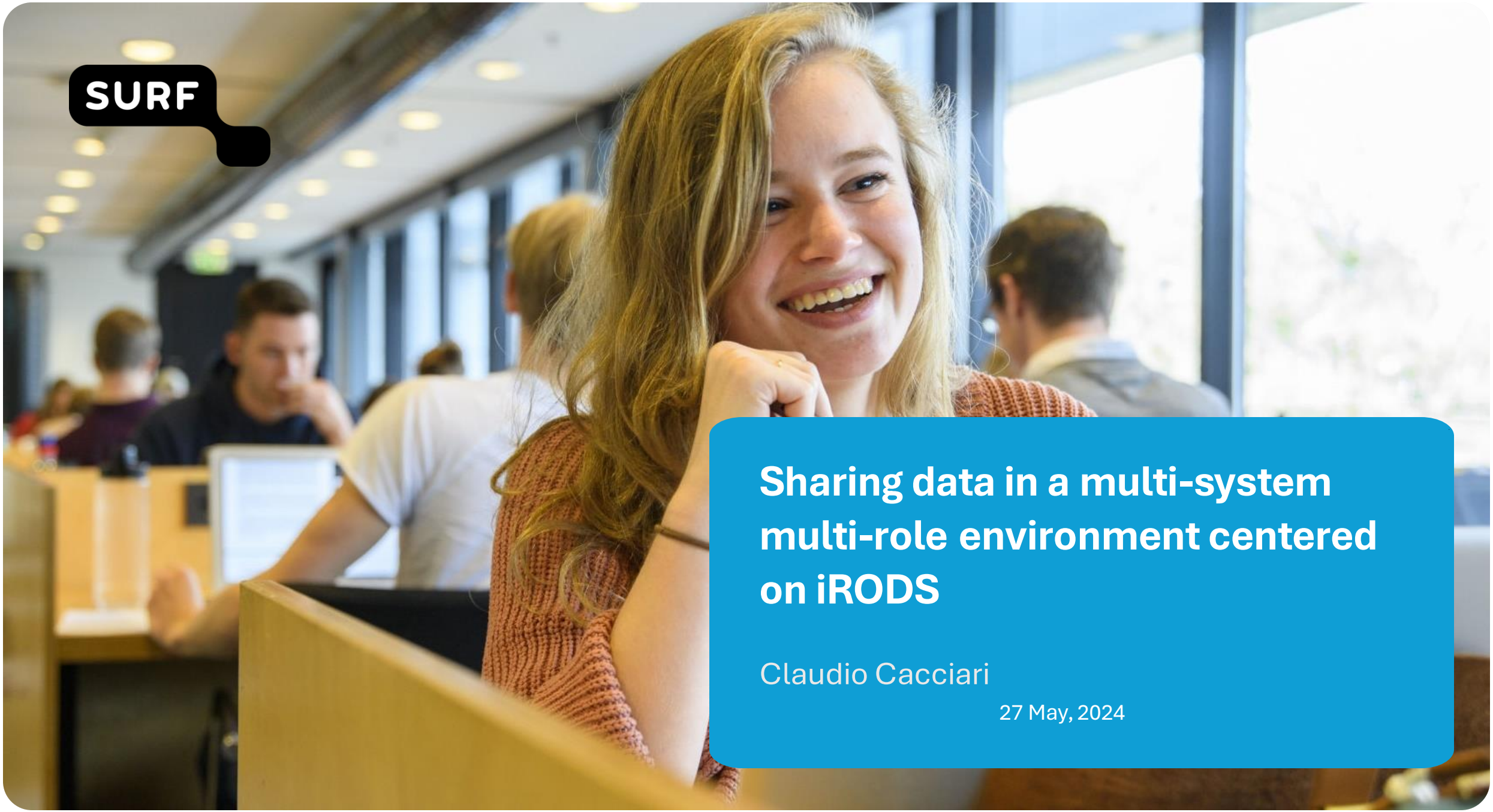


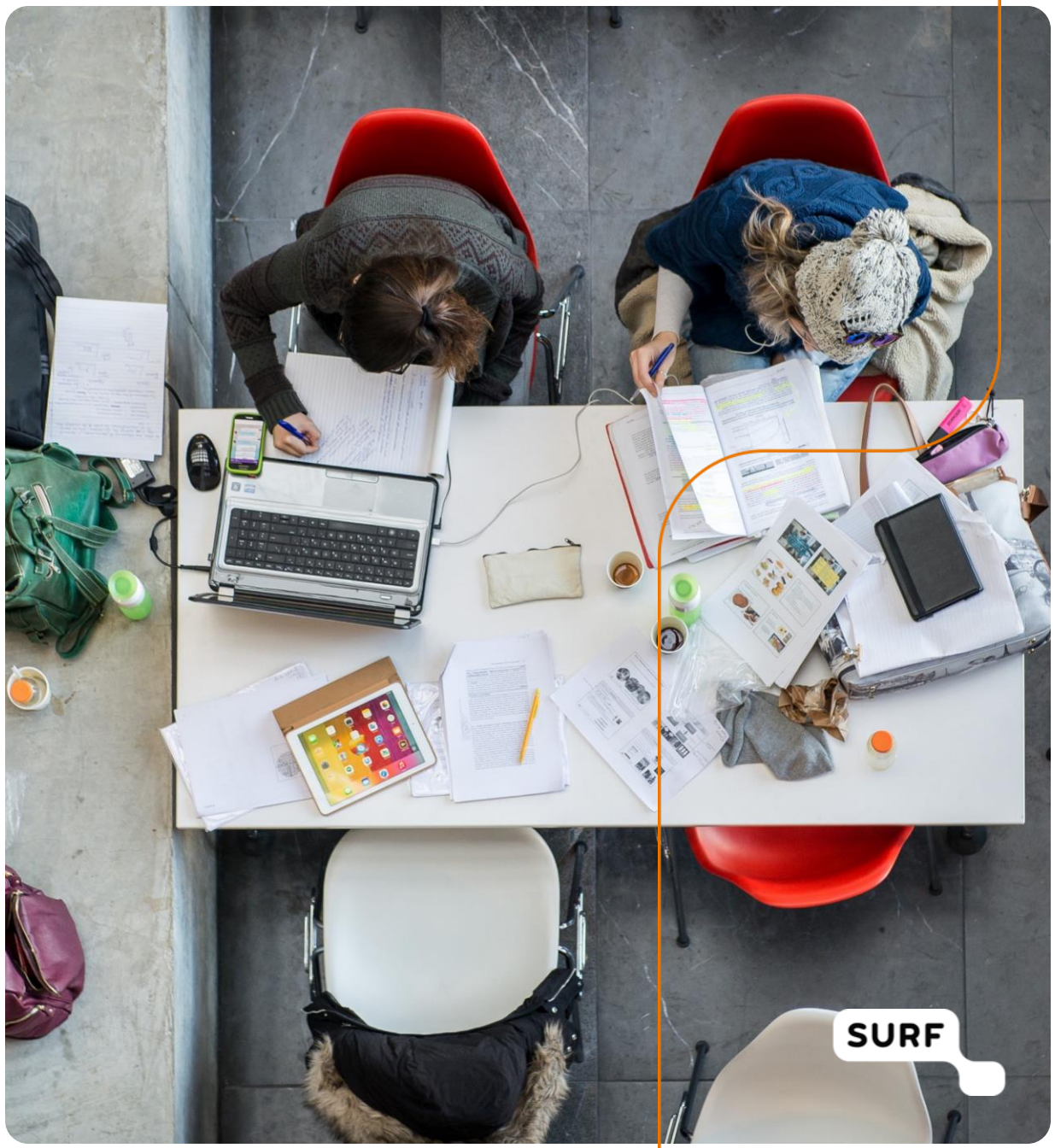
Sharing data in a multi-system multi-role environment centered on iRODS

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.



