

axians

HERZLICH WILLKOMMEN!

CARRIER INNOVATION DAY 2023

AI

SIMPLIFY. INNOVATE. TRANSFORM.

VINCI
ENERGIES

Agenda

11:35 Uhr Welcome

11:45 Uhr Innovation @ Axians: Technologie, Prozesse & Kultur

12:10 Uhr Innovation & CSP-Monetarisierung am Beispiel von 5G Advanced

12:30 Uhr Lunchbuffet und Networking

13:30 Uhr Cloud Native Routing & Network Slicing in 5G deployments

13:50 Uhr VISONARY Paneldiskussion "KI@CSP – mehr als nur ChatGPT?„

14:30 Uhr Networking

Agenda

- **15:15 Uhr** Cyber Security: Bedrohungslage für Carrier & Service Provider
- **15:45 Uhr Paneldiskussion** „Was ist die richtige Antwort auf IT-Bedrohungen?“
- **16:25 Uhr** Impulsvortrag:
„Zusammen in die Zukunft! Warum Menschen gemeinsam innovativer sind.“
- **17:25 Uhr** Zusammenfassung
- *19:00 Uhr Start Kochevent*
- *23:00 Uhr Ende der Veranstaltung*

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Schön, dass Sie dabei sind!

Simplify. Innovate. Transform.

Sascha Fiedler, Axians Networks & Solutions

Head of Business Unit CSP & BBU



VINCI
ENERGIES

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INNOVATION@AXIANS

Technologie, Prozesse & Kultur

Hendrik Kahmann, Axians Deutschland

Head of Innovation



MARKT & ICT MEGATRENDS



Fachkräftemangel im IT-Bereich

Leaving Experts, 7M Renteneintritte 2022-2027
60.000 unbesetzte Stellen in der IT (2022)



Gesamtwirtschaftliche Entwicklung

Starke Inflation & Schwaches BIP
Zurückhaltung bei Investitionen



Automatisierung & Effizienzsteigerung

Reduzierung der Herstellungskosten
Adressierung des Fachkräftemangels



Veränderte Nachfrage im Carrier-Markt

IT-Ausgaben steigen, XaaS bald bei 22%
IT-Sicherheit als starker Wachstumsmarkt



Next-level Prozess- automatisierung

Industrial IOT
Roboter/Cobots



Prozess Virtualisierung

Digitaler Zwilling
3D-/4D-Druck



Die Zukunft der Vernetzung

5G und IoT
Konnektivität



Dezentrale Infrastruktur

Cloud und
Edge Computing



Next-Generation Computing

Quanteninformatik



Angewandte KI

Language Processing
& Sprachtechnologie



Die Zukunft der Programmierung

Software 2.0
Low-Code / No-Code



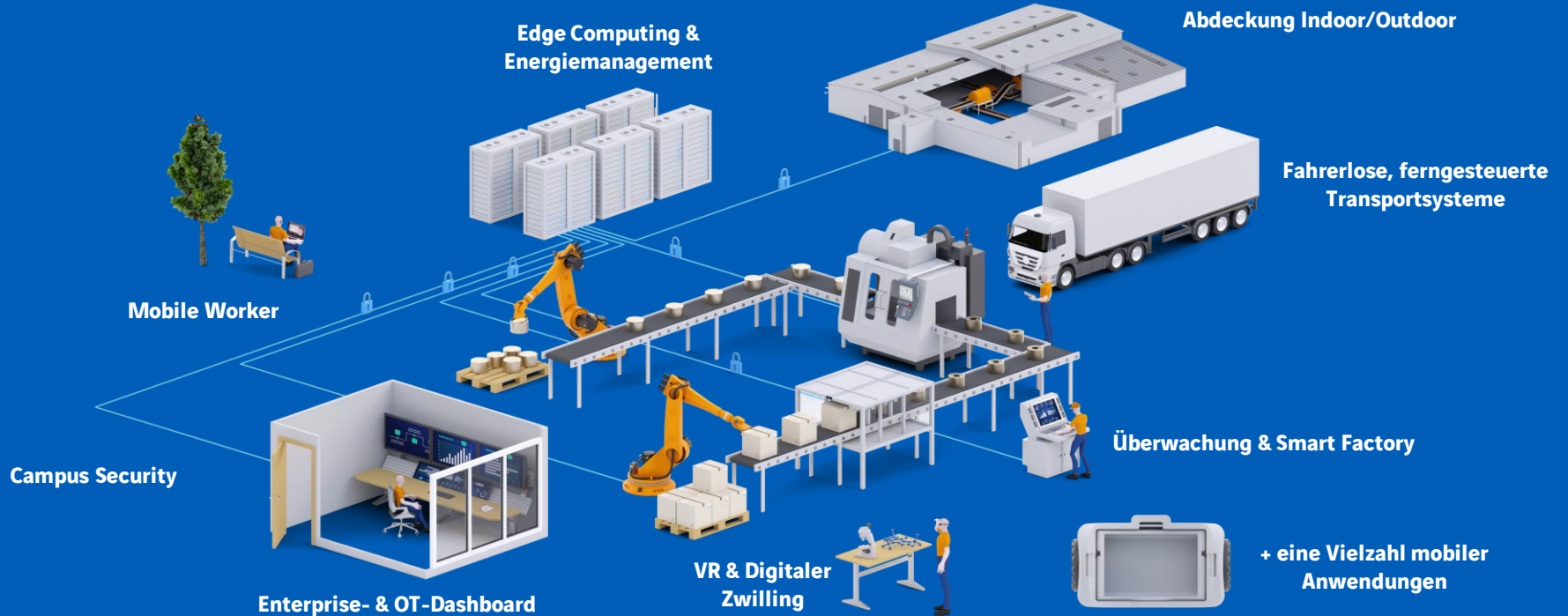
Trust-Architektur

Zero Trust Security
Blockchain



Nachhaltige Technologien

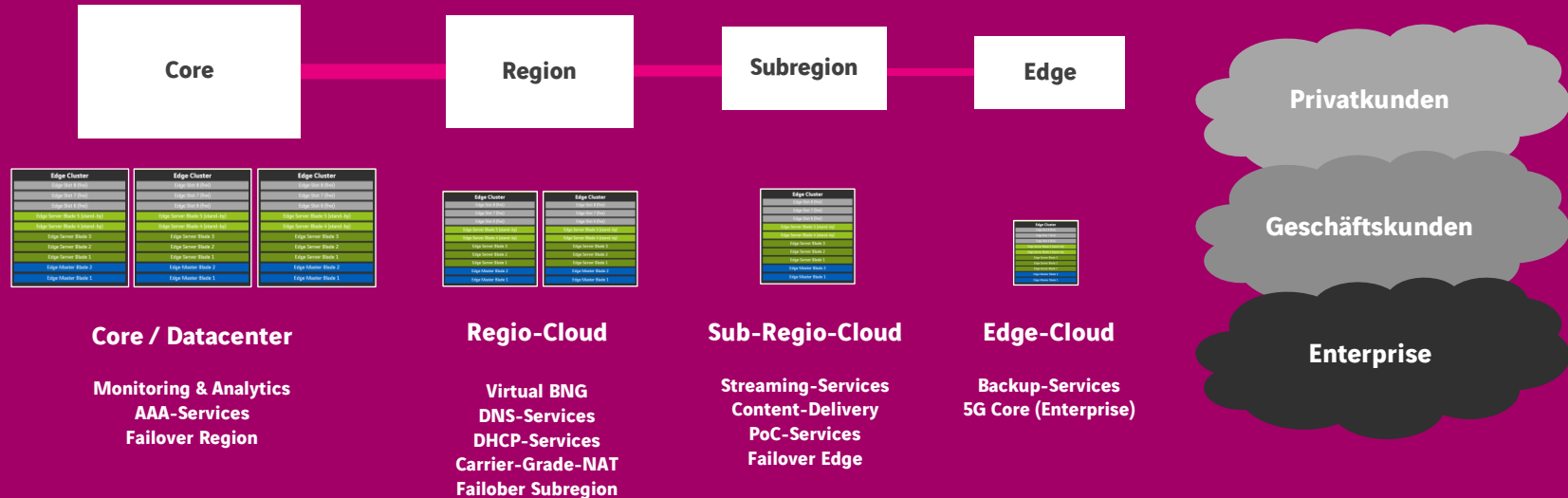
ZUKUNFT DER VERNETZUNG: 5G CAMPUS



WHITE LABEL MANAGED SERVICE FÜR CARRIER & SERVICE PROVIDER



ZUKUNFT DER VERNETZUNG: EDGE COMPUTING





ANGEWANDTE KI

LEONARD

together @ VINCI

Angewandte KI ermöglicht vielfältige Anwendungen

ChatGPT ist nur die Spitze des Eisbergs

- 1 **Automatisierung von wiederkehrenden Aufgaben**
- 2 **Inhaltsbasierte Optimierungen & Mediengenerierung**
- 3 **Analyse von komplexen Zusammenhängen**
- 4 **Kostenreduktion & Adressierung des Fachkräftemangels**
- ! **ABER: KI bringt auch Risiken mit sich und muss reguliert werden**

47% der DAX-Unternehmen geben an, dass der Stellenwert von KI durch ChatGPT gestiegen ist.

70% der DAX-Unternehmen geben an, dass sich ihr Geschäftsmodell verändern wird.

Quelle: Handelsblatt 20.06.2023

Mehrwerte für Carrier & Service Provider

KI-basierte Netzanalyse & -Planung | Root-Cause-Analysen | Automatisierung von Konfigurationsaufgaben



NEXT GENERATION COMPUTING

LEONARD

together @ VINCI

Quanten Computing

- 1 Überlegene Rechenleistung
 - 2 Lösung komplexer Probleme
 - 3 Parallele Bearbeitung von Prozessschritten
- ! **ABER: Quantencomputing ist noch weit vom Alltagsinsatz entfernt**
- Ungenauigkeiten und komplexe Fehlerkorrektur
 - Skalierbarkeit stellt noch ein großes Problem dar
 - Notwendigkeit der Forschung und Anpassung von Algorithmen

1960er und 1980er Jahre

Die theoretischen Grundlagen des QC werden erforscht und festgehalten.

1980er Jahre

Die ersten Algorithmen wurden entwickelt, um das Potenzial von QC aufzuzeigen.

2000er Jahre

Die ersten praktischen Experimente mit Quantencomputern werden durchgeführt. Erste Unternehmen und Forschungseinrichtungen entscheiden, zu investieren.

2010er Jahre

Deutliche Fortschritte in der Hardware von QCs und erster QC mit 12 Qubits. Die Entwicklung der Fehlerkorrektur beginnt.

2020er Jahre

QCs sind ein riesiges Forschungsfeld. Unternehmen wie Microsoft, Google und IBM sind führend. 2019 wurde die erste Aufgabe mit einem QC schneller gelöst als auf klassischer Hardware → Quantenüberlegenheit.

Quanten-Computing wird den IT-Bereich in den nächsten 5-10 Jahren Zeit stark verändern.

.. und bringt Herausforderungen und Risiken mit sich!

WHITELABEL-XAAS FÜR CARRIER

Vorleistungsprodukte als Ende-zu-Ende Managed Service

Managed SD-WAN / SASE

Managed Security

Cybersecurity SoC

Network Operation Center



Managed 5G Campus

Managed ISP (BaaS)

Managed DDoS

Innovations & Testing Center

WHITE LABEL-VORPRODUKTE VERKÜRZEN DEN GO-TO-MARKET



NACHHALTIGE TECHNOLOGIEN

Nachhaltigkeit rückt in den Vordergrund



Axians Green ITC Lab

Labor- und PoC-Umgebung der Axians
Effiziente Energiesparmethoden
Automatische Skalierung anhand der Nutzung



Effiziente Architekturen

Managed Services mit Cloud-Anteil
Skalierbare Rechenzentrums-Architekturen
Einsatz energiesparender Systeme



Axians Umwelt-Ökosystem

Axians CO2-Mobile APP für tägliches Tracking
eNatureCloud für Umwelt- und Energiemanagement
Axians Neo Suite für Routenoptimierung im Field-Service



Transparenz

Einsatz zur Kalkulation des CO2-Footprint
Axians Green+ Calculator im Rahmen von Angeboten
Ziel: Vergleichbarkeit von Technologien und Systemen



ERFOLGSFAKTOREN INNOVATIVER UNTERNEHMEN

Innovationskultur



Prozesse



Ökosystem



Menschen



Fokussierung



Technologie



ERFOLGSFAKTOR INNOVATIONSKULTUR

Förderung kreativer Prozesse

Prozesse und Tools (z.B. Design Thinking)
Professionelle Moderation
Bildung eines kreativen Umfelds
Bereitstellung von Budgets (Ideenkonto)

Innovation @ Axians

Dedizierte Rolle für Innovationen
Enge Zusammenarbeit mit den Fachbereichen
Strategie & Innovationen entstehen Bottom-Up
Veranstaltungen mit Kunden und Partnern



Rollendefinitionen und Austausch

Fachbereiche und operative Einheiten
Business Development / Produktmanagement
Geschäftsleitung / Marketing / HR
Einbindung von Kunden und Partnern

LEONARD

together @ VINCI

Strategische Kernthemen wie KI & Quanten-Computing
Dedizierter Support für Business-Units
Trainings, Workshops & Dedizierte Coachings



Intrapreneurship

Stärkung der Identifikation der Mitarbeiter:innen
Förderung von internen „Start-Ups“
Ausgründungen von Geschäftsideen

Digitalschmiede VINCI Energies

Co-Creation-Space in Frankfurt am Main
Workshops mit Kunden und Partnern
Synergien zwischen Energie, Industrie und ITK



ERFOLGSFAKTOR ÖKOSYSTEM

Starke Partnerschaften im Axians Netzwerk



Axians in 36 Ländern



STARKE PARTNERSCHAFTEN MIT PARTNER UND KUNDEN SIND DER KERN UNSERER STRATEGIE

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NOKIA

Innovation & CSP-Monetarisierung am Beispiel von 5G Advanced

Dr. Konstantinos Manolakis, Nokia

5G-Adv. Business Programm Lead / Senior Device Research Specialist



VINCI
ENERGIES

Innovation & CSP- Monetarisierung am Beispiel von 5G-Advanced

The Nokia logo is displayed in white, uppercase letters within a dark blue circular area. This circle is surrounded by a thick white ring, which is itself set against a larger, lighter green circular background that overlaps the main slide's green gradient.

