

gaia-x  
2<sup>nd</sup> Summit

# Gaia-X – technical deepdive



From the governance model to implementation

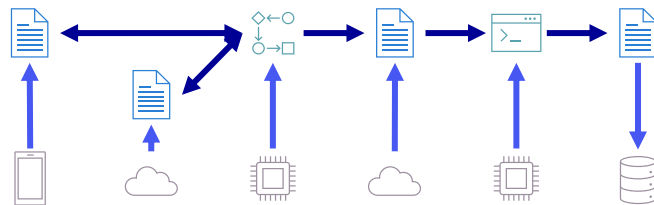
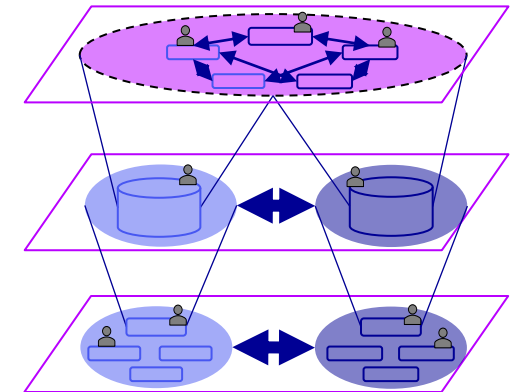
30 November 2021

Pierre Gronlier, Gaia-X

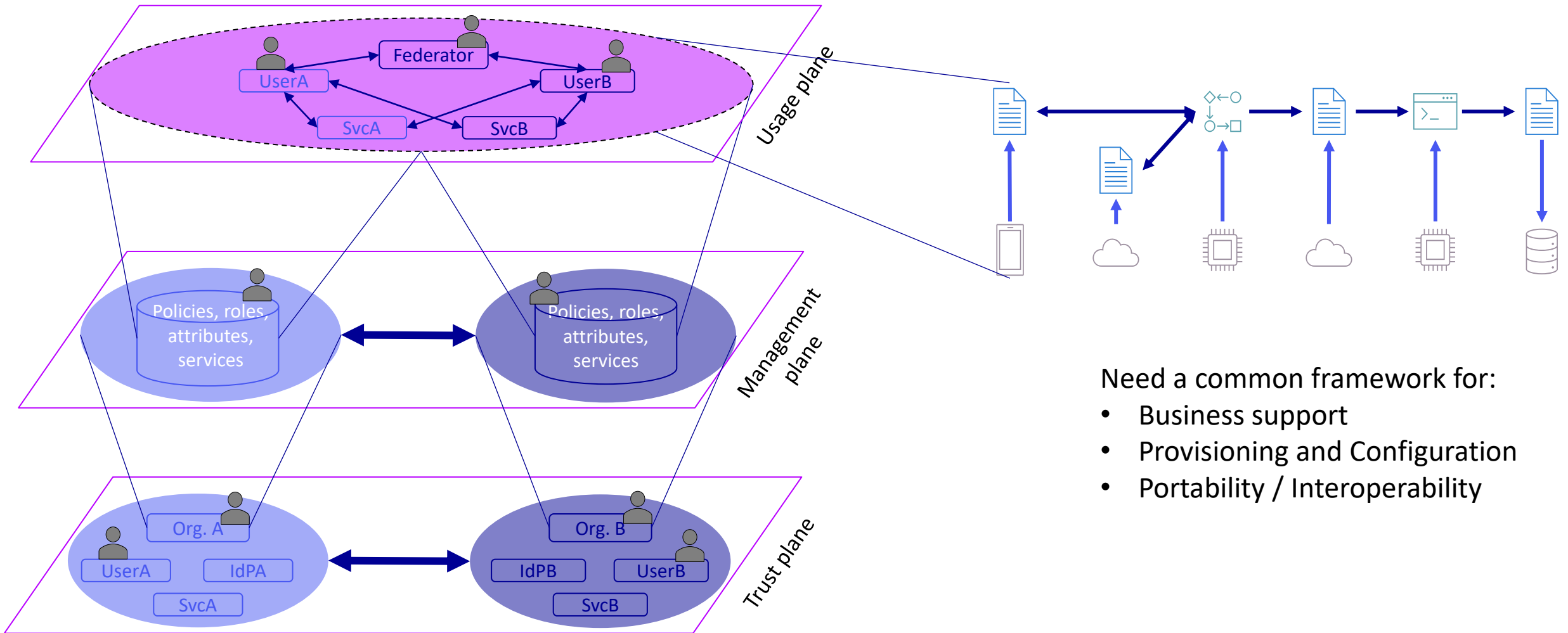


# Gaia-X goals

- 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.