The project

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

Discover data through metadata

The user searches domain specific data on a web portal

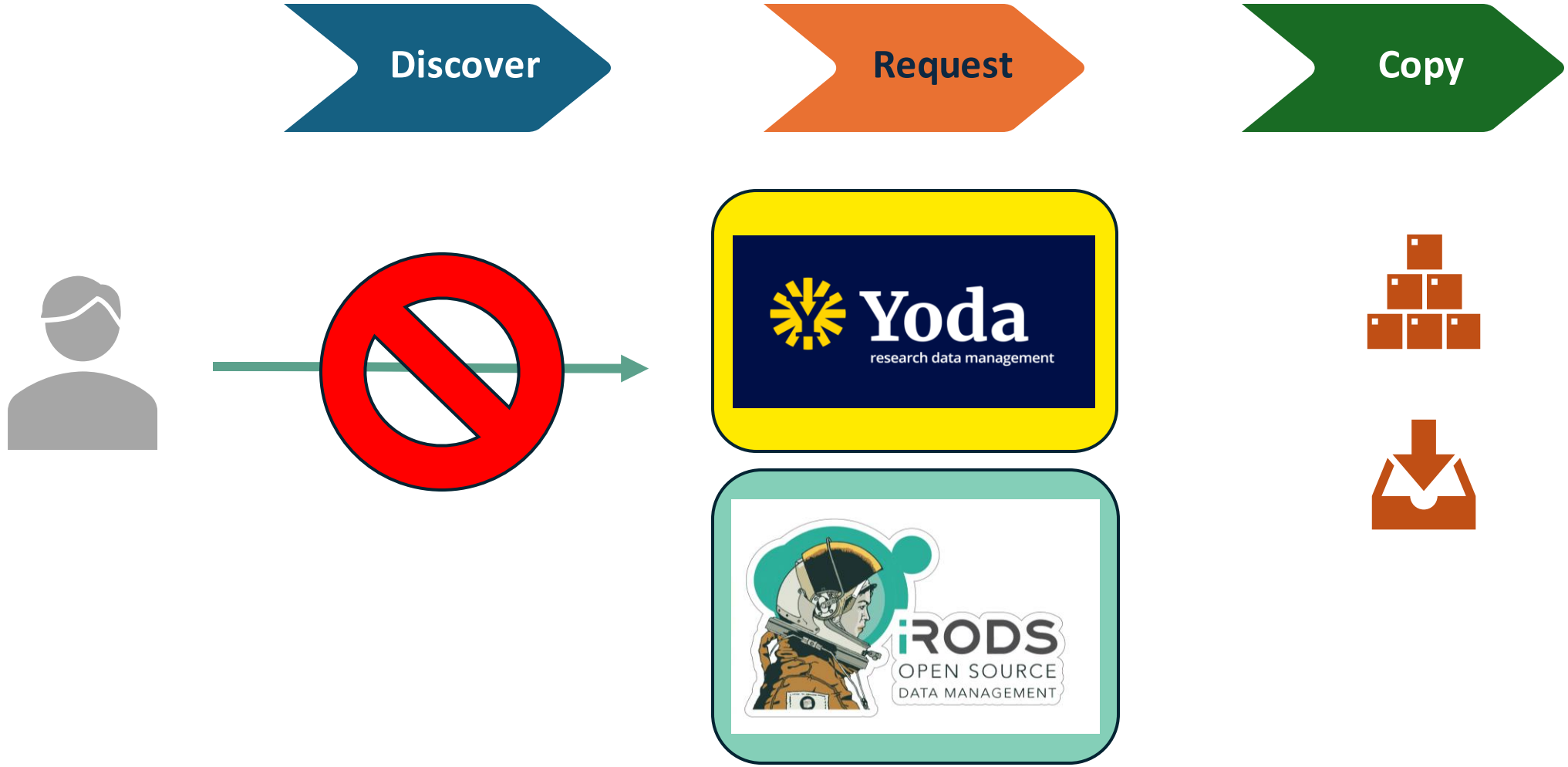
Request access to the data

The user selects some data sets and asks to get access to them

Copy the data from a repository to another

The requested data are copied to another repository, where the user can read them

