



Network eAcademy – AI Courses

Maria Isabel Gandía Carriedo (CSUC/RedIRIS)

Network eAcademy Service Manager & WP6 T4 Leader at GN5-2

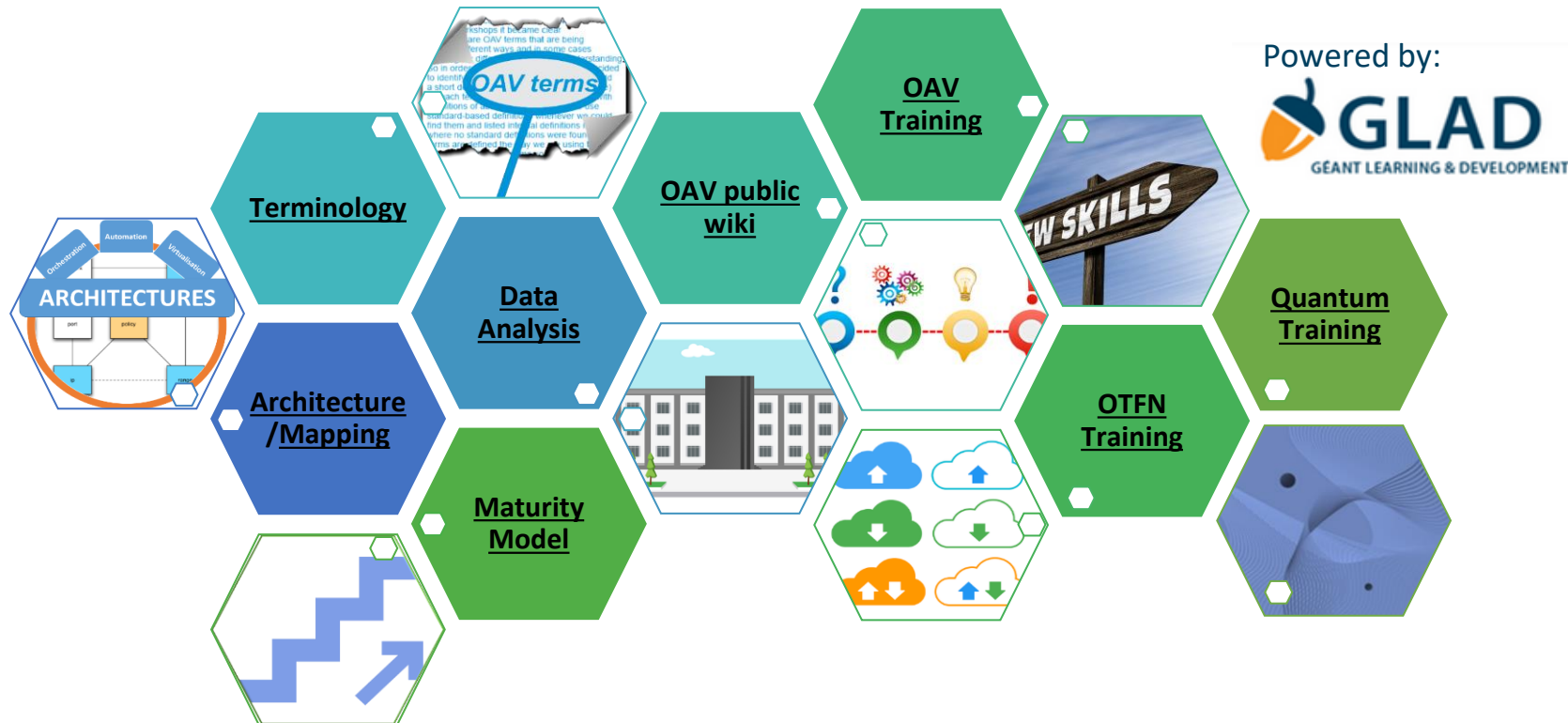
Infoshare: AI in Network Operations

21 January 2026

Public (PU)