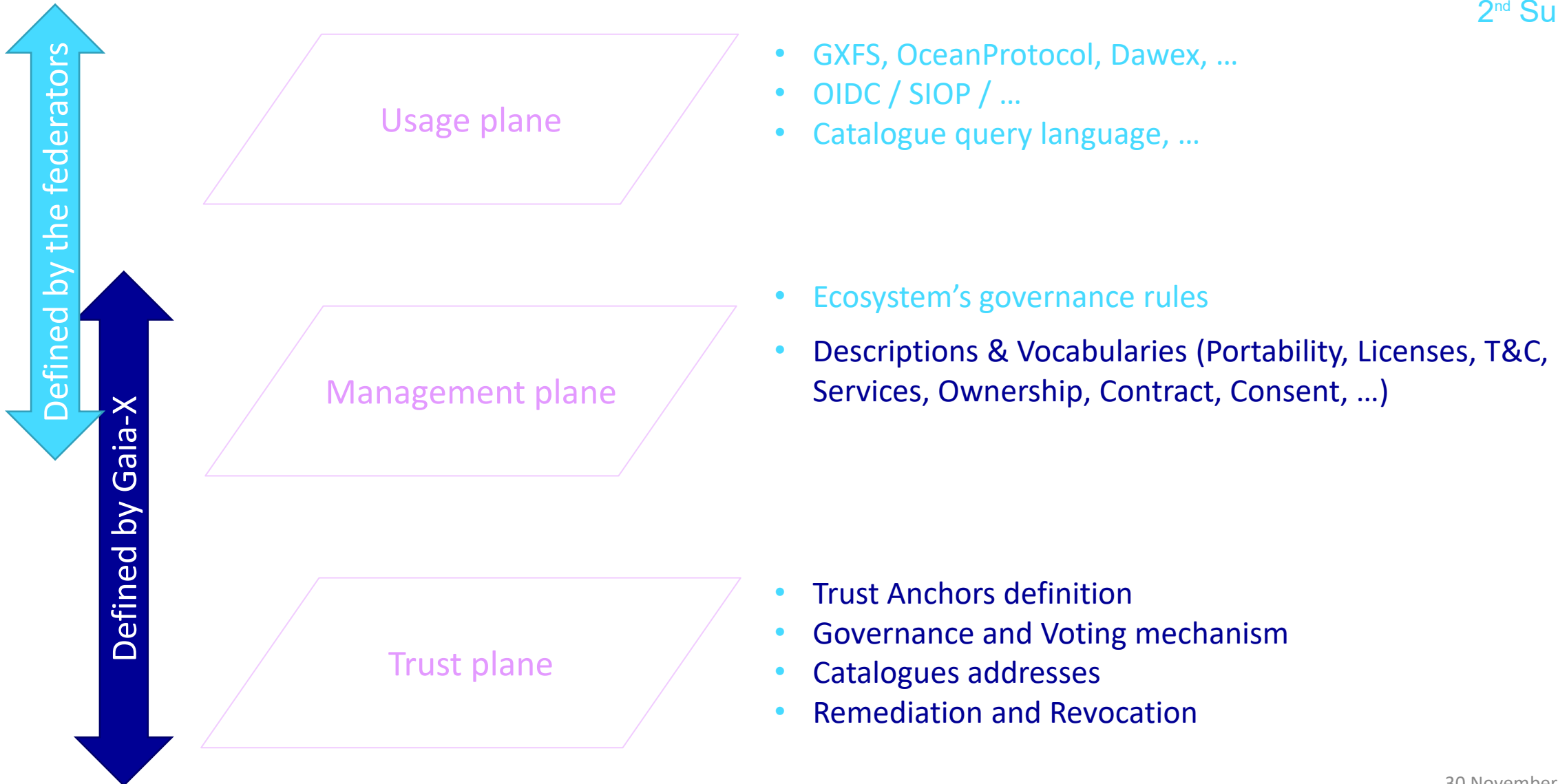


# Data-Infrastructure Ecosystem Federation Conceptual model



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

# Gaia-X Reference Architecture and Interoperability



# Implementation

– Service #1: Gaia-X association issues association membership W3C Verifiable Credentials

