

#### GREEN FUTURE NETWORKS

Anita Döhler, CEO, NGMN Alliance



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## **GREEN FUTURE NETWORKS**

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www.ngmn.org

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(NGMN

### **STRATEGY**

Alongside with projects supporting 5G's full implementation, the focus of NGMN's Work Programme since 2021 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, requirements and design considerations to address

#### **GLOBAL PARTNERSHIP**

More than 80 Companies and growing



# **GREEN FUTURE NETWORKS**



### **BUILDING A SUSTAINABLE FUTURE FOR MOBILE**

- High relevance to MNOs, industry and globe
- A **multi-year project** to guide the industry with **roadmaps** and **actionable recommendations**



#### **GREEN FUTURE NETWORKS – PUBLICATIONS** PHASE 1



### **CORE TOPICS**



TELCO SUPPLY CHAIN SUSTAINABILITY / CIRCULAR ECONOMY



REDUCING ENVIRONMENTAL IMPACT



NETWORK ENERGY EFFICIENCY AND METERING

KPIS FOR GREEN NETWORKS

#### **TELCO SUPPLY CHAIN SUSTAINABILITY** KEY RECOMMENDATIONS



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new Aliance?           LCA availability         is the product LCA available according to the recognised standards?           LCA availability         is the product LCA available according to the recognised standards?           LCA availability         is the product LCA available according to the recognised standards?           Daray consumption         is the product contemp duration available according to the recognised standards?           Daray consumption         is the product smaller particular available according to the recognised standards?           Daray consumption         is the product smaller particular available according to the recognised standards?           Satistical support of the product smaller particular available according to the recognised standards?         is the sender completer according to substandals supply chain conditions	Product housing and packaging	is the product housing and packaging eco-friendly?
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tento tento de la consultación de la construcción d	LCA availability	is the product's LCA available according to the recognised standards?
Conflict minerals/hazardous sub- stances Social impact Is the product containing hazardous substances? Social impact Is the vendor compliant according to sustainable supply chain conditions	PCF availability	Is the Product Carbon Footprint available according to the recognised stan- dards?
stances Social impact is the vendor compliant according to sustainable supply chain conditions	Energy consumption	is the product energy efficient?
		Is the product containing hazardous substances?
	Social impact	

- Adopt ESG (Environmental Social Governance) goals as an integral part of the operator's objectives
- To reduce scope 3 emissions, ensure alignment of major stakeholders (in particular suppliers) with the ESG goals
- 3. Update processes to include ESG
- 4. Encourage suppliers to disclose carbon emissions data

#### Sourcing criteria checklist is available!

#### **KPIS FOR GREEN NETWORKS ASSESSMENT** KEY RECOMMENDATIONS

#### Table 1: Environmental KPIs and their thresholds

	KPI Name	Target value Maximum threshold	Other thresholds
1	Sustainability reporting with audit	Sustainability report with the auditing compa- ny mentioned	
2	Net Zero goal is set	2040	2045, 2050
3	Sustainability goals set with a clear path to achieving these goals	Passed if a clear path to achieving Net Zero goals is indicated. The operators are advised to follow the ITU-T industry standards L1470 [25] and L1471 [26]. The best assurance is if climate targets are verified by Science Based Targets Initiative (SBTi) or another competent third party [28].	
4	Target to reduce Scope 1 & 2 to near zero	2025	2030, 2035
5	Target amount of scope 3 emission reduction by	45% 2200 if from 1 8 2 are near zero	30%

#### Table 2: Energy and Quality of Experience KPIs and their thresholds

	KPI Name	Target value Maximum threshold	Other thresholds
1	Quality-of-Experience (QoE) assessment	The top possible category or class, e.g., outs- tanding as in Figure 7. Corresponds to very high percentage of the points/values achieva- ble	Other QoE classes
2	Energy and electricity consumption reported	Passed if both the energy and the electricity consumptions are reported	
3	Historical trend of network energy and/or electri- city consumption	Decreasing	Stable
4	Power Usage Effectiveness (PUE) of data centres reported	KPI met if the company wide value is reported	

- The industry should move towards using a unified methodology for all key sustainability KPIs
  - Move towards using the Environmental and Energy & QoE KPIs in the report
- Target Values defined use them
- Consider reporting KPIs on a per-country level (rather than group level)
- Obtaining the right data is critical
  - More granular (e.g. separate energy consumption for each part of the network)
  - Trust (accuracy / integrity)



### REDUCING ENVIRONMENTAL IMPACT NEW PUBLICATIONS OUT SOON

- Development of common end to end services footprint calculation method
- Compendium of new business models based on LCA
- Critical raw materials and Life Cycle Assessment
- Ecosystem Water Footprint



#### **NETWORK ENERGY EFFICIENCY** NEW PUBLICATIONS OUT SOON

- Topics further addressing energy efficiency of networks
  - Better engineering networks (Radio units and antennas, DC Power Distribution, Cooling, Energy harvesting & renewable energy)
  - Using network energy saving features (standardised technology / sleep and power saving modes etc)
  - **Reviewing new technology enablers** (Reconfigurable Intelligent Surfaces, others)
- Energy consumption of disaggregated networks



### **GREEN FUTURE NETWORKS PHASE 3 / 2023**





#### **Circular Economy**

• How to enable?



#### **Energy Efficiency**

- Short Term Energy Savings
- Industry Roadmap

### **GREEN FUTURE NETWORKS - JUST PUBLISHED**





Green Future Networks: KPIs and Target Values for Green Network Assessment

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- Telco Supply Chain Sustainability (Published January)
- **KPIs and Target Values** for Green Networks Assessment (NEW)
- Further publications in next few weeks on Network Energy Efficiency and Reducing Environmental Impact

### INDUSTRY CONFERENCE & EXHIBITION 2024

#### WATCH OUT & JOIN US!





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