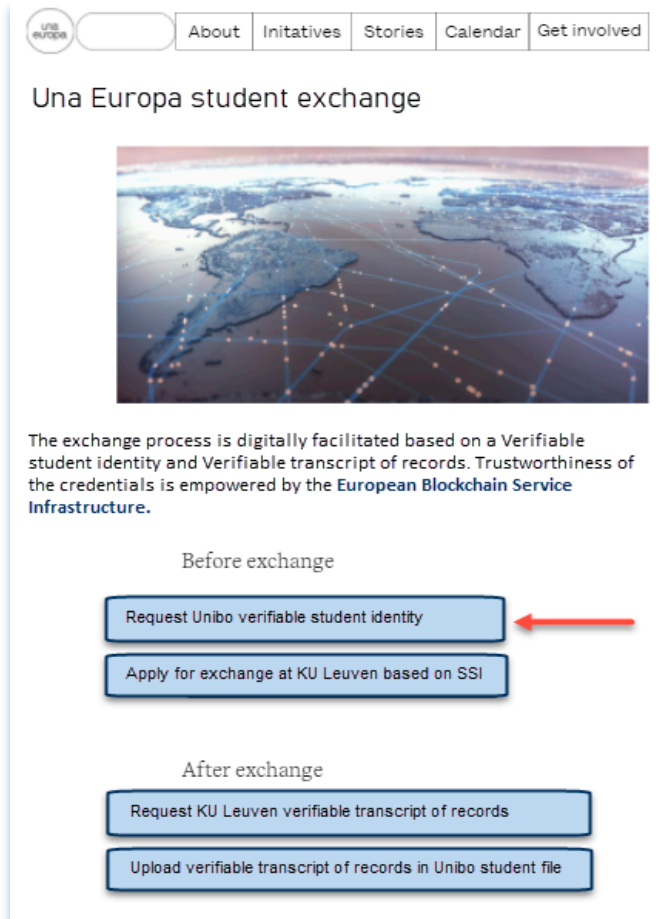


Supplementary material

Scenario 1: Issuance and storage of a verifiable student identity by Unibo (IT)

Step 1: Eva opens the Una Europa student exchange website and request a Unibo verifiable student identity



Step2: Eva is redirected to the Unibo student portal to authenticate herself as a Unibo student

The screenshot shows the Unibo student portal login page. At the top, there is a logo for "DSA". Below the logo, there is a red box with the text "PREPRODUCTION environment".

Below the red box, the text reads: "Enter the University institutional credentials." There are two input fields: one for the email address (containing "eva.ebsi@unibo.it") and one for the password (containing "*****"). Below the input fields, there is a "Sign in" button.

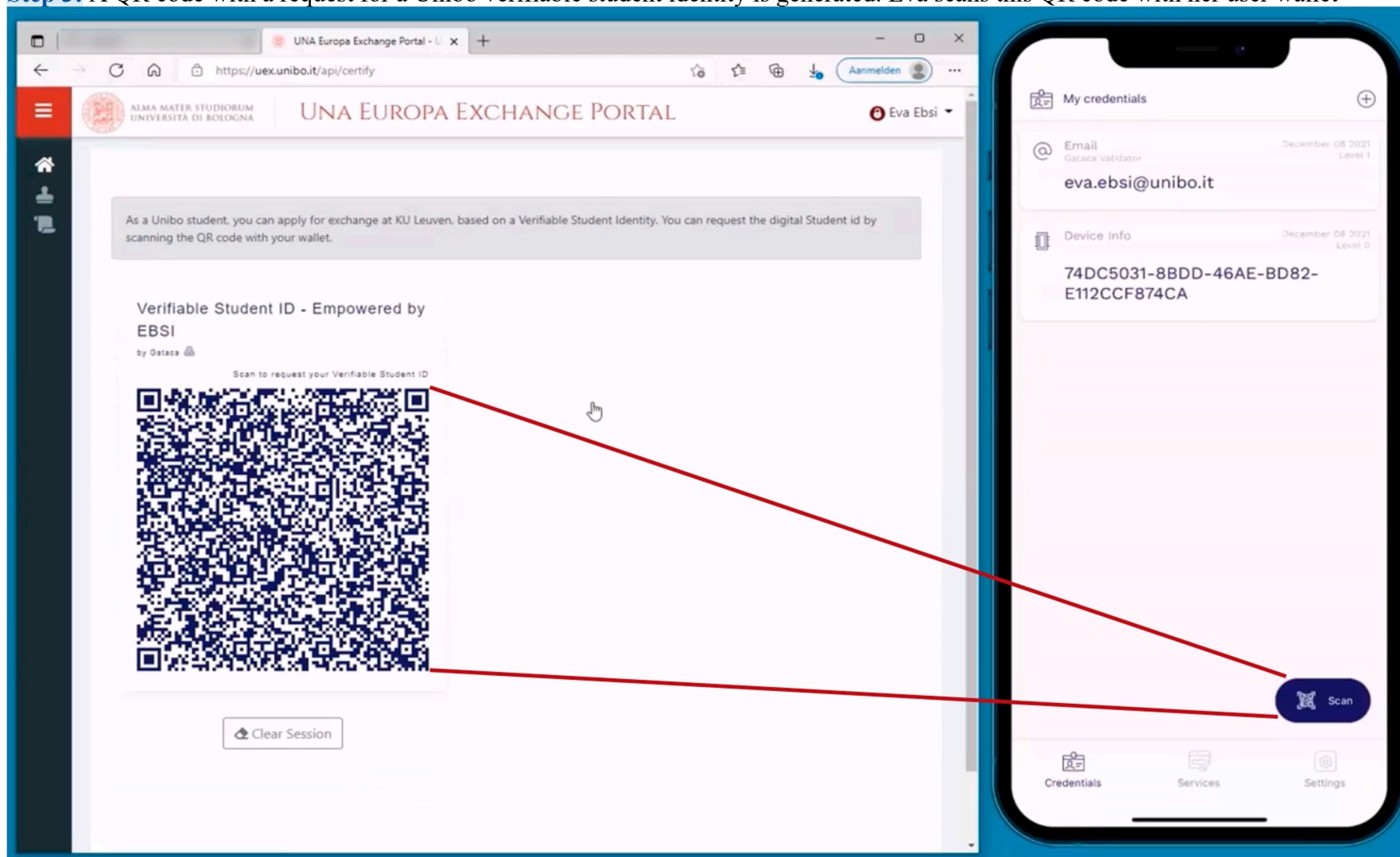
Below the "Sign in" button, there are links for "Having trouble logging in?", "Forgot your credentials?", and "Do you want to change your password?".

