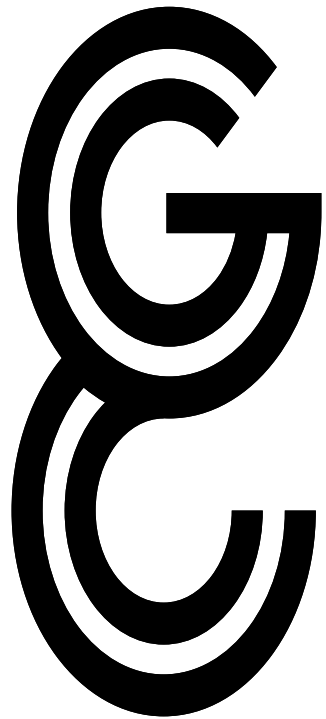
Claudio Cacciari

27 May, 2024

SURF is an ICT cooperative for education and research

At the SURF cooperative, education and research work together to make full use of the opportunities offered by digitalisation, **with the aim:** making education and research better and more flexible.





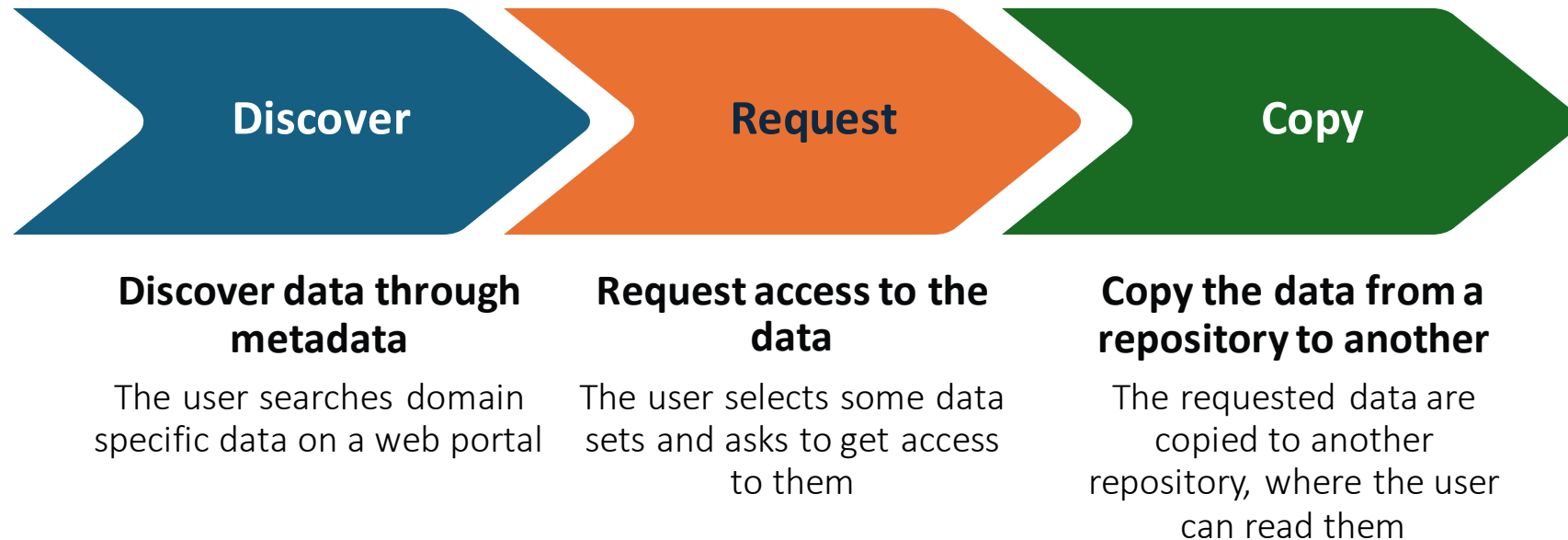
Growing Up Together in Society

The GUTS consortium investigates youth from the perspective of societal neuroscience, and combines insights and expertise from neuroscience, psychology, psychiatry, and sociology. The consortium is funded by a Gravitation grant from the Ministry of Education, Culture and Science for a ten-year period (2023-2033). To learn more about GUTS visit <https://www.gutsproject.com/>.

