

# Sharing an attribute credential from Self-Sovereign Identity to FIM Model

FIM4R 17th Workshop, February 2023

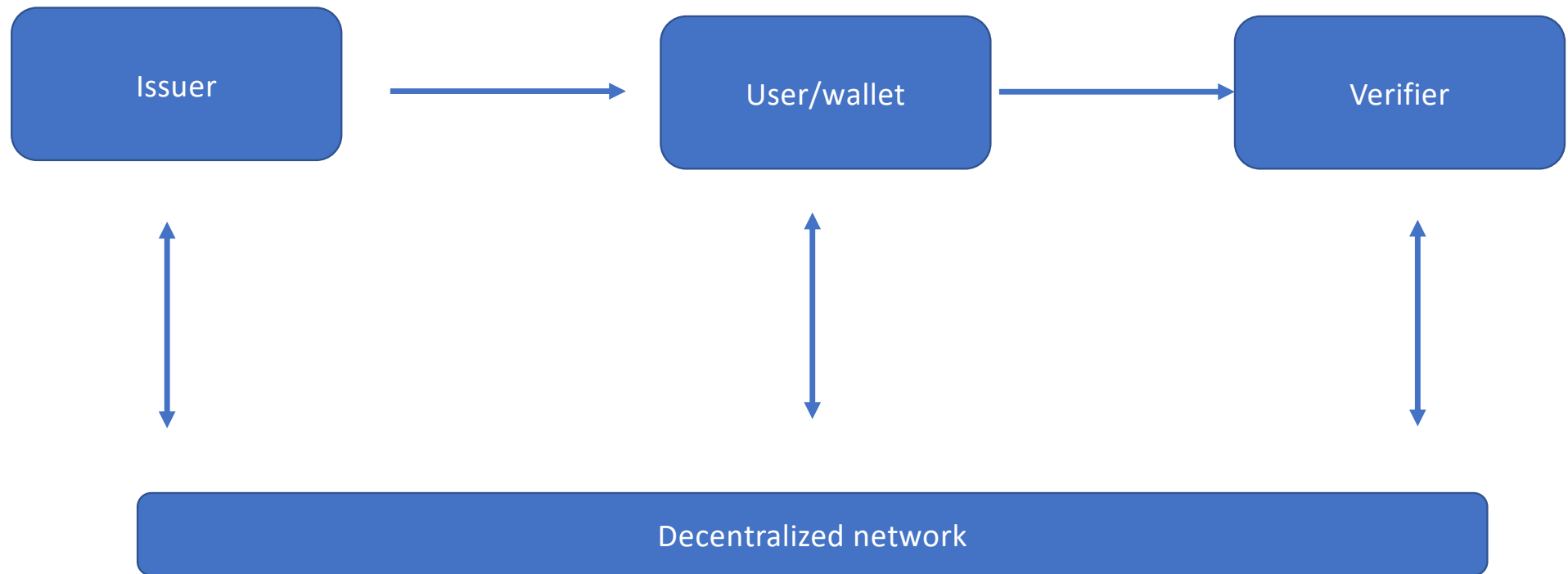