Within a single system

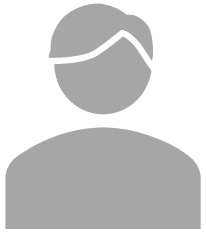


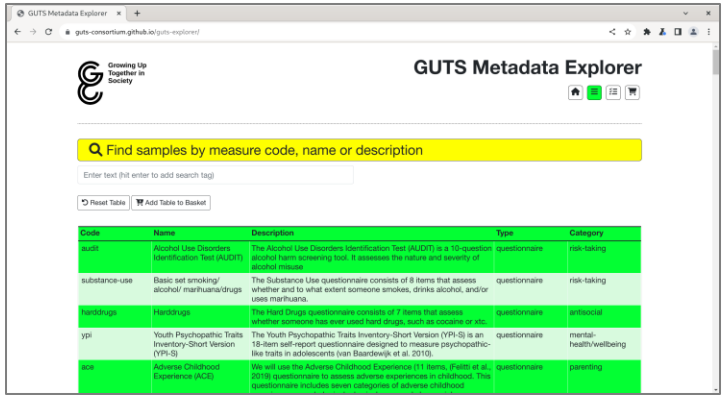
Multiple systems

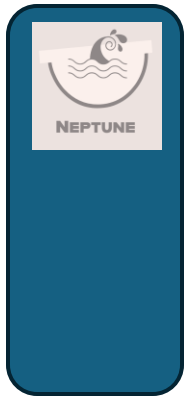
Discover

Request