Below the links, there is a section titled "More information about credential" with the text "Choose the appropriate credential type:". Below this text, there is a list of credential types: "@studio.unibo.it", "@unibo.it", and "@esterni.unibo.it".

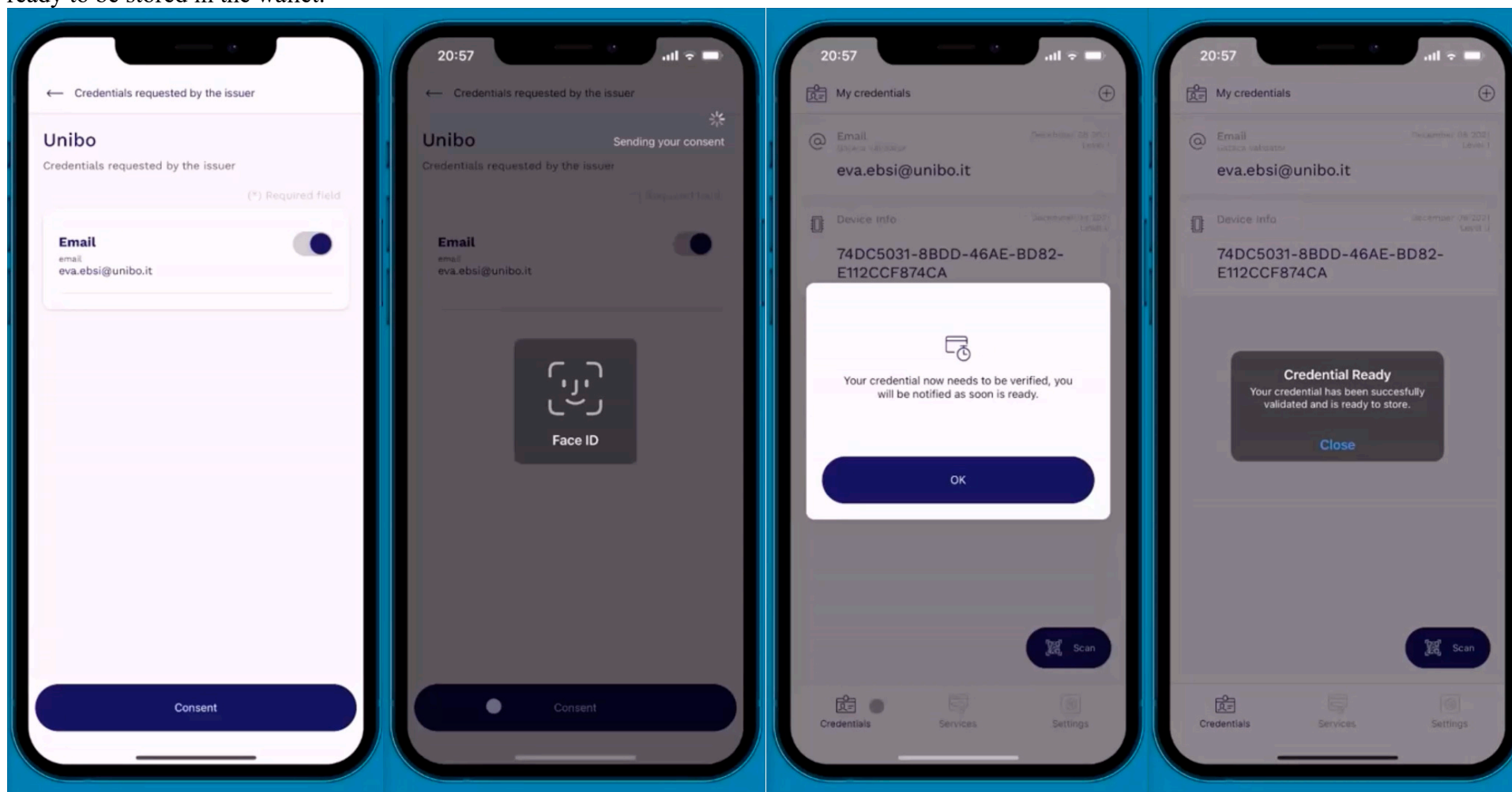
At the bottom right, there is a link for "Privacy policy".

At the bottom left, there is a logo for "Alma Mater Studiorum University of Bologna".