Mauladi

PhD Student University of Göttingen, Germany

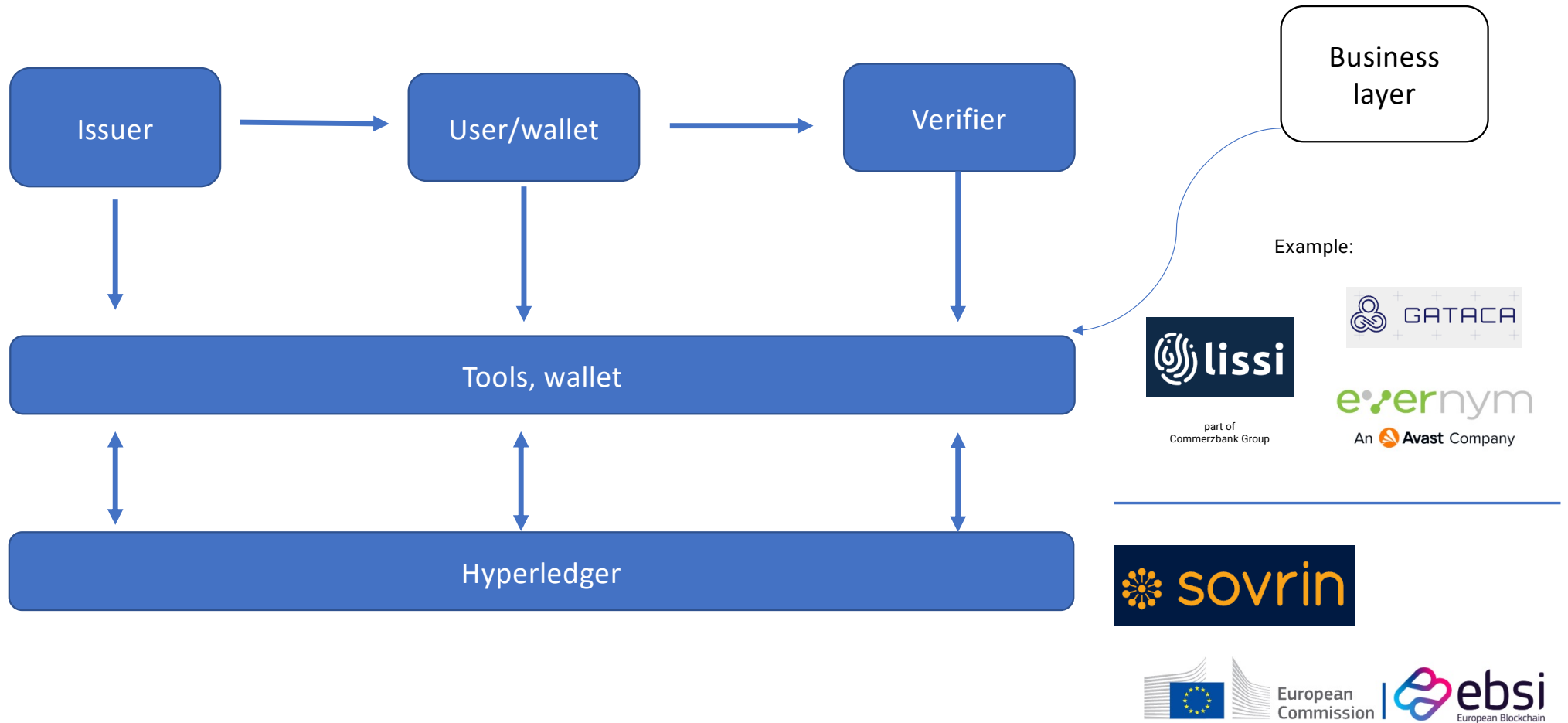
Member of eScience group GWDG, <https://gwdg.de>



