



SUCCESS ON THE ROUTE TO DISAGGREGATION

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**WE MAKE BETTER
CONNECTIONS**

AGENDA



- **Welcome and Introduction**
Anita Döhler (CEO, NGMN)
- **Introduction to ODiN**
Carlos Fernandes
(VP Group Technology Innovation, Deutsche Telekom)
- **Concrete Operator Example**
Franz Seiser (VP Access Disaggregation, Deutsche Telekom)
Marc Fiedler (Chief Product Owner SMO Development,
Deutsche Telekom)
- **Panel Discussion**
 - Carlos Fernandes
 - Franz Seiser
 - Javan Erfanian (Distinguished Member of Technical Staff,
Bell Canada)
 - Lennart Olaivar (Senior Manager, Technology Strategy
and Transformation Office, Smart/PLDT)

NGMN - GENERAL COMPETITION LAW DISCLAIMER

- Agreements between major competitors are illegal under European law as well as other jurisdictions;
- Agreements should in particular not reduce competition on the market by agreeing on pricing structure, technology preferences or exchange of sensitive information (business processes, marketing plans, etc.);
- Agreements may only be excused if (i) consumer benefits can be shown or (ii) any restrictions can be demonstrated as necessary;
- Breach of these principles may lead to administrative sanctions and fines.
 - **DON'T** enter into agreements that restrict other parties' actions or creates barriers to market entry.
 - **DON'T** discuss or exchange information on pricing, business plans, or any other confidential or commercially sensitive data.
 - **DO** clearly identify the positive Industry purpose of each project and follow it.
 - **DO** consult with own and NGMN legal in areas where you are unsure.



NGMN STRATEGIC PILLARS

GLOBAL PARTNERSHIP

~ 80 Members and Partners

MEMBERS

NGMN Operators with over 200 networks serving more than 60 % of all global mobile users



CONTRIBUTORS

NGMN Telco Vendors, Software Companies and many other leading industry players contributing and driving the advancement of future mobile network technologies



ADVISORS

NGMN Research Institutes contributing substantially to mid- to long-term innovation



STRATEGY

Alongside with projects supporting 5G's full implementation, the focus of NGMN's Work Programme in 2021 and beyond is on three main equally important pillars with different time horizons



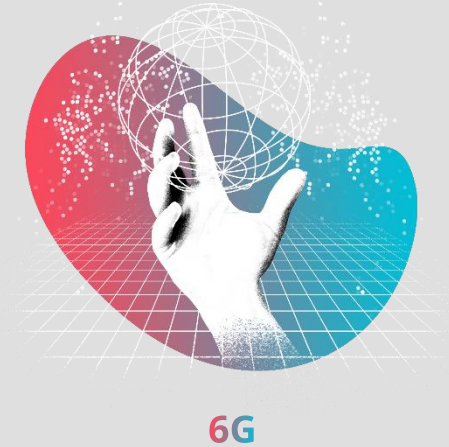
ROUTE TO DISAGGREGATION

Leading in the development of open, disaggregated, virtualised and cloud native solutions with a **focus on the E2E Operating Model**



GREEN FUTURE NETWORKS

Building sustainable & environmentally conscious solutions



6G

Emergence of 6G highlighting key trends across technology and societal requirements plus use cases to address

ROUTE TO DISAGGREGATION



OPERATING DISAGGREGATED NETWORKS

DISAGGREGATION IS A BURNING TOPIC FOR OPERATORS



- More deployments are being observed
- Operators have different starting points, challenges and experiences
- Currently 12 NGMN MNOs collaborating in the pre-competitive area
- NGMN vendors and research institutions to contribute soon
- Project co-leads with global coverage and regional representation covering Americas, Asia and Europe

DISAGGREGATION INFLUENCING THE FUTURE

ROLE OF A CTO

Several factors will influence the operating model and the required skills, technology and tools.
MNOs – amongst other – need to ramp up SI capabilities, alongside with NT/IT merger

Today

- Aggregated Radio Access - and Core Networks
- Clear separation between NT and IT functions
- Standards based, vendor proprietary network elements
- Vendor proprietary network management systems

