

WELCOME

Arash Ashouriha
Laurent Leboucher
Anita Döhler
Luke Ibbetson
Ray Le Maistre

Deutsche Telekom
Orange
NGMN
Vodafone
TelecomTV

*WE MAKE BETTER
CONNECTIONS*

AGENDA

1. Welcome
2. Recap last year
3. Chairman handover
4. Forecast 2025
5. Q&A

Mission and Strategy

NGMN's strengths



Operator-driven global alliance with focus on requirements level



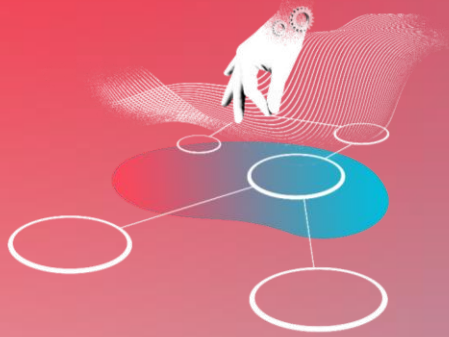
Global alliance reflecting the entire value chain



Strategic Focus Topics address the industry's main opportunities and challenges

Work Programme

Strategic Focus Topics with different time horizons, plus projects supporting full 5G implementation



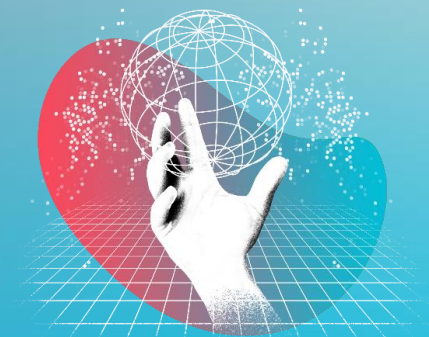
ROUTE TO DISAGGREGATION

Leading in the development of open, disaggregated, virtualised and cloud native solutions



GREEN FUTURE NETWORKS

Building sustainable and environmentally conscious solutions



6G

Emergence of 6G highlighting key trends across technology and societal requirements plus use cases, requirements, design considerations, network architecture evolution