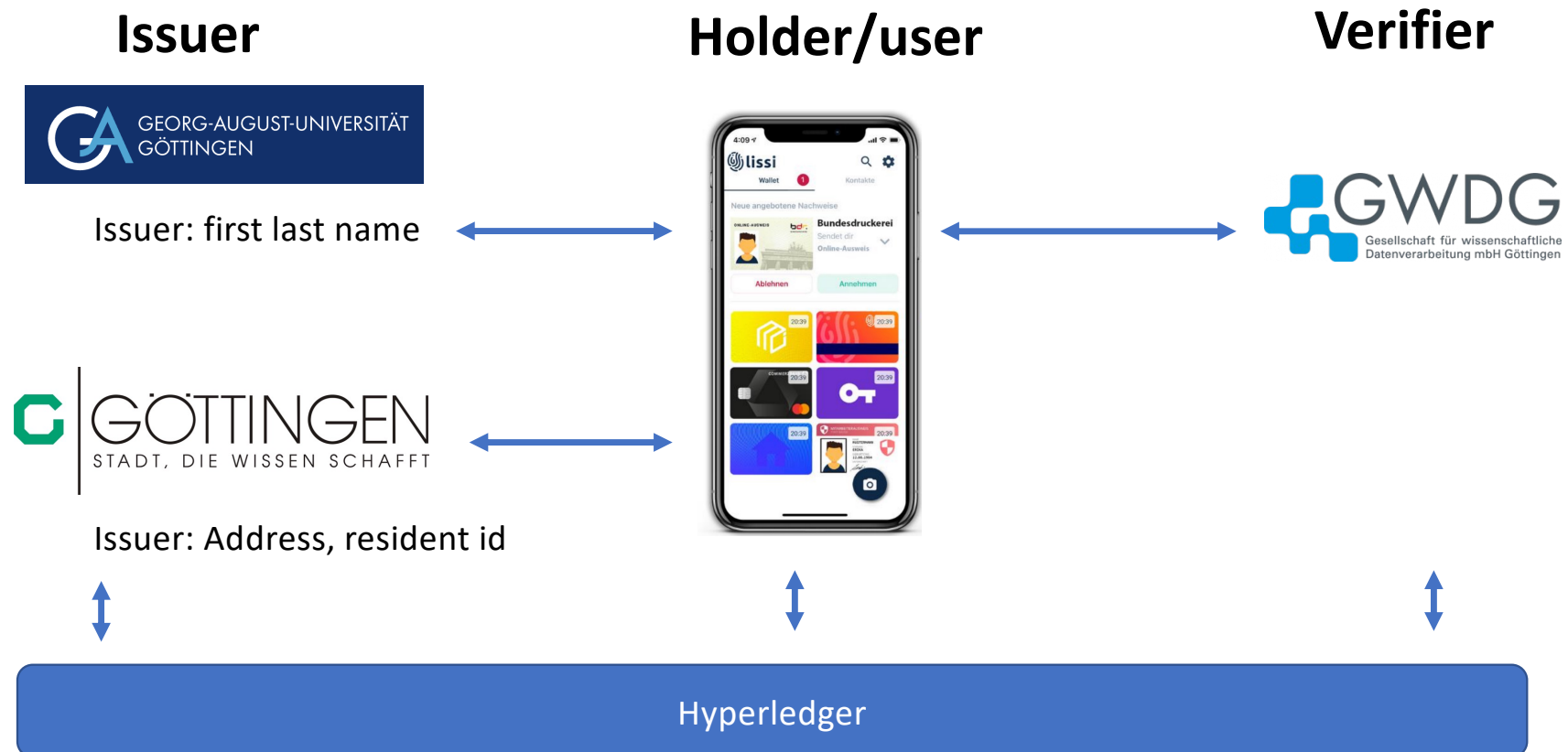
# Self-sovereign identity (SSI) flow (1)



# Self-sovereign identity (SSI) flow (2)



# Example of SSI case



# Technical SSI challenges:

- Interoperability
  - Friends are the most important because we are only working on the same ecosystem
    - Sovrin Foundation
      - <https://sovrin.org/>
    - European Blockchain Services Infrastructure (EBSI)
      - <https://ec.europa.eu/digital-building-blocks/wikis/display/EBSI/Home>
- User device environment