The Network eAcademy

The Network eAcademy was born to help and support organisations in human capital development in Network-development-related domains, as an umbrella covering several activities



The Network eAcademy

The Network eAcademy (NeA) offers knowledge sharing and exchange between GÉANT, NRENs, and organisations and is intended to serve as an umbrella platform to discuss several activities, such as the production and promotion of content around orchestration, automation and virtualisation (OAV), of architecture analysis and terminology documents, of an OAV Maturity Model and an OAV Community Portal and, most notably, of a popular and far-reaching series of training programmes developed "from the community and for the community". There is also a new GNA-G Network eAcademy Working Group that was formed with the objective to make the current contents and tools of the Network eAcademy available to the entire research and education community.



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...](#)

<https://wiki.geant.org/spaces/NETDEV/pages/870744201/Network+eAcademy>

Network eAcademy Training Portal

Network Automation



Take network automation classes to learn about orchestration, automation and virtualisation of networks. Get started with network architecture, data modeling, data formats and protocols and CI/CD and then move on towards intelligent networks using data analytics and AI.

[Learn more about Network Automation....](#)

Quantum Technology



Follow our Quantum technology track to learn about basics such as Qubits, Qubit Entanglement and Teleportation. Find out about Quantum Key Distribution and quantum simulation. Or learn the latest on standards and APIs.

[Learn more about Quantum Technology....](#)

