Tale of a scary dragon

...or 5G security demystified

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What is 5G?

	Latency	Throughput	Connections	Mobility	Architecture
5G	1 ms E2E Latency	10G bps Per Connection	1,000,000 Connections Per Km2	500 km/h High-speed Railway	Slicing Ability Required
GAP	30~50x	16x	100x	1.5x	NFV/SDN
LTE	30~50ms	600Mbps	10K	350Km/h	Inflexible

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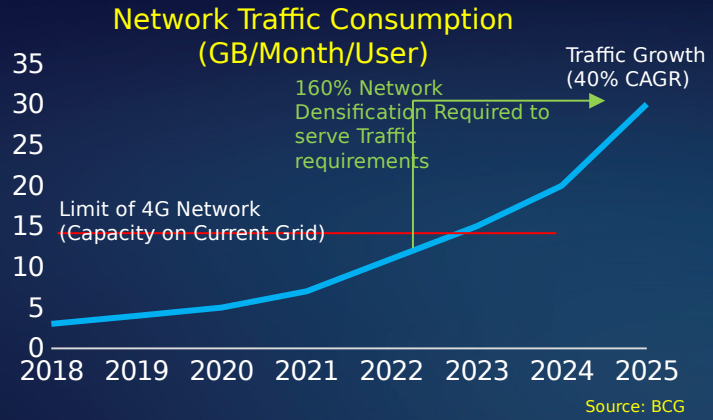
5G Improves ROI (Growth & Efficiency)



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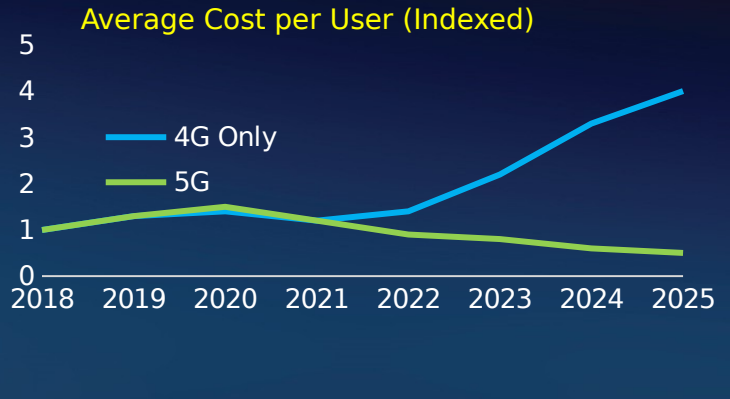

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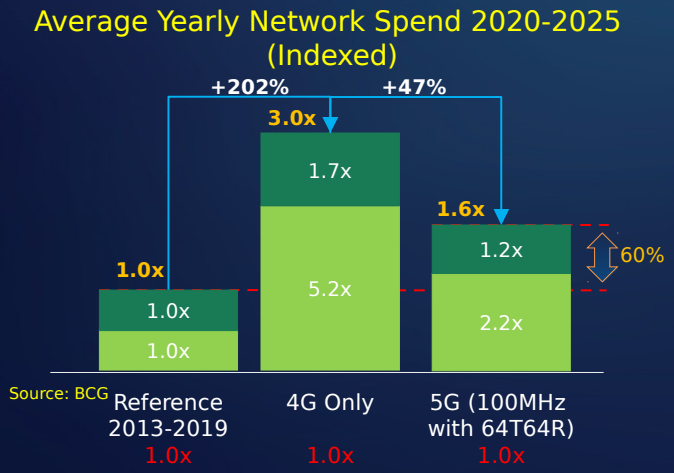

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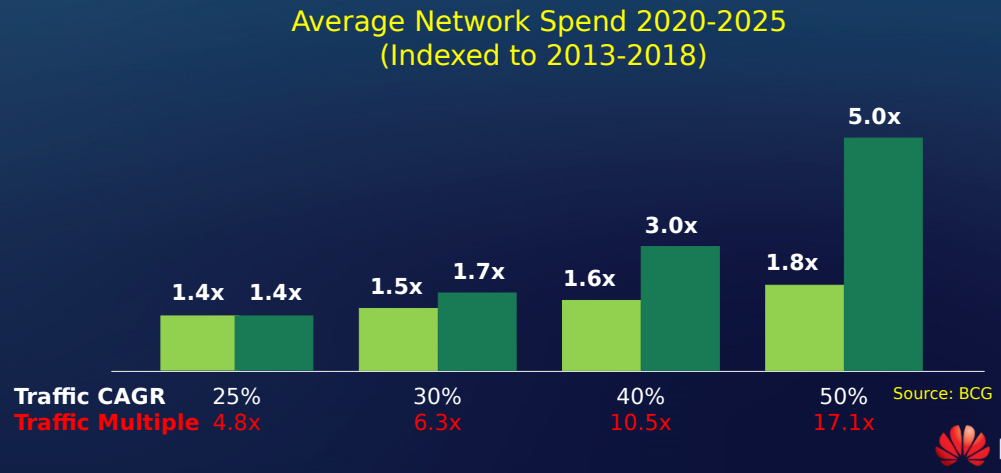

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Enter the Dragon

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So where would the dragons live?