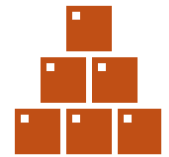
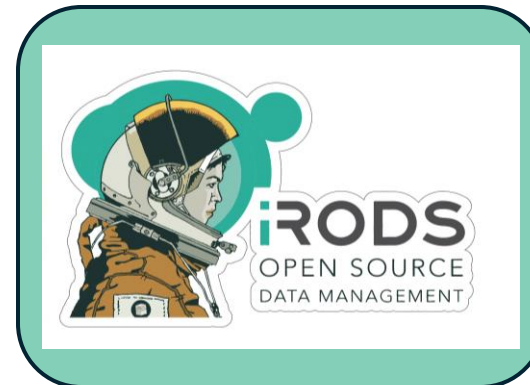
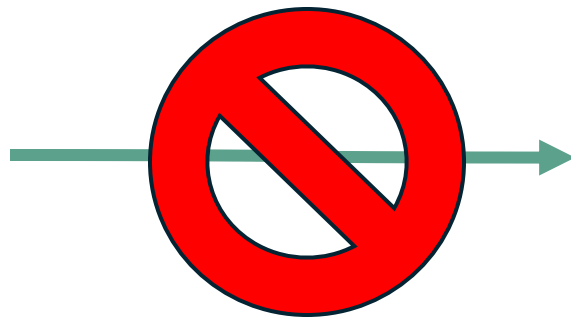
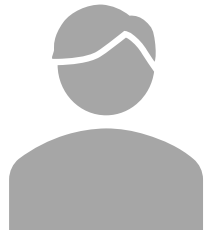
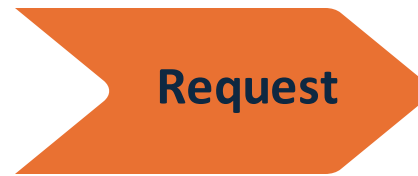
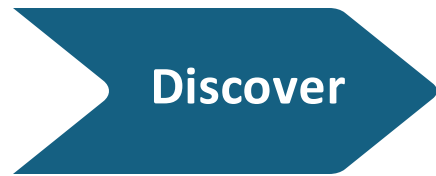
| Outlook

- The use case
- The obvious solution
- The less obvious solution
- More use cases
- Metadata Board
- Centered on iRODS
- Complementing, not replacing

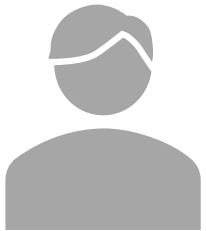
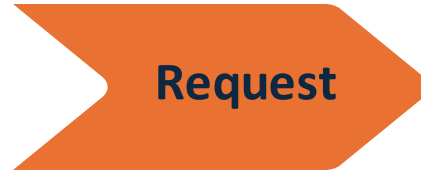
| Use case: user perspective – 3 steps



| Within a single system



Multiple systems



GUTS Metadata Explorer

Find samples by measure code, name or description

Enter text (hit enter to add search tag)

Reset Table Add Table to Basket

Code	Name	Description	Type	Category
audit	Alcohol Use Disorders Identification Test (AUDIT)	The Alcohol Use Disorders Identification Test (AUDIT) is a 10-question alcohol harm screening tool. It assesses the nature and severity of alcohol intake.	questionnaire	risk-taking
substance-use	Basic set smoking/ alcohol/ marijuana/drugs	The Substance Use questionnaire consists of 8 items that assess whether and to what extent someone smokes, drinks alcohol, and/or uses marijuana.	questionnaire	risk-taking
hard drugs	Hard drugs	The Hard Drugs questionnaire consists of 7 items that assess whether someone has ever used hard drugs, such as cocaine or etc.	questionnaire	substance
ypsi	Youth Psychopathic Traits Inventory-Short Version (YPI-S)	The Youth Psychopathic Traits Inventory-Short Version (YPI-S) is an 18-item self-report questionnaire designed to measure psychopathic-like traits in adolescents (van Baardewijk, et al. 2010).	questionnaire	mental-health/wellbeing
acc	Adverse Childhood Experiences (ACEs)	We will use the Adverse Childhood Experiences (ACEs) Inventory (11 items, Felitti et al. 2010) questionnaire to assess adverse experiences in childhood. The questionnaire includes seven categories of adverse childhood	questionnaire	learning