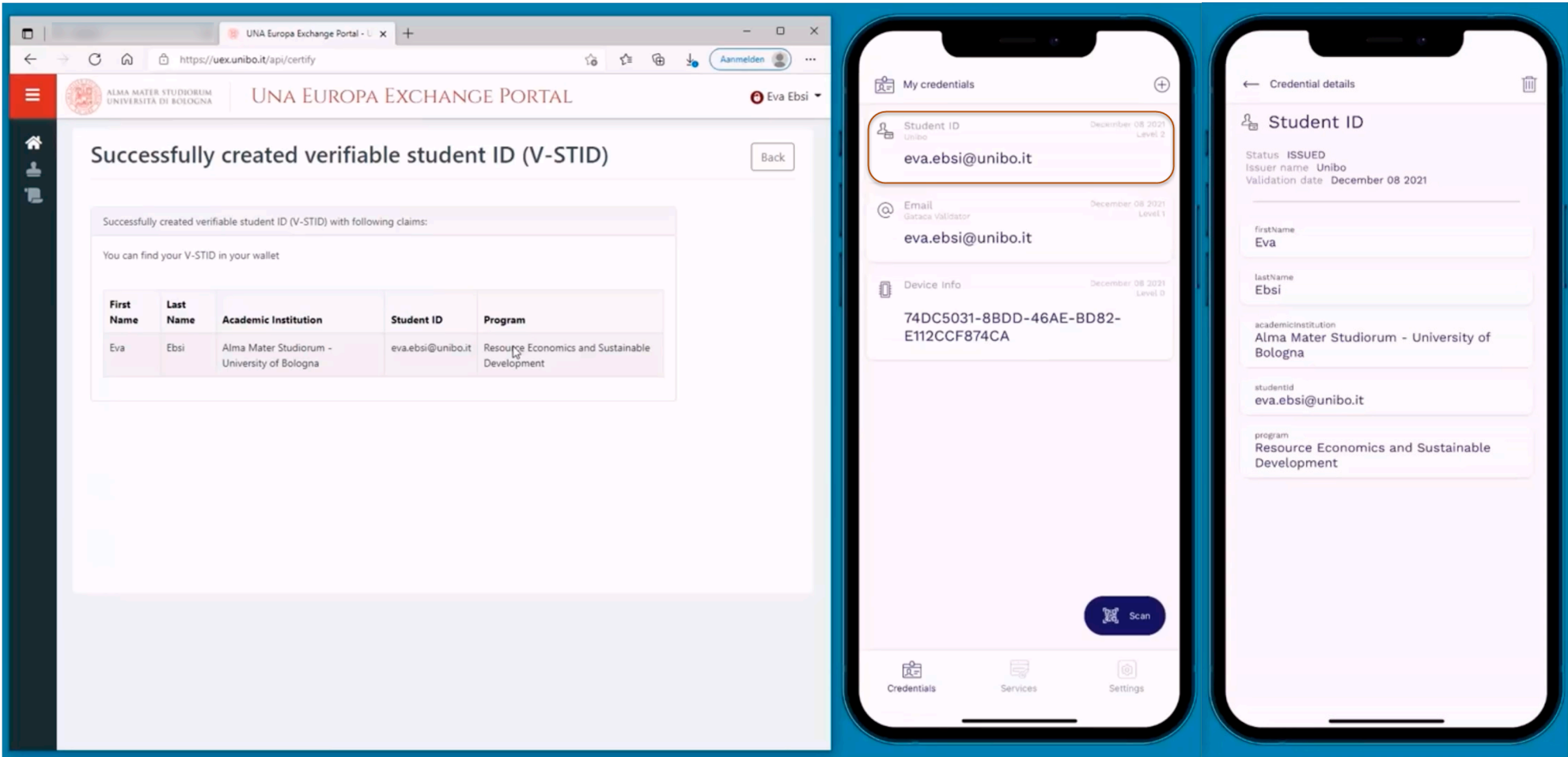
Step 3: A QR code with a request for a Unibo verifiable student identity is generated. Eva scans this QR code with her user wallet



Step 4: (1) Eva is asked to share her student email credential. (2) She gives consent, proves control over the DID and submits the request for a verifiable student identity to Unibo. (3) Eva receives a message in her wallet, saying the credential needs to be verified. She will be notified as soon as the credential is ready. (4) The request is processed by the Unibo backend system where the email credential is automatically checked against the student account. When the request is validated, a verifiable student identity is generated, assigned to the DID of Eva's wallet and signed by Unibo. (5) The student is notified that the credential is ready to be stored in the wallet.

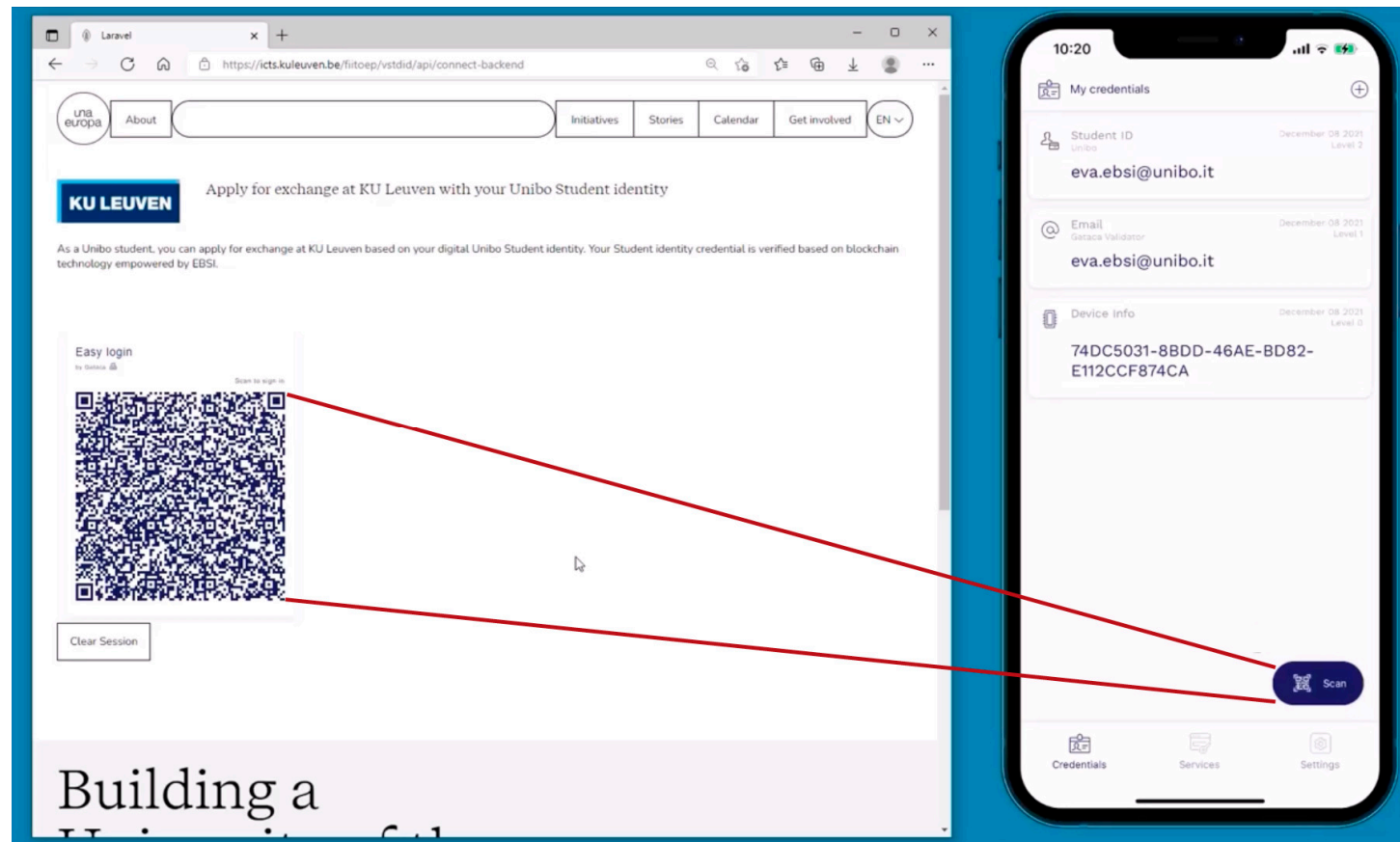
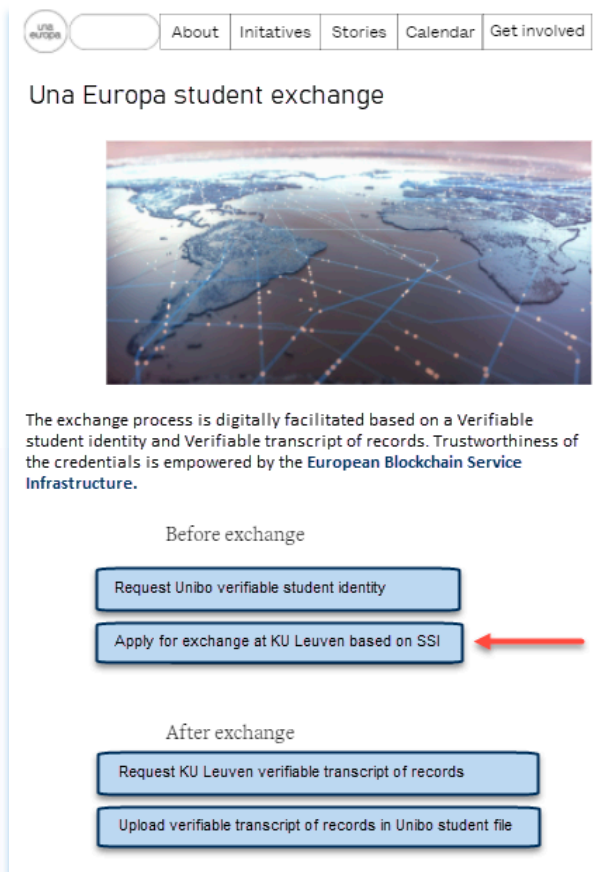


