

Requirements to 5G spectrum

5G-PPP Spectrum Workshop

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The NGMN Alliance: Global, Business Driven, Open Perspective



Members: NGMN Operators with over 200 networks serving more than 60 % of all global customers,...



Contributors: NGMN telco vendors, software companies and many other leading industry players contributing and driving the advancement of future mobile network technologies, ...

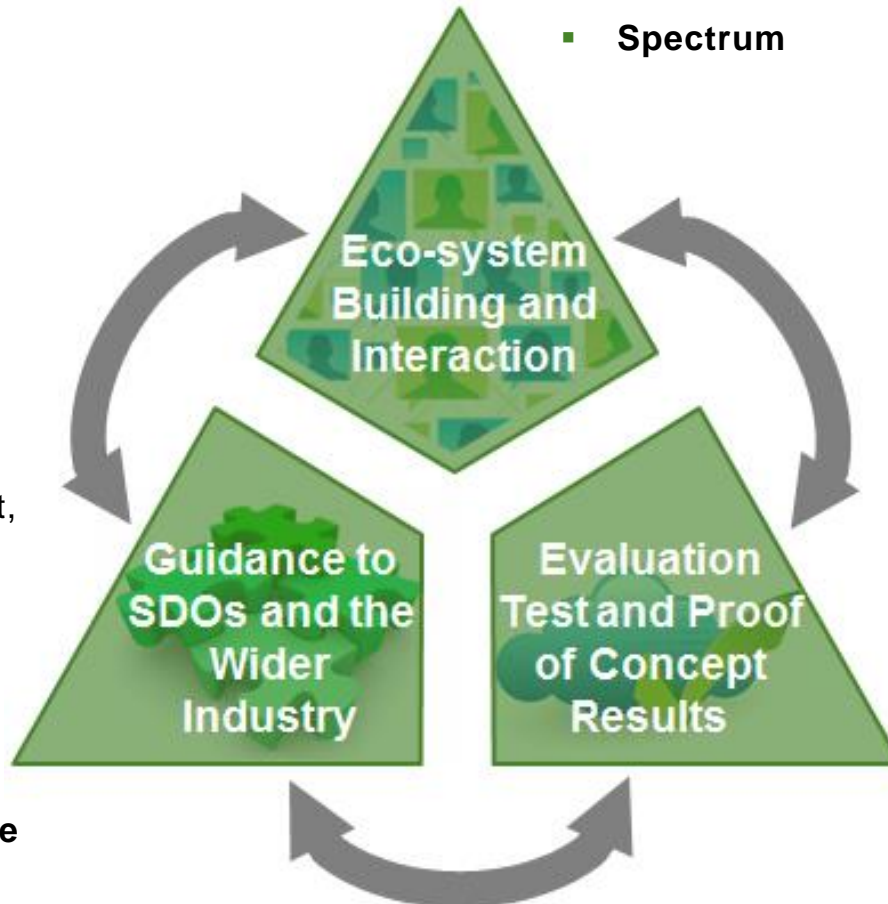


Advisors: NGMN research institutes contributing substantially to mid- to long-term innovation,....