Copy







Web Portal

Metadata Board

Multiple Repositories

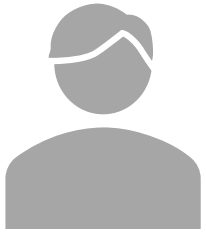
SURF

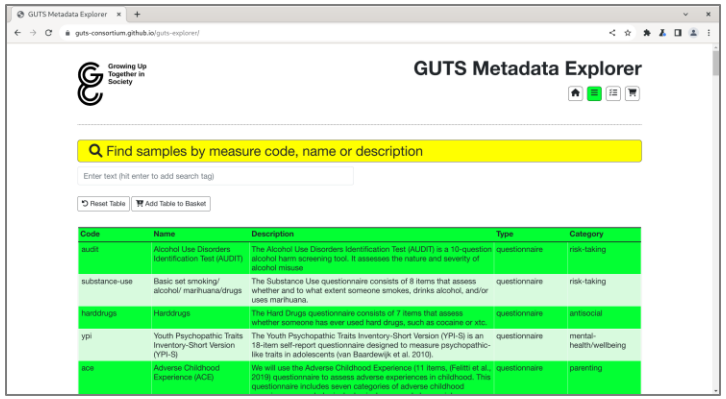
Multiple roles

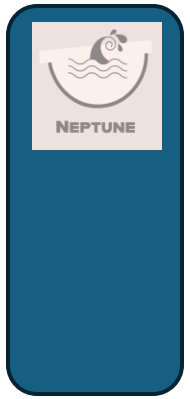