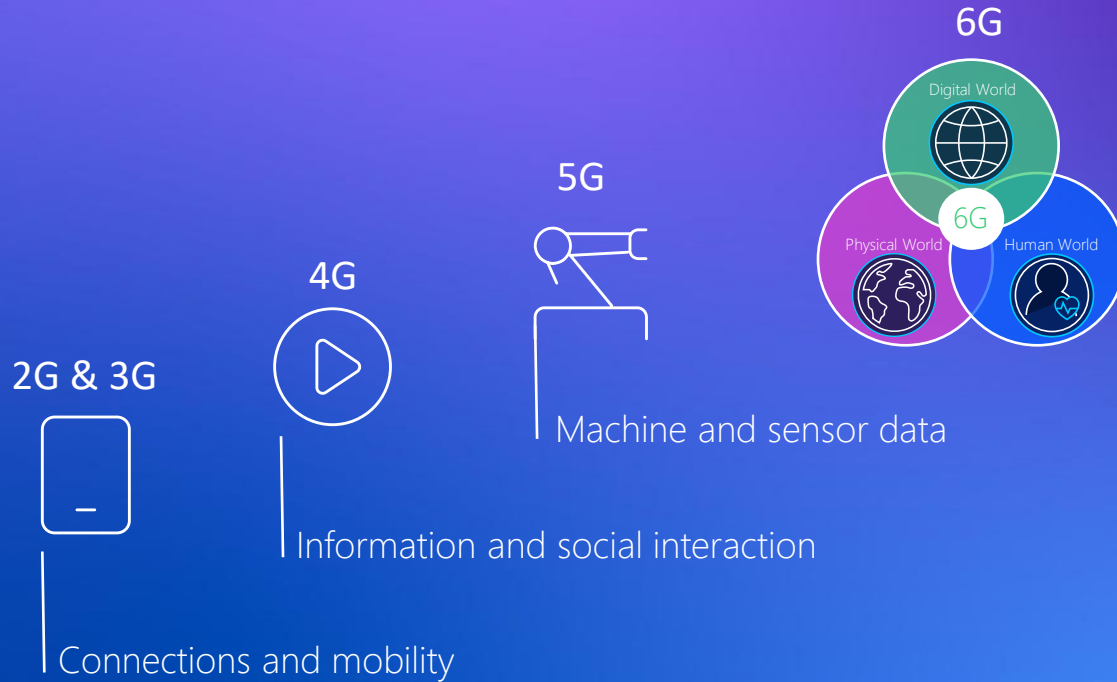
Dr. Konstantinos Manolakis,
Senior Expert / 5G-Adv. Business Program Lead
Axians Carrier Innovation Day, 8th Nov. 2023

Agenda

- Innovation in Nokia
- 5G-Adv. timeline and overview
- Why should operators invest in 5G-Advanced?
- Monetization
- Summary

Innovation in Nokia

The digital, physical and human worlds will become closely integrated in the 6G era



Connect digital, physical and human worlds to augment the potential of human beings

We have a clear and definitive vision of the metaverse opportunities

Concepts developed through Bell Labs Research frame this vision

Metaverse enablers



Human Augmentation

Extensions that enable people to interact with and within the digital world



Digital-Physical Fusion

Dynamic, connected representations of real-world things in the digital world



Metaverse opportunity areas

Consumer Metaverse



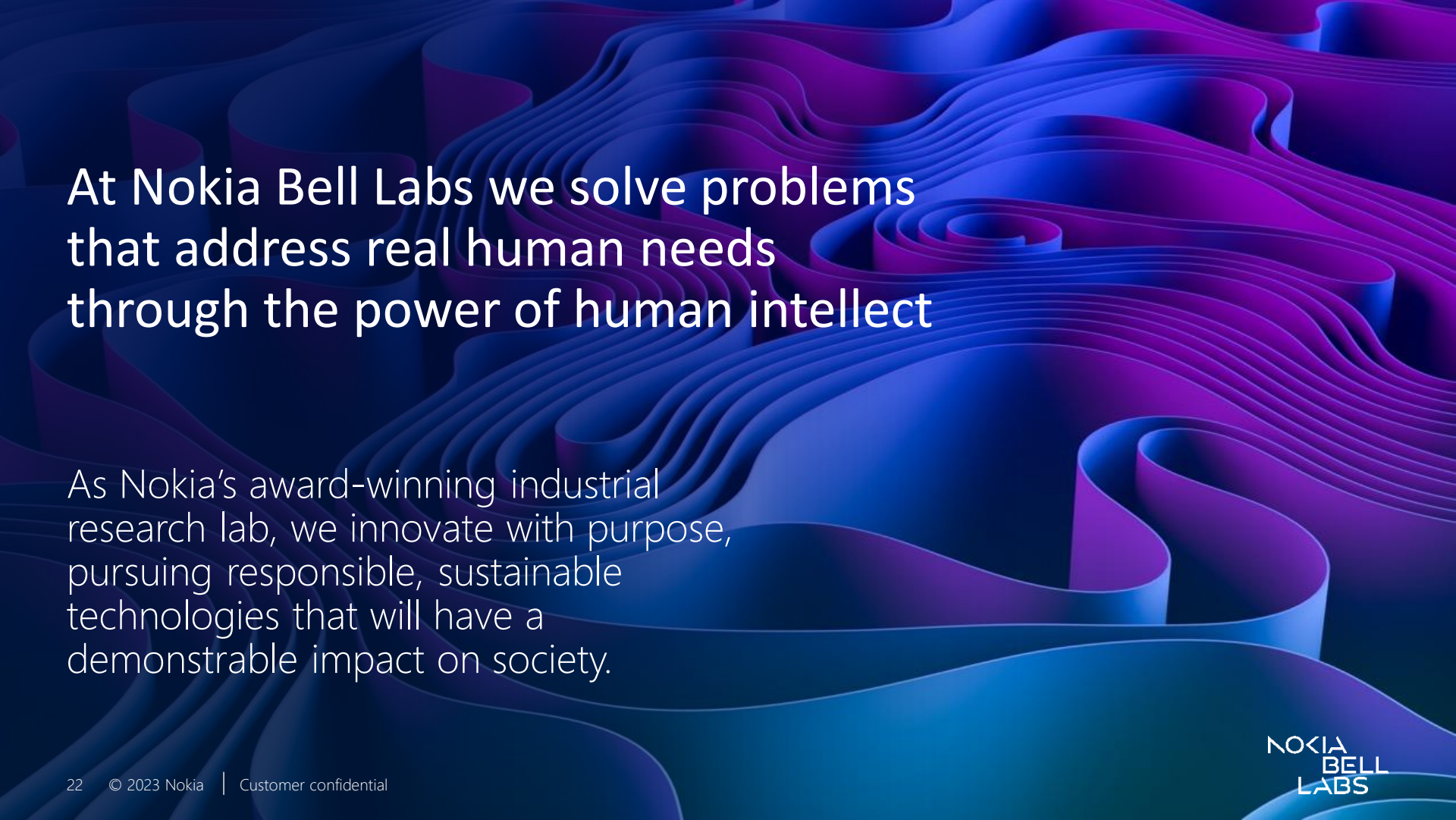
Enterprise Metaverse (IT*-centric)



Industrial Metaverse (OT*-centric)



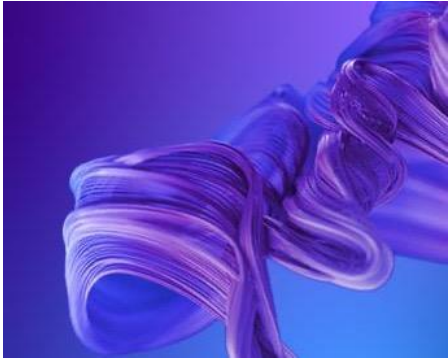
* IT: Information Technology
OT: Operational Technology



At Nokia Bell Labs we solve problems
that address real human needs
through the power of human intellect

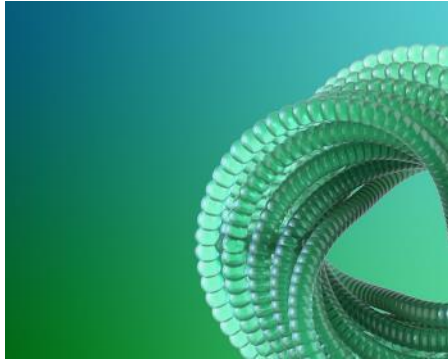
As Nokia's award-winning industrial
research lab, we innovate with purpose,
pursuing responsible, sustainable
technologies that will have a
demonstrable impact on society.

Focusing our research on innovations to transform the way we live our lives



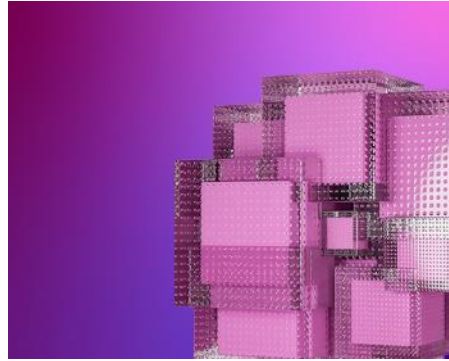
Network Fundamentals

Redefining what trusted networks can do



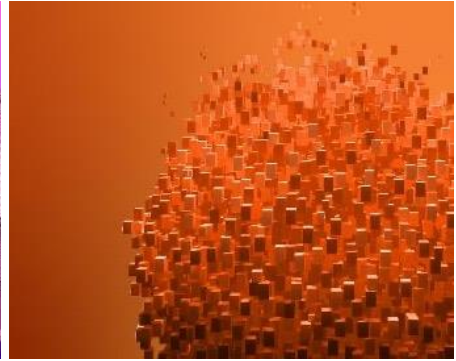
Automation

Augmenting our daily lives in an intuitive way



Semiconductors and Devices

Unleashing the power of sustainable future systems

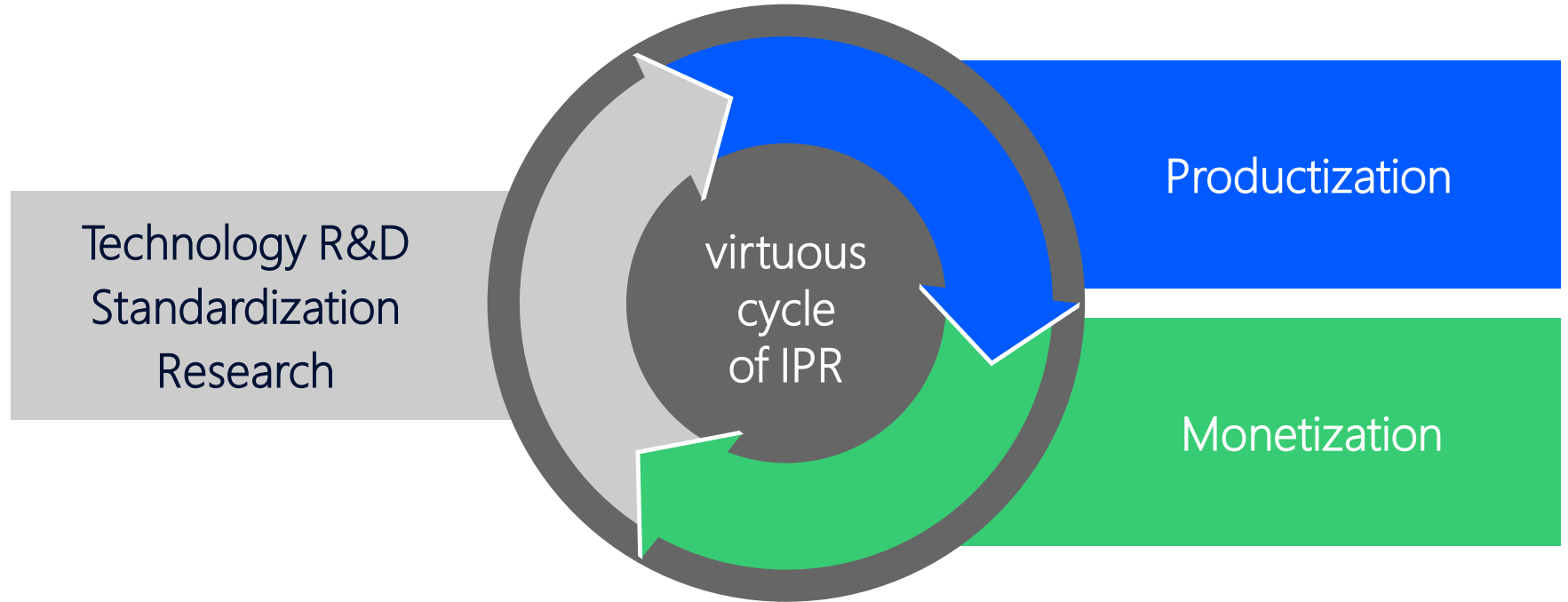


AI and Software Systems

Making technology both accessible and responsible

At Nokia, we create technology that helps the world act together

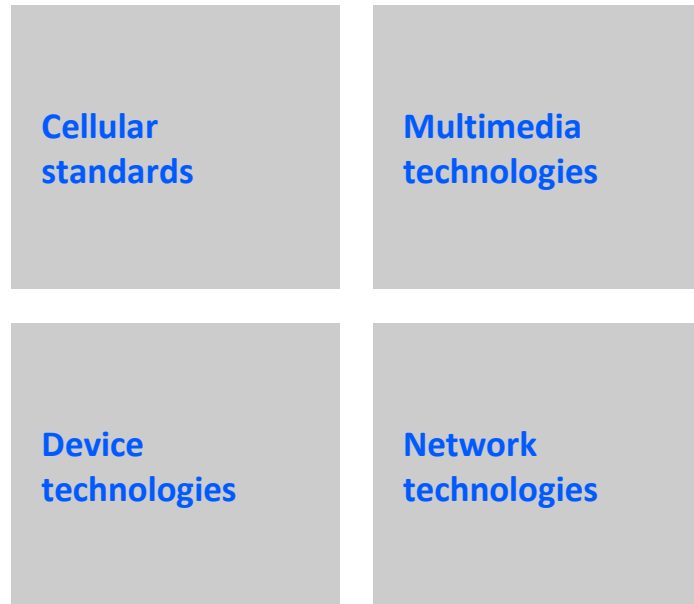
Virtuous cycle



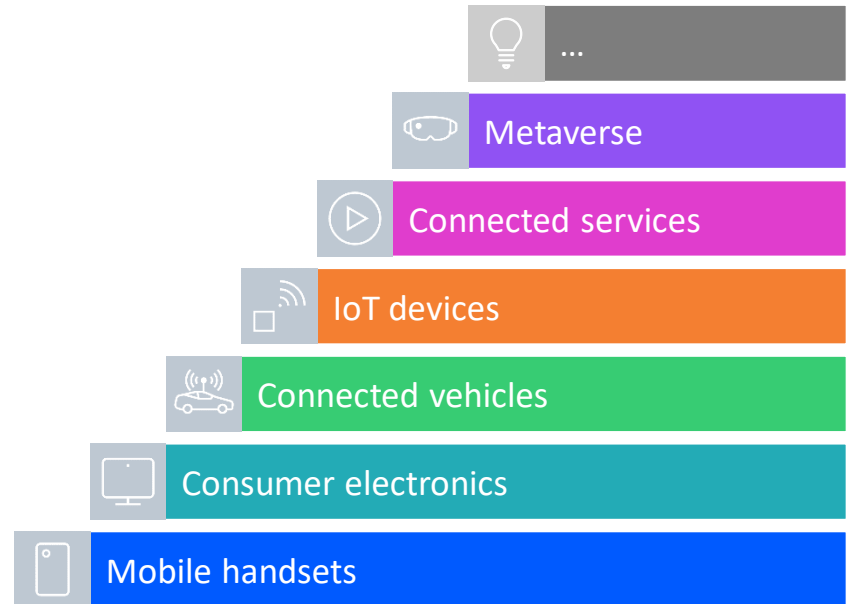
Our innovations are fundamental and enable entire industries

New form factors and value streams have opened new opportunities for monetization

Our innovations are highly relevant ...