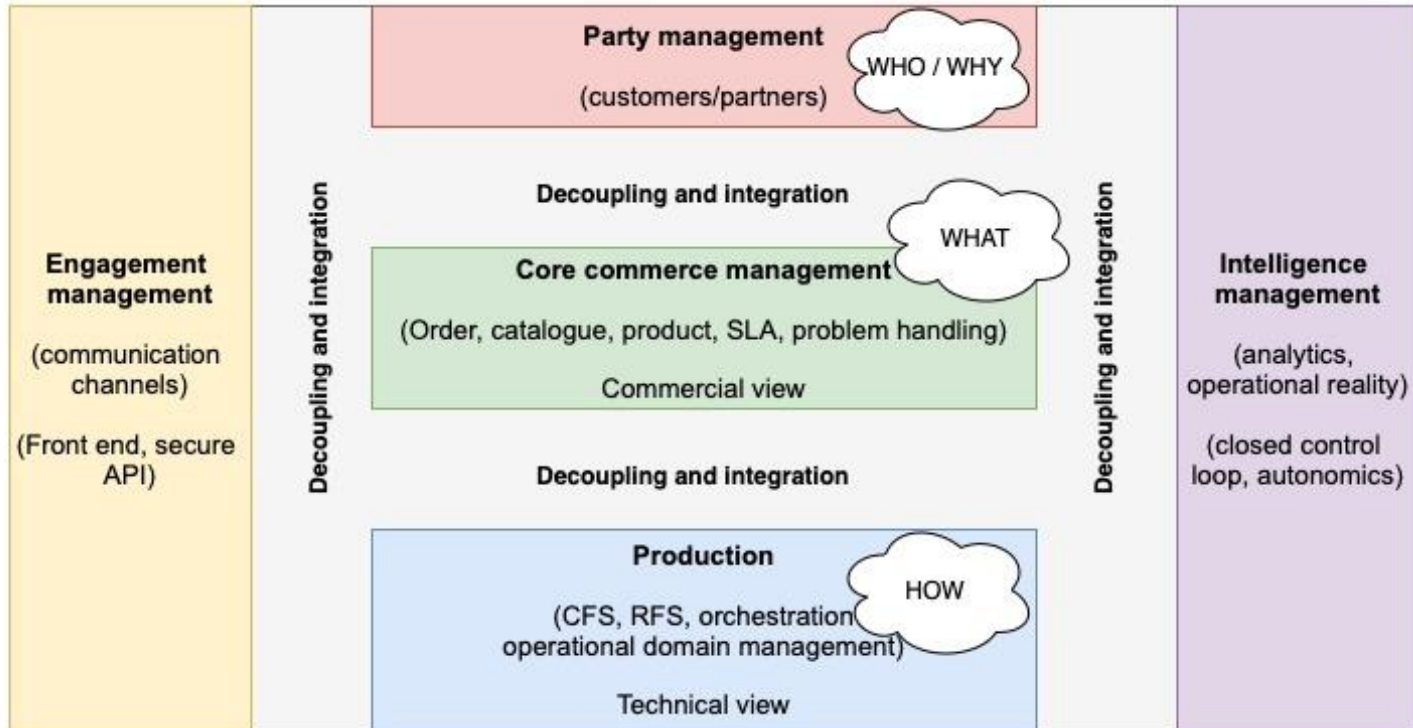
Time and Frequency Networks



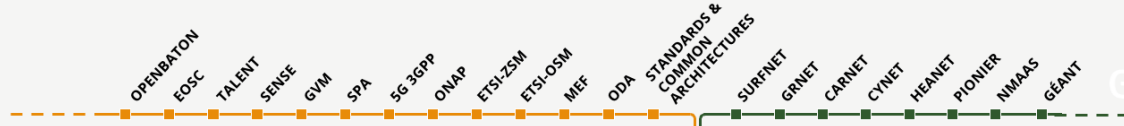
Follow our track for Time and Frequency Networks to learn about the basic metrology concepts of time and frequency, or find out about working with White Rabbit in networks. Other learning units will offer an insight into Optical Carrier Distribution, or the ELSTAB system, which is used for Time and Frequency dissemination via optical fibers.

[Learn more about Time and Frequency Networks....](#)