Discover

Request

Copy







User

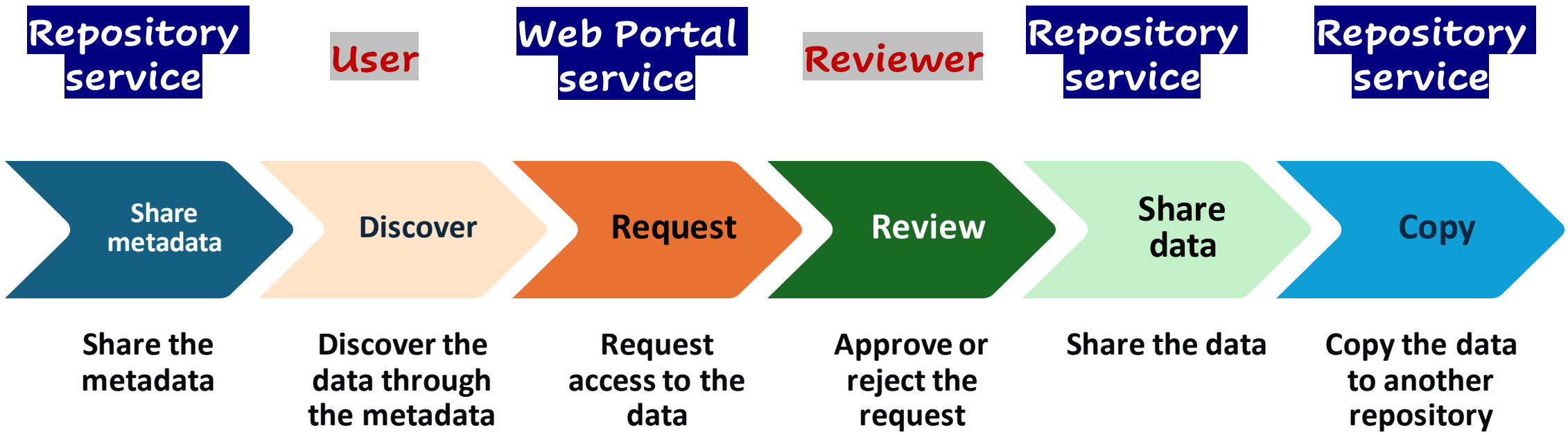
Web Portal service

Reviewer

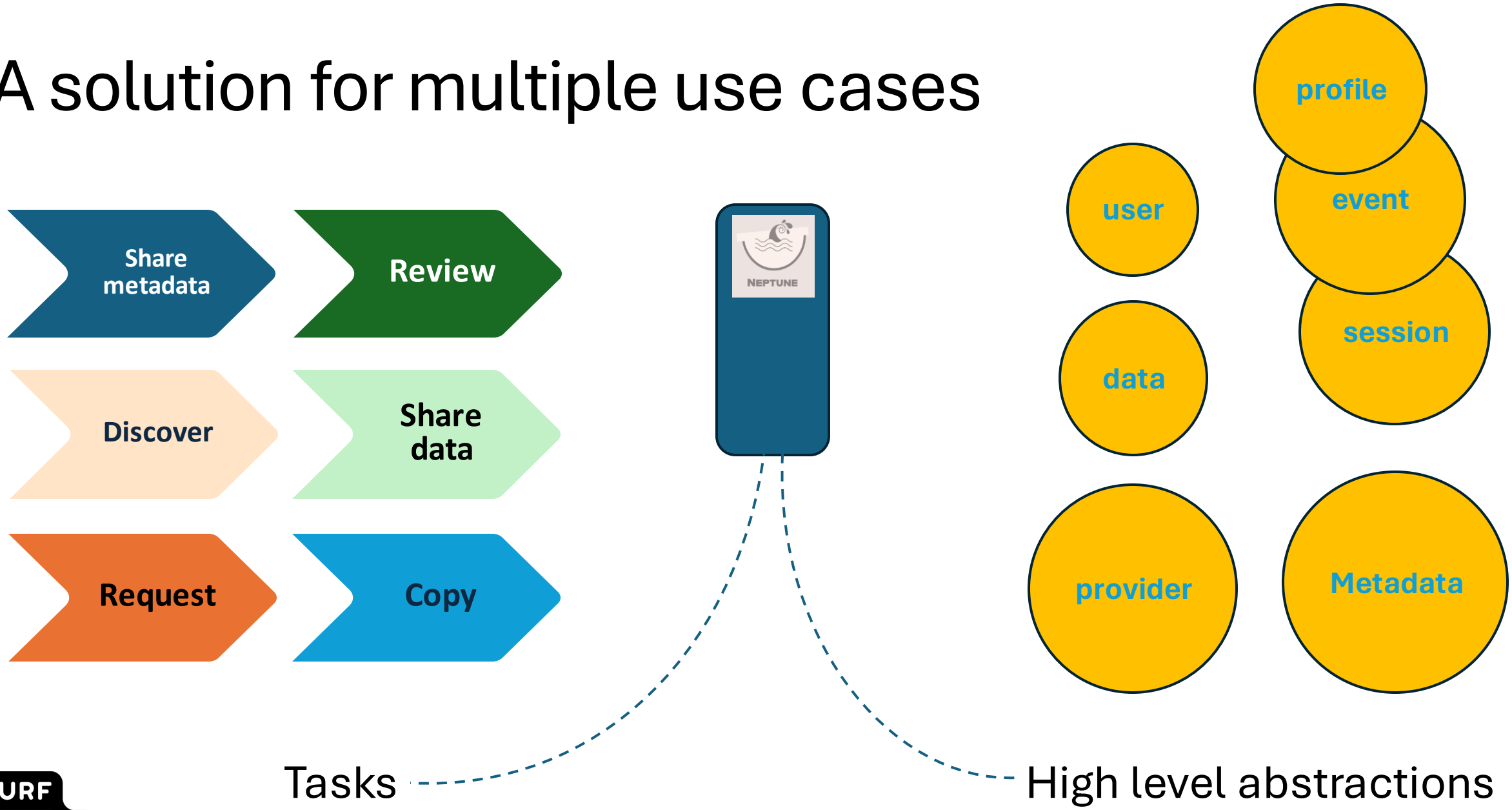
Repository service

SURF