... across multiple sectors



5G-Adv. timeline and overview

5G-Advanced overview

1

Evolution

5G-Advanced evolves the 5G system to its fullest capabilities

2

Backwards Compatibility

5G-Advanced maintains backward compatibility to 5G

3

Timing

First version of 5G-Advanced Standards expected in the beginning of 2024

4

Myths

5G-Advanced denominates the collection of enhancements from Rel 18 onward, it is not defined as one main feature

5

Market longevity

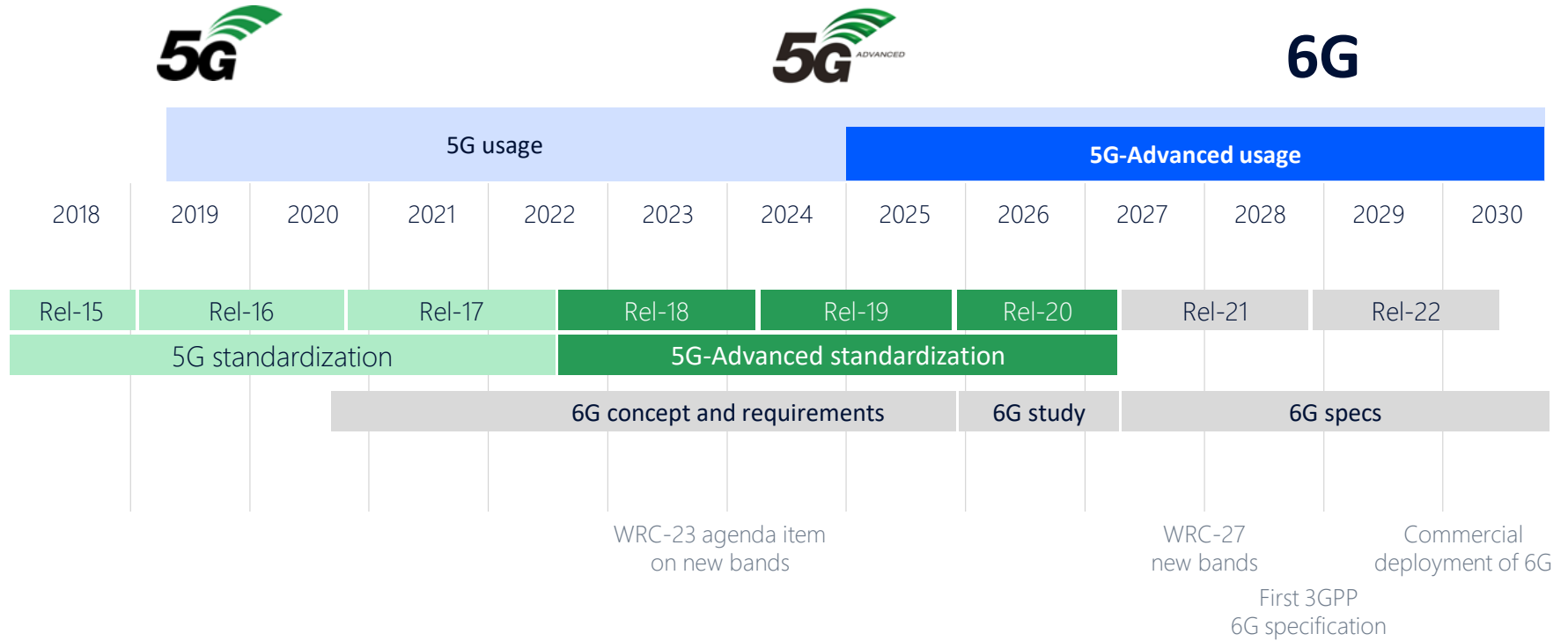
5G-Advanced will have min 5 years of market opportunity

6

G Revolution

5G-Advanced sets foundation and will be followed by 6G

5G and 5G-Advanced determine network capabilities until 2030



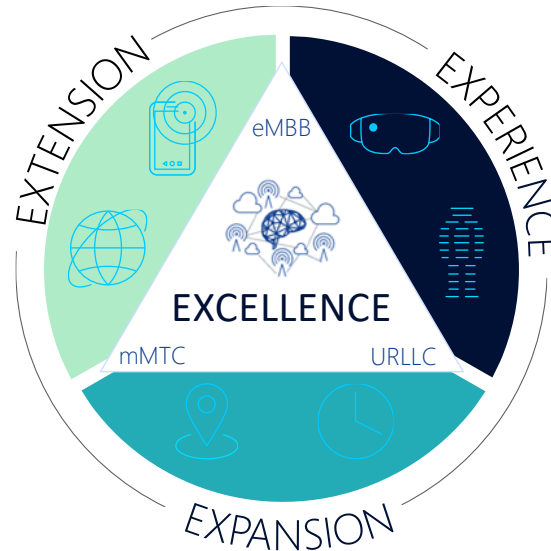
5G-Advanced

New usage areas, new services, boosted resiliency and operability

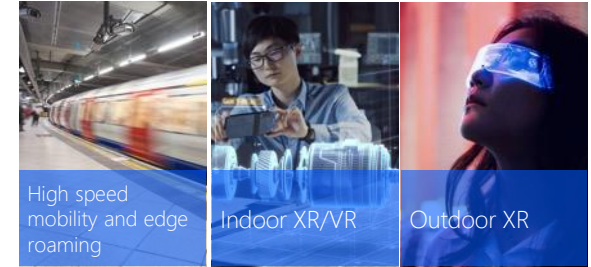
Extending global 5G-Advanced reach for IoT and basic MBB



Expansion to Support Positioning, Time Sync aaS also without GNSS – Enabling New Use Cases



Extreme MBB experience with bounded latency, high data rates enabling IIoT for FR2



Network wide AI/ML enhancements, further network energy saving, network slicing



Rel-19 in a nutshell: Networks that Sense, Think and Act

Rel-19 takes 5G-Advanced to its fullest capabilities and paves the way to 6G with state-of-the-art studies and introduction of key innovations for new business cases



Mobility & MIMO

More robust handovers and beam management
Reduced gaps
Extreme MIMO



Enhanced coverage

A-MPR reduction for CA, considerable reduction of MPR of up to 2 dB for high data rate services.



Energy efficiency

gNB-DU autonomy for cell, beam, channel shutdown, etc. Incl. related AI/ML enablers



XR (AR, VR, gaming)

Superior E2E XR performance, incl. capacity enh, QoS, power efficiency



AI/ML enabled

AI/ML for the air interface and CN, incl. data management and trustworthiness AI/ML



Ambient IoT

Overall intention is ultra-low power IoT devices with no or small battery.



Sensing

Channel model for sensing followed by study of UE-centric solutions for sensing



Slice security

Slice specific keys, slice isolation in lower layers, extended security of PDU sessions, etc..



Multiple reg.

Enables the UE to obtain best services offered by different networks



Management

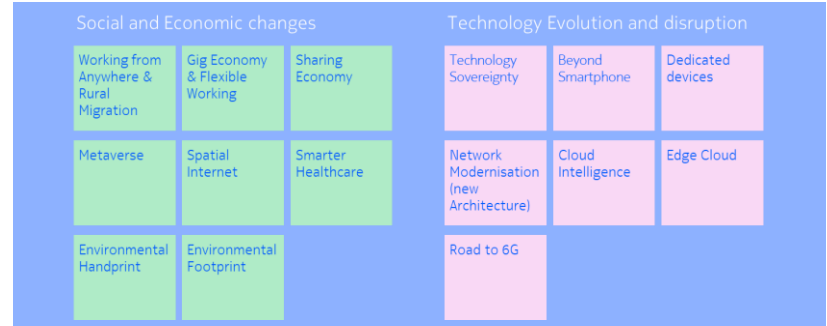
Further SBMA enhancements, NW slice management, NSSAA support while UE is in EPS, etc..

Why should operators invest in 5G-Adv.?

Nokia study provides insights on CSP views of 5G-Advanced

40 key executives' views in CSP technical / strategic functions

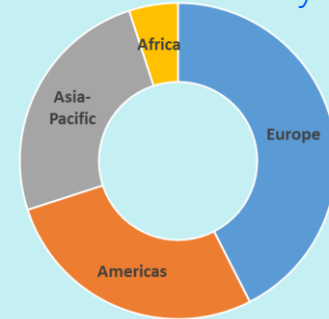
Social and Economic changes coupled with
Technology Evolution and disruption



16 CSP and Enterprises interviews



40 respondents of online survey



7 main CSP areas for 5G-Advanced

Top Priorities based on interviews and survey that will address the 15 Global Trends

Top four CSP Business Priorities

New and Enhanced Services (incl. SDN, Edge Services, Network Slicing & 5G SA Inherent Security)

ML/AI and Automation for Network Apps

Access Agnostic 5G SA Core

Energy Efficiency (RAN Driven)

Top three Feature/ Technology Priorities

Enhanced RAN Performance, Capacity and Reliability

5G IoT devices for low latency, localized positioning and low-cost UE's (incl. RedCap)

Diverse Applications and Device Driven Use Cases that will drive CSP choices

Leading enterprises have very specific requirements

Important findings from the enterprise market interviews

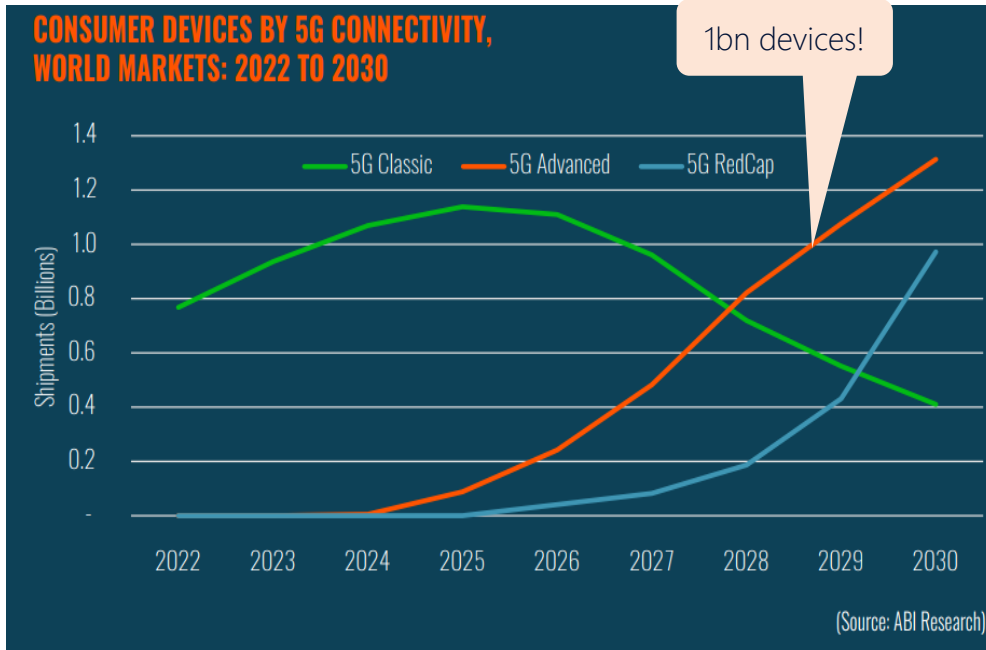
- 5G has gained major recognition for high speed, reliable connectivity
- Potential enterprise customers want 5G to fully meet its original objectives
- Industry 4.0 is key driver for private 5G especially as Wi-Fi replacement in the factory

although...

- Limited awareness of 5G's inherent security, distributed processing and on demand resource allocation.
- SPs must demonstrate the value that 5G and 5G-Advanced will add to the hyperscaler cloud providers
- Some of the 5G-Advanced features are currently viewed as important but 'niche' applications

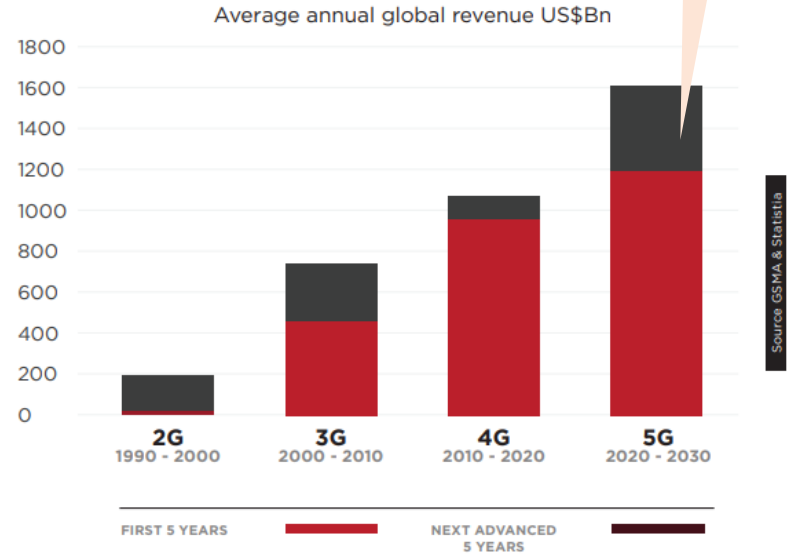
Monetization

Is there a market for 5G-Advanced?



1bn devices!