The High-level ODA Functional Architecture



Network Automation eAcademy Sep 2023

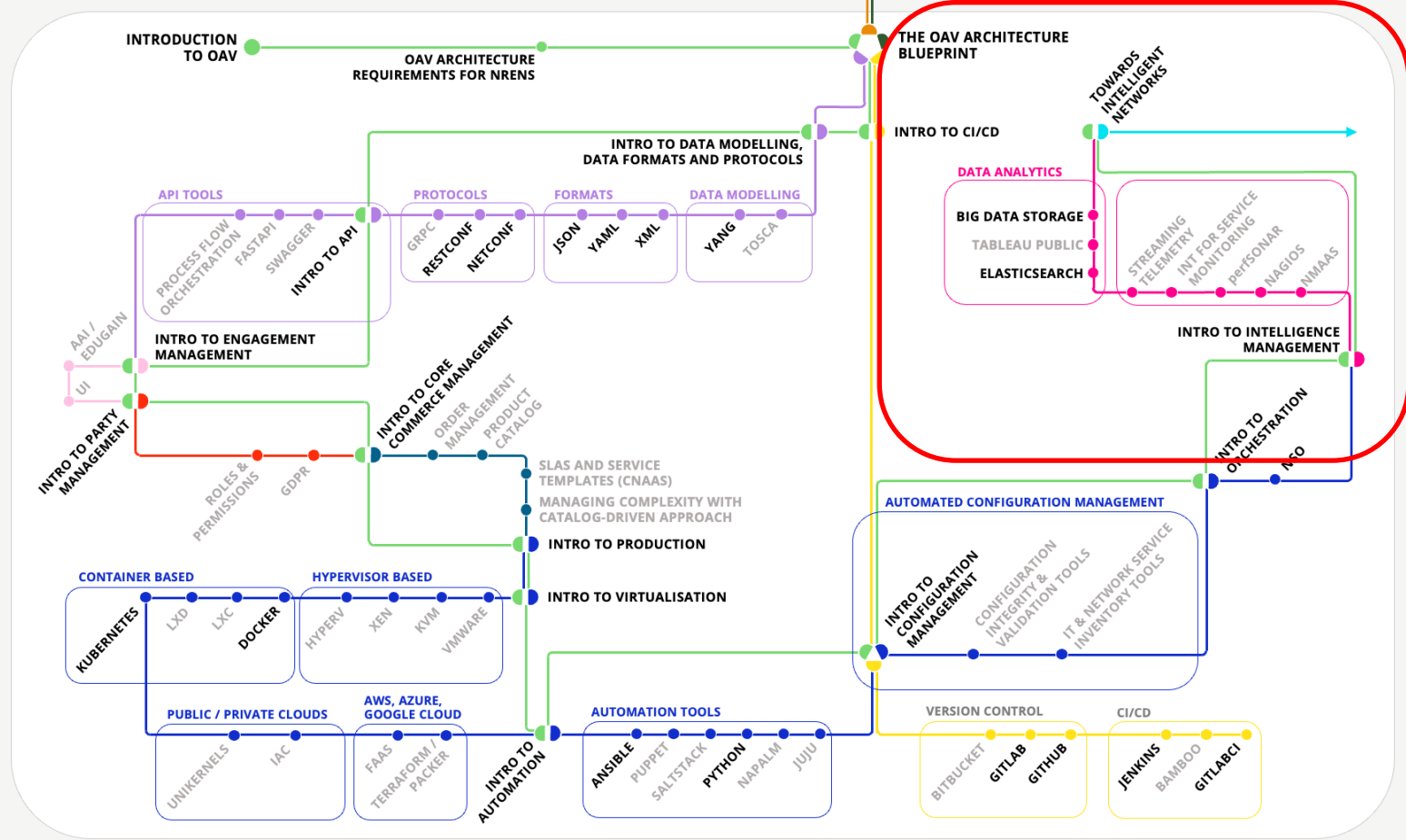


- Legend**
- Unit / ■ Document
 - Released / ● Not released
 - Exchange point
 - You can jump back and forth between this station and all exchange points at any time

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

Functional Blocks in the TM Forum OPEN DIGITAL ARCHITECTURE (ODA)