Future

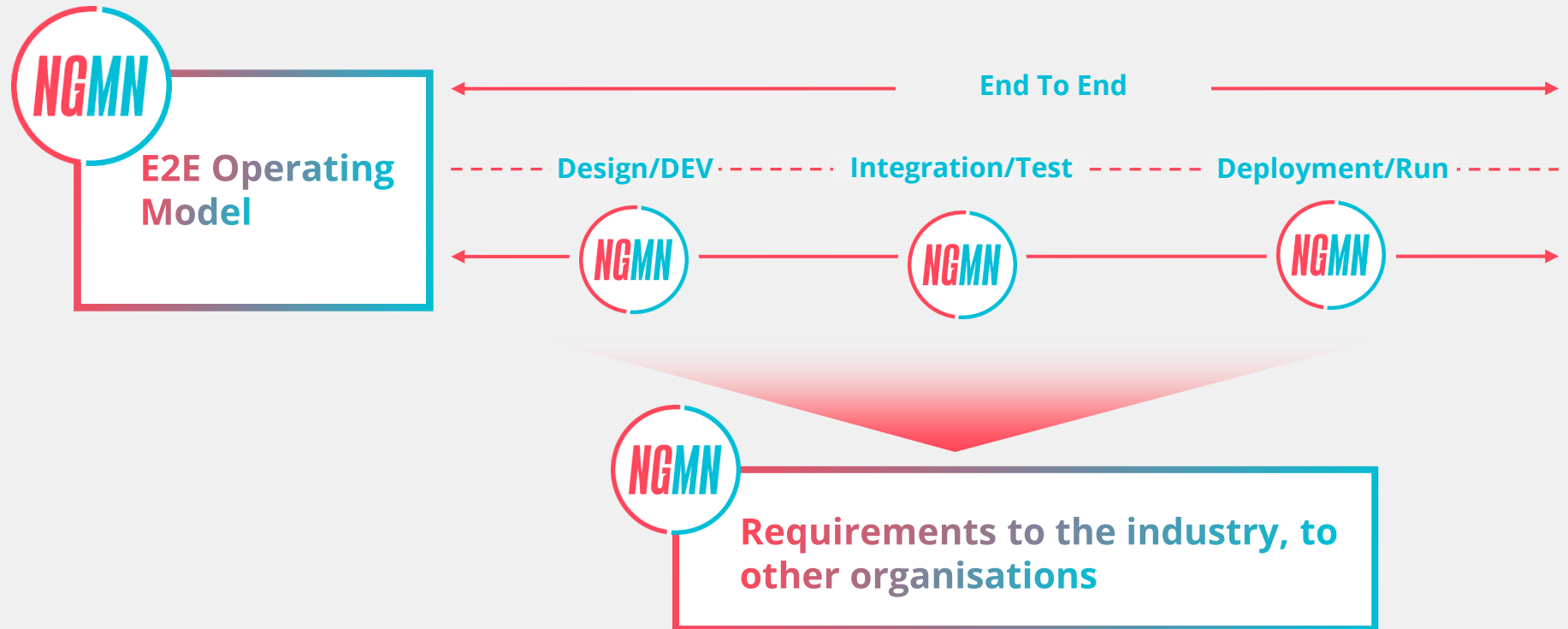
- Disaggregated networks
- Network softwarisation/ cloudification
- Merged NT and IT functions and skills
- Standards- and open source based, open network elements
- New, to be defined network management systems and tools

Operating Model influencing decisions

- Network operator vs vendor vs SI
- Brownfield vs Greenfield
- Commercial models (B2B, B2C, specific vertical industry requirements, Digital SP vs pure infrastructure operations ...)
- NT/IT merger
- Scale of operations
- Role of Open Source
- Required skills & transformation
- Cloud native
- Integration
- Testing
- Validation
- Security/ compliance
- etc.

E2E OPERATING MODEL BY NGMN

The End-To-End Operating Model for disaggregated networks was not covered yet by other organisations
NGMN is well positioned to add value in this area