FIGURE 1: Average annual revenue globally for all operators



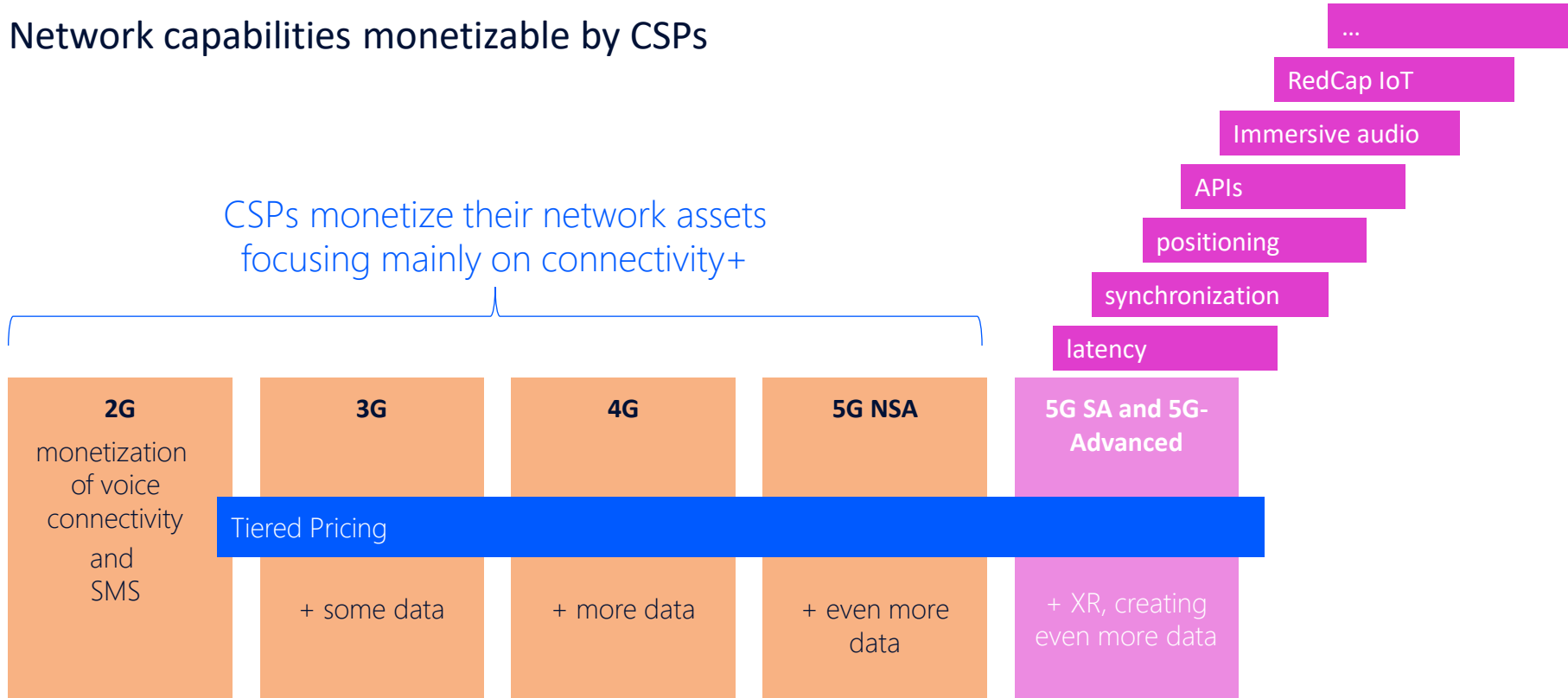
\$ 400bn!

Source: [ABI Research: Is the industry—and the world—ready for 5g advanced?](#)

Source: [GSMA: Advancing the 5G Era Benefits and Opportunity of 5G-Advanced](#)

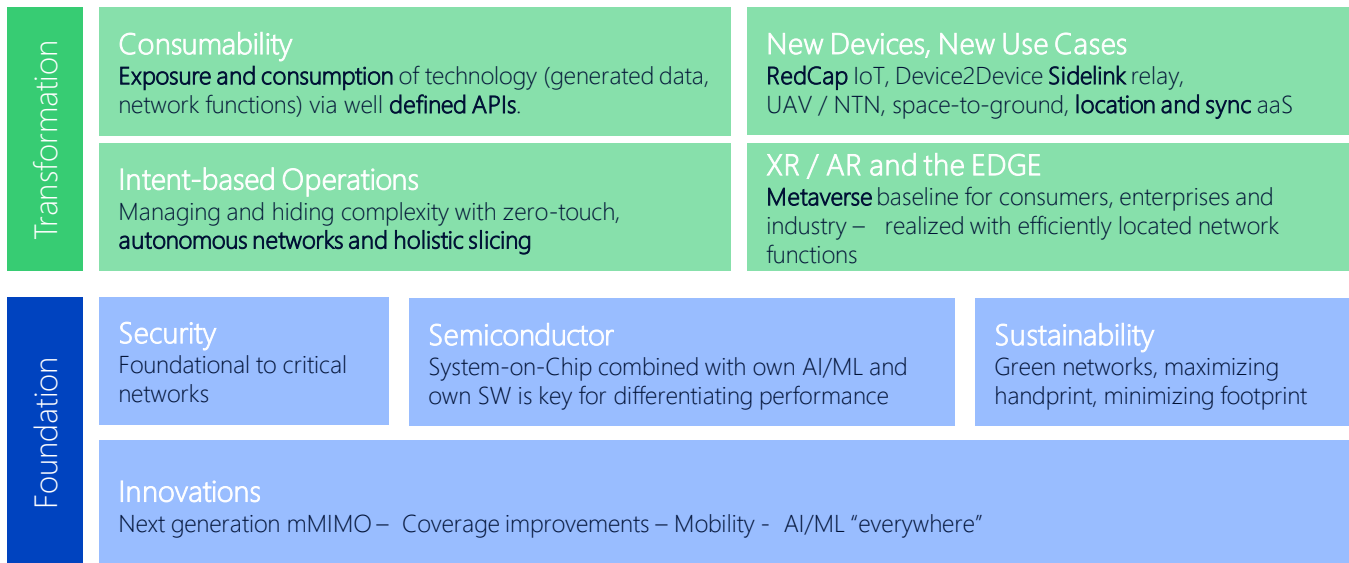
5G-Advanced unlocks new capabilities turning the network into a platform

Network capabilities monetizable by CSPs



Key take-away:

5G-Advanced unlocks new capabilities turning the network into a platform



New capabilities to monetize

Evolution improves performance and efficiencies

Network As Code

Monetize 5G beyond connectivity

Today the CSPs are application agnostic and have no share in the application space revenue.

Why Network As Code?

- Future applications will become network-aware and adaptive.
- New era apps need new network capabilities, on demand.
- *Network programmability is a Monetization hook into the CSP/PW business.*

What does Network-As-Code provide:

- Abstracted exposure to network programmability.
- Simple-to-use open APIs to build high-level apps
- Intent-based Service Chains built from distributed Services
- *A SaaS platform with Nokia as an aggregator, supporting multiple networks (CSPs/PW), clouds and third-party providers underneath.*

Benefits to the ecosystem:

CSPs:

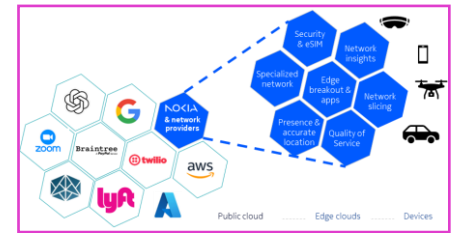
- ➔ Network as differentiating part of new service chain.
- ➔ Get paid by the applications for specialized network.

Developer:

- ➔ Network-as-Code embeds 5G (adv) capabilities in Apps in simplest ways.
- ➔ App developers need not understand the underlying 5G network *concepts or design or topology* (multi-CSPs).

Nokia:

- ➔ Disruptive digital ecosystem solution concept, leveraging our portfolio capabilities.
- ➔ Shared Revenue Model using the Aggregator SaaS Platform.



Summary

5G-Advanced

1

Will be commercialized from 2025 and enables networks to become seamless evolution towards 6G

2

Benefits from 5G Stand Alone, energy-efficient enhanced RAN and NW Automation based on AI/ML

3

Is not about one big feature but a plethora of heterogeneous functionalities

4

Will lower costs, enable new services and ecosystems, go beyond connectivity & improve energy efficiency



NOKIA

Outlook #1

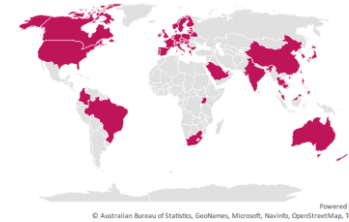
5G monetization

Ongoing 4G-5G transition & 5G stand alone

2023/2024

Continuation of CSP strategies -> building coverage, establish higher band:
5G transition, price plans, bundling (no big changes)

Evolution to 5G SA -> **new service** enablement - especially enterprise market with new opportunities



116 5G SA NW's
(out of 524 5G)*

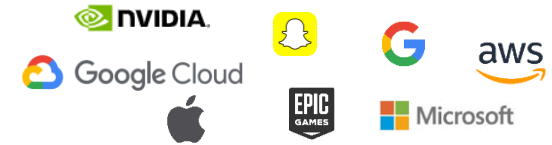
Partnering, digital economy & ecosystems

2024/2025

Joint value creation – establishing of **digital marketplaces**

Cloud & edge services (value add & new business models – as a service)

Enabling of network adopting services (customer centric), **AI** services impact?



Meta verse: X-reality takes time

2026 & later

When? (likely later than expected - devices are key)

CSP's and network must part of the journey – but **realistically**

How big? 2,5 – 13 TN\$ per year revenue opportunity in 2030**



Future of consumer monetization – XR and AI enabled services

CSPs already started XR services to gain early experience

- SK Telecom Ifland
- AT&T experience in VR Chat
- TIM Brazil Twin concept store
- Tier 1 CSP cloud gaming experience



XR Devices

Glass Millions

Mobile Billions

Mobiles are the mass market

AI/XR applications impacting 5G usage and monetization

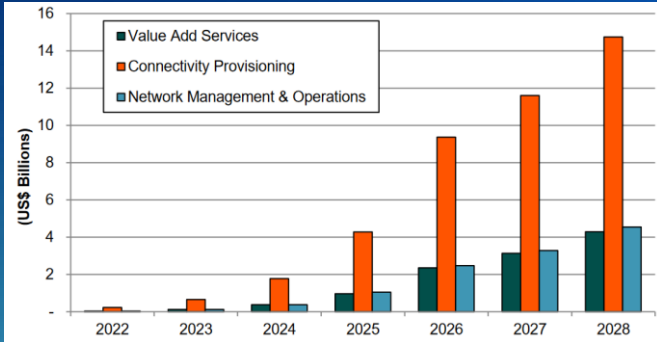
My AI friend Luma AI (live)

AI mirror Maps (immersive)

Outlook #3

5G enterprise monetization - network slicing for flexibility & scaling driven by requirements

5G network slicing revenues – \$24 BN in 2028



* Source: ABI 5G network slicing: technical and commercial considerations, Jun 22

5G NW slicing with a slower take up (faster momentum after 2025) overtaking PW revenues from 2028

PW & 5G slicing complementing each other addressing the verticals



5G slicing

Private wireless

NW slicing to provide **standardized** solutions optimal utilizing CSP's **existing infrastructure**

PW typically targeting **larger enterprises** with **dedicated requirements**, high security demands, closed campuses etc.

Slicing vs PW: typically at lower costs, **higher volumes**, simple & **standardized**, more distributed

PW vs. slicing: usually at higher cost, **project based** with longer lead times, more **complex & tailored**, limited to few locations

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JUNIPER
NETWORKS

Cloud Native Routing & Network Slicing in 5G deployments

Pavan Kurapati, Juniper Networks

Vice President of Global Service Provider Architecture



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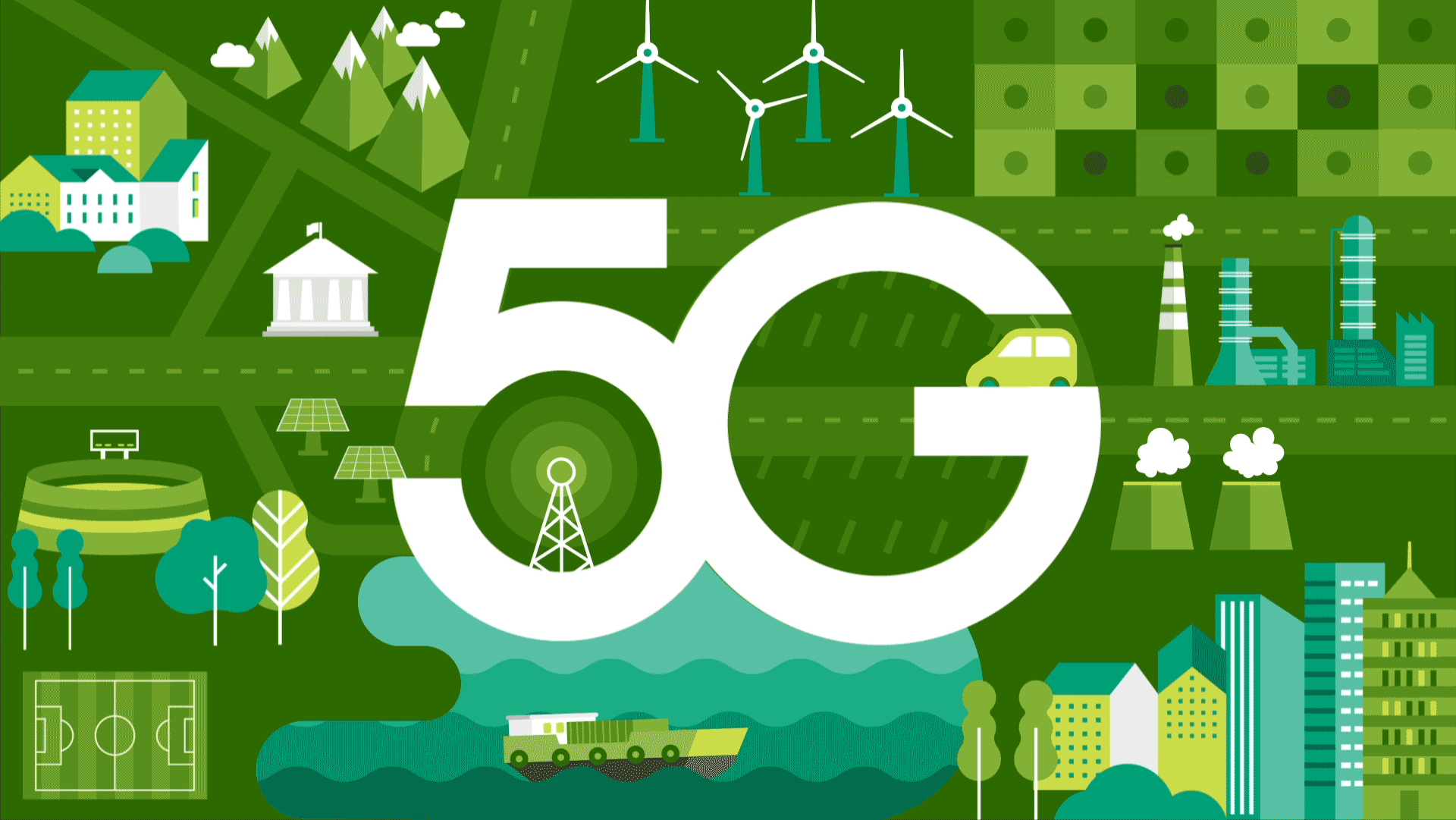
CLOUD-NATIVE ROUTING & NETWORK SLICING