Step 5: (1) The credential is stored in Eva's wallet. (2) Eva can open the credential on her wallet.



Scenario 2: Presentation and verification of verifiable student identity by KU Leuven (BEL)

Step 1: (1) Eva wants to apply at KU Leuven as an exchange student. She goes to the Una Europa student exchange website and requests to apply for exchange. (2) A QR code with a request to share the Unibo verifiable student identity is generated. Eva's scan's the code with her user wallet.



Step 2: (1) Eva is asked to share (a part) of her Unibo student identity with KU Leuven. She gives consent, proves control over the DID and sends the info to KU Leuven. (2) The verifiable student identity is verified by KU Leuven. The trusted registries on the EBSI blockchain are consulted in this verification process.

10:20

← Service link requirements

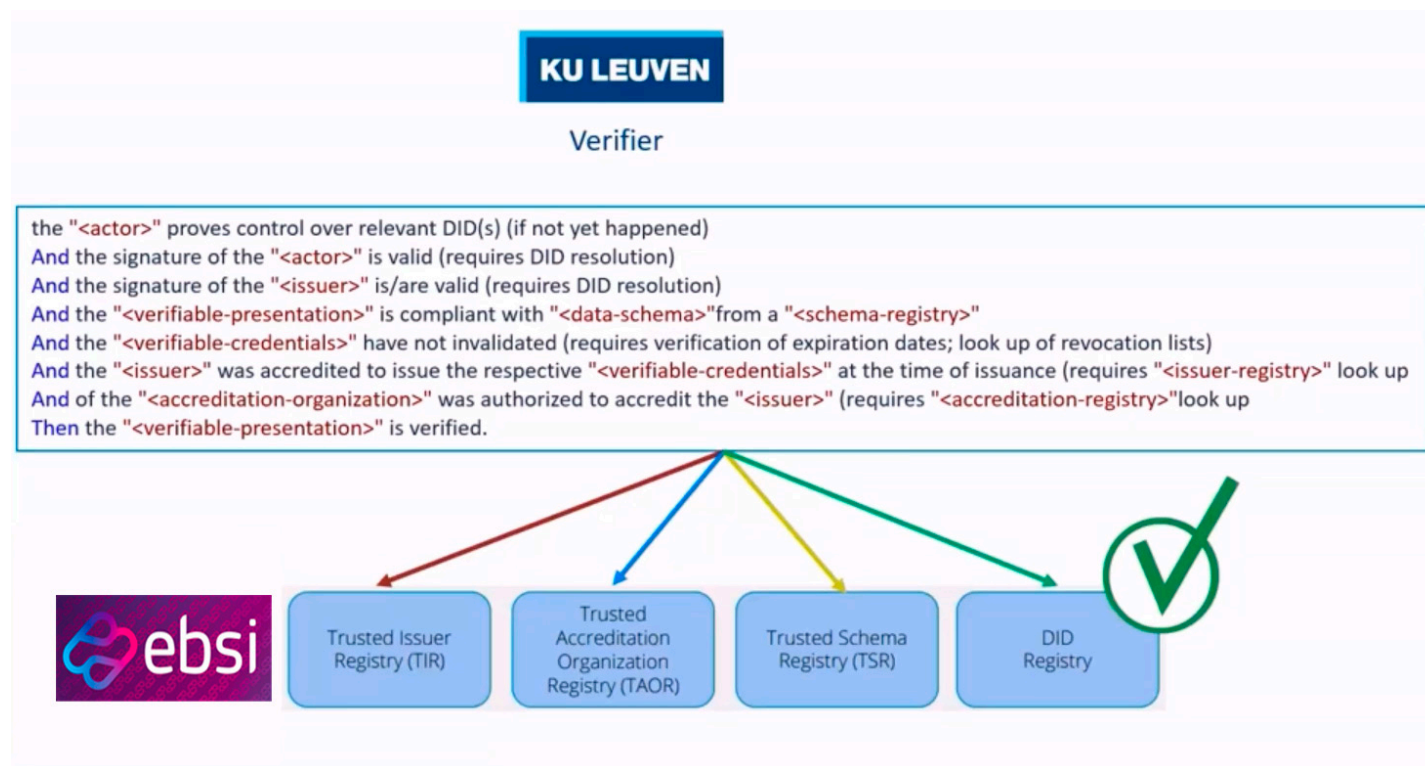
KU Leuven

Credentials requested for this service

(*) Required field

- * Academic Institution**
academicInstitution
Alma Mater Studiorum - University of Bologna
- * Student ID**
studentid
eva.ebsi@unibo.it
- * Last Name**
lastName
Ebsi
- * First Name**
firstName
Eva
- * Program**
program
Resource Economics and Sustainable Development