– <https://gitlab.com/gaia-x/gaia-x-compliance/gaia-x-vc-issuer>

– Service #2: bootstrap Gaia-X Compliance service

(compliance.gaia-x.eu) to validate VCs (Self-Description) for ongoing

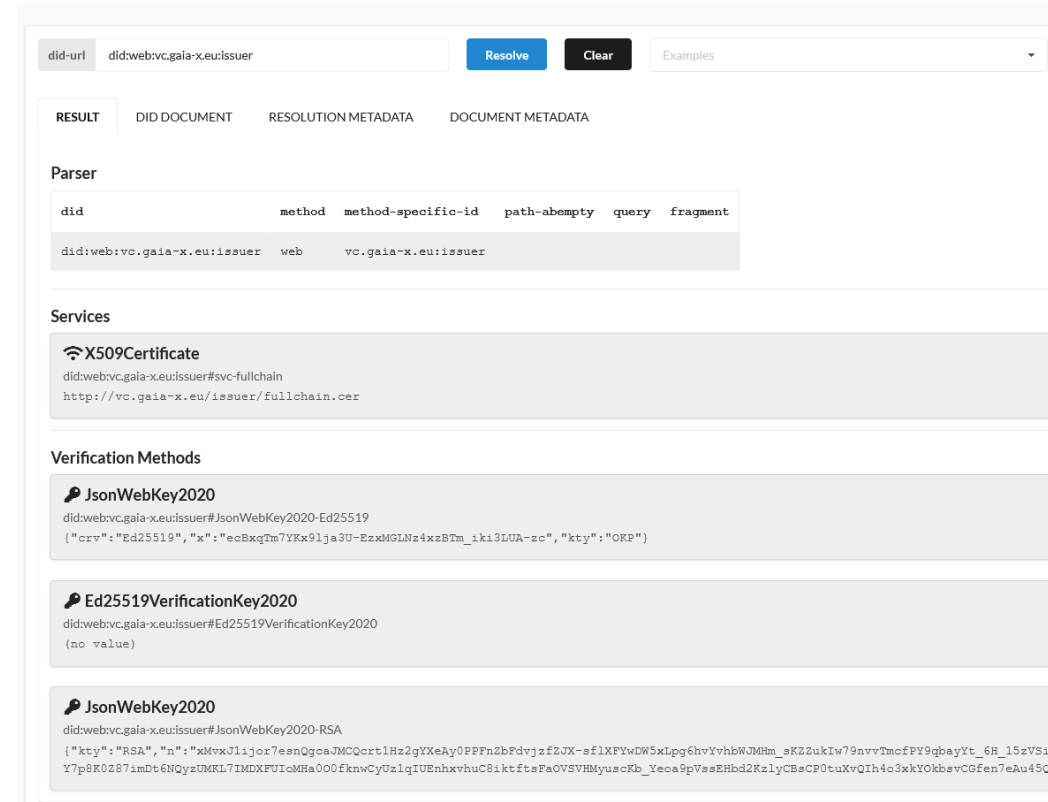
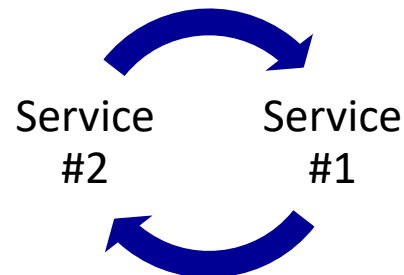
lighthouse projects (Catena-X, AgDataHub, ...)

– Basis for the Gaia-X Compliance & Labels framework

– Test Driven Development approach / EYOF

– GXFS-DE and GXFS-FR

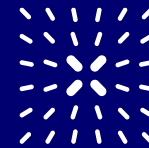
– Hackathon #2



The screenshot shows a web interface for a DID Resolver. The input field contains the DID `did:web:vc.gaia-x.eu:issuer`. The interface displays the following information:

- Parser:** A table showing the DID structure.

did	method	method-specific-id	path-absolute	query	fragment
did:web:vc.gaia-x.eu:issuer	web	vc.gaia-x.eu:issuer			
- Services:**
  - X509Certificate:** `did:web:vc.gaia-x.eu:issuer#svc-fullchain`, `http://vc.gaia-x.eu/issuer/fullchain.cer`
- Verification Methods:**
  - JsonWebKey2020:** `did:web:vc.gaia-x.eu:issuer#JsonWebKey2020-Ed25519`, `{"crv": "Ed25519", "x": "ecBxqTm7YKx91ja3U-EzxMGLNz4xzBTm_iki3LUA-zc", "kty": "OKP"}`
  - Ed25519VerificationKey2020:** `did:web:vc.gaia-x.eu:issuer#Ed25519VerificationKey2020` (no value)
  - JsonWebKey2020:** `did:web:vc.gaia-x.eu:issuer#JsonWebKey2020-RSA`, `{"kty": "RSA", "n": "xMvxJ11jor7esnQgeaJMCQcrt1Hz2gYXeAy0PPFn2bFdvjzFzJX-sf1XFYvDW5xLpg6hrYvrbWJMhm_eKZZukIw79nrvTmcFPY9qbayYt_6H_15zV5s1Y7p8K0z87imDt6NQyzUMKL7IMDXFUIcMHa000fknwCyUz1qIUEnhxvhuC8iktftaFa0VSVHMMyuacEb_Yeoa9pVseEhb2KzlyCBsCP0tuXvQIh4o3kkYOkbavCGfen7eAu45Q"`



gaia-x  
2<sup>nd</sup> 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