Global Alliance

Nearly 70 companies shaping the future of the industry

 ngmn.org/our-alliance

MEMBERS



CONTRIBUTORS



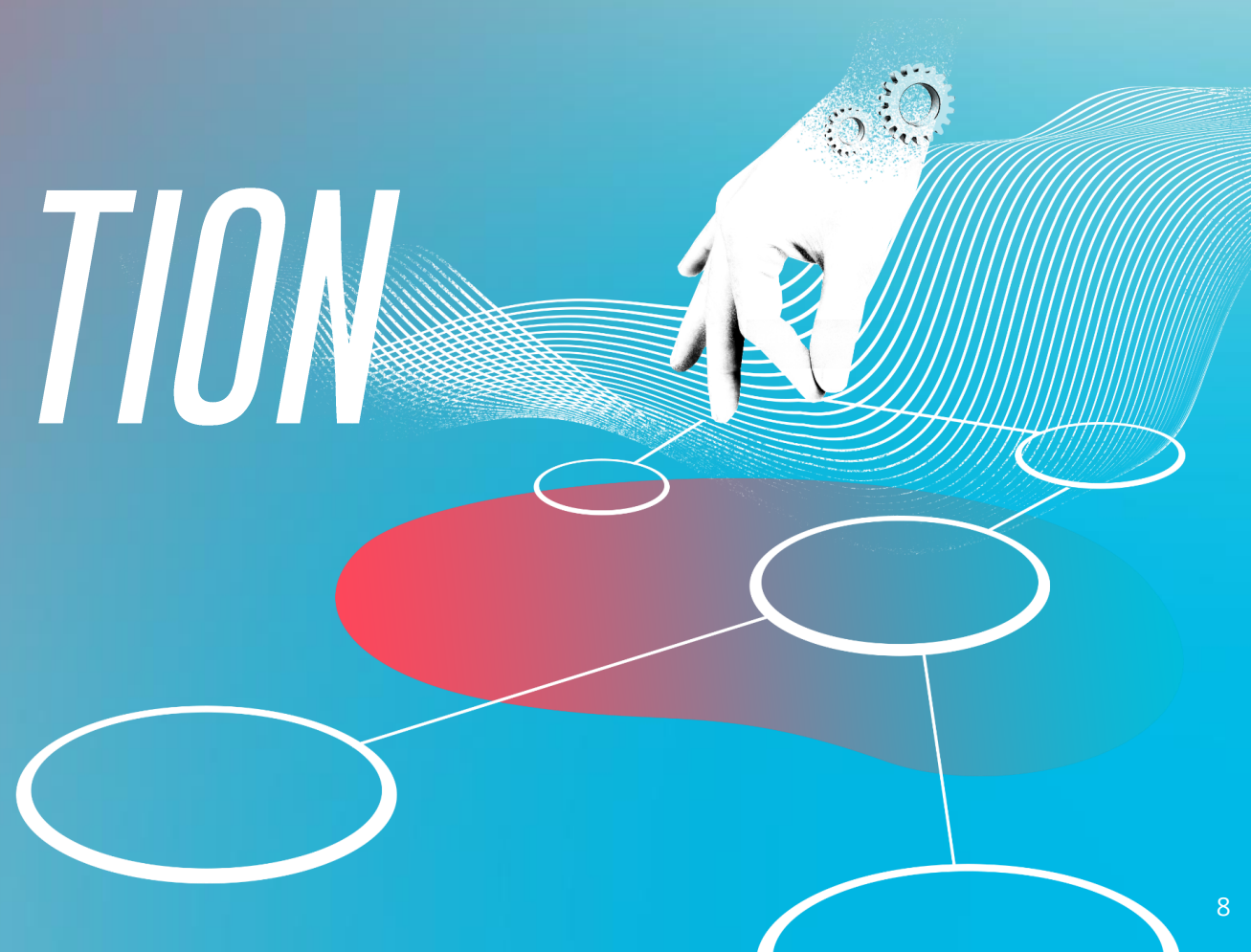
ADVISORS



Extract of

*PUBLICATIONS IN
THE LAST YEAR*

ROUTE TO DISAGGREGATION



ODiN – Operating Disaggregated Networks

Providing a framework for operating models for MNOs to choose and adopt

2024

 ngmn.org/publications



An Introduction:

This publication provides an overview of the four Operating Models for Disaggregated Networks identified by NGMN Alliance.

Single Vendor led:

A straightforward approach whereby the operator contracts with a single/lead vendor to deploy the disaggregated network with the lead vendor acting as System Integrator (SI).

Systems Integrator led:

The Systems Integrator in its capacity will implement the solution on behalf of the operator by managing and integrating several hardware and software vendors.

Operator Platform for Own Use:

In the operational model the operators develop and maintain a platform exclusively for their own use.

Operator led Platform Commercially Offered to Others:

In this operational model, the operator develops and maintains an open platform for adoption by other operators.

GREEN FUTURE NETWORKS



April 2024

July 2024



NGMN provides recommendations to aid **metering in virtualised infrastructure**

- Recommends using Redfish and open-source tools such as Kepler and Prometheus. Recommendations to SDOs
- Notes operating models will have an impact (as what can be achieved depends on interfaces /APIs exposed)



Roadmap to Energy Efficient Mobile Networks

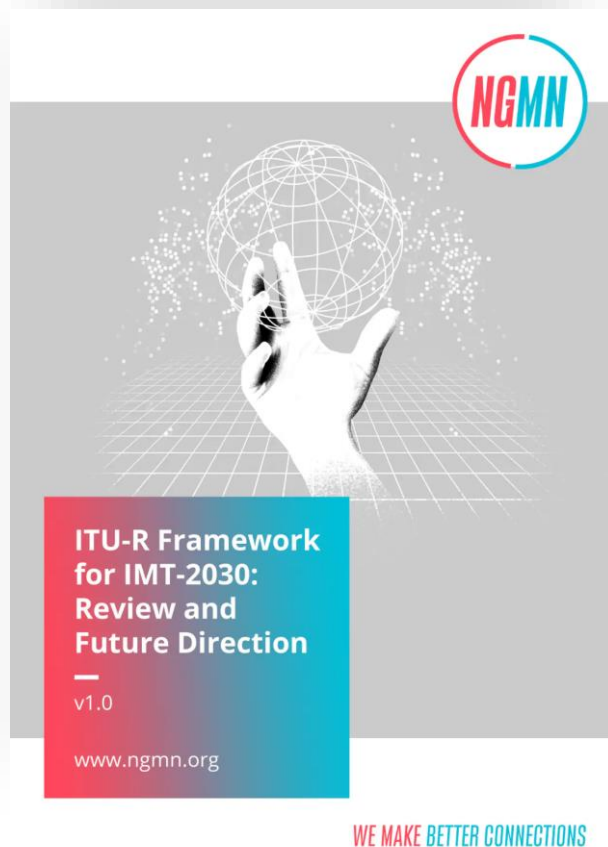
Outlines **16 different energy saving solutions quantified by size of saving and time-horizon** (short/medium/long term), a.o.