Consent



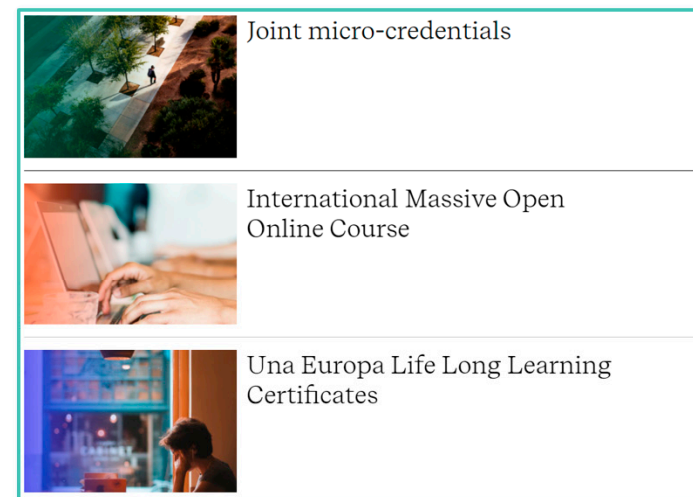
Step 3: After successful authentication based on the Unibo Student identity, the application form can be pre-filled with student info data. The Unibo student identity can also be used during her stay at KU Leuven to subscribe in / login to online courses.



An application form can be prefilled with claims shared by Eva

A screenshot of a web form titled 'Enroll as an exchange student'. The status is 'Nieuw'. The form is titled 'PERSONAL DATA'. It contains the following fields: 'Name' (prefilled with 'Ebsi'), 'First name' (prefilled with 'Eva'), 'Call name' (empty), and 'Gender' (dropdown menu). At the bottom, there are three buttons: 'Save', 'Submit', and 'Back'.

The verifiable student id can be used to subscribe / login to online courses



Scenario 3: Issuance and storage of a verifiable transcript of Records (KU Leuven)

Step 1: (1) Eva wants to share the obtained KU Leuven credits with her home university Unibo. She goes to the Una Europa student exchange website and requests a KU Leuven verifiable transcript of records. (2) A QR code is generated with the request to issue the verifiable transcript of records based on the presented Unibo verifiable student identity. Eva scans the QR code with her user wallet.



Una Europa student exchange



The exchange process is digitally facilitated based on a Verifiable student identity and Verifiable transcript of records. Trustworthiness of the credentials is empowered by the **European Blockchain Service Infrastructure**.

Before exchange

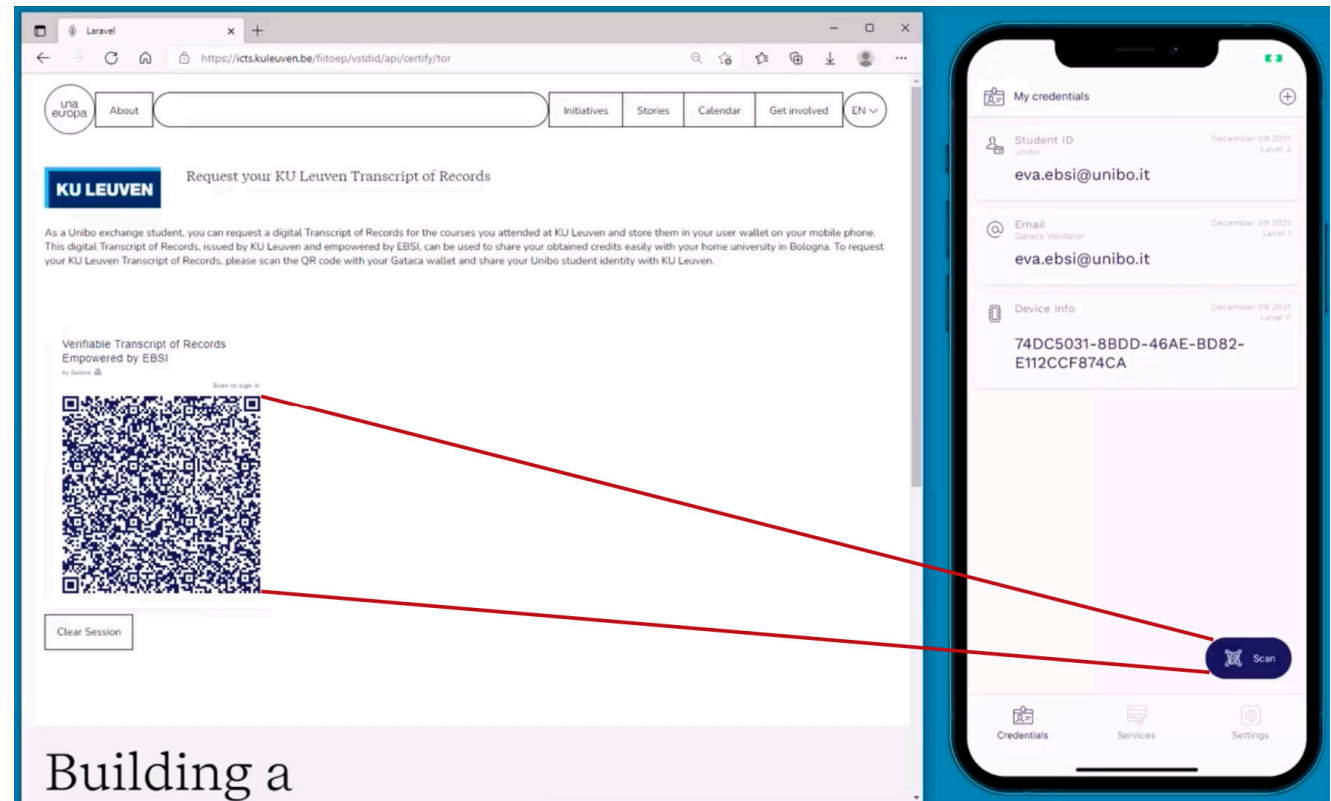
Request Unibo verifiable student identity