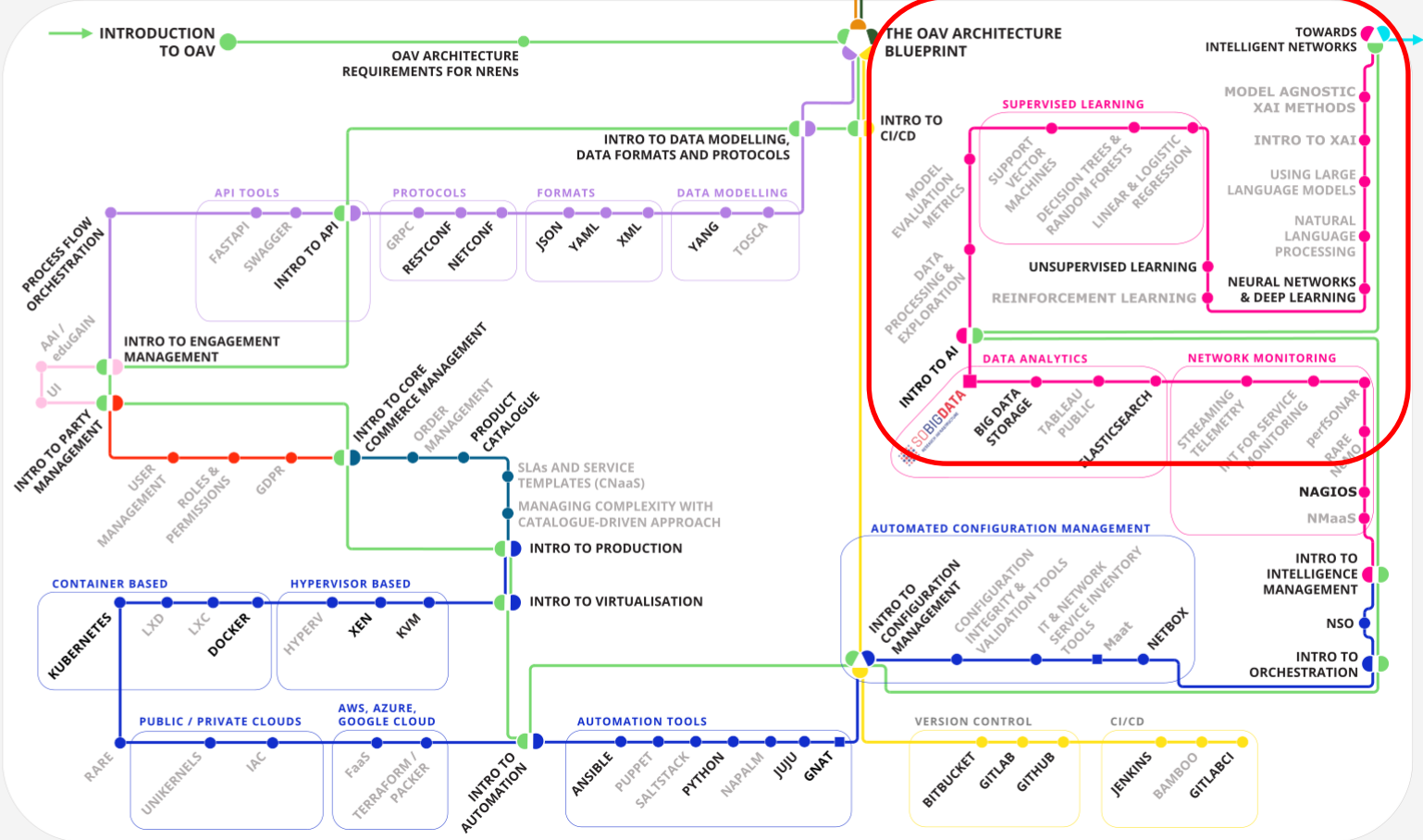


Network Automation eAcademy Nov 2025



- 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



Functional Blocks in the TM Forum OPEN DIGITAL ARCHITECTURE (ODA)

