Track 2 – Service & Tool Support Onboarding Presentation

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Martin Pilka, Kai Meinke
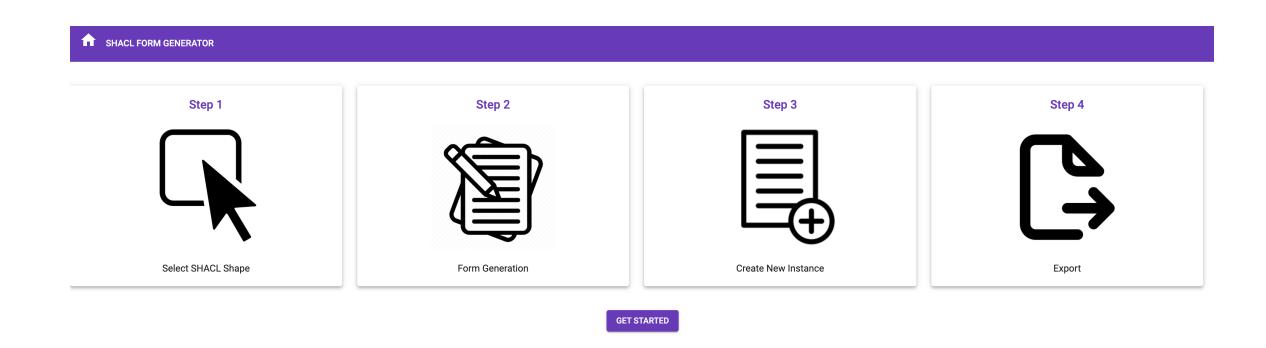
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01

SD Toolkit Demonstration

Johannes Theissen-Lipp

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01 – Self-Description Toolkit Demonstration

- Demonstrate the Self-Description Creation and Validation UI (currently under development)
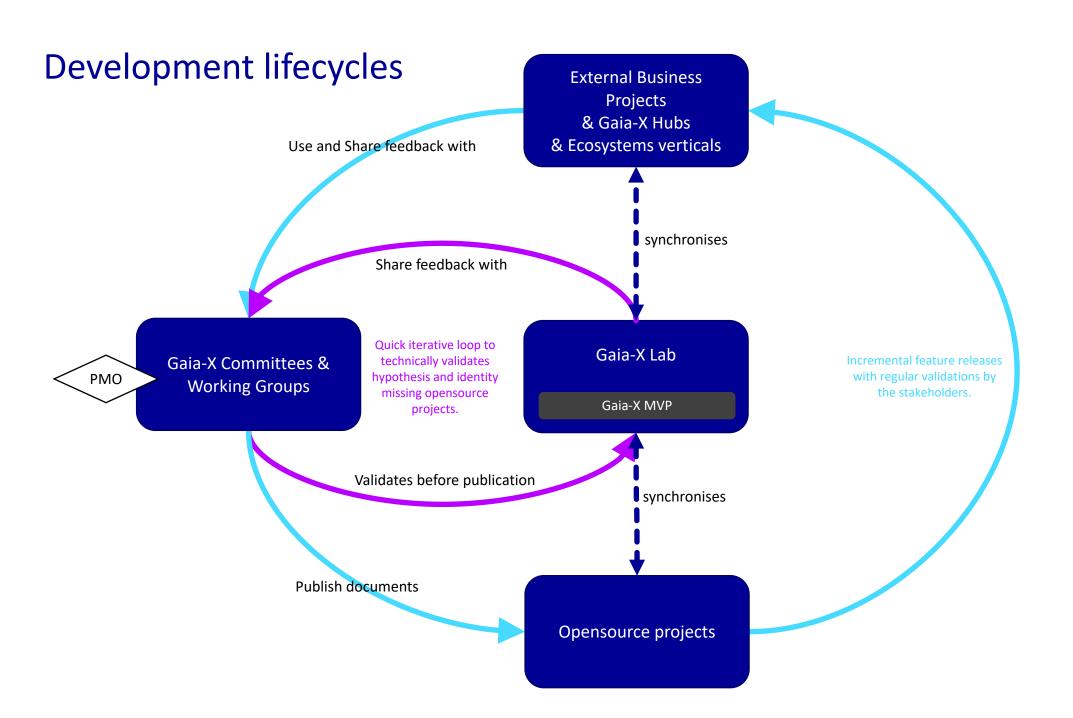
02

Gaia-X Lab Demonstration
Trust Framework

Kai Meinke

02 - Gaia-X Lab Demonstration Trust Framework

- **Introduction to the work of the Gaia-X Lab** and relation to the Gaia-X Trust & Compliance Framework and working groups.

