



Introduction to the Network eAcademy

Maria Isabel Gandia Carriedo, CSUC/RedIRIS

Infoshare <https://events.geant.org/event/1849/>

May 07, 2025

Public (PU)

Agenda

15:00 → 15:10 **Introduction to the Network eAcademy**

Speaker: Mariaisabel Gandia Carriedo (CSUC/RedIRIS)

15:10 → 15:20 **Architecture blueprint and analyses**

Speaker: Lidija Jakovčić (CARNET)

15:20 → 15:30 **Terminology and glossary**

Speaker: Iacovos Ioannou (CYNET)

15:30 → 15:40 **OAV Maturity Model**

Speaker: Eldis Mujarić (CARNET)

15:40 → 16:20 **Training**

Network Automation

Speaker: Dónal Cunningham (HEAnet clg)

Quantum Technologies

Speaker: Mariaisabel Gandia Carriedo

Optical Time and Frequency Networks

Speaker: Mariaisabel Gandia Carriedo

Data Analysis of the Network eAcademy

Speaker: Bojana Koteska (UKIM/MARNET)

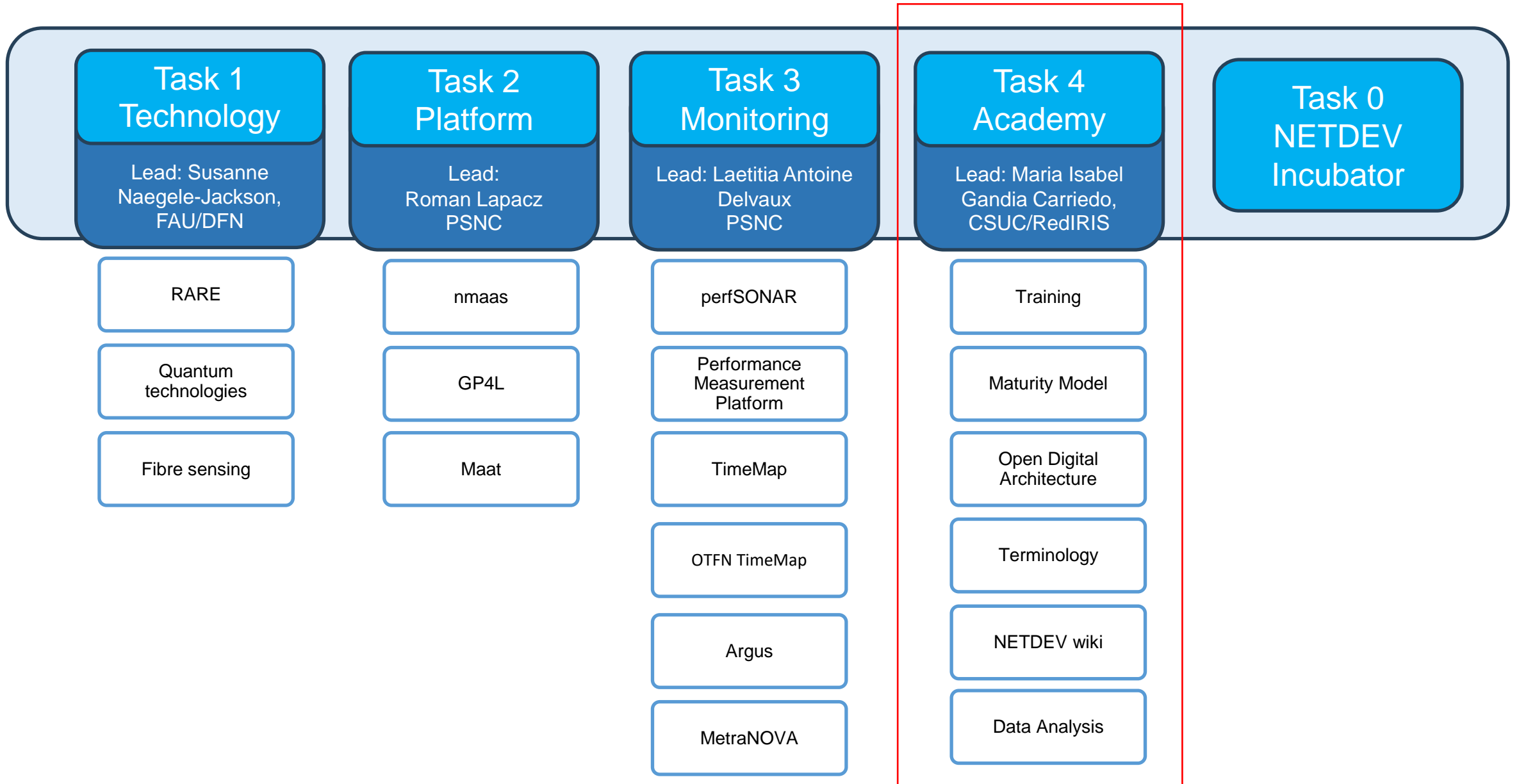
SoBigData Academy collaboration

Speaker: Sara Lelli (SoBigData Academy)

16:20 → 16:30 **Open discussion & AOB**

Speaker: Mariaisabel Gandia Carriedo (CSUC/RedIRIS)

GN5-2 WP6 Topics



Collaborative approach to OAV in the GÉANT Community



Strong need for collaboration and exchange of knowledge and expertise



Knowledge as a gap



We speak different languages



A generally accepted architecture blueprint needed



NRENs are willing to share experiences and learn from others

Feedback from the OAV Survey to the NRENs (published in Sep 19):

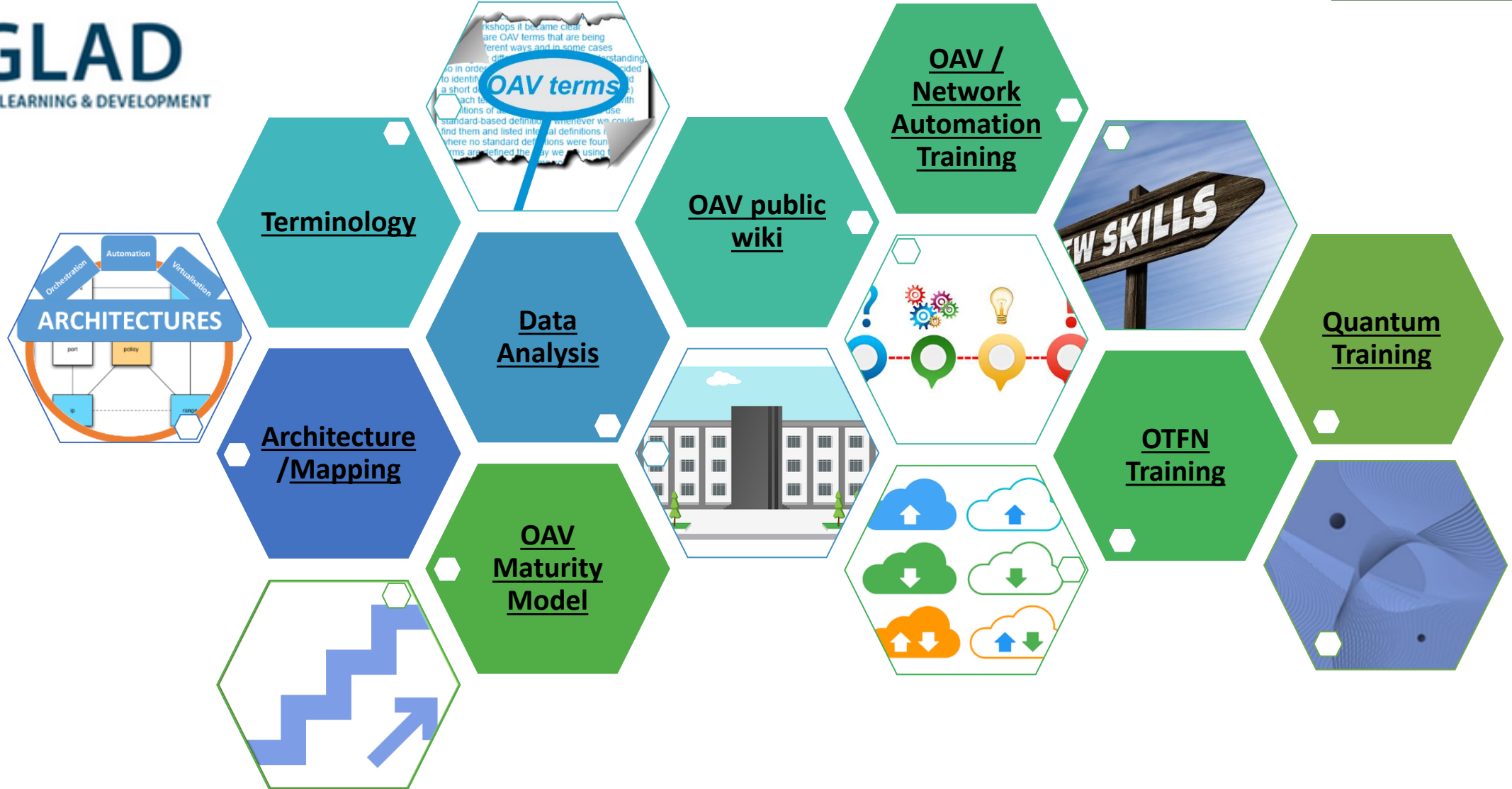
https://www.geant.org/Projects/GEANT_Project_GN4-3/GN43_deliverables/D6-2_Automation-and-Orchestration-of-Services-in-the-GEANT-Community.pdf