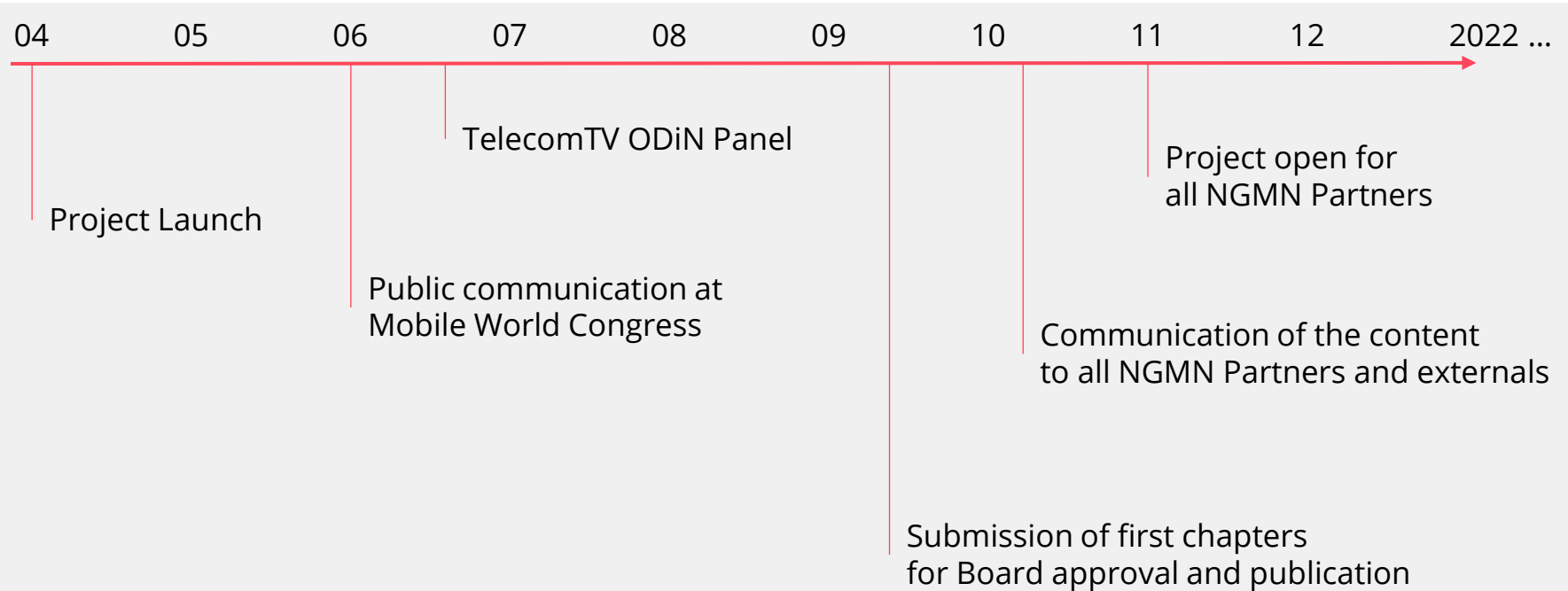


OPERATING DISAGGREGATED NETWORKS (PROJECT ODIN)



1. Context, current challenges and needs observed by operators
2. Industry status and roadmap, including foreseen technical- and tool evolutions
3. Target picture provided by Network Disaggregation
4. Relationship with specific industry verticals
5. Operating Model(s) options, their pros/cons, main decision criteria and blueprints

TIMELINE AND MILESTONES



WHITE PAPER CONTENT



Contents

1	Background and Introduction	6
1.1	A New Operating Model	6
1.2	Network Disaggregation - the Transformation Catalyst	7
2	Expected Benefits of Network Disaggregation	9
2.1	Adoption Flexibility	9
2.1.1	More Solution Choices and Flexibility	9
2.1.2	Supply Chain Benefits	10
2.2	Innovation Acceleration	10
2.2.1	Better Functionality, Features and Solutions	10
2.2.2	Better Performance, Improved User Experience	11
2.2.3	Speed of Change	11
2.3	Expenditure Reduction	11
2.3.1	Lower Cost Attributed to Improved Competition	11
2.3.2	Assumed cost gains attributed to improved Resource Efficiency	12
2.4	Openness for Further Innovation in Automation and AI Platform	12
3	Context, Current Challenges and Needs Observed by the Operators	13
3.1	Impacts to the Network	13
3.1.1	Complexity	13
3.1.2	Interoperability and compatibility	13
3.1.3	Security Risks	14
3.2	Impacts to the Organization and Processes	15
3.2.1	Impact to Procurement Processes	15
3.2.2	Newly Added System Integration Processes	16
3.2.3	Assumed Cost Implications	17
3.2.4	Shift of Scope and Responsibilities	18
	List of Abbreviations	22
	References	22

MAIN MESSAGES

- Truly collaborative work of all operators involved
- Identified numerous challenges but as well many great opportunities
- Captured the uniqueness of each contribution
- Relevance has increased throughout the year
- Determined to impact the industry with content and speed

NEXT STEPS

- NGMN Partners to announce their interest in joining the project by sending a mail to office@ngmn.org
- Externals to contact office@ngmn.org for joining NGMN and then contributing to the project



THANK YOU

In case of further questions please contact
office@ngmn.org