Most secure civilian mobile communications system

Čo je na večeru, zlato?

“Pivo a hranolky”

4G 5G

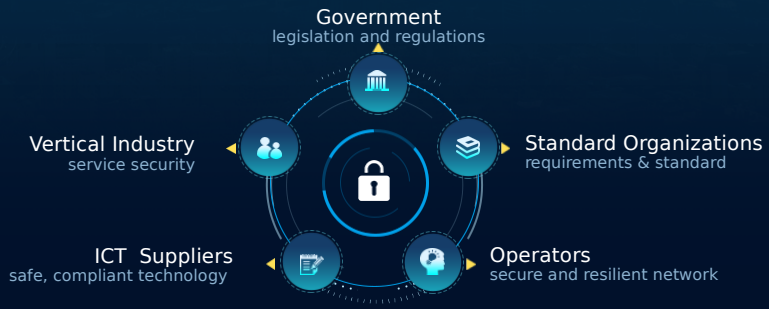
128 »» 256

bit encryption,
enhanced privacy protection,
unified authentication...

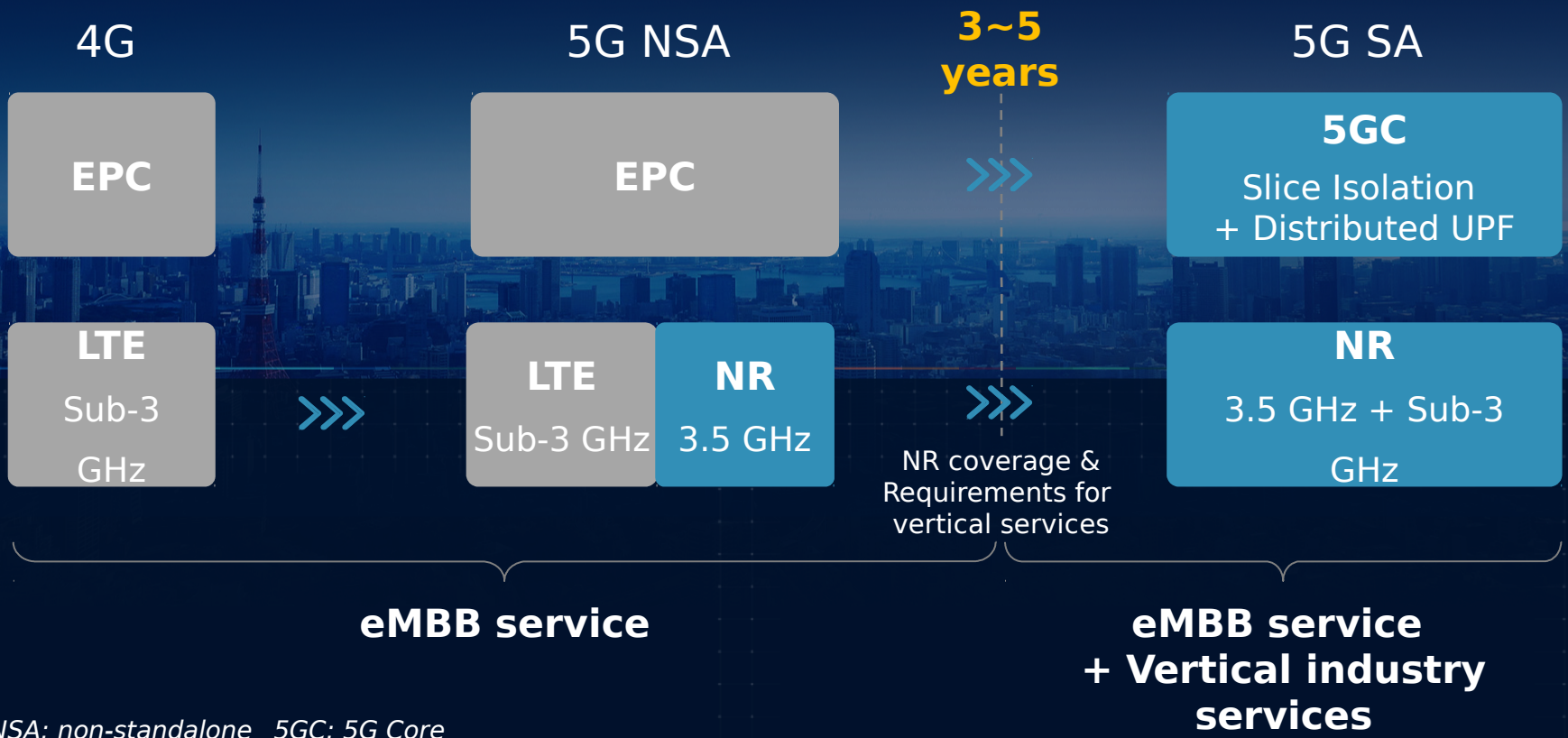
Dragons are coming...