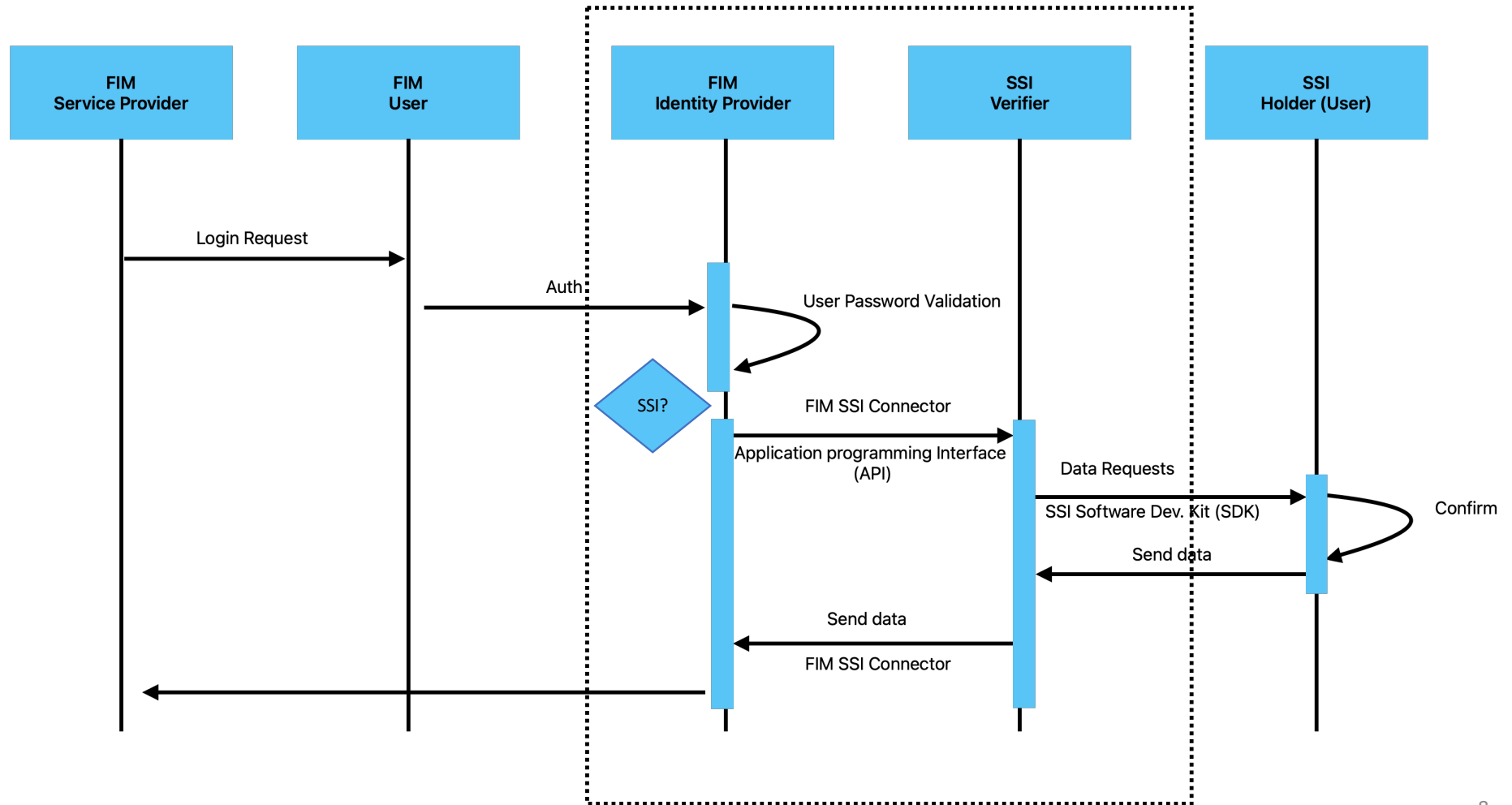
# Research questions

- How FIM user has a capability to control their attribute credential?
- How the IdP has an option not to save the user attributes?
- How the IdP and SP have verified attributes from the trusted source?

What are the possible attributes that IdP can share with SP in this context?

- First and last name
- Phone number
- Address
- Identity number
- Birthdate
- Organization name
- Tax number
- Bank account
- Any others string