- **Demonstration of Trust & Compliance workflow** from anchoring and issuance of Gaia-X participant credentials to verification of verifiable presentations

- Using SSI & OIDC4VP/SIOPv2 and DID:WEB to **issue, hold an verify Gaia-X participant Credentials**

- Demonstration of the **Gaia-X Registry**

Development lifecycles

External Business Projects & Gaia-X Hubs & Ecosystems verticals

Gaia-X Committees & Working Groups

PMO

Gaia-X Lab

Gaia-X MVP

Opensource projects

Use and Share feedback with

Share feedback with

synchronises

Quick iterative loop to technically validates hypothesis and identity missing opensource projects.

Incremental feature releases with regular validations by the stakeholders.

Validates before publication

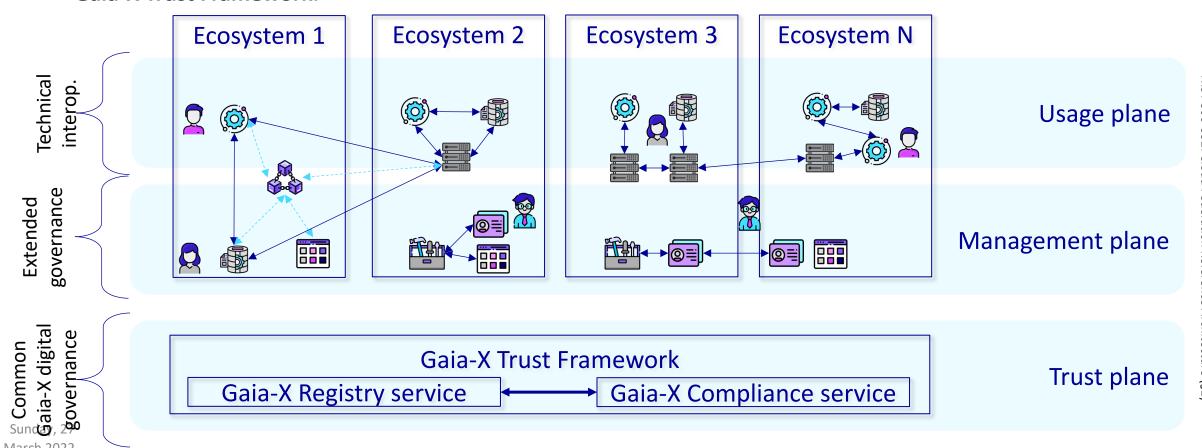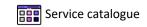synchronises

Publish documents

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One **Gaia-X Ecosystem,** federating **interoperable autonomous ecosystems.**

- **Gaia-X Ecosystem:** the virtual set of Participants, Service Offerings, Resources fulfilling the requirements of the **Gaia-X Trust Framework.**

Technical interop.

Extended governance

Common Gaia-X digital governance

Ecosystem 1   Ecosystem 2   Ecosystem 3   Ecosystem N

Usage plane

Management plane

Gaia-X Trust Framework

Gaia-X Registry service ⟷ Gaia-X Compliance service

Trust plane

NIST 500-332: Cloud Federation Reference Architecture (§2)

🧰 Federation Services toolbox   ▦ Service catalogue   👨 Federator   👨/👩 Participants   ◆ DLT   ▭ Verifiable Credential Wallet

Gaia-X Lab Onboarding Demonstrator

Demonstrator: **https://onboarding-portal.lab.gaia-x.eu/**
Repositories: **https://gaia-x.atlassian.net/browse/LAB**

Summary – Triangle of Trust

Provider trusts Issuer(s) and Verifier

Federator / AISBL

(2) Issuer creates Credential

(3) Provider (RP) requests Credential

Service Provider

(1) User requests Credential

(4) User presents Credential

(5) Verifier checks VC according to Trust & Compliance Framework

Verifiable Credentials Wallet

Gaia-X Lab Onboarding Demonstrator

gx-registry `1.0.0` `OAS3`

Gaia-X Lab Registry

Apache 2.0

Trust Anchor Endpoints to interact with registered trust anchors ⌃

POST `/api/trustAnchor` Look for a given Trust Anchor public key in the registry. ⌃