Network eAcademy

Powered by:



Network eAcademy



Network Automation eAcademy

Legend

● Unit / ■ Document / ext. link

● Released / ● Not released

● Exchange point

You can jump back and forth between this station and all exchange points at any time

Tracks

GENERAL INTRODUCTION

AGILE, DevOps, CI/CD

DECOUPLING & INTEGRATION

PRODUCTION

ENGAGEMENT MANAGEMENT

PARTY MANAGEMENT

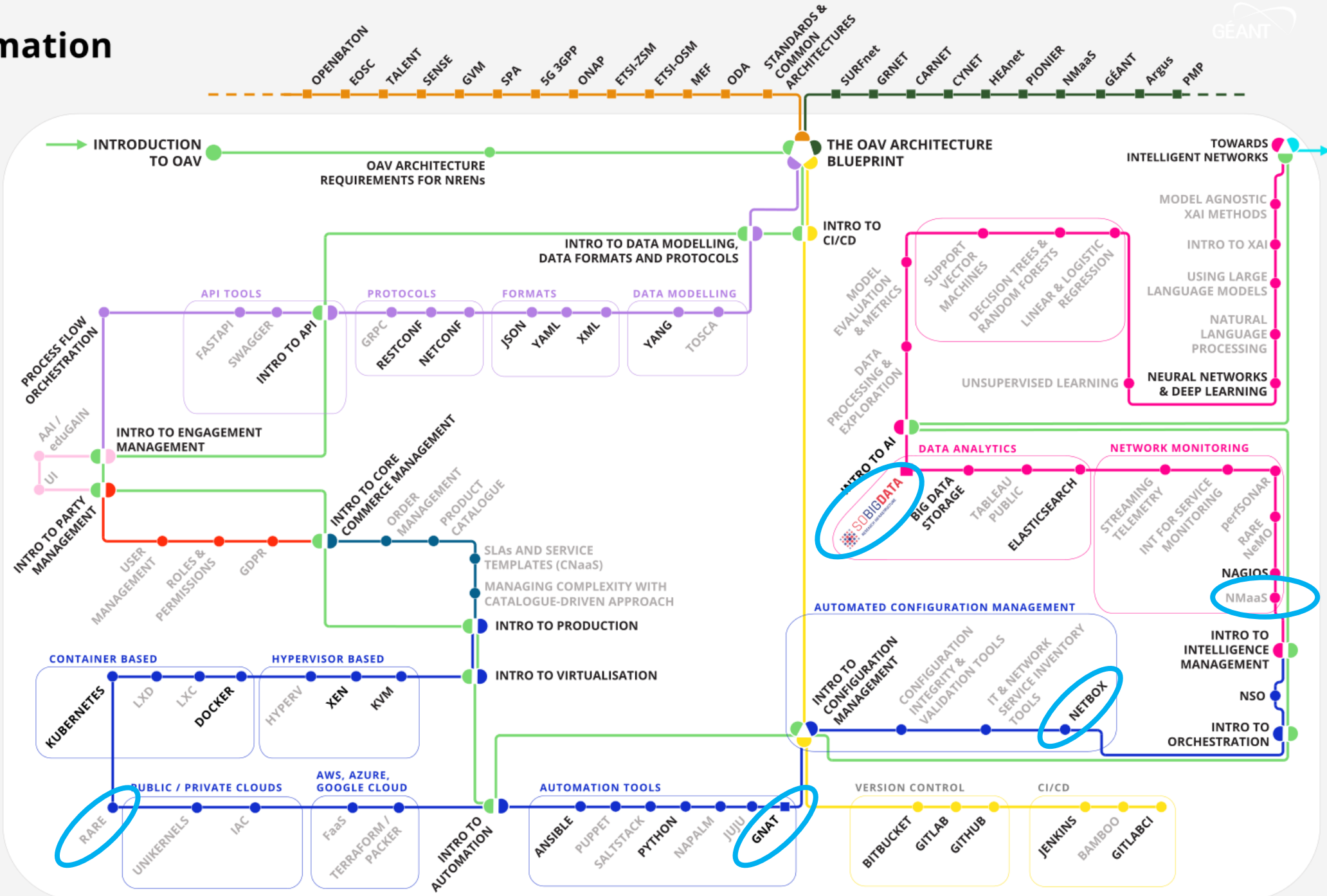
CORE COMMERCE MANAGEMENT

INTELLIGENCE MANAGEMENT

OAV REALISATION

USE CASES AND EXAMPLES

ARCHITECTURE



 NETDEV

Páginas

» Blog

ÁRBOL DE PÁGINAS

- Argus
- Dissemination
- Fibre Sensing
- NETDEV Incubator
- Network eAcademy**
 - Highlights
 - Network eAcademy Training Portal
 - Network Automation Training
 - Quantum Technology Training
 - Time and Frequency Networks Training
 - OAV Architectures
 - Architecture Investigation
 - Introduction to Digital Platforms
 - Mapping Use Cases
 - ODA - Open Digital Architecture (TM Forum)
 - Requirements for an Automated Digital Framework
 - OAV Community Portal
 - OAV Maturity Model
 - Architecture and Technology
 - People and Organisation
 - Processes and Services
 - Vision and Strategy
 - OAV Terminology
 - Standardisation Bodies
- QT
- TimeMap
- WP6 Archive
- WP6 Events

Panel / NETDEV Home

Network eAcademy

Creado por Susanne Nägela-Jackson, modificado por última vez en abr 22, 2025

The Network eAcademy (NeA) offers knowledge sharing and exchange between GÉANT, NRENs, and organisations and is intended to serve as a platform to discuss strategies, common use cases and ideas related to a variety of topics. One of our main focus areas are network and service orchestration, automation and virtualisation (OAV) in our GÉANT community (including an OAV maturity model, information on OAV terminology and OAV architectures). Applied OAV can be found as part of our OAV community portal and with the example of the SPA Service Provider Architecture. Another major focus area of NeA is the Network eAcademy Training Portal with on-demand training courses ranging from Network Automation to Quantum Technology.



