

gaia-x
2nd Summit

Gaia-X – technical deepdive

—
From the governance model to implementation

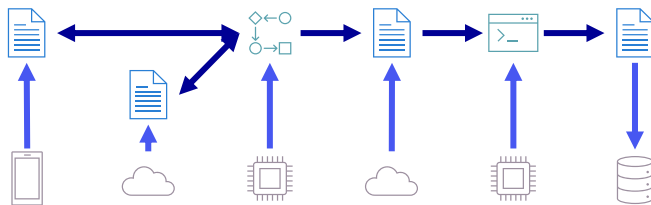
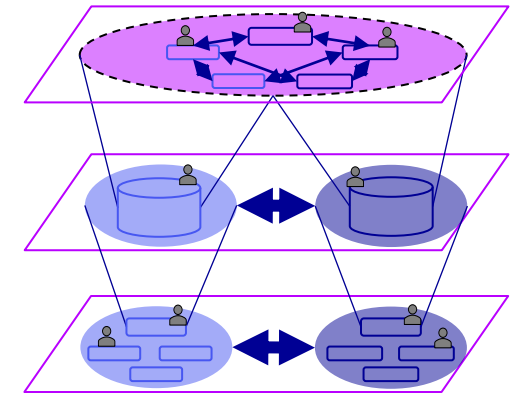
25 November 2021

Pierre Gronlier, Gaia-X

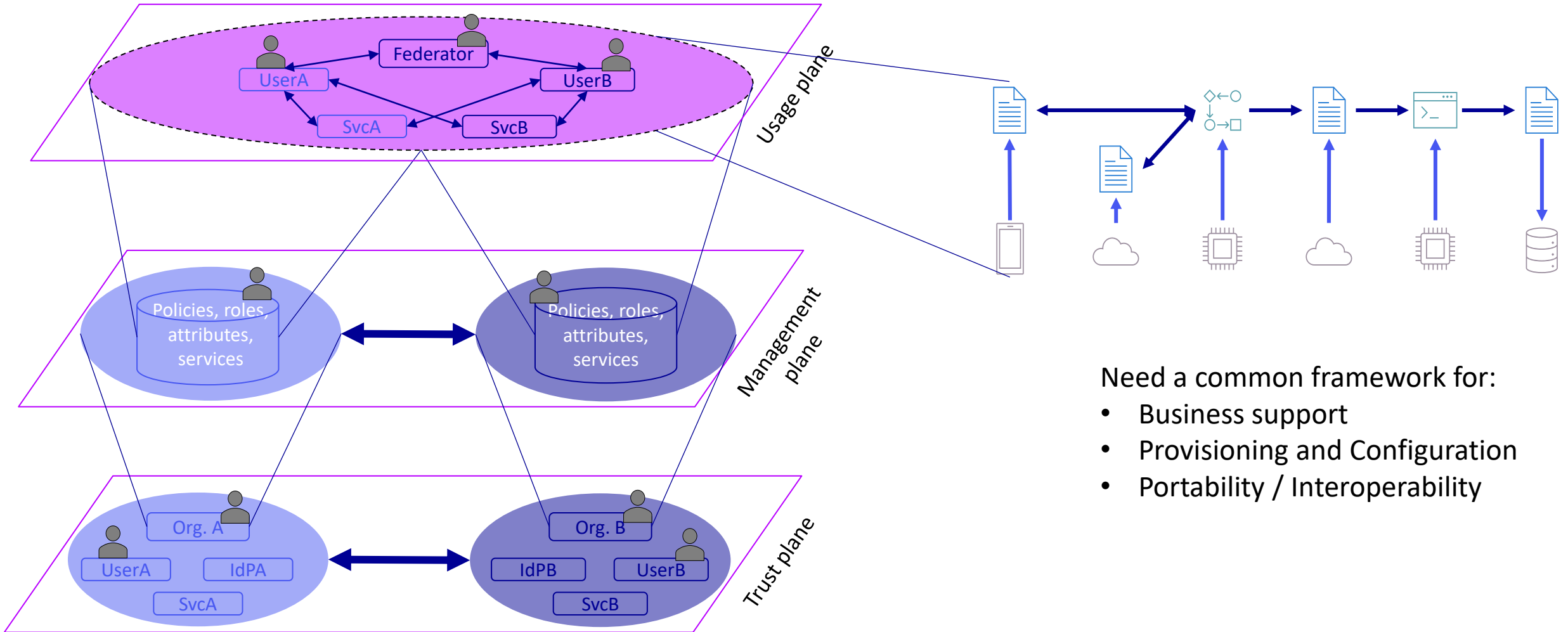


Gaia-X goals

- Promote European values and digital sovereignty / control.
- Create bigger and richer dataspaces by connecting interoperable ecosystems
- Create a federation of ecosystems enabling services stacks composition across multiple services providers.