Web Portal



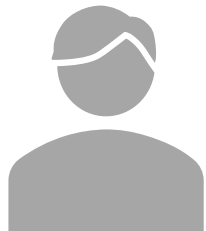
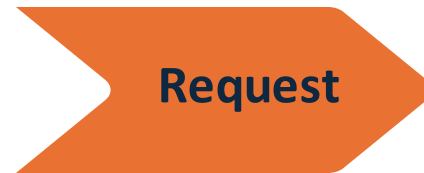
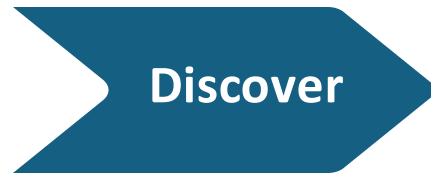
Metadata Board



Multiple Repositories



Multiple roles



GUTS Metadata Explorer

Find samples by measure code, name or description

Enter text (hit enter to add search tag)

Reset Table Add Table to Basket

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audit	Alcohol Use Disorders Identification Test (AUDIT)	The Alcohol Use Disorders Identification Test (AUDIT) is a 10-question alcohol harm screening tool. It assesses the nature and severity of alcohol intake.	questionnaire	risk-taking
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ypr	Youth Psychopathic Traits Inventory-Short Version (YPI-S)	The Youth Psychopathic Traits Inventory-Short Version (YPI-S) is an 18-item self-report questionnaire designed to measure psychopathic-like traits in adolescents (van Baardewijk, et al. 2010).	questionnaire	mental-health/wellbeing
acc	Adverse Childhood Experiences (ACE)	We will use the Adverse Childhood Experiences (ACE) Items (Finkelhor et al. 2010) questionnaire to assess adverse experiences in childhood. The questionnaire includes seven categories of adverse childhood	questionnaire	parenting