Use case: overall perspective - 6 steps

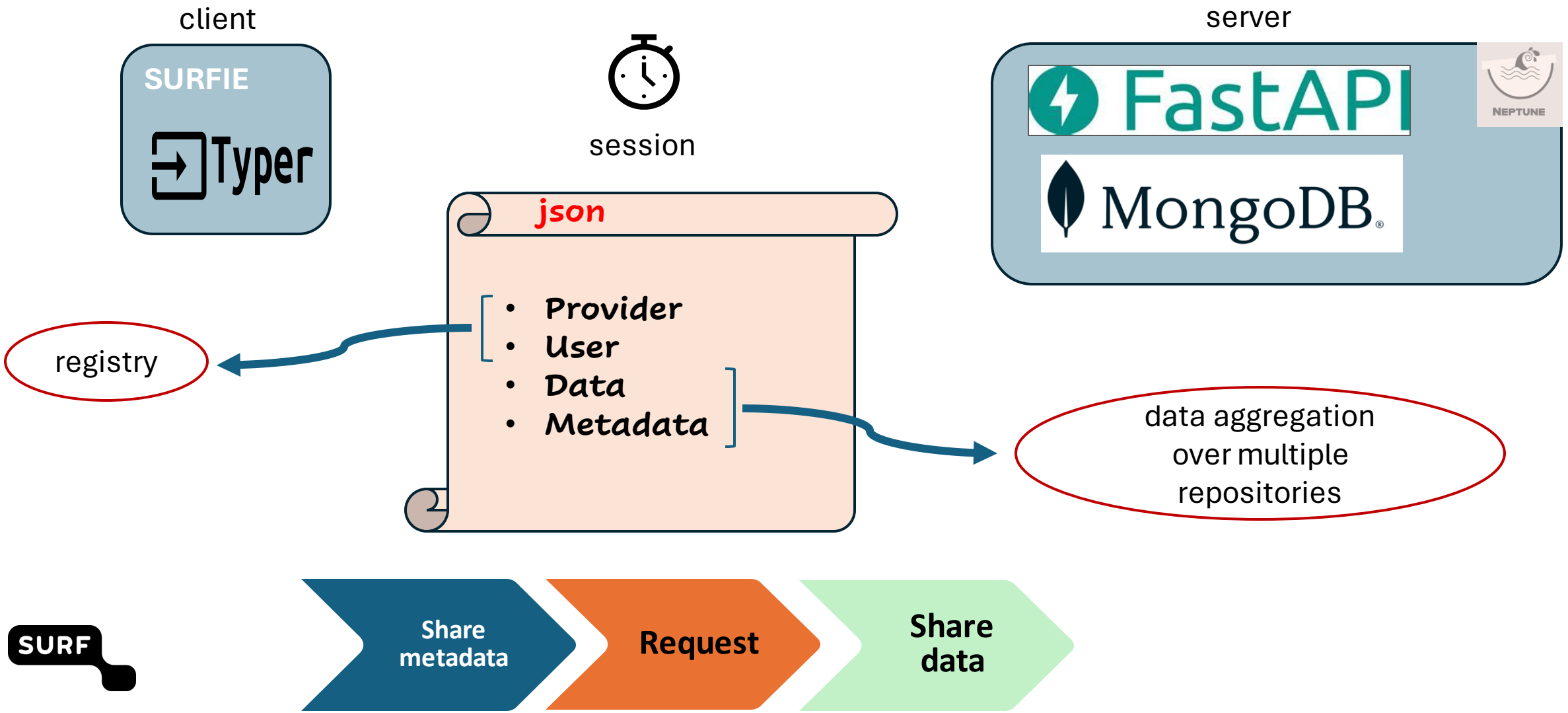


A solution for multiple use cases



SURF

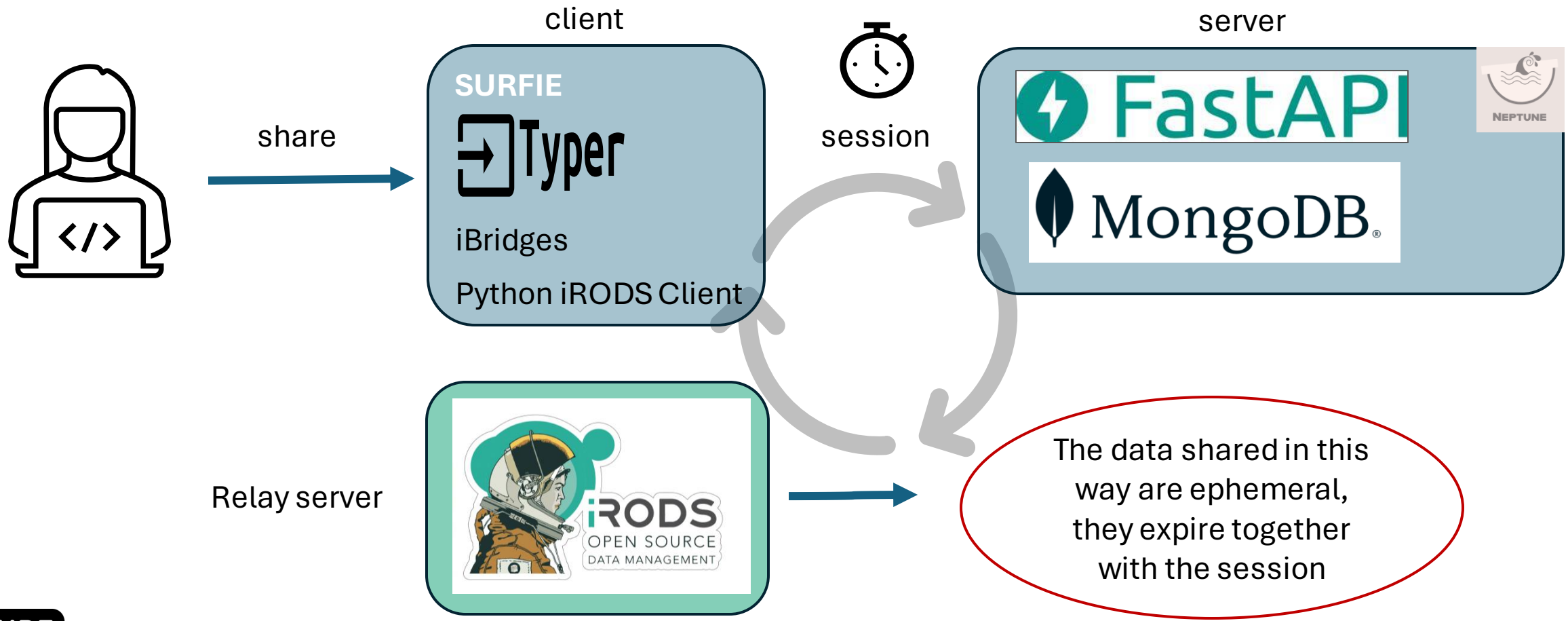
Metadata board (Neptune)