- Artificial Intelligence / Machine Learning as key technology enabling further energy saving through all stages in the lifecycle of a network
- RAN sharing highlighted as a method to save energy as well as limit carbon emissions

6G

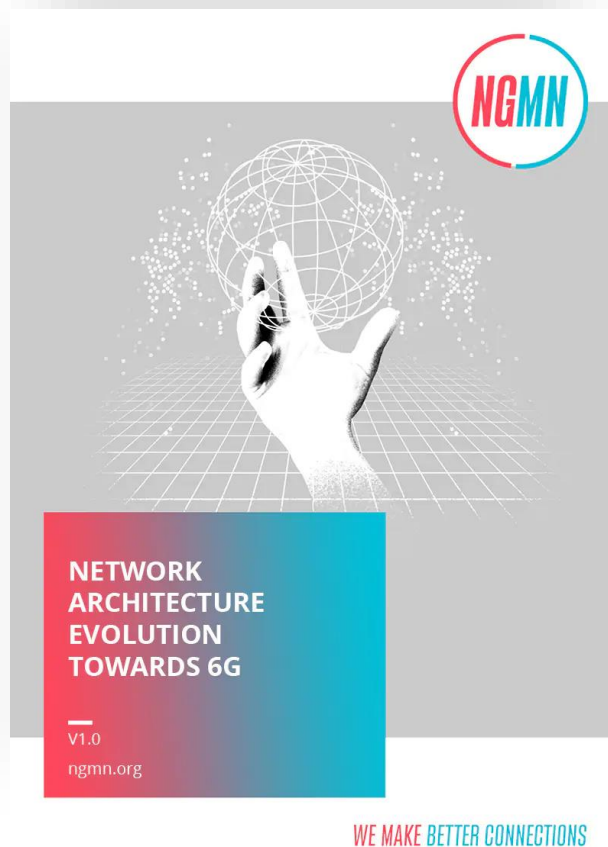


February 2024



- Review and future direction
- Extremely close alignment between IMT-2030 and NGMN 6G publications
- **Recommendations that ITU-R may wish to consider in formulating the next stage of work**, including:
 - New features should be deployed as and when required
 - Reinforcement of the importance of global standards
 - Any new radio interface must demonstrate significant benefits over and above IMT-2020
 - IMT-2030 will continue to evolve based on IP communications, considering cloud native solutions

February 2025



- **Network Architecture path is evolutionary**
- Factors influencing the evolution of network architecture :
 - Addressing 5G gaps and limitations like network complexity, energy efficiency and leveraging its strength as building blocks
 - Embracing emerging technology trends – AI, sensing, immersive communication
 - Adapting to RAN changes if justified by clear value add– potential impact of new technologies and scenarios
- **The design principles reflect a philosophy of continuous improvement inline with NGMN’s previous “6G Position Statement – An Operator View”**
- Addressing early-stage challenges involve minimising unnecessary complexities and other

RADIO PERFORMANCE ASSESSMENT FRAMEWORK

Radio Performance Assessment Framework

December 2024



- 1. Alignment with ITU-R IMT 2020 Metrics:**
Radio performance metrics such as spectral efficiency, Total Radiated Sensitivity (TRS), Total Radiated Power (TRP), and energy consumption should align with ITU-R IMT 2020 specifications in 3GPP standards.
- 2. Benchmarking Against 3GPP Release-18:**
All new RAN solutions must demonstrate clear performance improvements when benchmarked against 3GPP Rel-18 specifications.
- 3. Integration of 5G A Rollout Learnings:**
The framework incorporates lessons learned from the deployment and operation of 5G Standalone (SA) networks, ensuring practical and informed assessment criteria.

CHAIRMAN HANDOVER



THANK YOU

Arash Ashouriha

Chairman of the NGMN Alliance Board
Nov 2020 – Feb 2025



Leadership through challenging times

Successfully led NGMN for more than 4 years through challenging times:

- The COVID –pandemic
- Industry performing significant technology – and operational changes by moving to disaggregated and cloud-native networks
- Industry confronted with the emerging threat of fragmentation
- MNOs in several geo-regions struggling with 5G monetisation
- M&As and reorganisations leading to further decrease of resources the ecosystem can assign to alliance- and standardisation work
- Ensured stability, adaptability, and continued progress despite global disruptions
- Developed a strategy for NGMN tackling the biggest opportunities and challenges short-, mid-and long term
- Took on second term as chairman during challenging times to guarantee stability and continuity