Apply for exchange at KU Leuven based on SSI

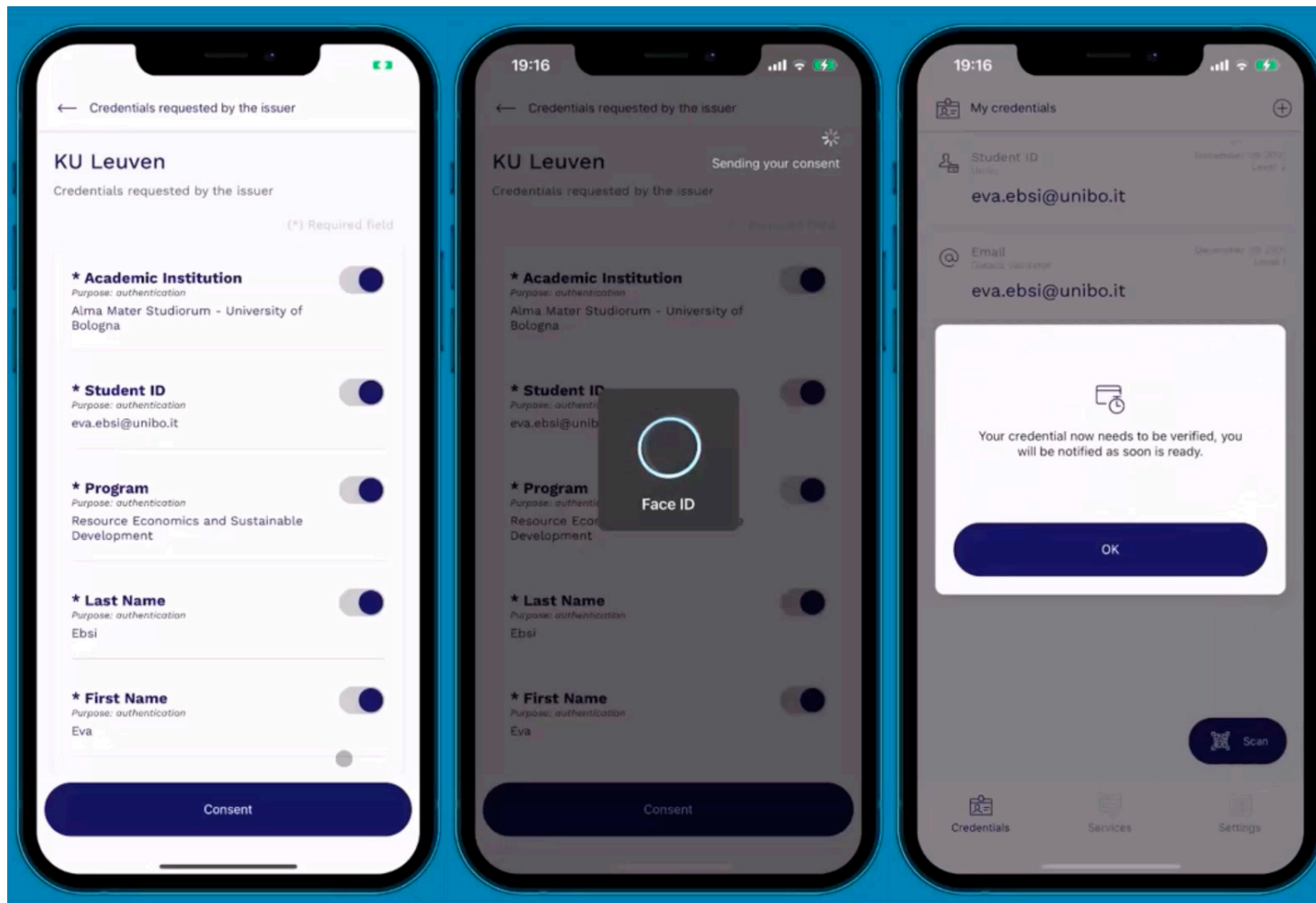
After exchange

Request KU Leuven verifiable transcript of records

Upload verifiable transcript of records in Unibo student file

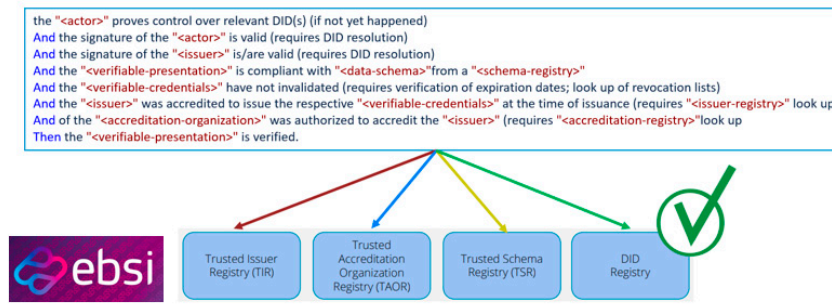


Step 2: (1) Eva is asked to authenticate herself based on (part of) the Unibo verifiable student identity. shares her Unibo student identity with KU Leuven to authenticate herself. (2) She gives consent, proves control over the DID and submits the request for a verifiable transcript of records to KU Leuven. (3) Eva receives a message in her wallet, saying the credential needs to be verified. She will be notified as soon as the credential is ready.

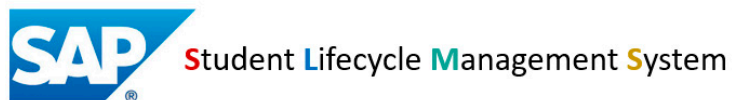


Step 3: The request is processed by the KU Leuven backend system: the verifiable student identity is verified, the corresponding student file is retrieved, the obtained credits are put in the data schema of a verifiable transcript of records, the credential is signed by the KU Leuven and a notification is sent to Eva's user wallet.