Parameters | Try it out

No parameters

Request body | application/json ⌄

Example Value | Schema

{
  "publicKey": "MIIGDjCCBPagAwIBAgIUYSJuRCHo8Gy8nvmplyxHmWWWSCkwDQYJKoZIhvcNAQELBQAwgZYxCzAJBgNVBAYTAkJHMRgwFgYDVQRhEw9OVFJCRy0yMDMzOTczNTYxIzAhBgNV8AoTGkV2cm90cnVzdCBUZWNobm9sb2dpZXMgSlNDM SEwHwYDVQQLExhRdWFsaWZpZWQgT3BlcmF0b9uYWwgQ0ExJTAjBgNVBAMTHEVZcm90cnVzdCBSU0EgT3BlcmF0aW9uYWwgQ0EwHhcNMjAxMjAzMTA8OTAxWhcNMjMxDjAzMTA8OTAxWjCBrjELMAkGA1UE8hMCQkcxDjAMBgNVBAcMBVNvZmlhMS0wKw YDVQQKDCRDb21tdWSpyY2F0aW9ucy8Z0d1bGFeuY1ENvbW1pc3Npb24xGDAWBgNVBGEMD0SUUkJHLTEyMTc0NzgZNDEq4WCgGA1UEAwwhQnVsZZFyaMFuIFRydXN0ZWQgTGlzdCBPcGVyYXRvciAxMRowGAYJKoZIhvcNAQkBFgtpbmZvQGNyTy5iZzC CASImXQYJKoZIhvcNAQEBBQADggEPADCCAQoCggEBAKa9qDZMt83syfXOZk/KTVSHMlhkodYR4CiO1mMSSLJ3jpmHfojmDb7mP8HaUysoD55cmTizjR5ZEZ9/m4CFmq01ucC7SSgKFbpHEZ3yfTgaFsqTwNuEBX8eulDzMcdorG79rNsaXbxh/8h36+ZC jA2NGYNNDm47tayK0Foa4ZZEMASbnga7WkHiP57dQbux1hlQv/SiQ6nonnZibqZoiroy8S6+m0wj2+tcI8CZBPFEPOcuQwsahX5plets44o5Zqbr0/HSDcOTB+hfg+Oofz4Tbt3Jand4+HEr+Tp+AMcgX1GyEwTS6RuY8edtIm/wcCWy4gJNacxH8jWosY LSOo/MCAwEAAoOCAjgwggI0MAwGA1UdEwEB/wQCMAAwHwYDVR0jBBgwFoAUfz5kWYUr3SNpwgHny8NpwIeTKwgwfwYIKwYBBQUHAQEECzBxMEUGCCsGAQUFBzAChjlodHRwOi8vYZEuZXZyb3RydXN0LmNvbS9jcMRwCQYHBACL7EABAzARBgNVHSUECjA IBgYEAJE3AwAwgoMGCCsGAQUFBwED8IGHMGITMBUGCCsGAQUFBmsCMAkGBwQAi+xJAQIwCAYGBACORgEEBM8UGBgQAjkYBAjALEwNCR04CAQQCAQQwCAYGBACORgEEM8MGBgQAjkY8BjAJ8gcEAI5GAQYCMDoGBgQAjkYBBTAwWC40WKGh0dH8z0i8vd3d3 LmV2cm90cnVzdC5jb20vcGRzL3Bkc191bi5wZGYTAmVuMEoGA1UdHwRDMEEwP6A9oDuGOWh0dHA6Ly9jYSS1dnJvdHHJ1c3QuY29tL2NybC9FdnJvdHHJ1c3RSU0FPcGVyYXRpb25hbENBLmNybDAdBgNVHQ4EFgQUeKOM3OLwOuGgkoVxSbNwKi7w9n4wD gYDVR0PAQH/BAQDAgbAMABGCSqGSIb3DQEBCwUAA4IBAQBzg38CHa1yoZ7iyZbdNU1GPCel8hJCiJDorNqo3zxdnN7vXAZ7tLc68n3V7QLbhUsXT6apVHcObPxsPavVbBthFSZ1VrV7ULVS+fYo4QRt7y30E779wmPYJg+MRODKNdpAkSUEAFCeMcUaRLK v8xHYbGpv/+h4m1ThonyeehkBFZytU2KUKs1WbzNB6vgC7+v1Yv1N8zCvxW0AWISCiMpqwDYBwGo3LkaKT3R8QyngPZY3U0qCCkA7Bq0iRVRV/L29x0NqwSdXWQnT5H7UpqTJycAtvdB/HFpGn1yK0DQWuP0cWHuMqtHnAjbtcq3RiIpgKg+6XF7f1Gut lQ5pzv/Ke"
}