User

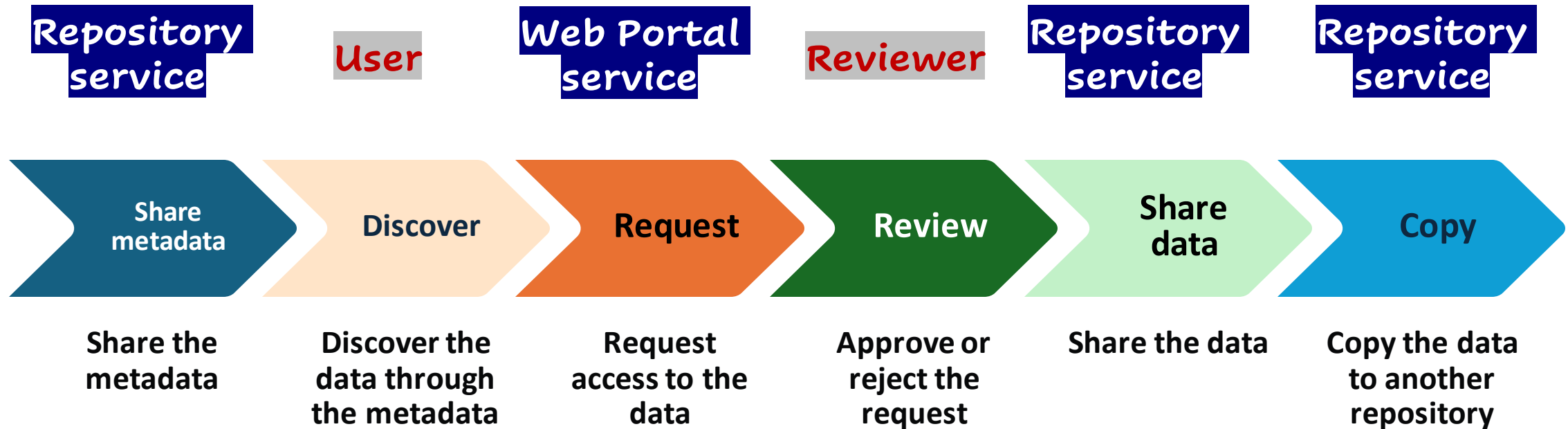
Web Portal service

Reviewer

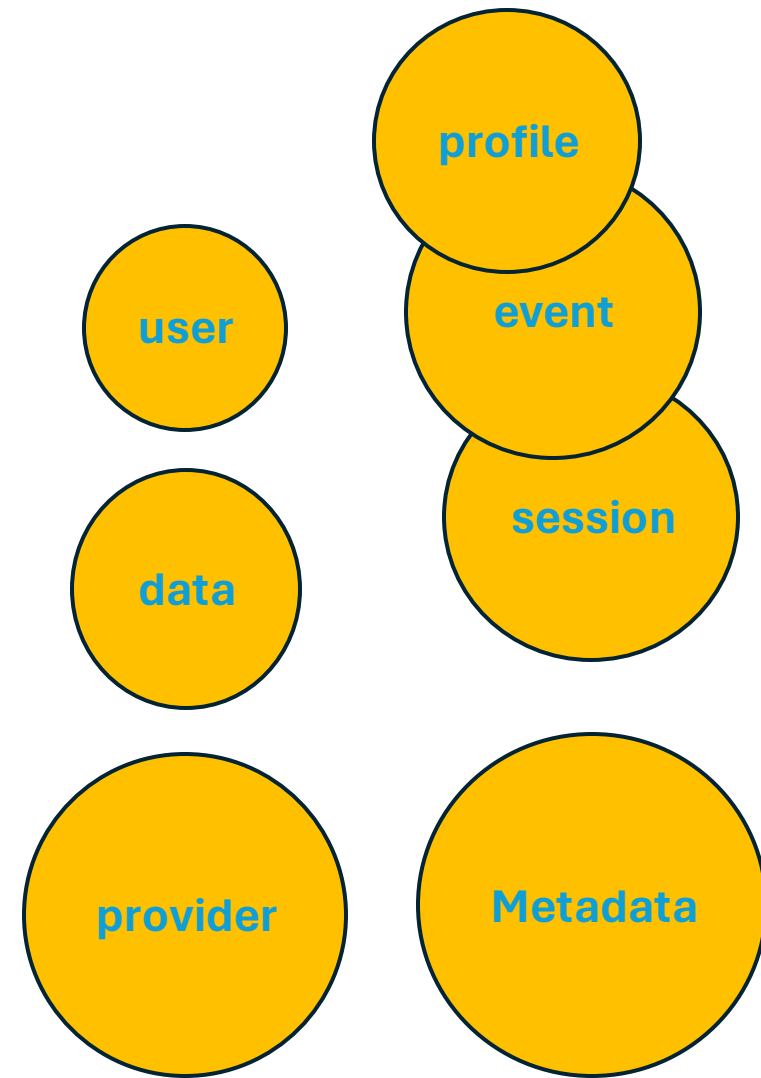