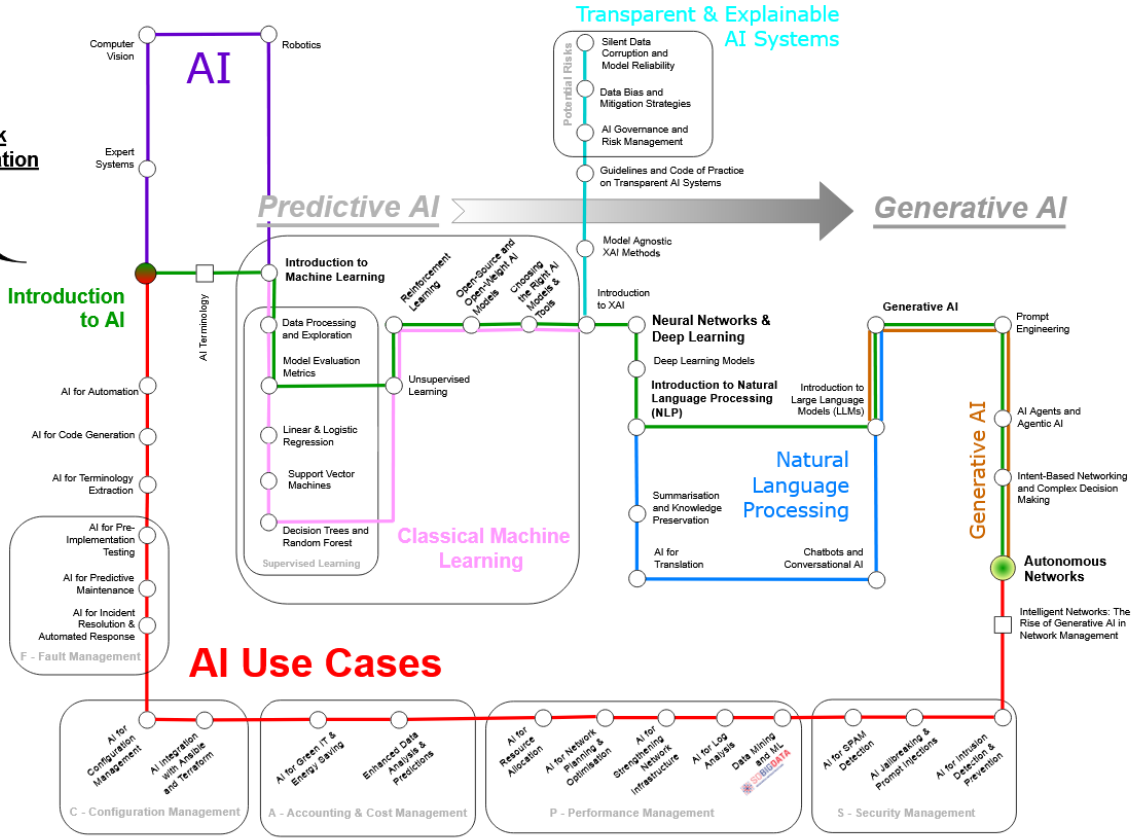
AI: first steps in the Network eAcademy

- A Focus Group Started in January 2024 to define the Intelligence Management section of the Network Automation eAcademy metro map:
 - Units added to Intelligence Management line
 - Already decided on a two-phase approach with initial focus on introductory units.
- Dormant after defining the units.
- Also Incubator Project: Chatbot for training.

AI: Current Work

- We had already made the “Intelligence Management” line longer to include more units.
- The interest around AI-relevant topics is increasing.
- We are detaching the AI section of the Network Automation map (part of Intelligence Management).
- We are working on the new map, with two introductory paths:
 - To understand how AI Works (Introduction to AI)
 - To use AI to manage the Network (AI use case): We follow the FCAPS Framework (Fault, Configuration, Accounting, Performance, and Security)