Responses

Code	Description	Links
200	Found a Trust Anchor for the public key in the registry	No links

Media type | application/json ⌄

Controls Accept header.

Example Value | Schema

{
  "trustState": "trusted",
  "trustedForAttributes": "/.*/gm",
  "trustedAt": 1645817070
}

| 400 | | No links |

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3. List of defined trust anchors

Name	Defined as
State	The Trust Service Providers (TSP) must be a state validated identity issuer. - For `participant`, if the `legalAddress.country` is in EEA, the TSP must be **eIDAS** compliant. - Until end of 2022 Q1, to ease the onboarding and adoption this framework **DV SSL** can also be used. - **Gaia-X** association is also a valid TSP for Gaia-X association members.
eIDAS	Issuers of Qualified Certificate for Electronic Signature as defined in eIDAS Regulation (EU) No 910/2014 (homepage: https://esignature.ec.europa.eu/efda/tl-browser/#/screen/home) (machine: https://ec.europa.eu/tools/lotl/eu-lotl.xml)
DV SSL	Domain Validated (DV) Secure Sockets Layer (SSL) certificate issuers are considered to be temporarily valid Trust Service Providers. (homepage: https://wiki.mozilla.org/CA/Included_Certificates) (machine: https://ccadb-public.secure.force.com/mozilla/IncludedCACertificateReportPEMCSV)
Gaia-X	*To be defined after 2022Q1.*
EDPB CoC	List of Code of Conduct approved by the EDBP (homepage: https://edpb.europa.eu/our-work-tools/documents/our-documents_fr?f%5B0%5D=all_publication_type%3A61&f%5B1%5D=all_topics%3A125)
gleif	List of registered LEI issuers. (homepage: https://www.gleif.org/en/about-lei/get-an-lei-find-lei-issuing-organizations) (machine: https://api.gleif.org/api/v1/registration-authorities)

03 - Deployment of Issuer, Wallet and Verifier

- **Session**: Guidance & Deployment of necessary components (verifier, wallet, issuer) using Kubernetes for issuance and verification of credentials using OIDC4VP/SIOPv2

- Goals:

  - Deploy the demonstration cloud wallet

  - Deploy the demonstration issuer component

  - Deploy the demonstration verifier components

  - Using your Kubernetes infrastructure for issuance and verification of credentials

04 - Utilize Hyperledger Aries for SD-Trust Issuance

- **Session**: Create an easy to use CLI tool that interacts with components of open-source Verifiable Credential framework - Hyperledger Aries Cloud Agent and allows issuing, storing and verifying credentials for Self-Descriptions.

- Goals:

  - Create tool that hides the complexity of its usage behind simple CLI that provides necessary actions for issuance and validation of credentials for SD.

  - Allows the 'dynamic' import of SD templates in JSON-LD format.

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05

Credential Bridge

Theo Dimitrakos, Bithin Alangot, Ali Hariri, Amjad Ibrahim

05 - Credential Bridge

- **Session**: Build a Credential Bridge middleware that can do semantically correct transformation of credentials and federation protocols into a decentralized identity fabric.

- Goals:

  - Creating a credential bridge layer that enables a cost-efficient bridging between federated identity and decentralized identity in Gaia-X ecosystem thus facilitating to build a federated trust model.

06 - Creating VC Template from JSON Templates

- **Session**: How to create templates for Verifiable Credentials, based on the SD Shapes / SD Tools

- Goals:

  - Allows the 'dynamic' import of SD templates in JSON-LD format.

  - Give an outlook how to build a bridge from Self-Description Generators to the issuance of Verifiable Credentials, based on VC Templates in accordance with the Gaia-X Trust Framework.

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Any questions or remarks?

GO

Enjoy the Gaia-X Hackathon #3

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