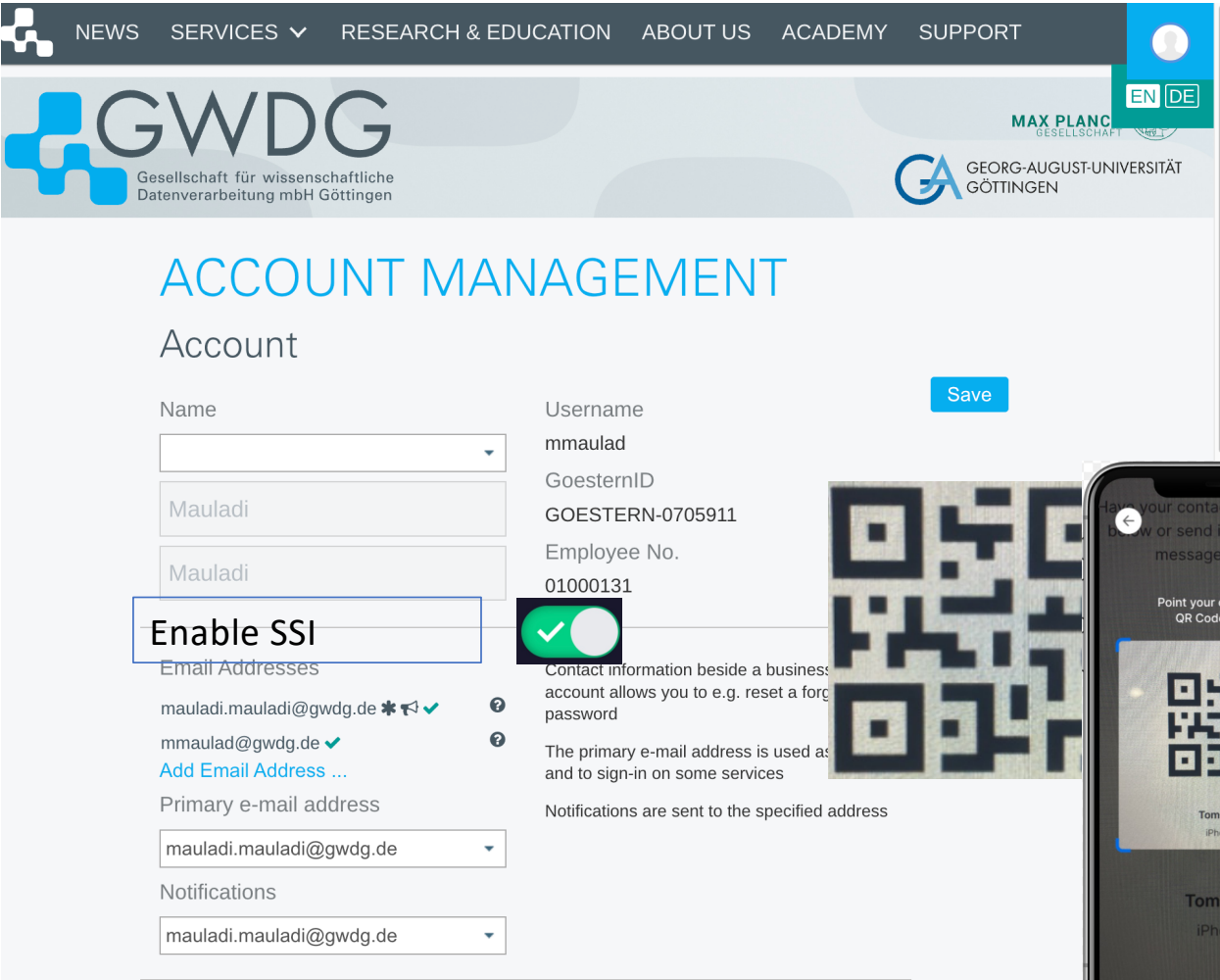
# Propose a technical flow





# How to enable SSI on FIM

1. We define an option at the user account management
2. User account management (GWDG) issued a credential: “you are GWDG user”
  - SSI running on the backend
3. User saves the new credential into their wallet



The screenshot shows the GWDG Account Management interface. The header includes navigation links: NEWS, SERVICES, RESEARCH & EDUCATION, ABOUT US, ACADEMY, and SUPPORT. The GWDG logo is prominently displayed, along with the text 'Gesellschaft für wissenschaftliche Datenverarbeitung mbH Göttingen'. The page title is 'ACCOUNT MANAGEMENT' and the sub-header is 'Account'. The 'Name' field is set to 'Mauladi'. The 'Username' is 'mmaulad' and the 'GoesternID' is 'GOESTERN-0705911'. The 'Employee No.' is '01000131'. The 'Enable SSI' toggle switch is turned on, indicated by a green checkmark. The 'Email Addresses' section lists 'mauladi.mauladi@gwdg.de' as the primary address. A QR code is displayed on the right side of the page. A smartphone in the foreground shows the QR code being scanned, with the text 'Tomislav iPhone' visible on the screen.

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GÖTTINGEN

## ACCOUNT MANAGEMENT

### Account

Name

Mauladi

Mauladi

Enable SSI

Email Addresses

mauladi.mauladi@gwdg.de \* ✓

mmaulad@gwdg.de ✓

[Add Email Address ...](#)

Primary e-mail address

mauladi.mauladi@gwdg.de

Notifications

mauladi.mauladi@gwdg.de

Username

mmaulad

GoesternID

GOESTERN-0705911

Employee No.