Network eAcademy Training Portal

[Network Automation](#)
[Quantum Technology](#)
[Time & Frequency Networks](#)


OAV Maturity Model

Our model defines four main dimensions that describe different aspects of OAV, each further specified using subdimensions that highlight the important OAV areas of each dimension. The short and long descriptions of stages for each subdimensions help quickly identify the current status in the organisation and the main tasks that need to be accomplished in order to advance to the next level. [Read more...](#)



OAV Architectures

A high-level architectural blueprint (the TM Forum Open Digital Architecture, or ODA), provides R&E institutions with an easy way to understand and compare the architectures of their Network Management (NMS), Operations and Business Support Systems (OSS/BSS) and helps guide community efforts towards the creation of interoperable systems and operations. [Read more...](#)



OAV Terminology

During our discussions with NRENs it became clear that there are OAV terms that are being used in different ways and in some cases with slightly different meaning and understanding. In order to have a common basis we decided to identify a list of relevant OAV terms and add a short definition with a reference link (source) for each term as well as an acronym table. [Read more...](#)



OAV Community Portal

Applied OAV examples by country. Follow our community portal to see what NRENs are implementing in their own environments. [Read more...](#)



GNA-G Network eAcademy WG

Research and Education Networks and institutions around the globe are facing the same challenges as in the GÉANT community. As Artificial Intelligence strikes in all areas, new tools arise, others disappear or stop being used, and with the daily operations of the network, an up-to-date training programme with inputs from actors in all the regions of the world is a must. Therefore a new GNA-G Network eAcademy Working Group was formed with the objective to make the current contents and tools of the Network eAcademy available to the entire research and education community. [Read more...](#)



Infoshares ++ Events

- all events**
- NEW** GNA-G Network eAcademy Working Group
- NEW** Infoshare: How to create learning units for the Network eAcademy and beyond, May 12, 2025
- NEW** Infoshare: Network eAcademy, May 7, 2025
- RARE/FreeRTR Use Case: Open-Source Implementation of 5G User Plane Function (UPF), Dec.19, 2024
- AI Chatbot for the GÉANT eAcademy, Dec. 18, 2024
- What's New in the Network eAcademy?, Dec. 17, 2024
- NREN Fibre Infrastructure for Sensing, Dec. 5, 2024
- Telemetry Module for the Workflow Orchestrator, Nov. 5, 2024
- 4th European perSONAR User Workshop, May 14-16, 2024
- OAV Architecture Workshop, April 18, 2024
- GÉANT Infoshare - NETDEV Incubator, March 29, 2023
- GÉANT Infoshare: Maturity Model for Orchestration, Automation and Virtualisation, March 29, 2023
- GÉANT Infoshare: Tools for Campus Network Management as a Service (CNaaS), April 28, 2021
- Orchestration, Automation and Virtualisation in the NRENs. Ready, Steady, Go!, December 16, 2020
- Highlights**
- Standardisation Bodies**



Network eAcademy Expands, Connect Magazine, Issue 47, 2024, p. 22



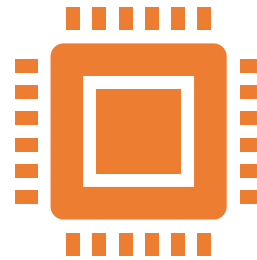
Network Automation eAcademy, Connect Magazine, Issue 38, 2021, p. 19

<https://wiki.geant.org/display/NETDEV/Network+eAcademy>

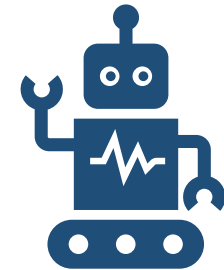
Objectives of the Network eAcademy Working Group in GNA-G



Make the current contents and tools of the Network eAcademy **available to the entire research and education community** and known through meetings, GNA-G community VCs and side meetings.