Industry impact and thought leadership during Arash's chairmanship

- Over 50 influential publications shaping the future of the telecom industry
- Provided strategic guidance on key industry topics such as The Route to Disaggregation, operating models, path to cloud native networks, green networks & general sustainability, as well as NGMN positions on 6G; delivering both, long-term benefits and short- to mid-term gains
- Closely monitored technological and ecosystem developments and wisely applied them to adjust and advance NGMN's mission and objectives, in consensus with the Board of Directors

WELCOME

Laurent Leboucher

Chairman of the NGMN Alliance Board
from March 2025



Laurent's vision as NGMN Chairman

Key priorities

- Network Simplification: streamline architectures for efficiency
- Seamless transition beyond 5G:
 - Guide the shift towards 6G
 - Develop framework for future evolution
- 6G Standardisation: support global alignment as standardisation begins

Addressing industry challenges

- Prevent ecosystem fragmentation through cooperation
- Provide clear requirements to drive global standards



CLOUD NATIVE MANIFESTO Operator View

ngmn.org

MAKE BETT

NGMN's role under his leadership

- Act as a platform for industry-wide alignment
- Deliver impactful recommendations from a diverse global membership
- Drive innovation, sustainability, and future-ready architectures

Industry collaboration and unity

- Unite operators, vendors, academia and the wider ecosystem
- Foster collaboration to shape the future of mobile networks



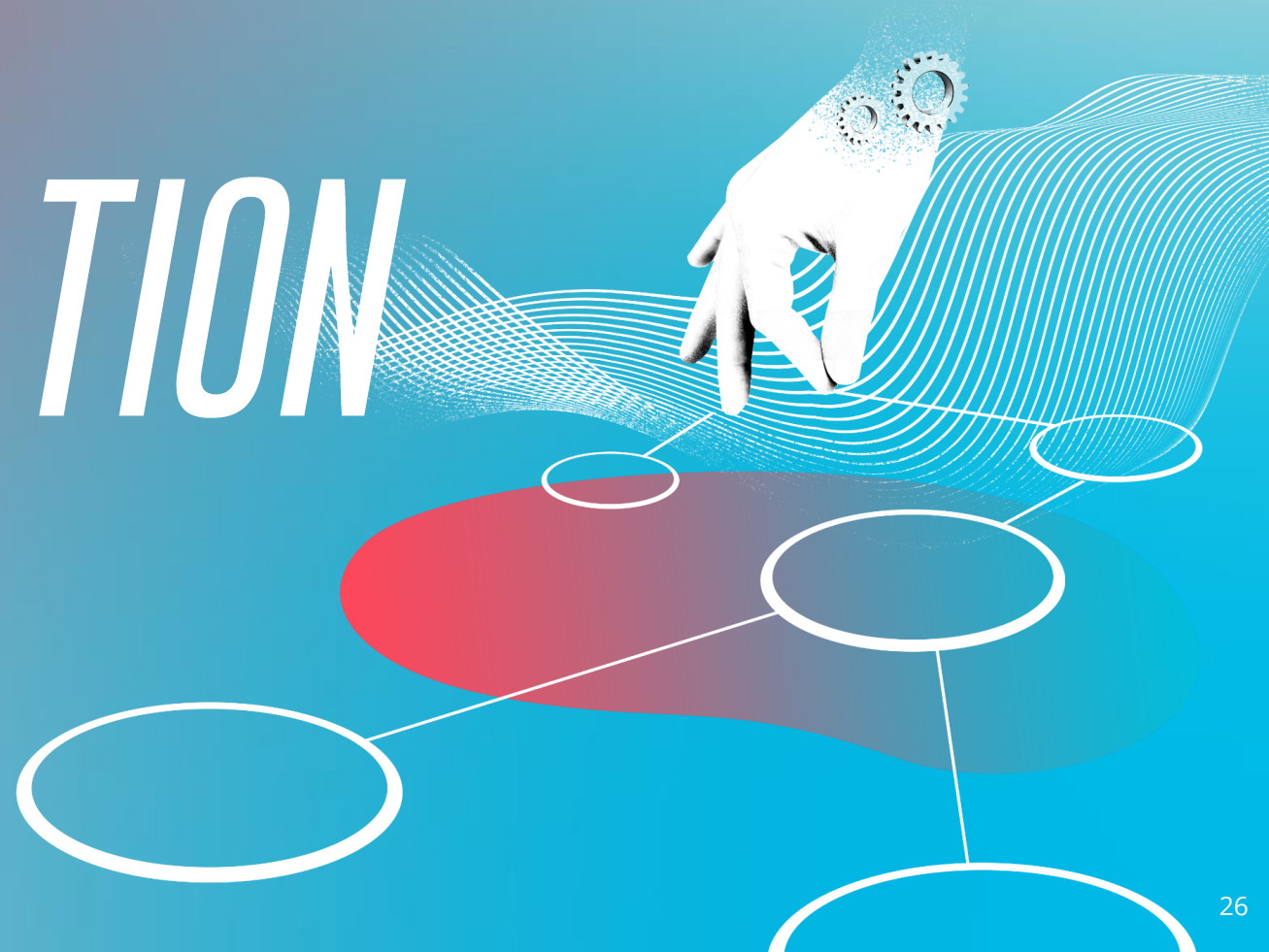
Key messages towards a sustainable and value-driven 6G