SURF

Share metadata → Request → Share data

Centered on iRODS



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

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

SURF

Photo by Vincentiu Solomon on Unsplash

Project core team

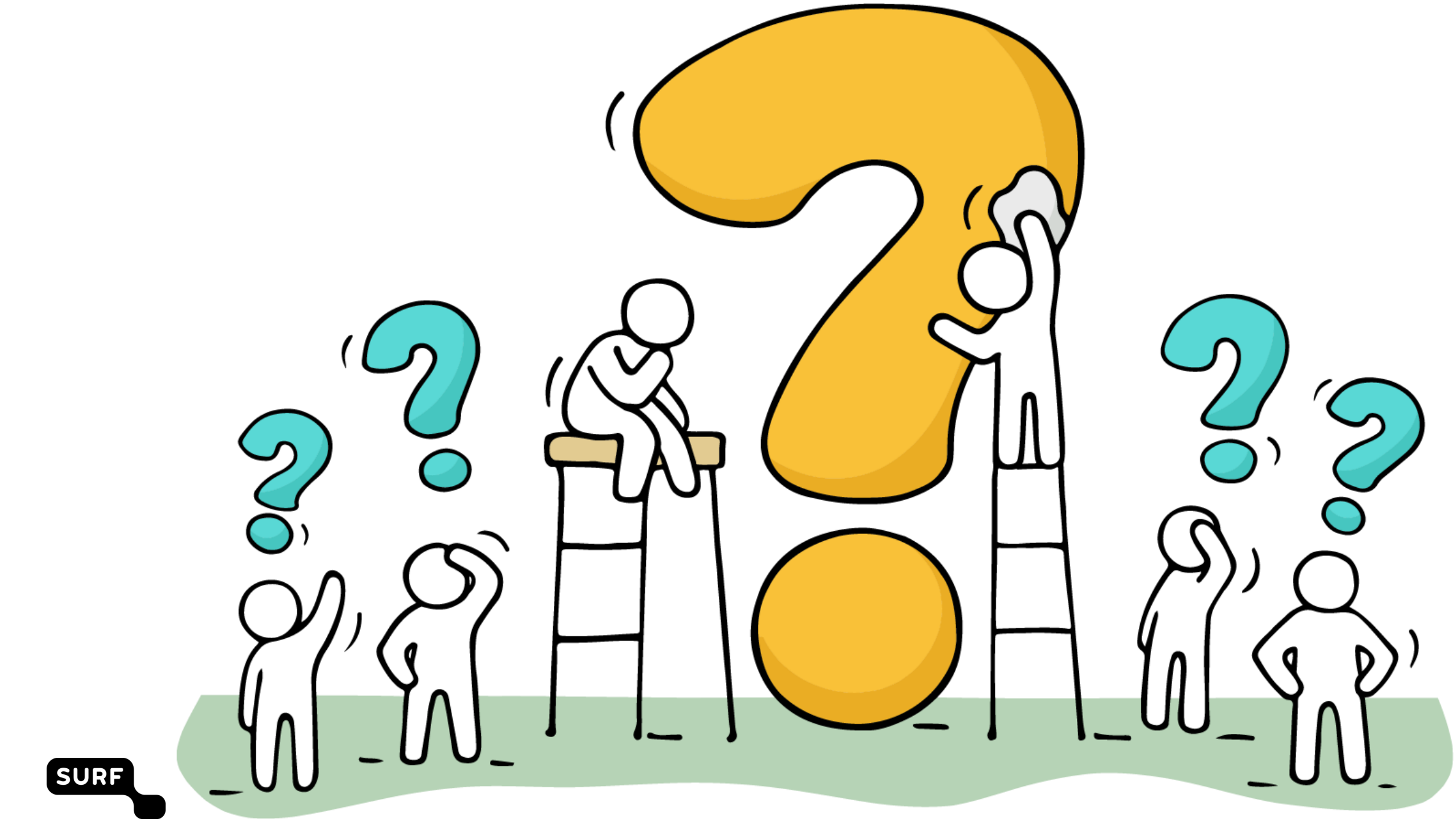
<u>Erasmus University Rotterdam Yoda team:</u>
Jos London (until Feb 2024)
Frans van der Zijde
Wouter Timmer

<u>GUTS data managers:</u>
Simone Mulder
Mark Mulder

<u>SURF consultant:</u>
Claudio Cacciari

<u>Metadata explorer:</u>
Stephan Heunis

<u>Project lead / data steward:</u>
Eduard Klapwijk


SURF

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

SURF

Examples: requesting

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

User authenticates to neptune

request

request

--with "surf_yoda_provider,alice.liddell"

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

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

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

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

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