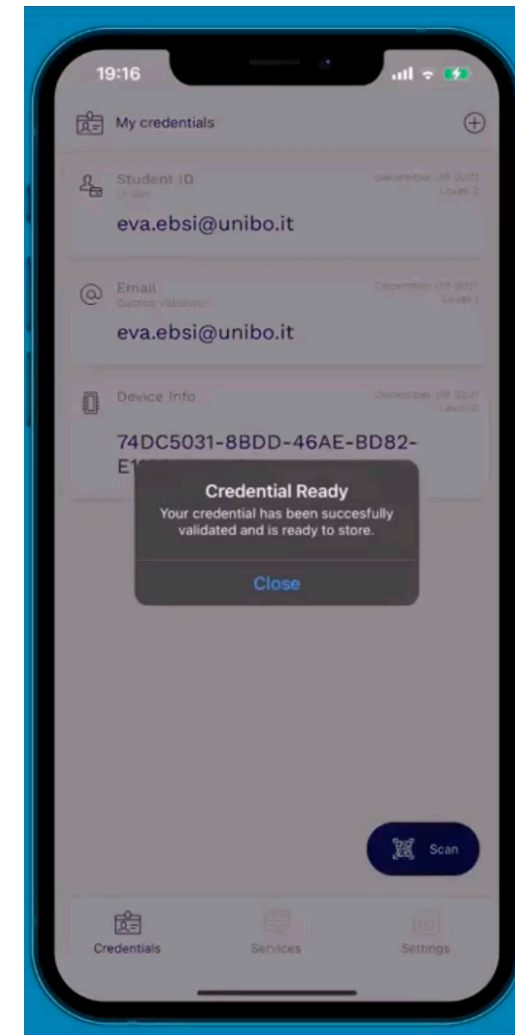
→ The shared V-STID is verified by KU Leuven



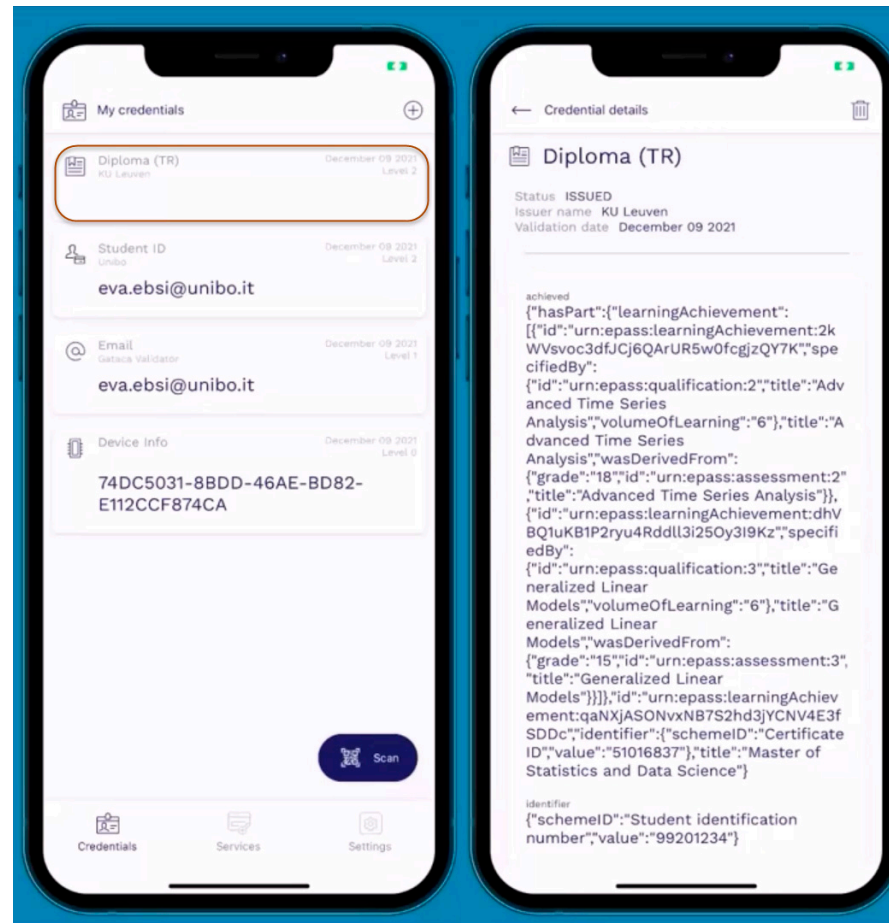
→ The obtained KU Leuven credits are retrieved from the Student Lifecycle management system



→ A Verifiable Transcript of Records is issued and sent to Eva's wallet



Step 4: (1) The credential is stored in Eva's wallet. (2) Eva can open the credential on her wallet. Since the data schema is more complex for a transcript of records, the data is for the moment displayed in json format. In the future, a user friendly representation of complex data schemes is desirable.



Scenario 4: Presentation and verification of a verifiable transcript of records by Unibo (IT)

Step 1: (1) Eva wants to share the obtained KU Leuven credits with her home university Unibo. She goes to the Una Europa student exchange website and requests to share her verifiable transcript of records with Unibo. (2) A QR code is generated with the request to share the verifiable transcript of records. Eva scans the QR code with her user wallet.



Una Europa student exchange



The exchange process is digitally facilitated based on a Verifiable student identity and Verifiable transcript of records. Trustworthiness of the credentials is empowered by the **European Blockchain Service Infrastructure**.