- Mobile networks are crucial for digital transformation
- Need to balance innovation, sustainability and efficiency
- The future of mobile networks lies in their ability to evolve continuously, much like software, to meet the changing needs of users and industries
 - New features should be deployable without unjustified hardware refresh. Software upgrades playing crucial role
- Continue evolving towards cloud-native, disaggregation, service-based architecture, forward and backward compatibility, and self-organisation
- AI plays a central role in enhancing network capability and user experience
- Consensus, time, and a focus on continuous improvement will be key elements for guiding the evolution of mobile networks towards 6G and beyond, building on the solid foundation of 5G

WHAT TO EXPECT IN 2025

What to expect in 2025

ROUTE TO DISAGGREGATION



Route to Disaggregation Cloud Native Assessment Methodology

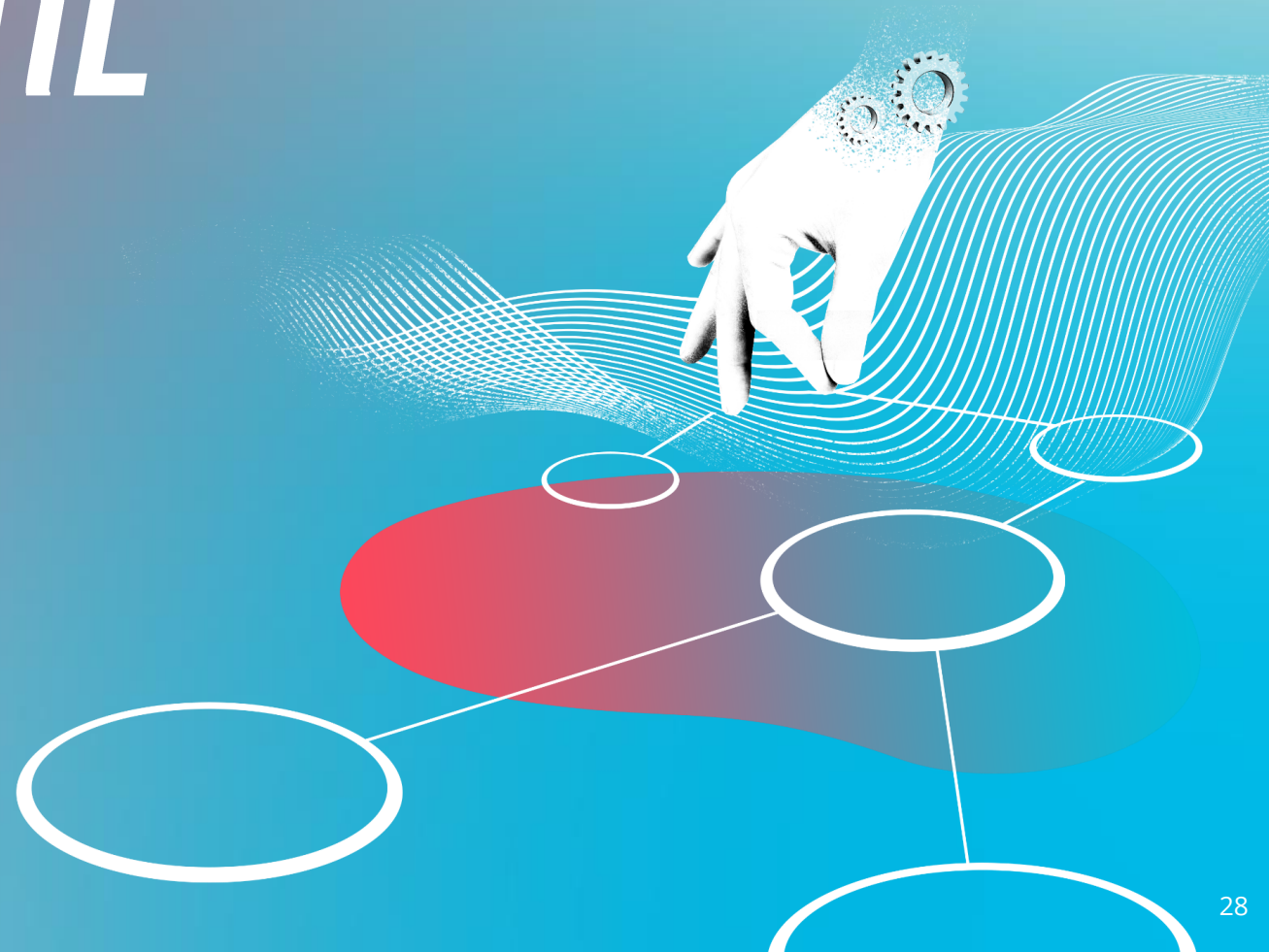
NGMN is developing a Cloud Native Assessment Methodology Framework as next steps of former publication “Cloud Native Manifesto”. This framework aims to guide organisations identifying prerequisites, requirements, and assess the level of maturity of “cloud nativeness” in their existing networks.