Key Focus Areas of the NGMN Work-Programme

- V2X
- IPR Forum
- Spectrum



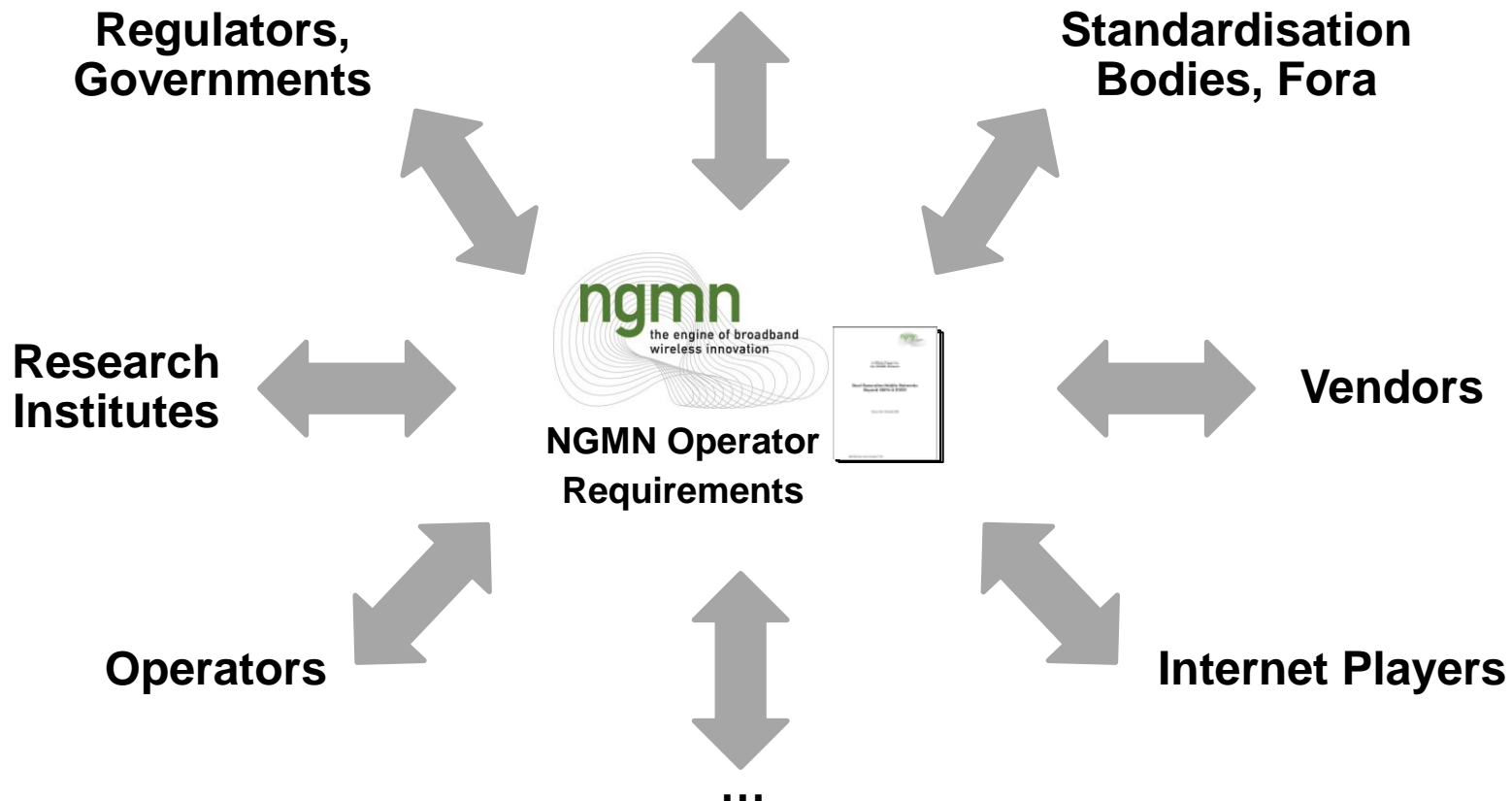
- **E2E Architecture Framework incl.**
 - RAN functional split, x-haul
 - Multi-Domain Operation
 - Service-Based Architecture
 - Management & Operations
- **Security Competence Team**

- **5G Trial & Testing Initiative:**
 - Tech. Building Blocks
 - Proof of Concept
 - Interoperability
 - Pre-commercial Networks

NGMN to Reach Out and Co-operate with All Ecosystem Stakeholders



“5G” Industry Initiatives

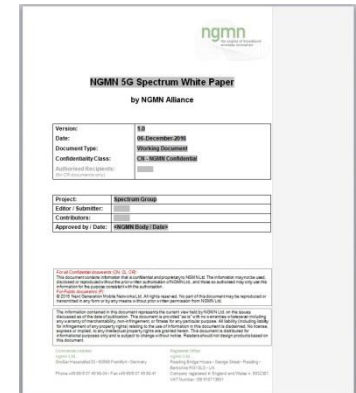


Orchestrated Effort for Global and Aligned Development of “5G”

Spectrum White Paper



- **Following the WRC-15, the spectrum team has developed a White Paper highlighting the group's vision on the future 5G bands:**
 - Bands already identified or IMT
 - Preferences from within candidate bands under the A.I.1.13 of the WRC-19
 - Bands outside the ITU process
- **The document keeps global perspective on the ecosystem, while recognising a series of regional trends.**



- **Identification of a series of core bands below 6GHz, while emphasizing technology neutral use of all bands:**
 - Around 700MHz (for low-bandwidth, wide area applications)
 - Around 3.5GHz (for higher bandwidth, coverage and capacity)

- **Priority for three ranges currently studied under the AI1.13 of WRC-19, but not ruling the other bands out at this stage:**
 - 24.25-27.5,
 - 31.8-33.4GHz and
 - 37-43.5GHz.

Main messages 2/2



- **Acknowledge the use of 28GHz for some first deployments in key markets in Asia and North America and the importance of a “tuning range” mechanism with the 24.25-27.5GHz band.**
- **Emphasizes on the need for study on regional basis frequency ranges between 6-24GHz.**

Next steps



- Further work on refining the NGMN priorities on bands and licensing models.

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