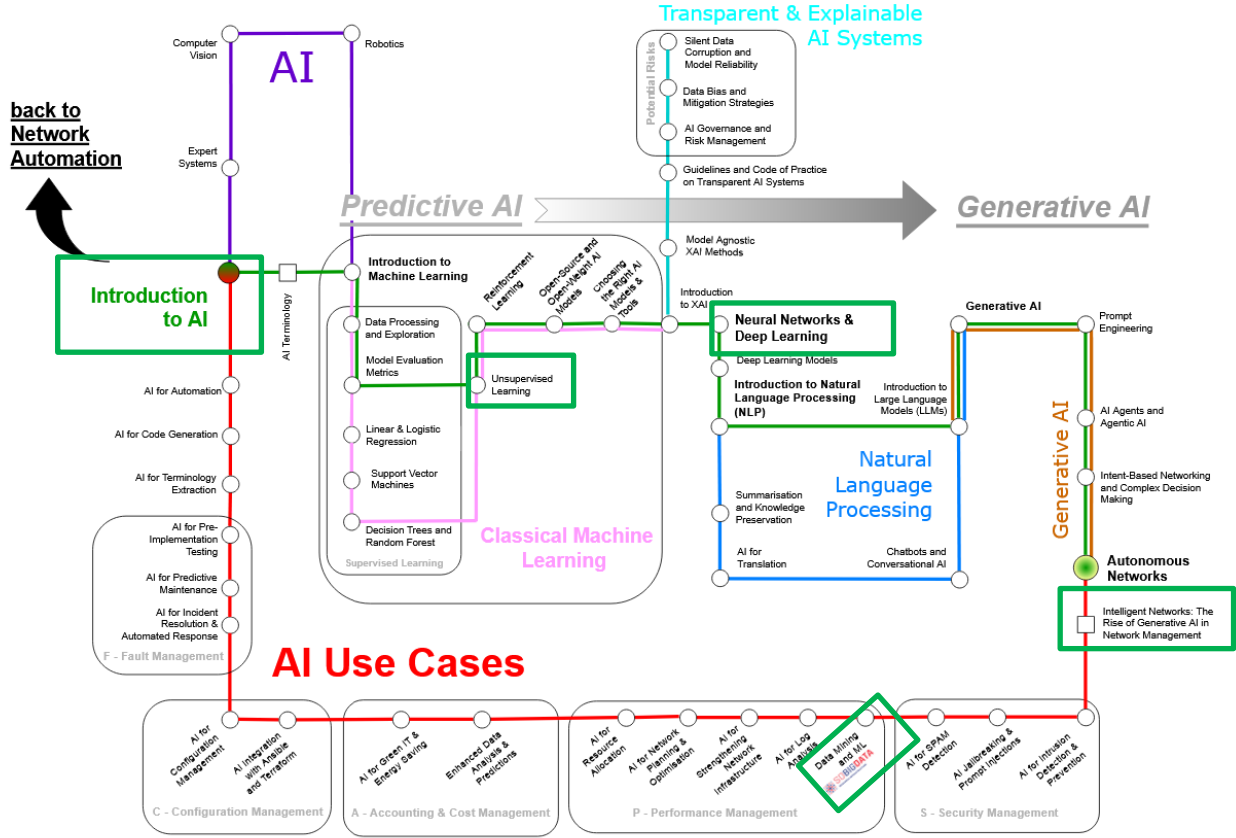
back to Network Automation



DRAFT

DRAFT



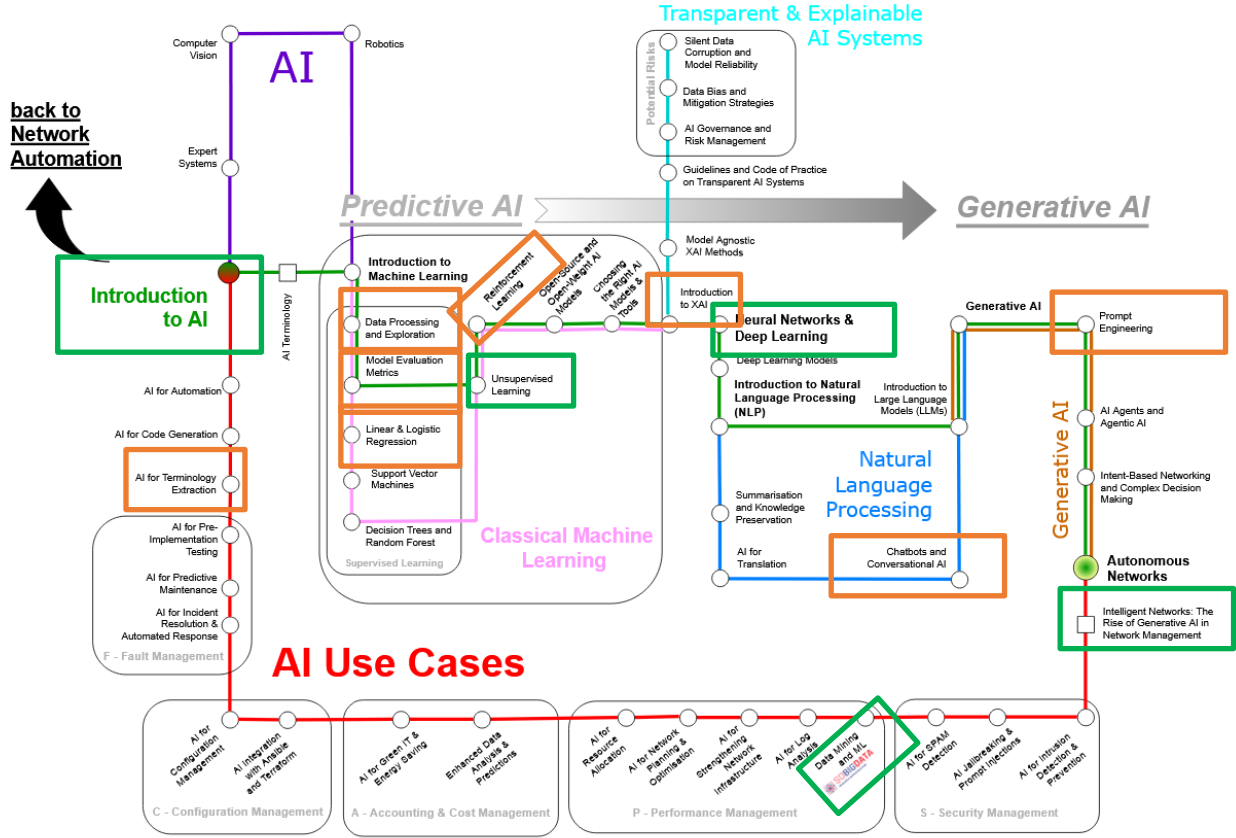


back to Network Automation

DRAFT

DRAFT





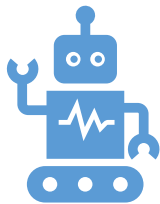
DRAFT

DRAFT



Terminology: AI/ML tools to the rescue!

Usage of AI/ML tools to help on the Terminology and Abbreviations documents.



AI/ML Tools

AI-assisted frequency cleanup (LLMs).
Abbreviation extractor: AgenticAbbreviationExtractor.
Terminology extraction: TermXT.
POS tagging & lemmatization: TermSuite components.
LLMs like ChatGPT, Lama and Gemini.



Word-frequency Analysis Tools

Reddit thread
MAXQDA guide
Voyant Tools
Quick online counter
Stop-word primer



Also...

- GNA-G Network eAcademy Working Group. Three Open Monthly Meetings held:
 - 8th October 2025 (<https://events.geant.org/event/1955/>), focused on AI. Presentation by Ivana Koteska (UKIM/MARNET) on 2 recently published units
 - 12th November 2025 (<https://events.geant.org/event/1955/>), focused on Terminology. Presentation by Iacovos Ioannou (CYNET), mentioning new document on AI/ML and usage of AI to find terms.