Key objectives:

- 01** Assessing impact on organisations, embracing Cloud Nativeness
- 02** Best practices to refer and follow with respect to telco cloud transformation journey
- 03** Defining appropriate and tangible assessment levels of Organisation AS-IS towards TO-BE
- 04** Identifying the maturity level of existing network and gathering pre-requisites to transform into complete Cloud Native network

What to expect in 2025

GREEN FUTURE NETWORKS



Green Future Networks

GFN in 2024/2025 (Phase 4)

- **Energy Management**
 - How to optimise use of renewable energy in mobile networks?
 - Role of MNOs in wider energy management of energy grids
- **Metering**
 - Requirements and recommendations towards metering in transport networks
 - Requirements and capabilities to compare energy efficiency of different RAN deployment options
- **Environmental Reporting and Sustainability**
 - Address challenges faced by telco industry for accurate assessment and reporting of emissions sustainability efforts

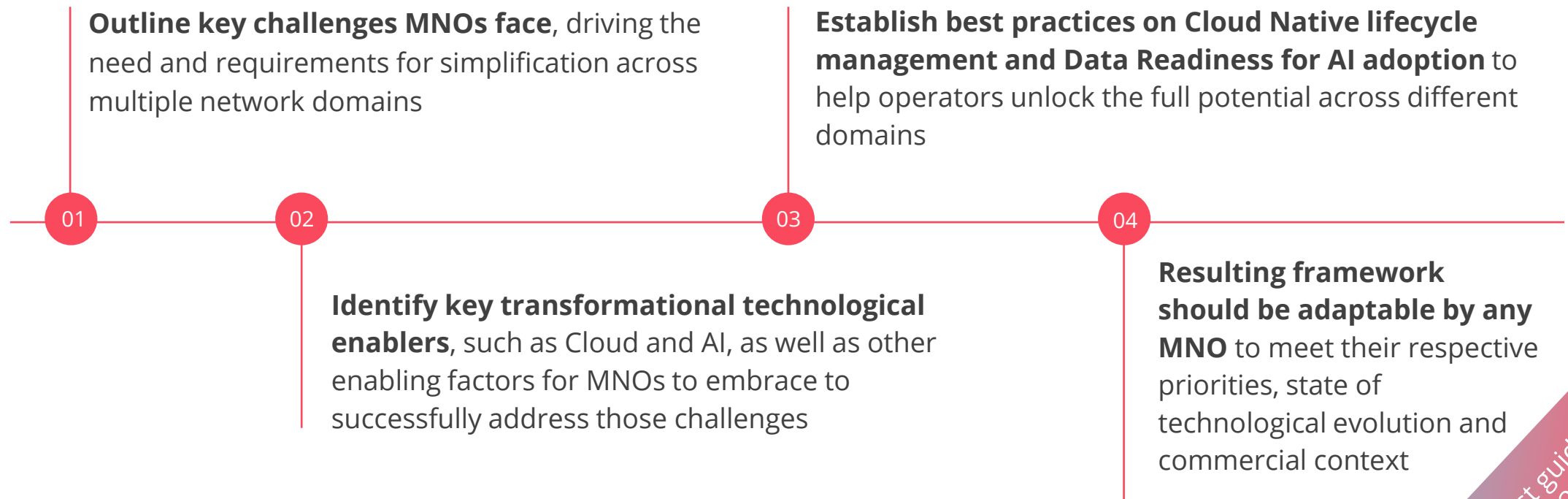
What to expect in 2025

FRAMEWORK FOR NETWORK SIMPLIFICATION

Framework for Network Simplification

NGMN establishes a project to provide guidance on framework for network simplification