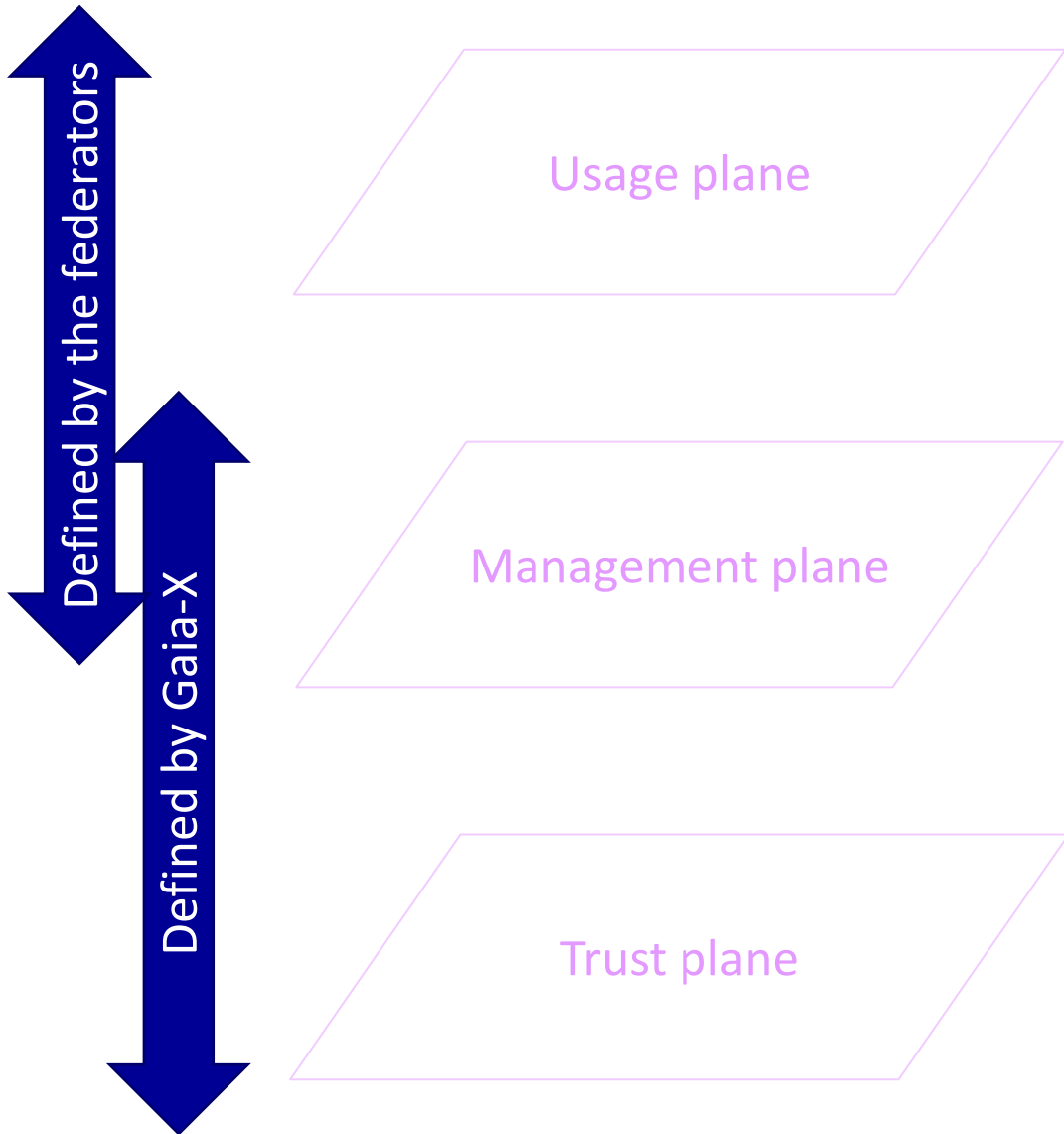


Data-Infrastructure Ecosystem Federation Conceptual model



- Need a common framework for:
- Business support
 - Provisioning and Configuration
 - Portability / Interoperability

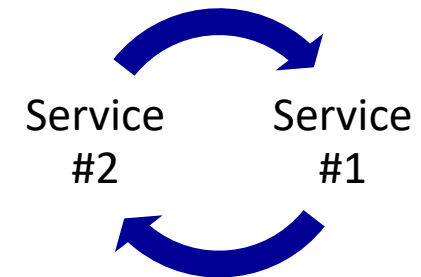
Gaia-X Reference Architecture and Interoperability

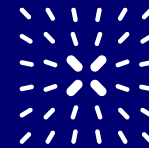


- Services Interoperability
 - GXFS, OceanProtocol, Dawex, ...
 - OIDC / SIOP / ...
 - Catalogue query language, ...
- Shared descriptions and ecosystem choices
 - Descriptions & Vocabularies (Portability, Licenses, T&C, Services, Ownership, Contract, Consent, ...)
 - Ecosystem's governance rules
- Shared Governance and Trust model
 - Trust Anchors definition
 - Voting mechanism
 - Catalogues addresses
 - Remediation and Revocation

Implementation

- Service #1: Gaia-X association issues association membership Verifiable Credentials
 - VC of type `https://schema.org/ProgramMembership`
 - DID with: (rfc7515, rfc7517, rfc5280, ...)
 - `verificationMethod` to verify VC signature (ed25519)
 - `authentication:publicKeyJwk:x5c` for the X.509 RSA DNS certificate of <https://tbd.gaia-x.eu>
- Service #2: bootstrap Gaia-X Compliance service (compliance.gaia-x.eu) to validate VCs (Self-Description) for ongoing lighthouse projects (Catena-X, AgDataHub, ...)
 - Basis for the Gaia-X Compliance & Labels framework
- Test Driven Development approach / EYOF (<https://gitlab.com/gaia-x/>)
- GXFS-DE and GXFS-FR
- Hackathon #2





gaia-x
2nd Summit



© 2021 Gaia-X European Association for Data and Cloud AISBL
All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express written permission of the GAIA-X European Association for Data and Cloud AISBL