Pavan Kurapati

Head, Global SP Architecture

November 2023





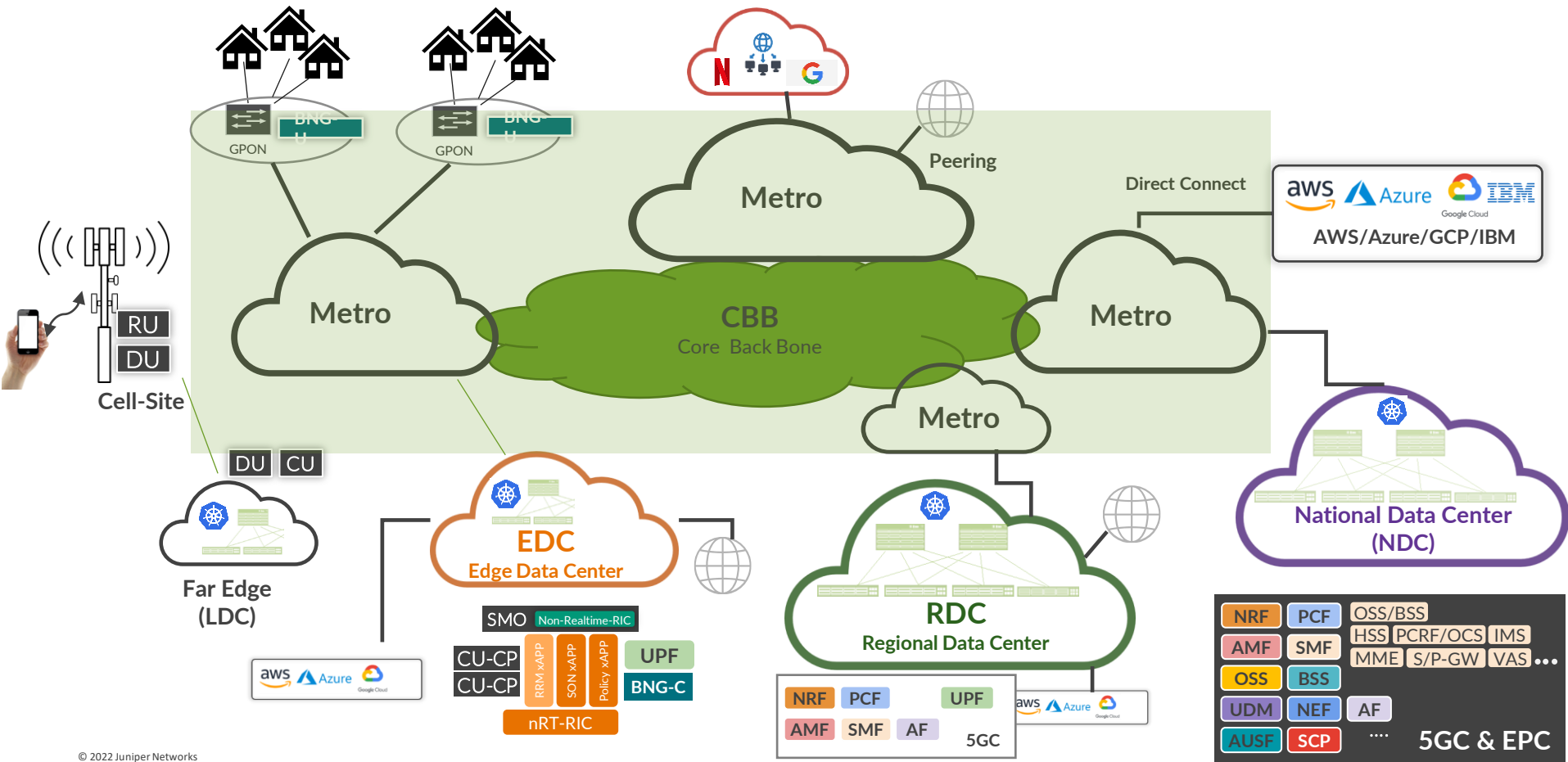
Agenda

An evolution to Distributed Edge Computing

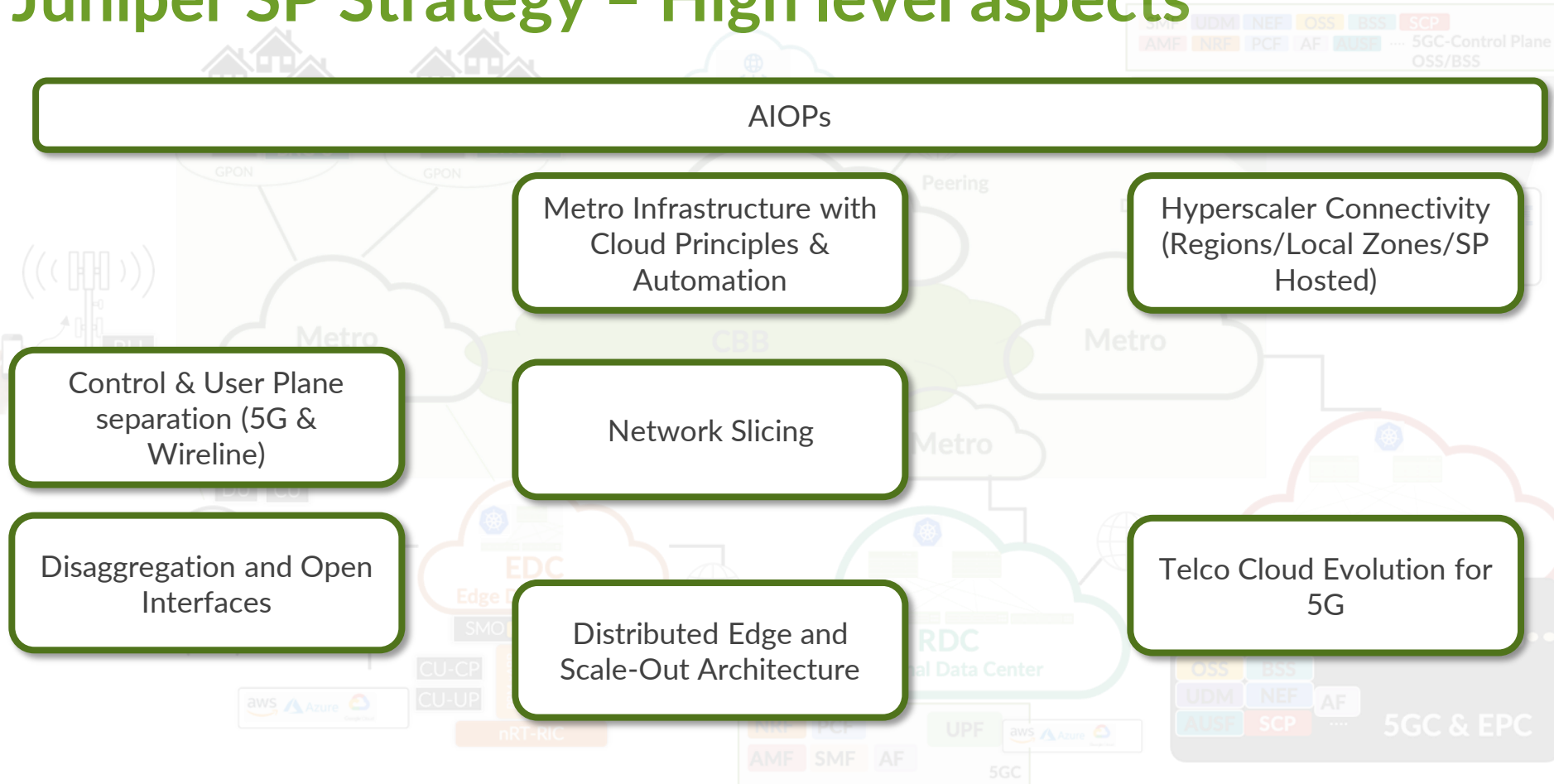
Cloud Native Routing for 5G vRAN

Network Slicing

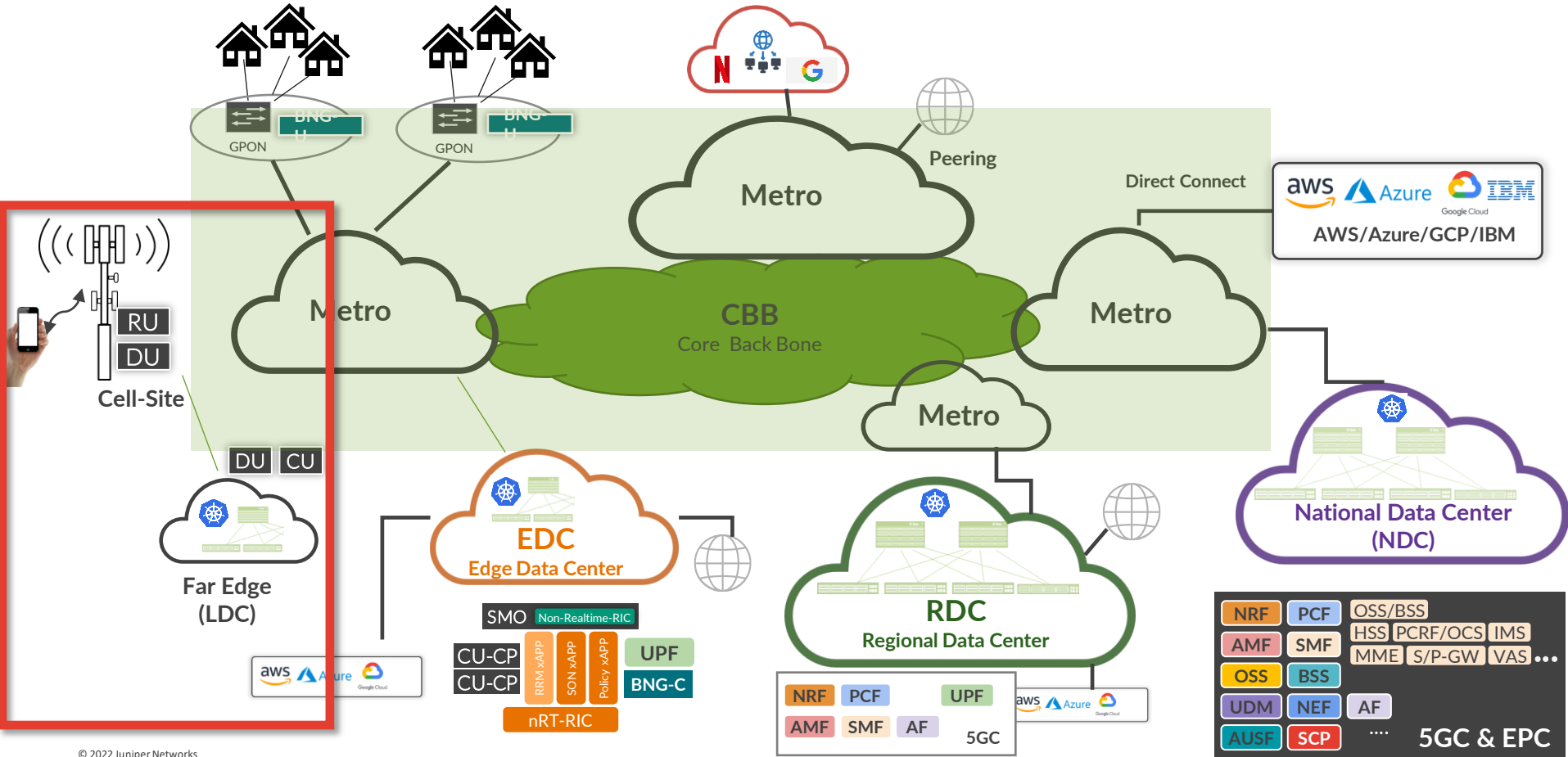
Evolution to Distributed Architecture



Juniper SP Strategy - High level aspects



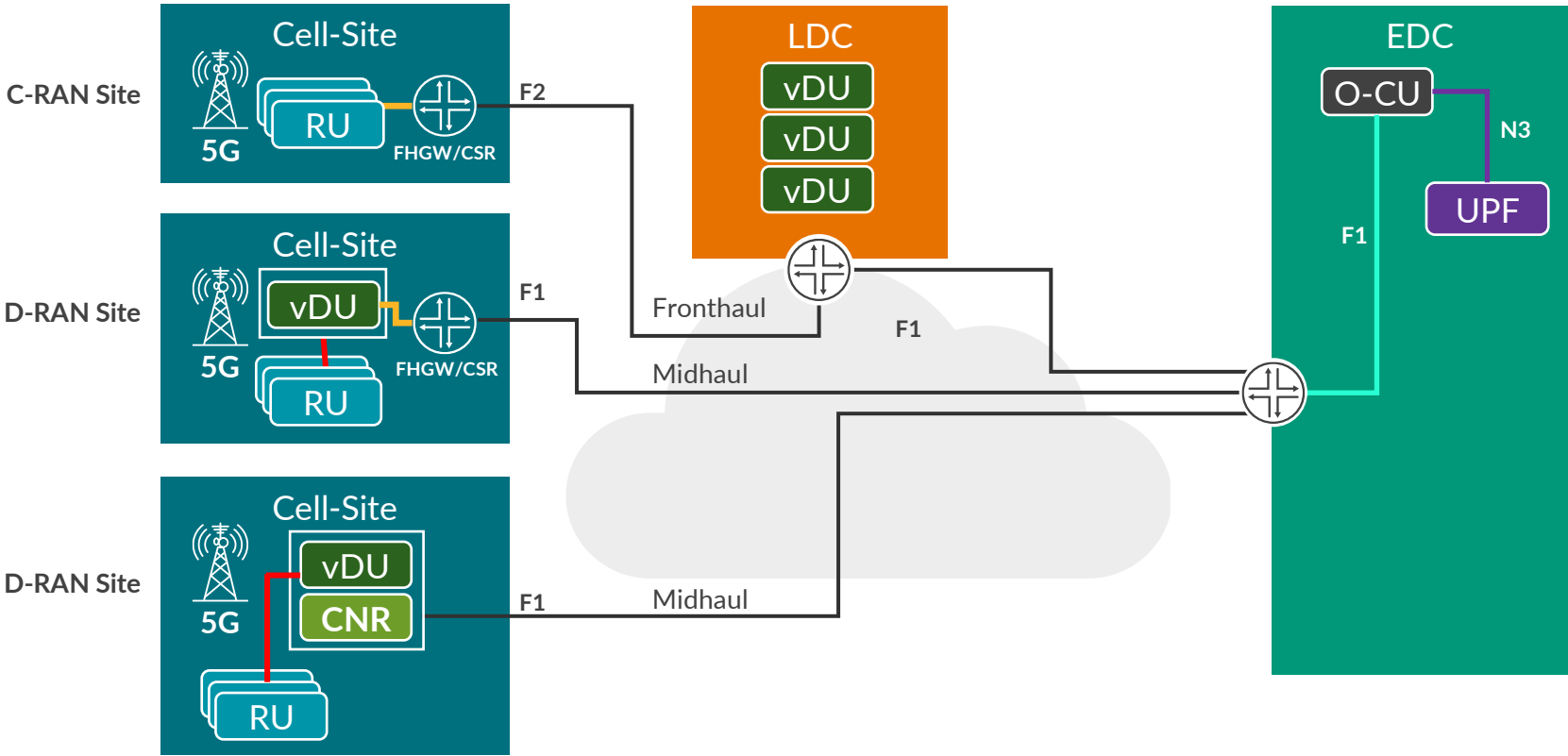
Evolution to Distributed Architecture