 - 10th December 2025 (<https://events.geant.org/event/1956/>), focused on Architecture Analysis. Presentation by Lidija Jakovčić (CARNET) on recent architecture mappings.
- Next Open Meeting: 11th February 2026
 - Register here: <https://events.geant.org/event/2019/>

What Can You Do?

- Follow the training tracks:
<https://wiki.geant.org/spaces/NETDEV/pages/870744119/Network+eAcademy+Training+Portal>
- Map your Architecture. Templates and examples here:
<https://wiki.geant.org/spaces/NETDEV/pages/362742030/Mapping+Use+Cases>
- Do a self-assessment through the OAV Maturity Model:
<https://wiki.geant.org/spaces/NETDEV/pages/543752253/OAV+Maturity+Model>
- Send us your examples for the Community Portal:
<https://wiki.geant.org/spaces/NETDEV/pages/212303927/OAV+Community+Portal>
- See the Terminology and Glossary:
<https://wiki.geant.org/spaces/NETDEV/pages/212303919/OAV+Terminology>
- Subscribe to the mailing list for the GNA-G Network eAcademy Working Group at
<https://lists.gna-g.net/postorius/lists/network-eacademy-wg.lists.gna-g.net/>
- Contact us to share your ideas/suggestions: network-eacademy@lists.geant.org



Thank You!

www.geant.org



Co-funded by
the European Union