Key objectives:



Expected first guidance
May 2025

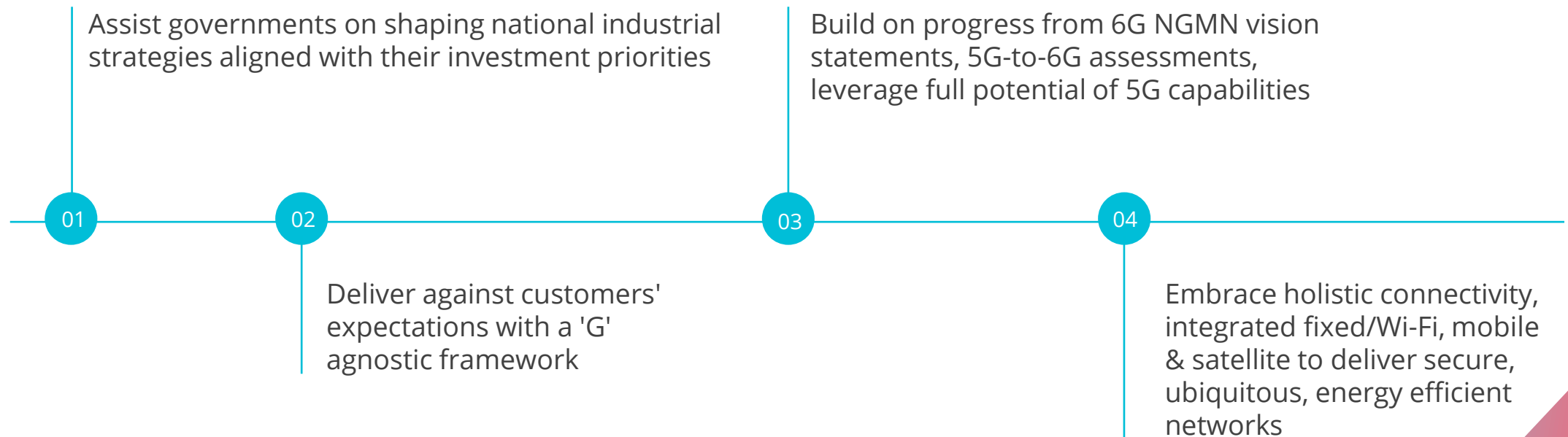
What to expect in 2025

FRAMEWORK FOR FUTURE COMMUNICATION NETWORKS

Framework for Future Communication Networks

NGMN establishes a project to provide guidance on the Framework for Future Communication Networks

Key objectives:

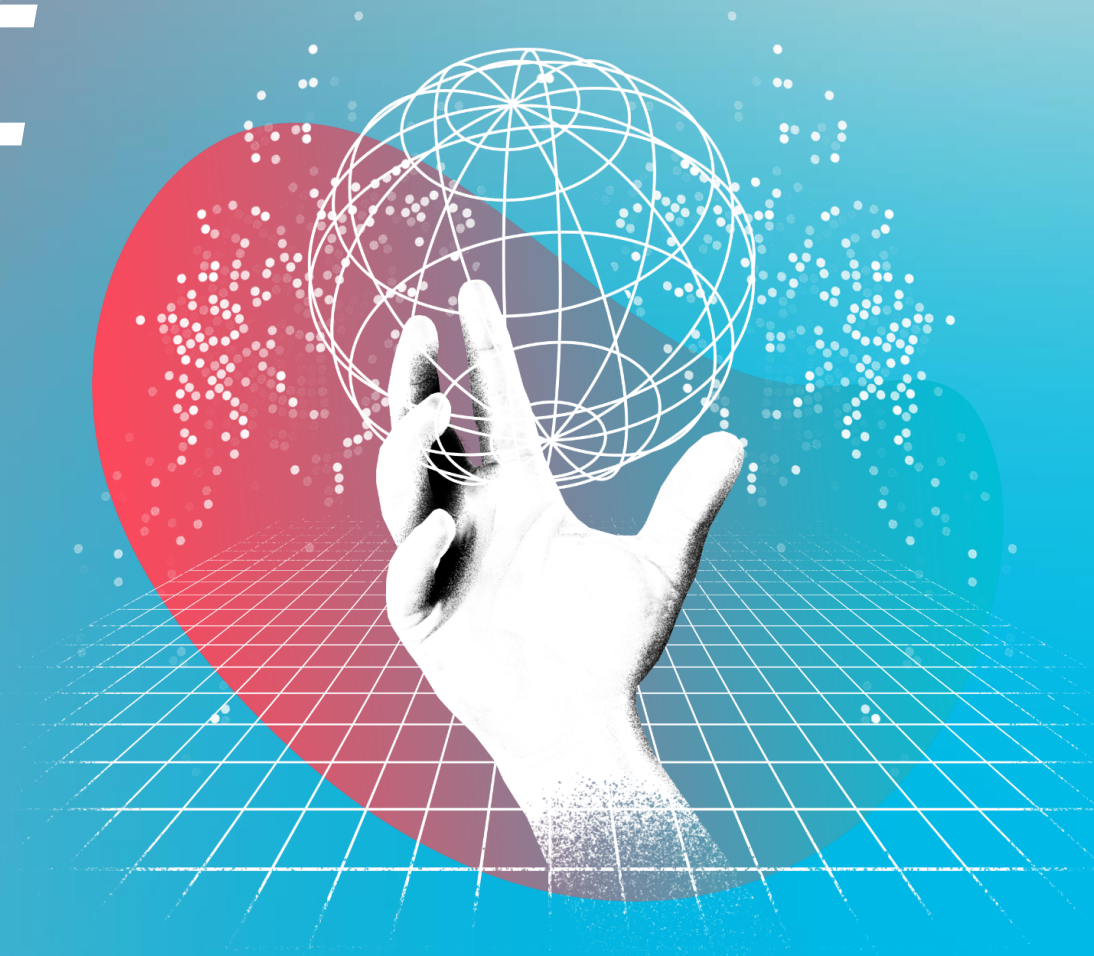


Expected first guidance
Spring 2025

What to expect in 2025

6G NEXT PHASE

Definition and kick off coming soon





***WE MAKE BETTER
CONNECTIONS***

Q&A

Anita Döhler
Arash Ashouriha
Guangyi Liu
Jérôme Birot
Laurent Leboucher
Luke Ibbetson
Mauro Costa
Michael S. Irizarry
Suzana Grujev
Takki Yu

NGMN Alliance
Deutsche Telekom
China Mobile
TELUS
Orange
Vodafone
Telia
UScellular
Liberty Global
SK Telecom

Q&A





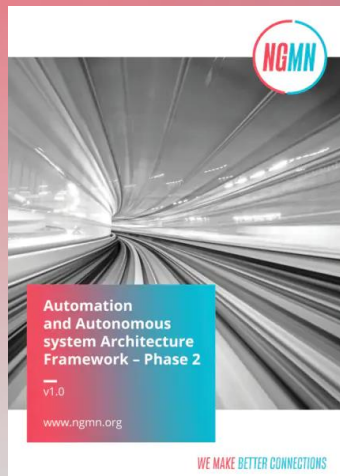
THANK YOU

Additional NGMN Projects

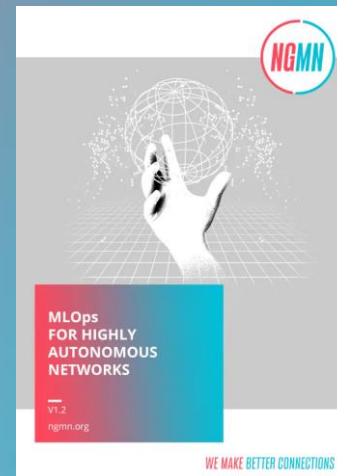
ANNEX

NETWORK AUTOMATION

To achieve the transformation from network automation to autonomy through AI technology, NGMN conducted an analysis of technical requirements and implementation architecture research for network autonomy based on the network automation platform.



The publication provides guidance and direction on the use cases, requirements, and architectural principles to embrace interoperable, multi-vendor and standards-based autonomous networks that will help to manage the increasing complexity of the evolving 5G Advanced ecosystem.



The publication provides comprehensive guidelines and requirements, specific to enabling technologies for highly autonomous networks. It focuses on a generalized ML model development and operation, elaborating the MLOps process, requirements, architecture, and end-to-end deployment for Level 4+ autonomous network AI applications.

SECURITY COMPETENCE TEAM

The Security Competence Team's objective is to analyse security challenges and propose comprehensive security requirements and recommendations related to network architecture, deployment, and operational aspects for 5G and beyond.

Additionally, the initiative supports security analyses and addresses related topics raised by other NGMN projects and teams, ensuring a robust and secure framework for future telecommunications.

BASTA - BASE STATION ANTENNA ARCHITECTURE

The result of the project on Base Station Antenna Architecture is an implementation recommendation which helps the telecommunication industry to establish industry-wide accepted antenna standards for the benefit of its customers.