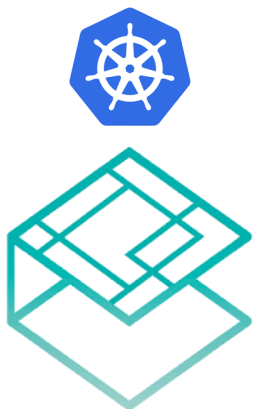
JCNR



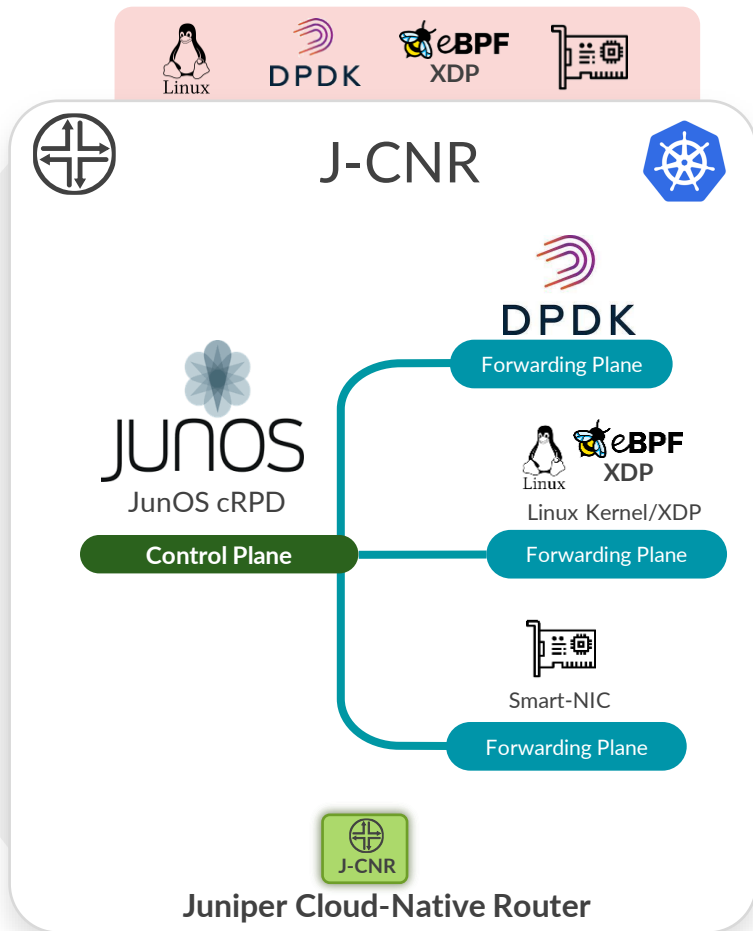
RAN Architectures – High Level View



Cloud Native Router



K8s CNI
/ CNF



Forwarding Plane -
Modular and Agnostic
Architecture

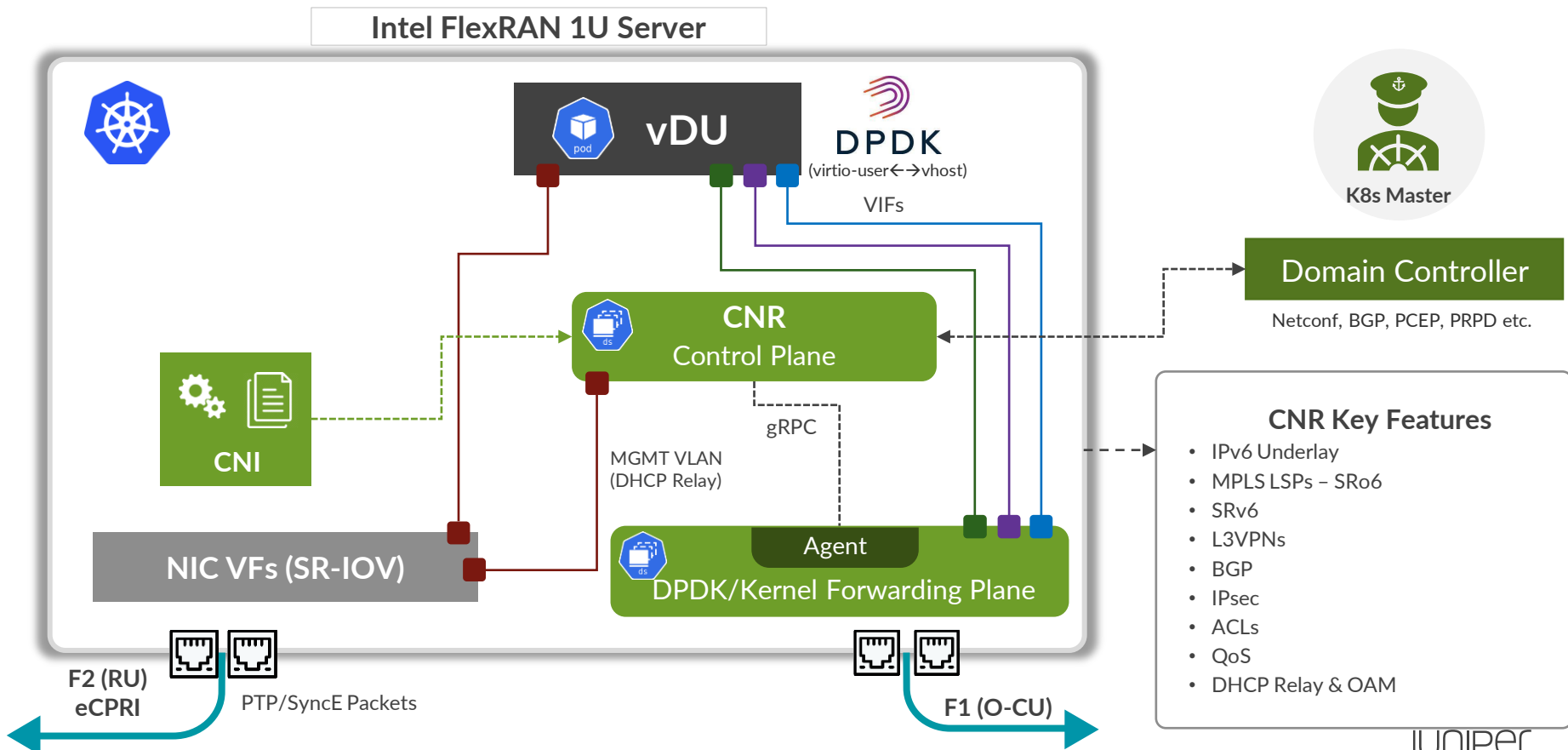


Cloud Native:
CNI, Operator
Framework, K8
Controller

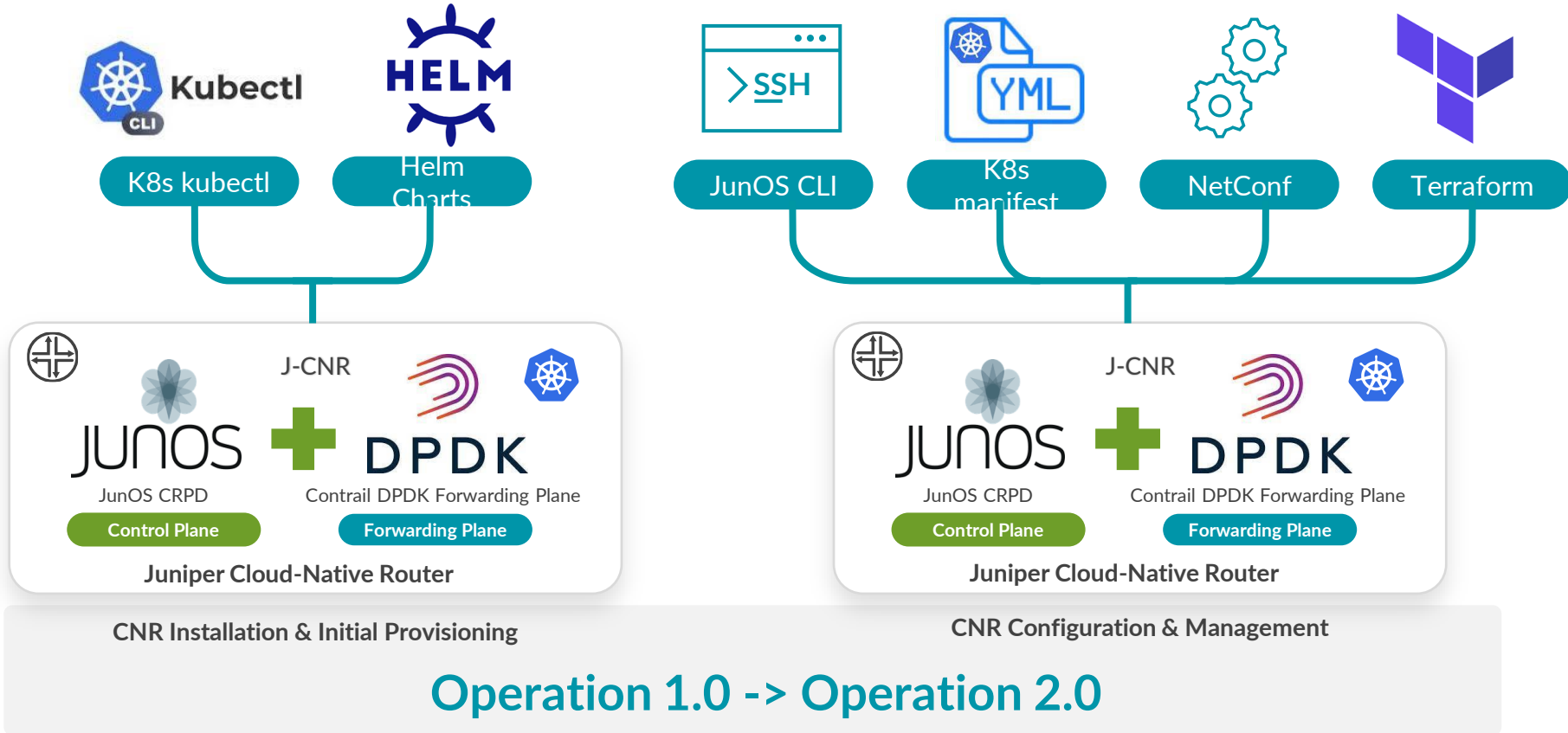


K8 Agnostic

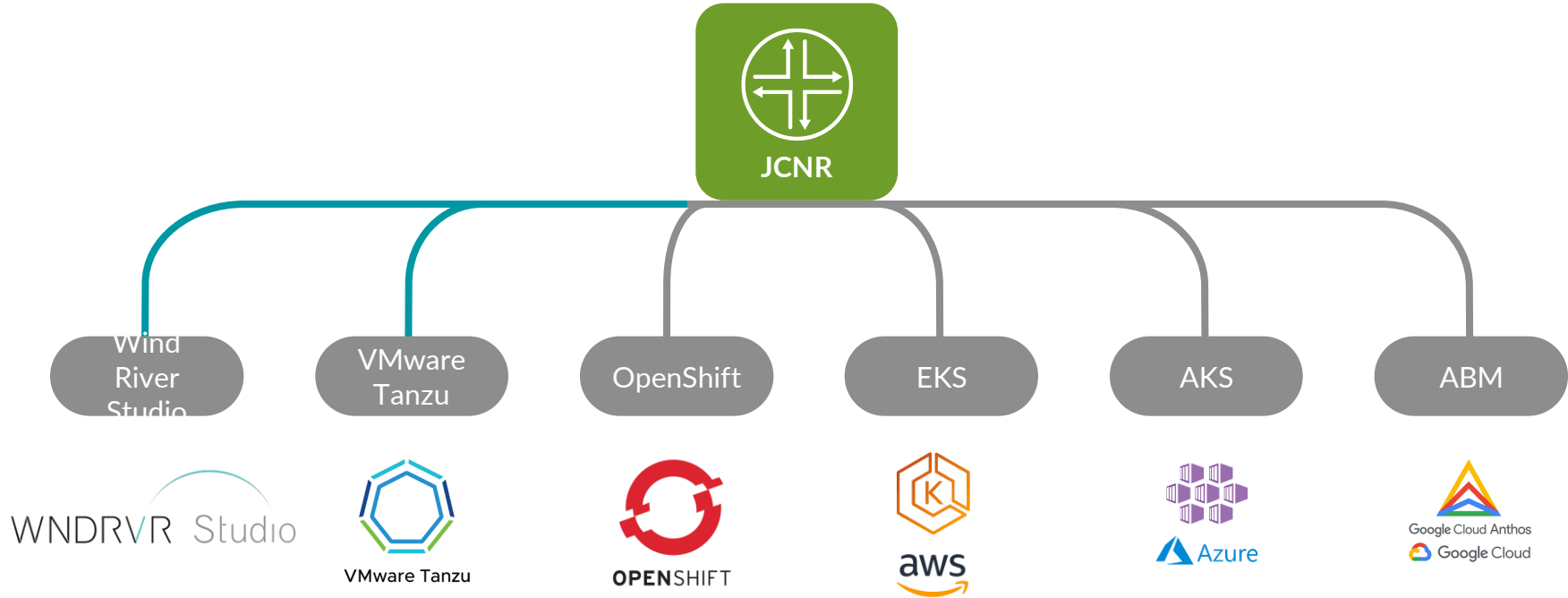
Cloud Native Routing Overview (Architecture)



