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# EGI and Gaia-X

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Franco-German initiative announced October 2019

"*Create … the next generation of a data infrastructure for Europe: a secure, federated system that meets the highest standards of digital sovereignty while promoting innovation*"

Unstated objectives:

- Promote European cloud providers, and support integration of edge
- Create capability that can be used with confidence by industry and public administration.  (German public administration notably behind in cloud adoption)

Now structured as AISBL with over 200 members from across EU, including EGI Foundation.

EGI very active in architecture/specification development activities

# EGI Objectives and Roles

Objectives:
- Observe GAIA-X developments, keep EGI community informed
- Represent EGI community in GAIA-X discussions
    - Relevant technical implementations
    - Realistic collaborative experience
    - Ensure interoperability where possible

- Gain relevant insights from GAIA-X:
    - E.g. "Governance, Architectures and Business Models for Data and Cloud Federations: the EOSC and GAIA-X Case Studies" https://zenodo.org/record/4929021
    - E.g. "A Proposal for a Common Approach to Data Ecosystems and Data Spaces" (in development)

Roles:
- Tiziana Ferrari: X-Association Working Group (WG)
- Diego Scardaci: Architecture WG
- Mark Dietrich: Federation Services, Provider, Portfolio WGs
- Andrea Manzi: "Data Connector/Data Broker" Open Work Package
- Nick Liampotis (GRNET): "Identity & Trust" OWP

# Organizational Status

Small AISBL staff: CEO, COO, CTO, CFO, etc.

- First full Board of Directors elected June 7, 2021.

Complicated Structure

- Federated relationship between AISBL and "National Hubs"
- Many Working Groups and Committees
- Different rules for participation of representatives of AISBL Members, and broader community
- Diverse collaboration platforms (Coyo, NextCloud, GitLab, Confluence, Miro)
- Unclear role and influence of IDSA

Debate over Mission/Vision, Value Proposition for GAIA-X.

Positioning for funding:

- Digital Europe Work Programme: Team Data Spaces (with IDSA, BDVA, many others)
- IPCEI proposal

# Gaia-X "Theory of Operation"

## *Similar to standards organization*

Federation:
- Gaia-X AISBL establishes policies, adopts standards, verifies compliance by Participants (both Providers and Consumers)
- Participants agree to policies/standards in order to join the Gaia-X federation
- Operated by Participants (not Gaia-X), including Federation Services:
  - Identity and Access Management
  - Catalogues: "Structured Marketplace" presents Services in searchable Catalogues
  - Ongoing Compliance testing
  - Services to enable Sovereign Data Exchange

Contracting, Metering, Billing, Service Management/Coordination out of scope

Consumers:
- Select Services that meet their requirements (including standards compliance, location of assets, performance factors, etc.)
- Contract directly with Providers for use of Services
- Integrate Services into the cloud solutions they need
- Manage Services from multiple Providers
- Participants can consume Services from other Providers and act as integrators/resellers

# Federation Services

*To be implemented as open source, over next 9 months*

Identity and Access Management
- Well-defined
- Implementing Self-Sovereign ID/DID

Catalogues: Searchable, "Structured"
- Detailed Self-Descriptions (=metadata) to achieve interoperability, transparent attributes
- Filtering by requirements, performance criteria to allow selection
- Scope is clear but ambitious, available solutions (including TOSCA-related) are limited and not production-ready

Ongoing Compliance testing
- Scope, specification unclear

Sovereign Data Exchange
- Ambitious but path unclear
- Enforce interoperable data standards, but scope & specification unclear
- Enable Data Spaces, but relying on IDSA architecture, which is only point-to-point, no "publication"
- No technical assurance of privacy preservation -- reliance on trust relationships with Gaia-X Participants

New Architecture Document scheduled for release June 30, 2021

- Significant gaps, unclear definitions and relationships, speculative concepts remain
- Debate about role of AISBL as a central "trust anchor"
- Desire by user organizations and ecosystems to retain "sovereignty" and not have their activities blocked by AISBL

Architecture linked to:

- Policy Rules Document: early, detailed version replaced by much shorter conceptual version.
- Architecture of Standards: surveying technologies and standards in use with the intent to define preferred approaches
- Self-Description Language: metadata schema to describe Participants, Assets, Services, but schema needs to be expanded to be more realistic
- Federation Services Specifications: being released as part of a contracting process to fund development of federation services on an open source basis -- delayed by last minute revisions, e.g. to address sovereignty concerns.

No "GAIA-X" compatible service is available today.

- Considering near term pilots (Minimum Viable Gaia-X) based on existing technology to confirm concepts and validate requirements

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# Questions?

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