- Safety/Privacy Critical Scenarios
- Cloudification
- Distributed Architecture
- Multi-Tenancy (B2B Network Sharing e.g. MVNO)
- 5G & Legacy Technologies
- Machine 2 Machine & IoT

We need to prepare...



They are not even here ~~yet~~



NSA: non-standalone *5GC: 5G Core*
SA: standalone *NR: New Radio*

Green 5G

5G Base Station Radiation Is Minimum
(Typical Value Comparison)
4G Base Station
0.1 - 0.5 mW/m²
5G Base Station
0.1 - 0.5 mW/m²
Mobile Phone
1 - 10 mW/m²
Microwave Oven
50 - 100 mW/m²
National Non-Ionizing Radiation Protection Standard (ICNIRP): 10,000mW/m²
Sun Radiation: 1361000mW/m²
TV: 0.7mW/m²
Mobile Phone: 8mW/m²
Wi-Fi: 6mW/m²
40 Meters from Base Station: 0.2mW/m²
Refrigerator: 30mW/m²
Microwave Oven: 92mW/m²
Hair Dryer: 4mW/m²

The way of the Dragon

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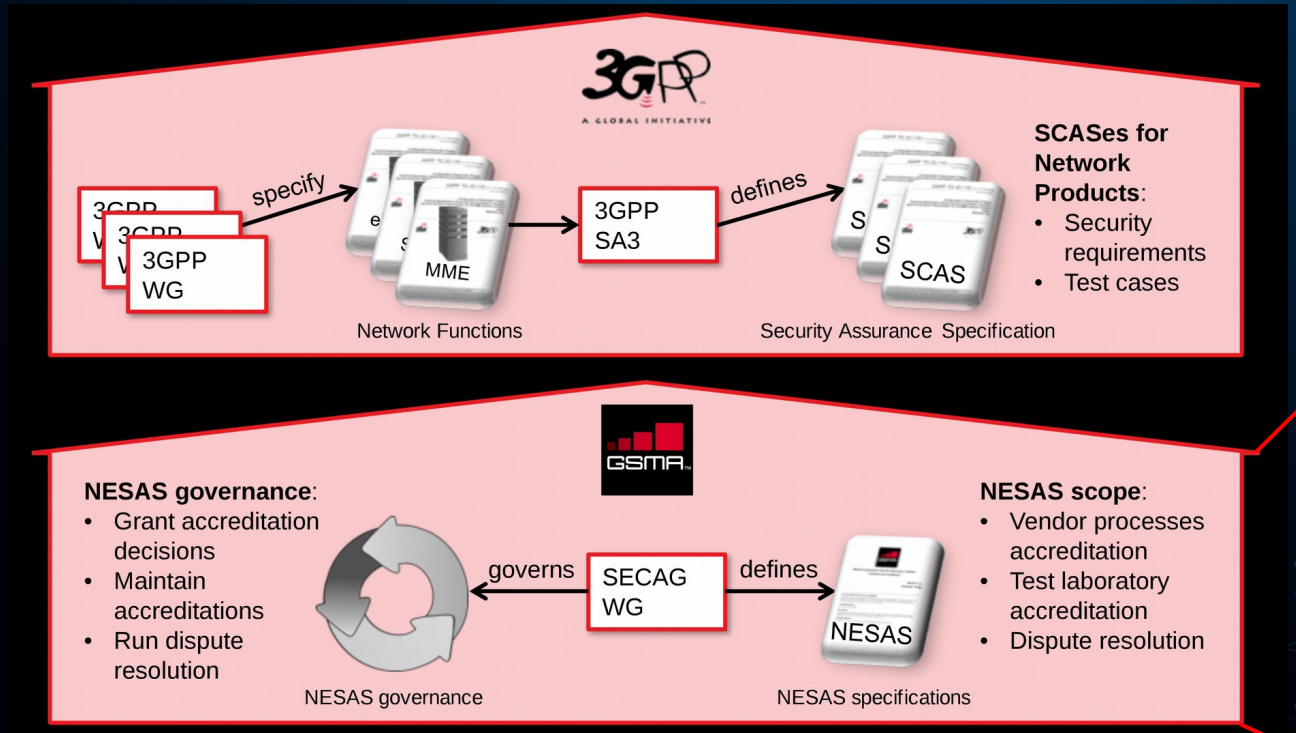
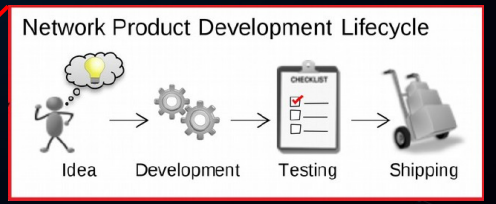
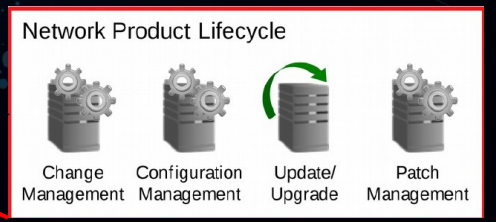
Dragons should come with certification | NESAS







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