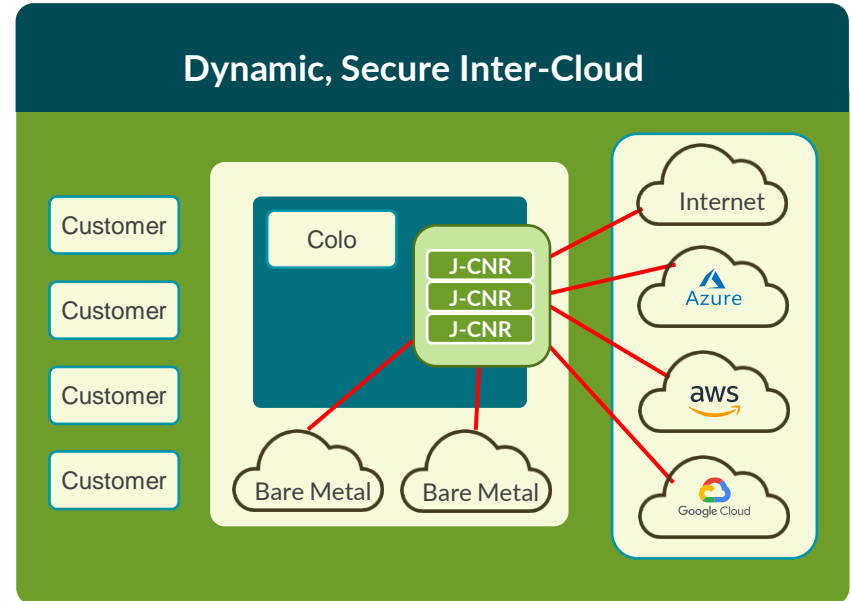
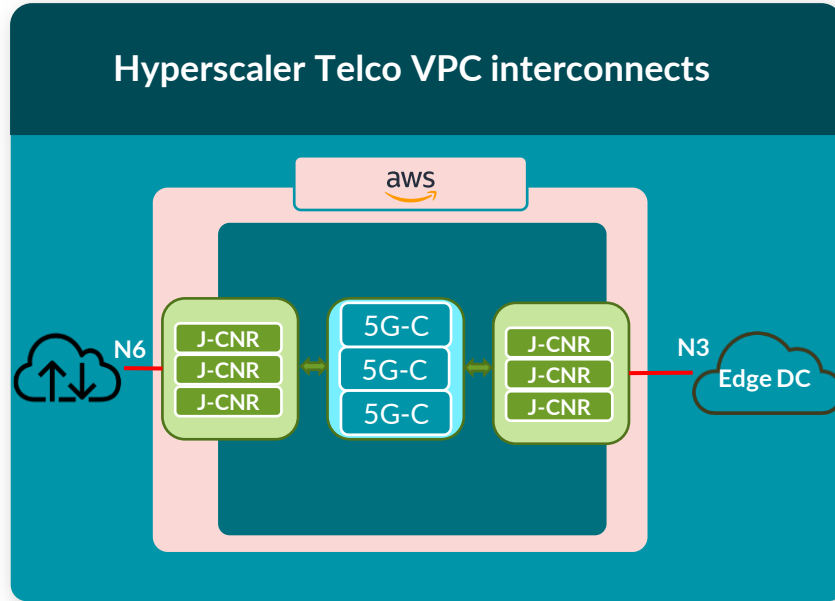
Juniper CNR Provisioning & Configuration Options



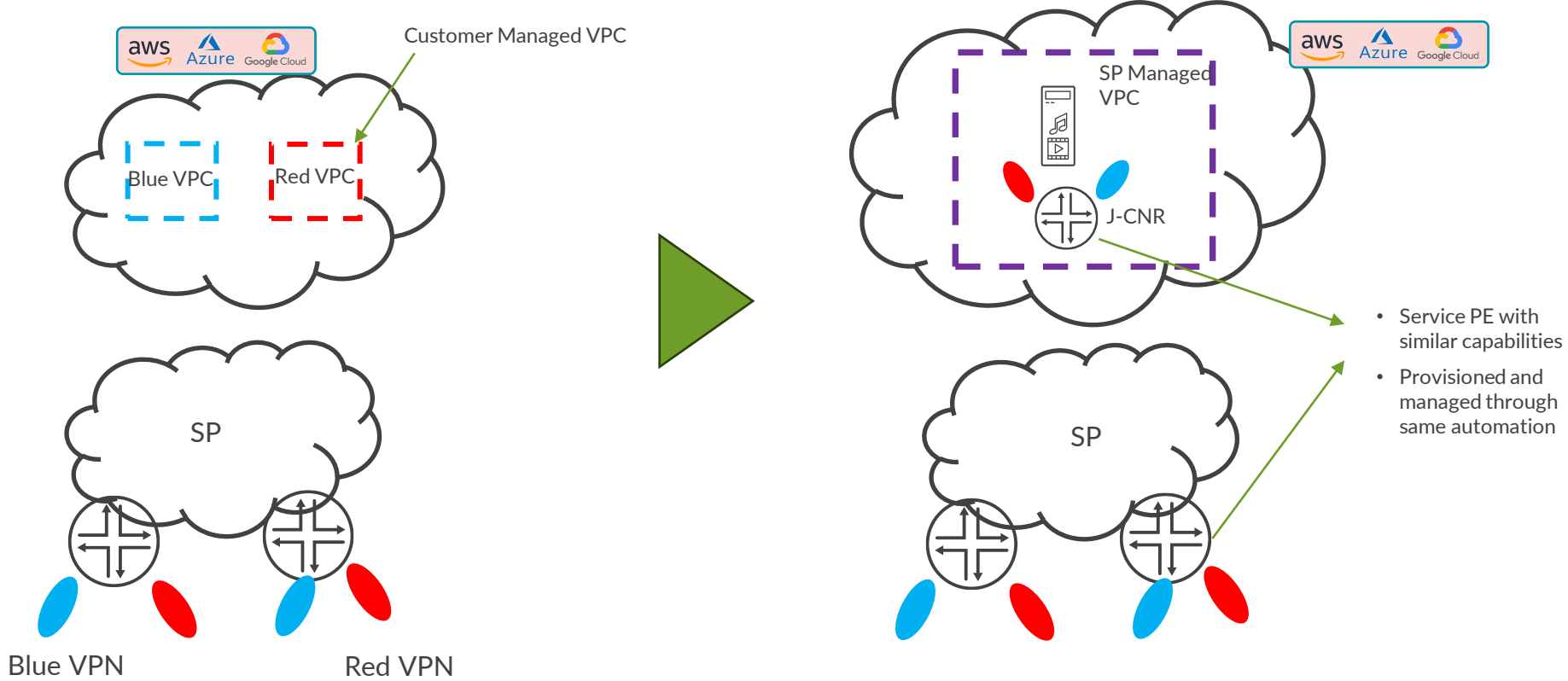
Cloud-Native K8s Ecosystem



VPC Interconnect & Virtual Gateway



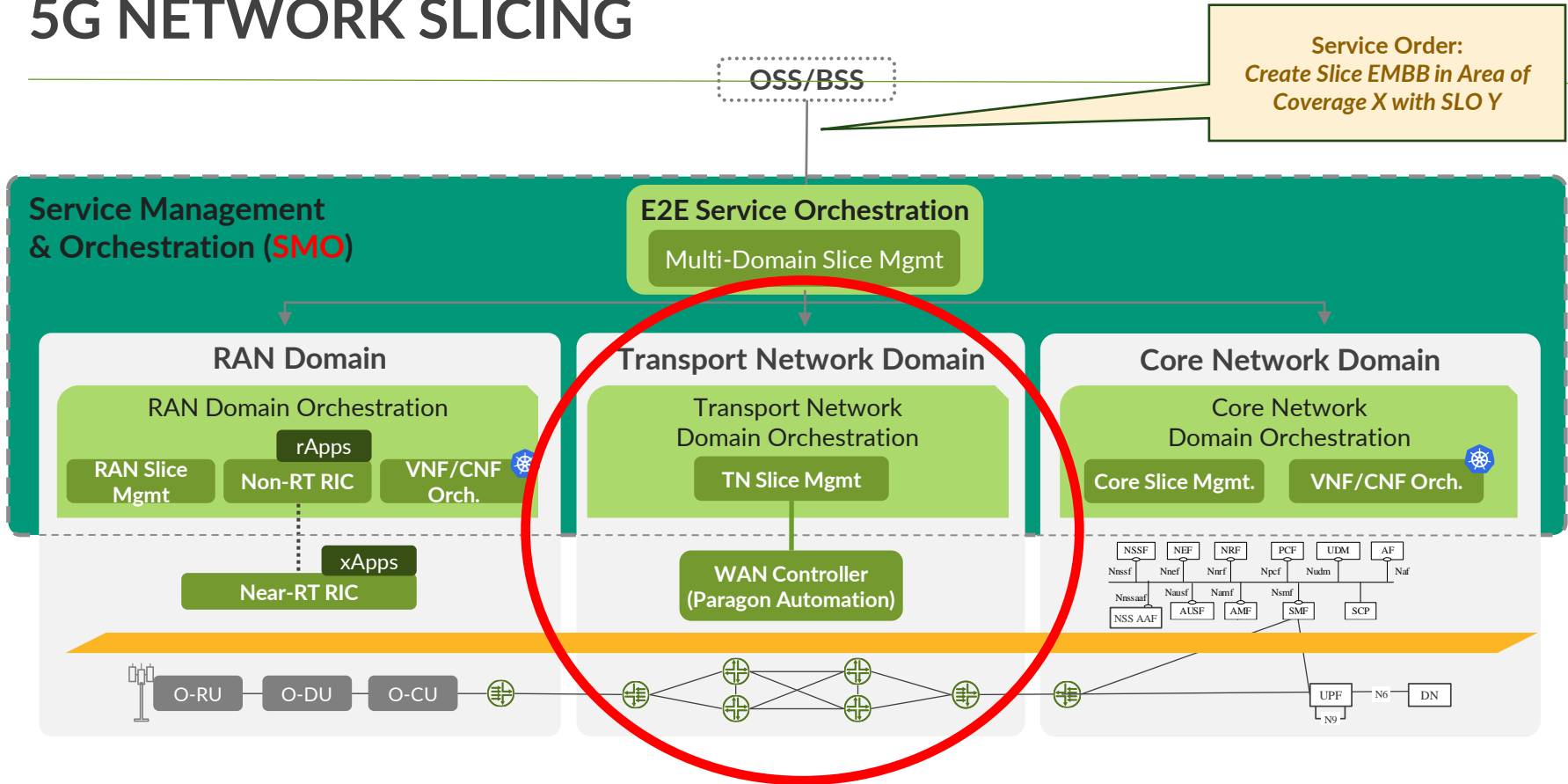
Extending SP Cloud Connect Services





NETWORK SLICING

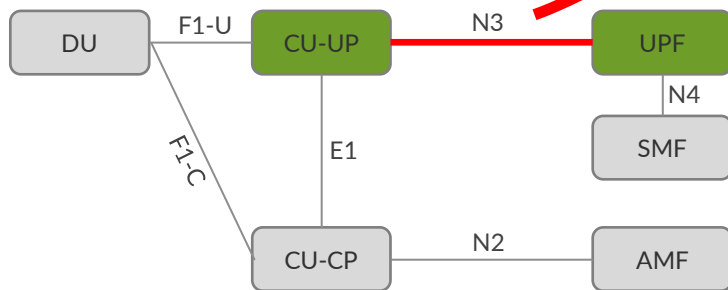
5G NETWORK SLICING



5G slicing vs IETF network Slicing

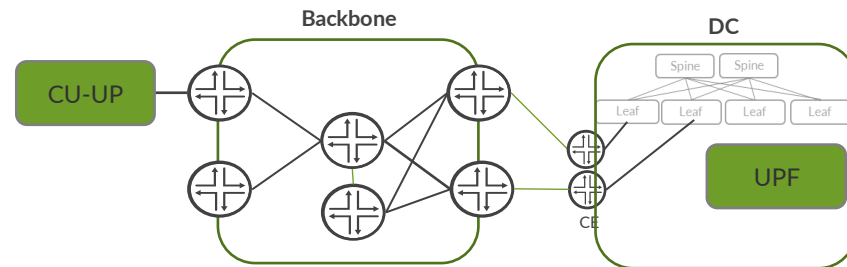
5G slicing (3GPP)

Regards transport as abstracted "logical wire"



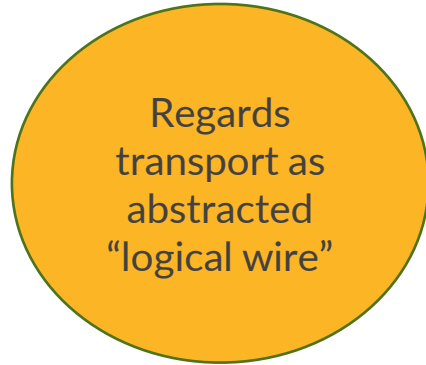
Transport network slicing (IETF)

Describes how transport network can provide capacity resources to slices



5G slicing vs IETF network Slicing

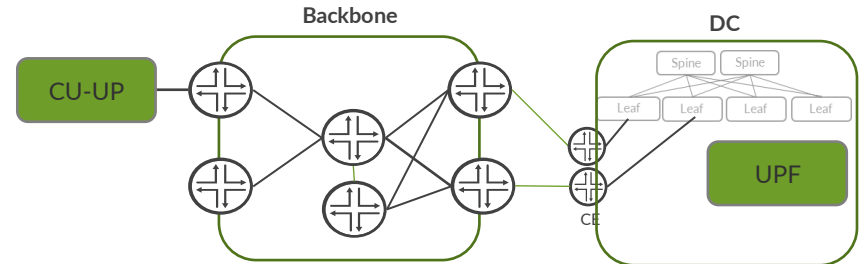
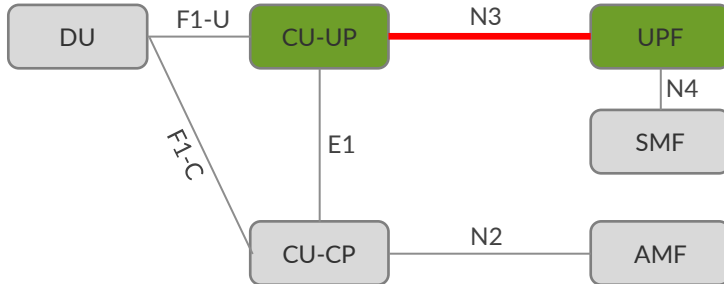
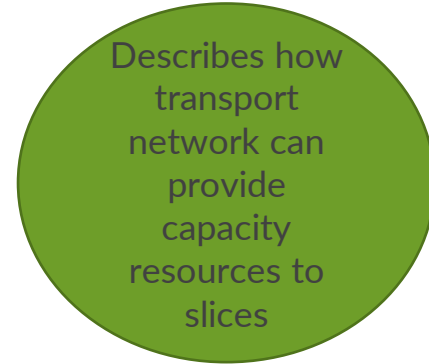
5G slicing (3GPP)



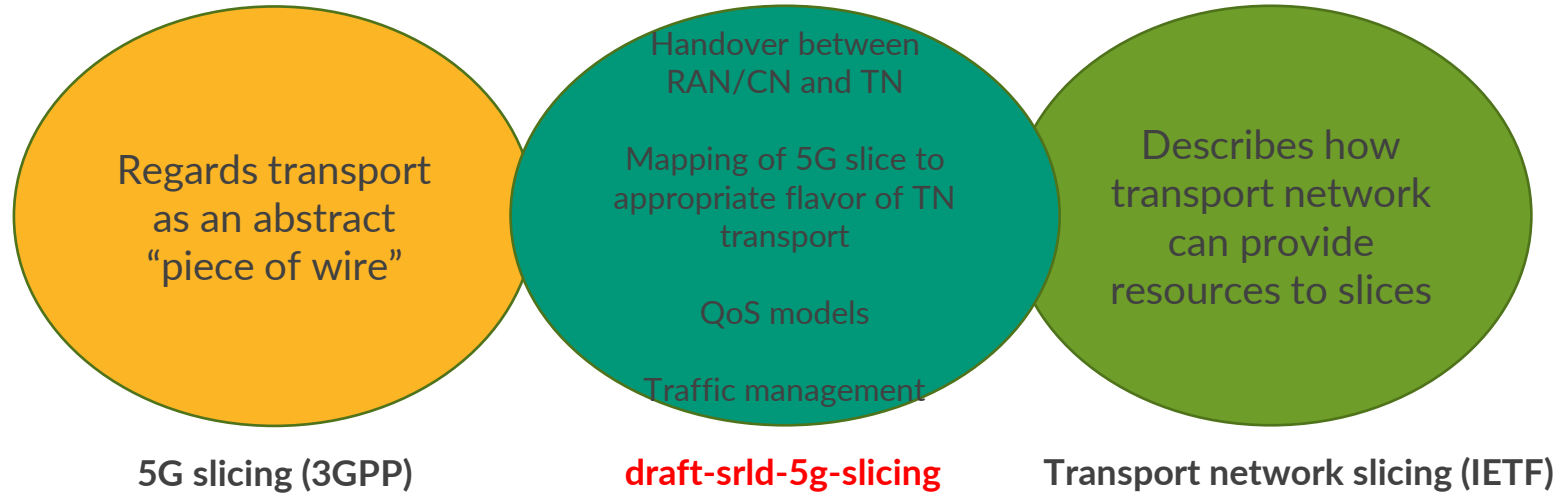
Gap!