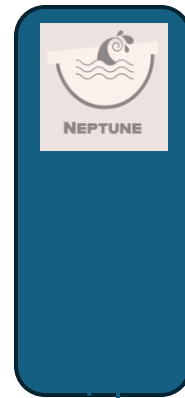
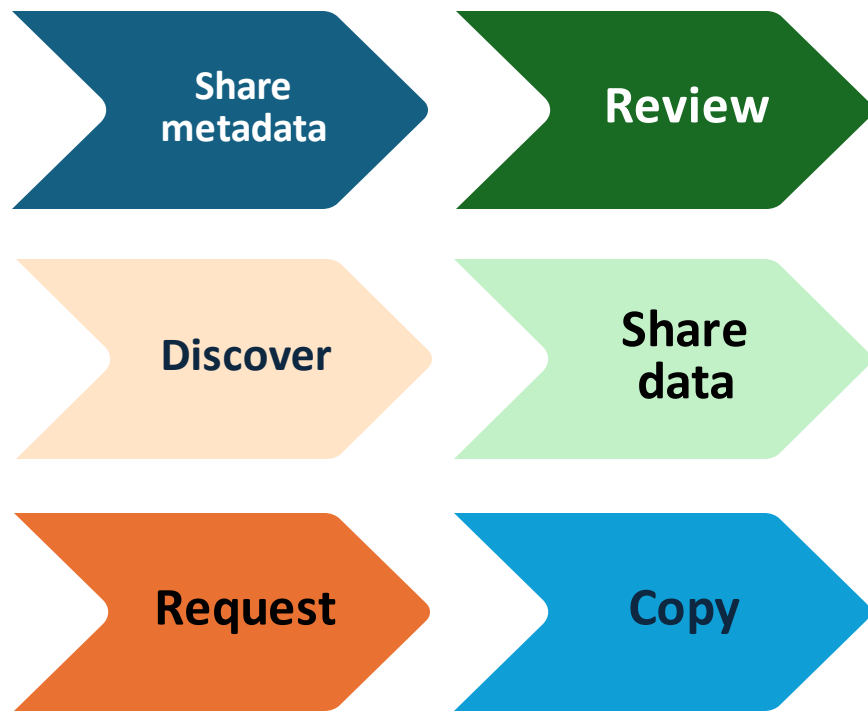
Repository service