Before exchange

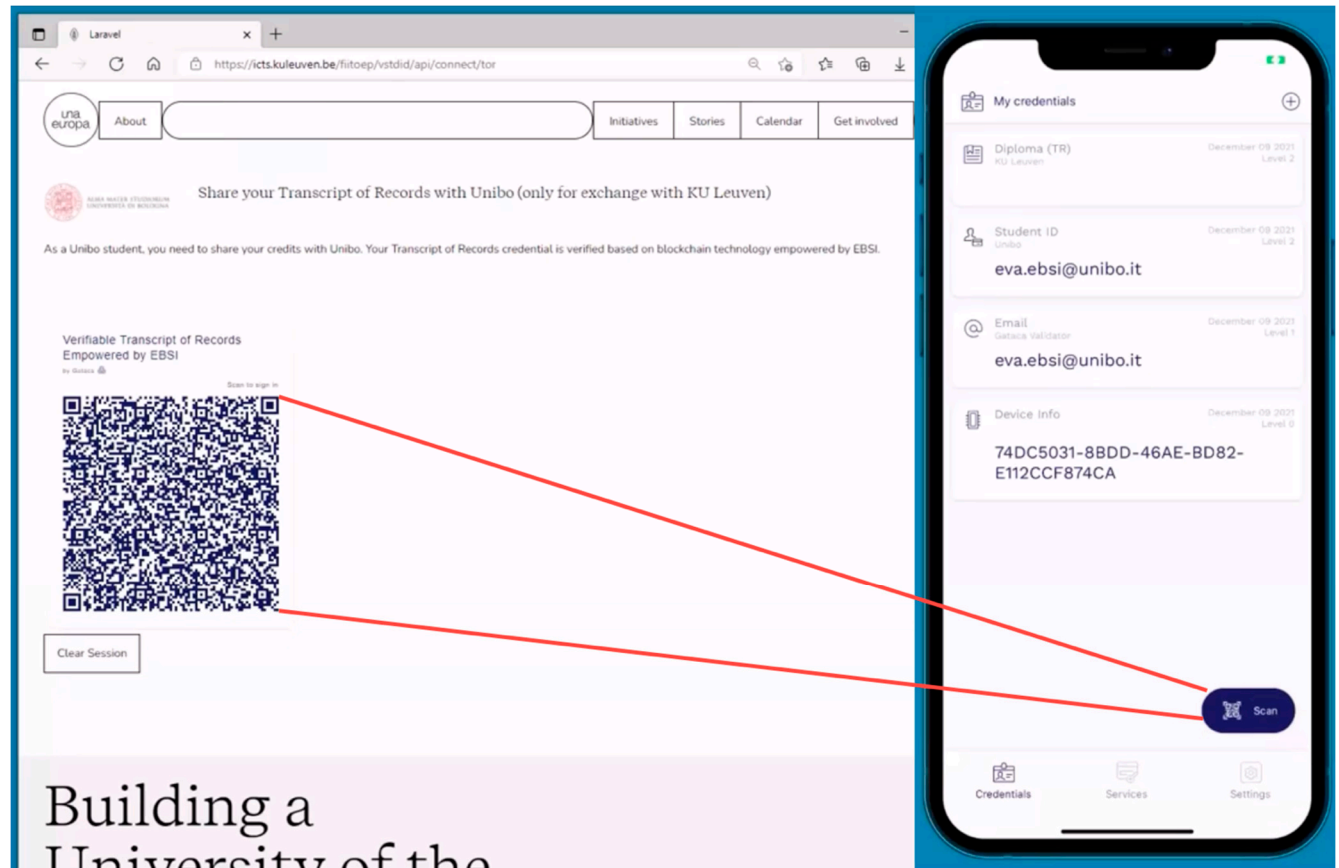
Request Unibo verifiable student identity

Apply for exchange at KU Leuven based on SSI

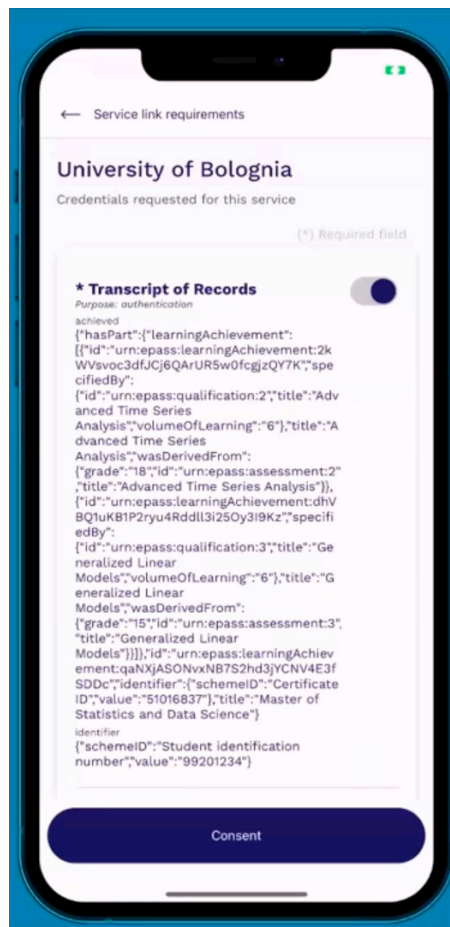
After exchange

Request KU Leuven verifiable transcript of records

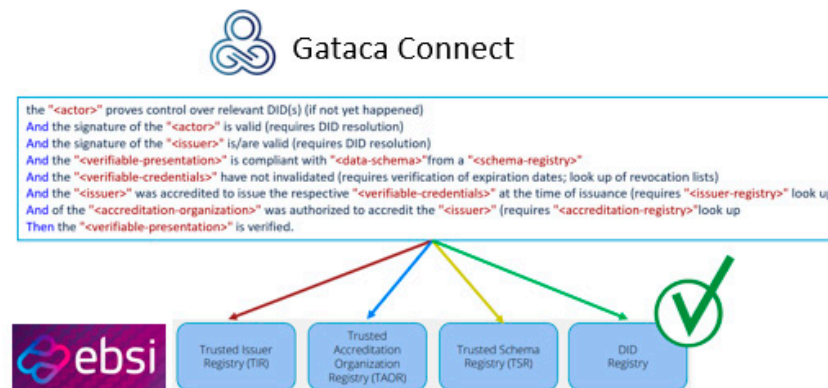
Upload verifiable transcript of records in Unibo student file



Step 2: (1) Eva gives consent to share both her Unibo V-STID and her KU Leuven V-ToR and proves control over the DID. The shared credentials are verified by Unibo and the obtained credits are stored in the student file on the Unibo backend system.



→ The shared V-STID and V-TOR is verified by the Gataca Connect component installed at Unibo



→ The obtained KU Leuven credits are stored in the Student Lifecycle management system