Be a tool for Research and Education institutions around the world to help them **check their maturity status and compare their architecture** in Orchestration, Automation and Virtualisation with other sibling organisations.

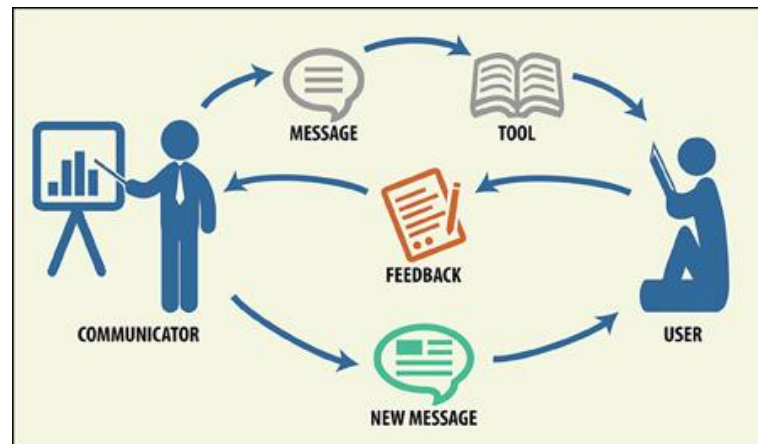


Be a **platform for knowledge sharing and discussion** to improve the content of the Network eAcademy, in the areas of Automation, Artificial Intelligence, Quantum Technologies, and other Network Development areas.

Dissemination activities

Dissemination

- We are here to help the NREN and R&E community.
- As important as doing an excellent job is to let the community know we are doing it 😊
- Thus the Infoshare today!
- Feel free to contact us at network-eacademy@lists.geant.org.
- Also, if you want to participate in the GNA-G WG, subscribe to the mailing list: <https://lists.gna-g.net/postorius/lists/network-eacademy-wg.lists.gna-g.net/>



Thanks all!

The Network eAcademy Team

| Who | Inst/NREN |
|-------------------------|---------------|
| Aleksandra Dedinec | UKIM/MARNET |
| Alexandru Litvinenco | RENAM |
| Bojana Koteska | UKIM/MARNET |
| Claudia Torres Pérez | i2CAT/RedIRIS |
| Dónal Cunningham | HEANET |
| Eldis Mujarić | CARNET |
| Elisantila Gaci | RASH |
| Iacovos Ioannou | CYNET |
| Jasone Astorga | EHU/RedIRIS |
| Konstantinos Stamos | GRNET |
| Lidija Jakovčić | CARNET |
| Maria Isabel Gandía | CSUC/RedIRIS |
| Mary Grammatikou | NTUA/GRNET |
| Onisiforos Soteriou | NUP/CYNET |
| Susanne Naegele-Jackson | FAU/DFN |
| Vincent Burkard | FAU/DFN |

WP6 Leaders

| Who | Inst/NREN |
|---------------|-----------|
| Ivana Golub | PSNC |
| Pavle Vuletić | UoB/AMRES |



Collaborators

| Who |
|---|
| T1 (Susanne Naegele-Jackson & team) |
| T2 (Roman Lapasz & team) |
| T3 (Laetitia Delvaux & team) |
| GÉANT Community |
| GÉANT Organisation |
| <ul style="list-style-type: none"> Technical Authors (Bridget, Gina, Rebecca, Sue, |
| <ul style="list-style-type: none"> GLAD Team |
| <ul style="list-style-type: none"> MarComms Team (Beatrix, Karl, Leo...) |
| NRENS |
| Internet2 (Karl, Sharon...) |
| Indiana University (AJ...) |
| SoBigData Academy (Roberto, Sara...) |
| CERN |
| ... |



Thank You

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