Use case: overall perspective - 6 steps



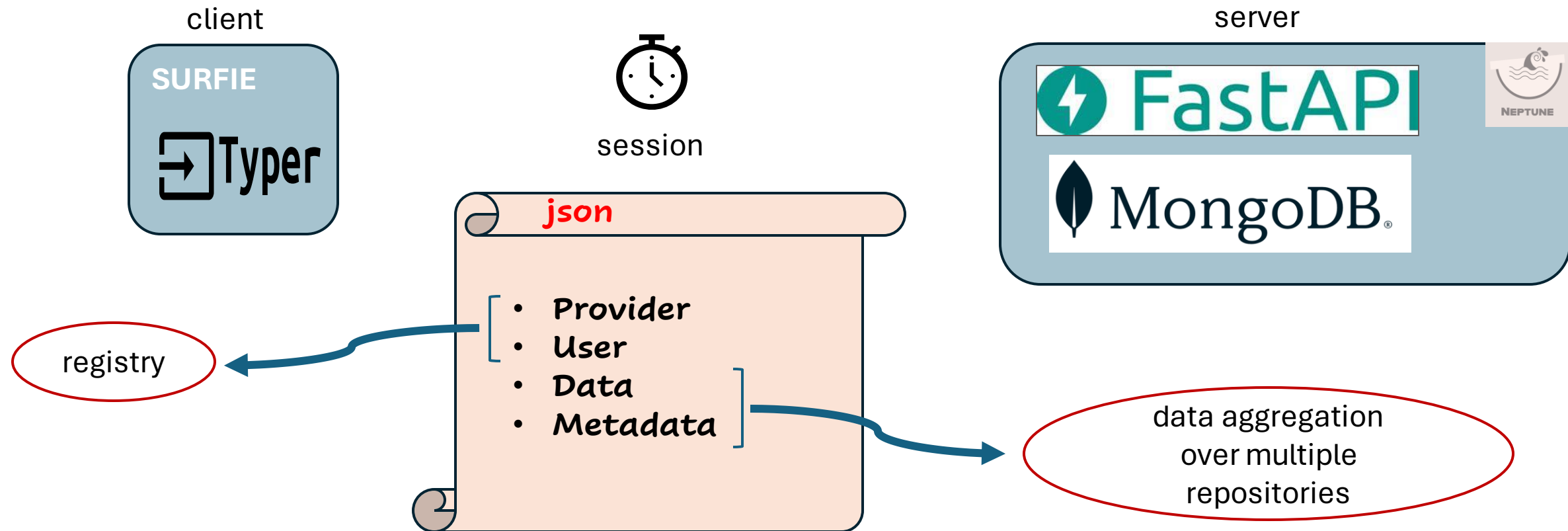
A solution for multiple use cases



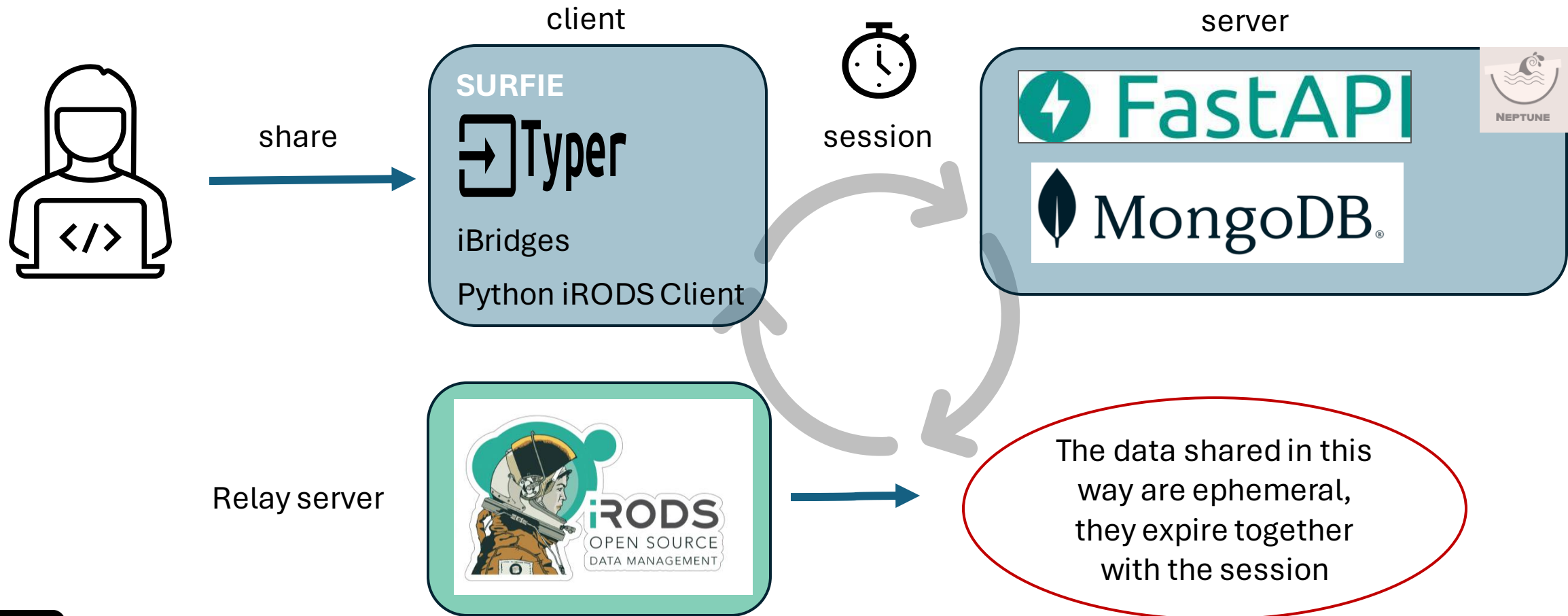
Tasks

High level abstractions

Metadata board (Neptune)



| Centered on iRODS



| Not another repository, just a small house on a (data) lake

<https://gitlab.com/surf-dms/neptune>



Photo by [Vincentiu Solomon](#) on [Unsplash](#)

| Project core team

Erasmus University Rotterdam Yoda team:

Jos London (until Feb 2024)

Frans van der Zijde

Wouter Timmer



GUTS data managers:

Simone Mulder

Mark Mulder



SURF consultant:

Claudio Cacciari

Metadata explorer:

Stephan Heunis

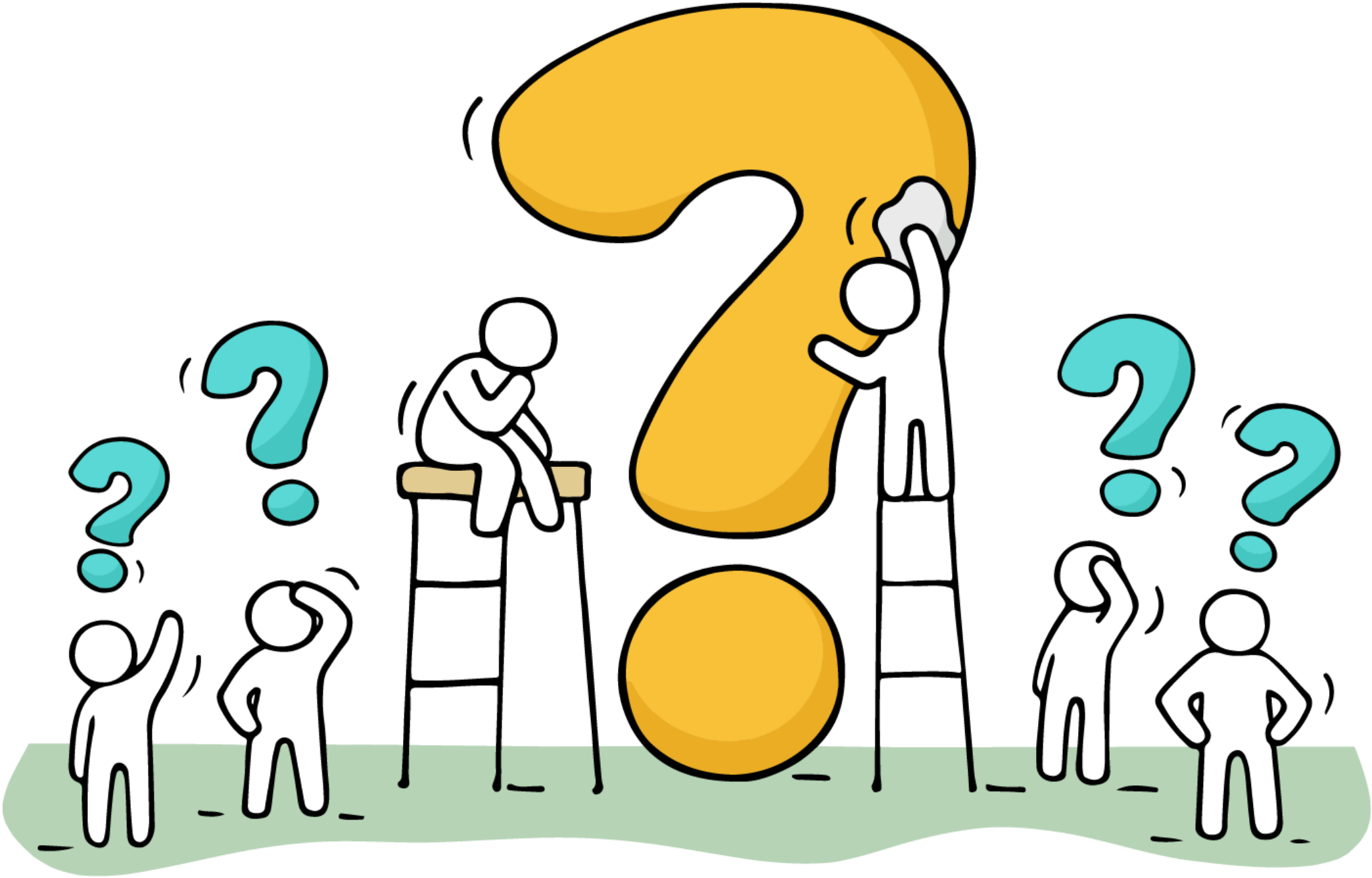


Project lead /
data steward:

Eduard Klapwijk

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Examples: sharing

python neptune/client/surfie.py --conf client/config.ini session



User authenticates to neptune

share



share

surf-yoda::/erasmus/home/research-guts-dummy



the shared data are provided by the provider "surf-yoda"

--with web_portal



the session is shared with the user "web_portal", a service account

--noaccess



only metadata are made available, no access to the data

--meta "json::/erasmus/home/research-guts-dummy/metadata/guts-file-level-metadata.json"



additional metadata are provided, in the json format: the json file is parsed and the content stored in neptune

Examples: requesting

`python neptune/client/surfie.py --conf client/config.ini session`



`request`



`--with "surf_yoda_provider,alice.liddell"`



`--by sram::john.smith@myorg.nl`



`surf-yoda::/surf/home/research-guts-dummy/objectA`
`surf-yoda::/surf/home/research-guts-dummy/objectB`



User authenticates to neptune

request

the request is shared with the data provider "surf-yoda" and a data manager "alice.liddell"

the request is issued on behalf of the user john.smith whose identity is provided by the provider "sram"

the list of the requested data (the shopping cart), each data pointer includes the data provider

Examples: approving

```
python neptune/client/surfie.py --conf client/config.ini
```

```
session list --v --type request --approve
```

sessions:

```
f2060c94-5c21-4017-b686-00b0959477e1 [active] [shared] [2024-05-14 11:02:39.501000] [web_portal]
```

```
request /surf/home/research-guts-dummy/objectA from provider surf-yoda  
by user john.smith@myorg.nl from provider sram
```

```
request /surf/home/research-guts-dummy/objectB from provider surf-yoda  
by user john.smith@myorg.nl from provider sram
```

```
signed by user alice.liddell on action approved [2024-05-14 11:06:21.736861]
```

```
Do you approve the request(s)? [y/N]:
```

**the list of requests,
the approvals for each request,
the question about a new
approval from the current user**