01000131

Save

Contact information beside a business account allows you to e.g. reset a forgotten password

The primary e-mail address is used as a contact address and to sign-in on some services

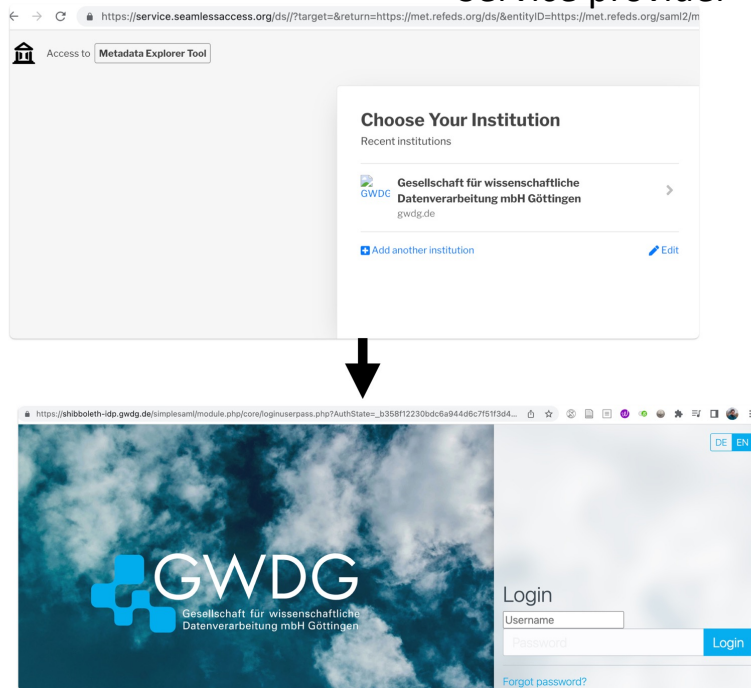
Notifications are sent to the specified address

Tomislav  
iPhone

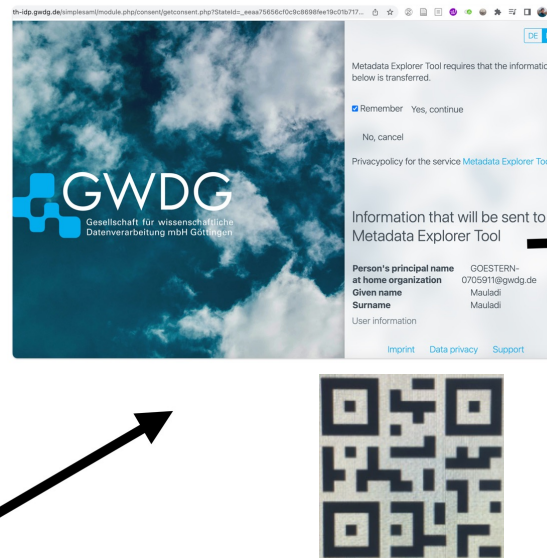
# Design of Implementation

## Federated Identity Management

### Service provider

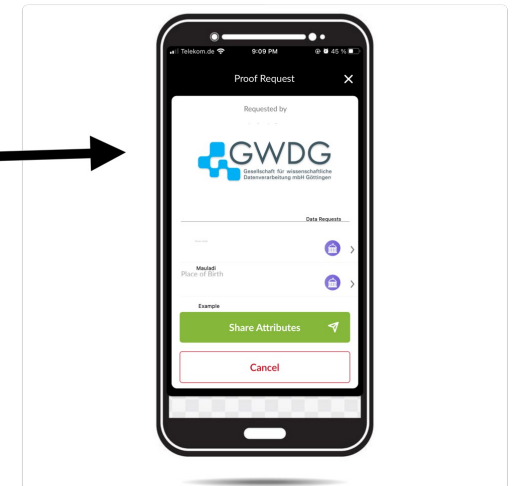


### Identity Provider | SSI Verifier



## Self-Sovereign Identity

### SSI Holder/user



# Thank you!

Mauladi

PhD Student University of Göttingen, Germany

Member of eScience group GWDG, <https://gwdg.de>