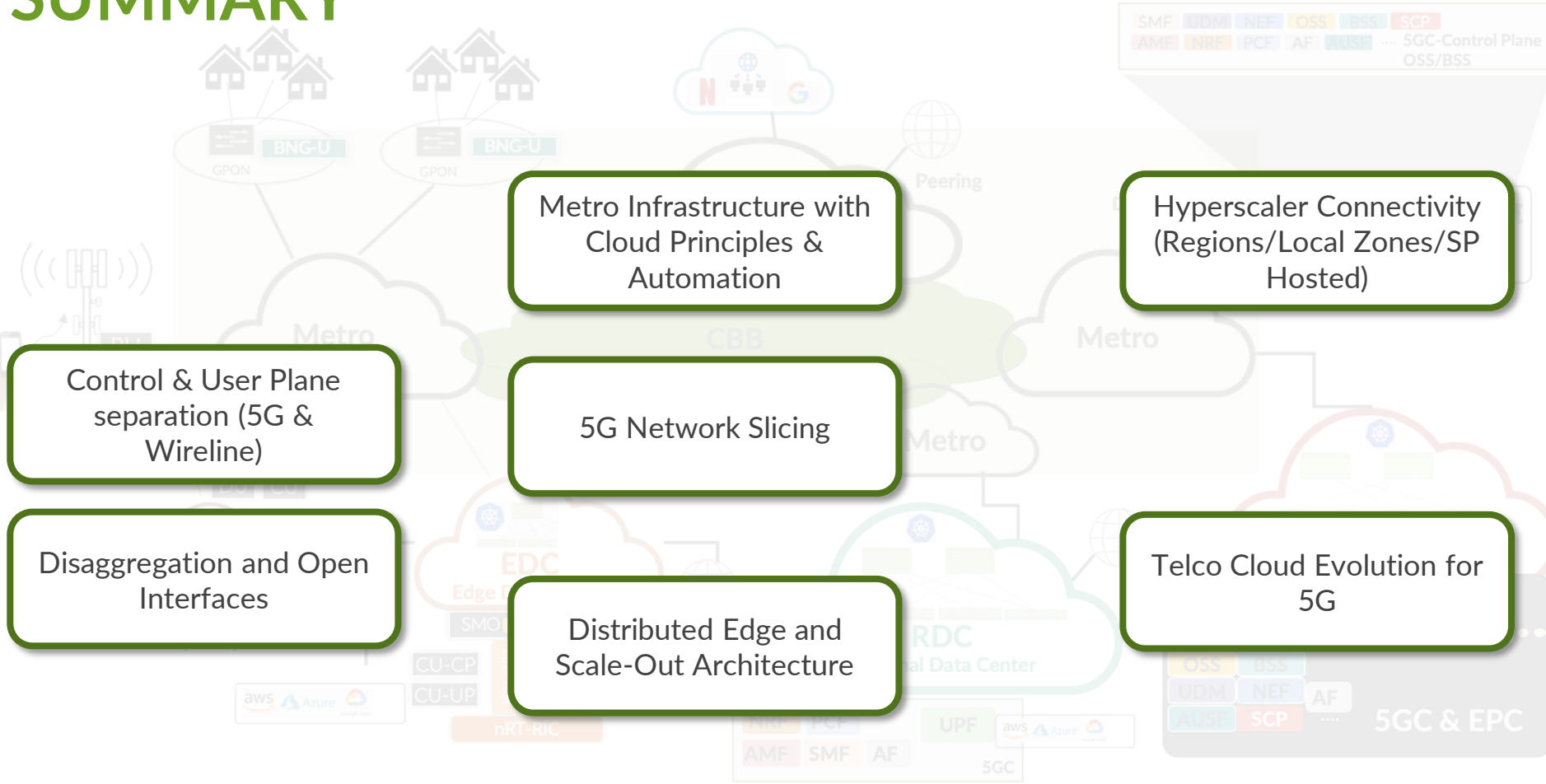
Transport network slicing (IETF)



5G slicing vs IETF network slicing



SUMMARY



Control & User Plane separation (5G & Wireline)

Disaggregation and Open Interfaces

Metro Infrastructure with Cloud Principles & Automation

5G Network Slicing

Distributed Edge and Scale-Out Architecture

Hyperscaler Connectivity (Regions/Local Zones/SP Hosted)

Telco Cloud Evolution for 5G

THANK YOU

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Experience™



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PANELDISKUSSION
**KI@CSP – mehr als
nur ChatGPT?**



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**6G networks will connect
the physical, digital and
human worlds.**

Dr. Konstantinos Manolakis, Nokia

5G-Adv. Business Programm Lead / Senior Device Research Specialist



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Investitionen in KI sind
unverzichtbar, um
wettbewerbsfähig zu bleiben.

Marlene Schininger, Axians Austria
Data Scientist Consultant



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Mehr Chancen als Risiken.

Andreas Meisinger, Juniper Networks
SP Chief Architect



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FORTINET®

Cyber Security: Bedrohungslage für Carrier & Service Provider

Tommy Grosche, Fortinet
Country Manager Germany



VINCI
ENERGIES

The Fortinet logo, featuring the word 'FORTINET' in a bold, black, sans-serif font. The letter 'O' is replaced by a red square with a white grid pattern. A registered trademark symbol (®) is located to the right of the text.

Cyber-Security:

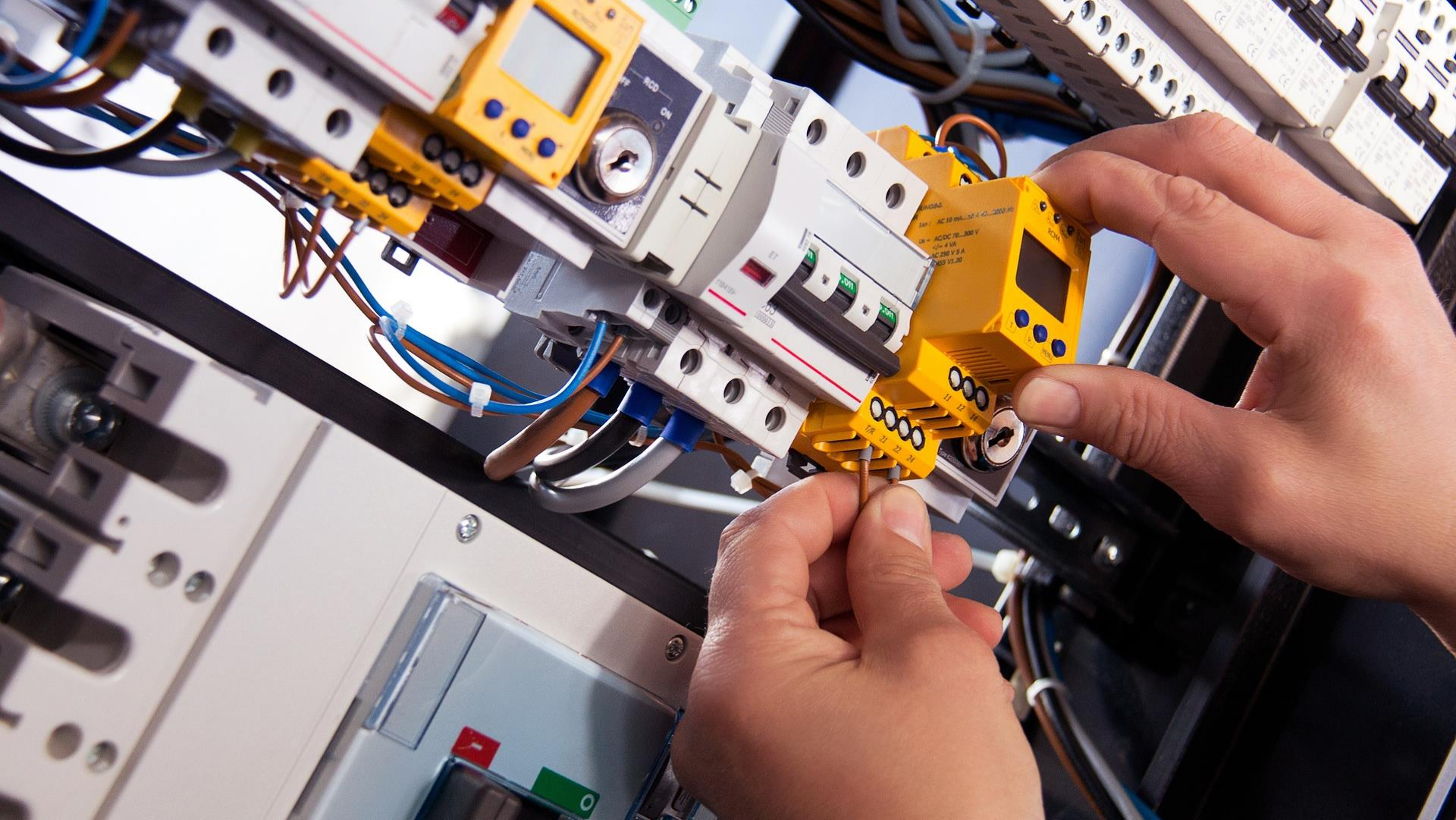
Bedrohungslage für Carrier & Service Provider

Tommy Grosche

Fortinet Country Manager Germany









100
YEARS

The Fortinet logo, featuring the word 'FORTINET' in black with a red square icon containing a white grid pattern.

Cyber-Security:

Bedrohungslage für Carrier & Service Provider

Tommy Grosche

Fortinet Country Manager Germany

Im Titel steckt mehr als ein Satz...

Cyber-Security: Bedrohungslage für Carrier & Service Provider



Allgemeine Bedrohungslage

Cyber-Security Bedrohungslage

Resultierende Trends



Allgemeine Bedrohungslage

Cyber-Security als Chance

Handlungsempfehlung



Digitalisierung eKarbonisierung emografie e-Globalisierung



Digitalisierung eKarbonisierung emografie e-Globalisierung





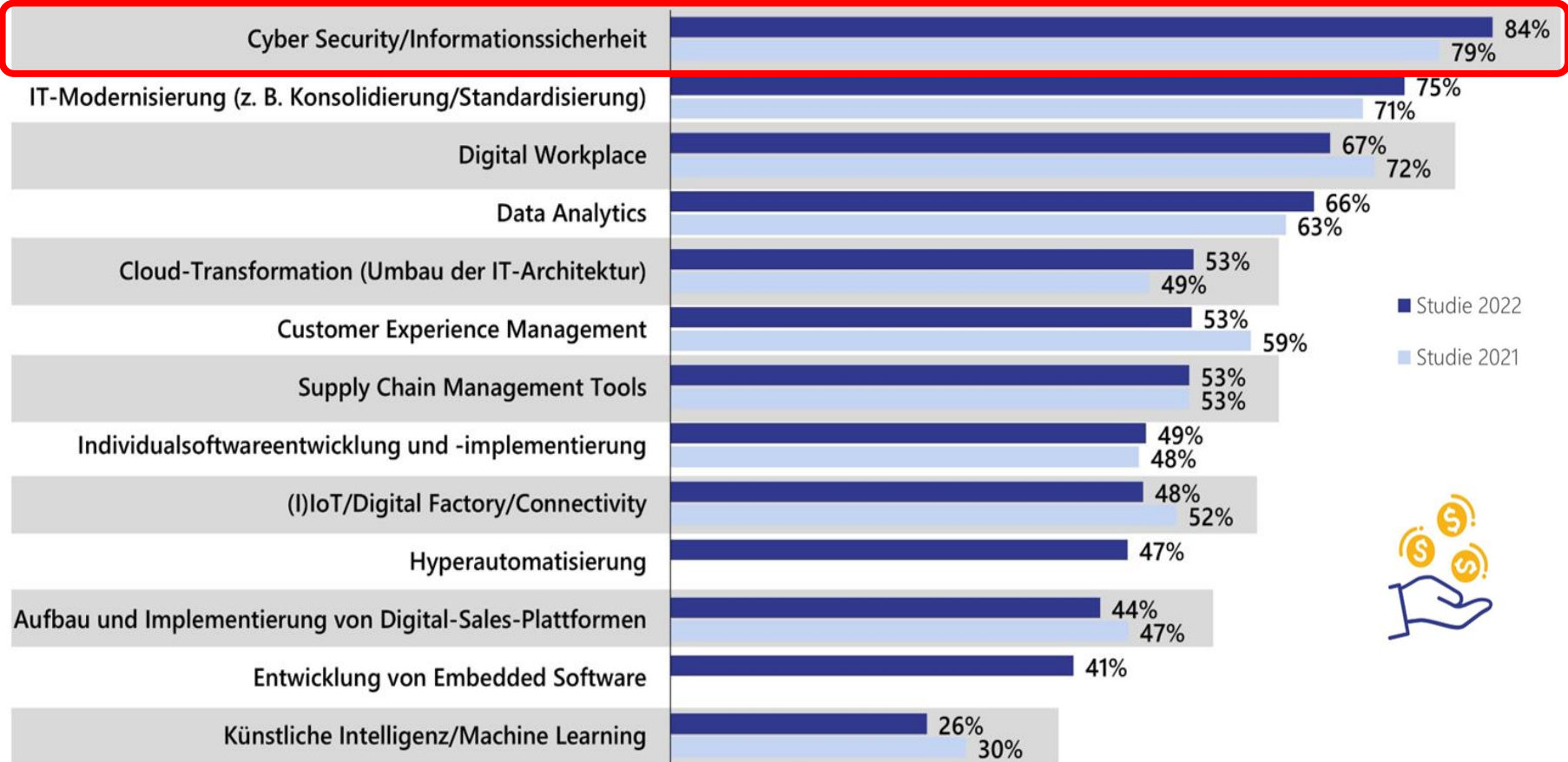
Viele der aktuellen Geschäftsmodelle in nahezu allen Branchen sind (oder werden in naher Zukunft) in ihrer Existenz bedroht!



Unternehmen müssen sich daher darauf fokussieren, neue und zukunftsfähige Lösungen und Geschäftsmodelle zu entwickeln!



Die Disruptionen bieten aber auch erhebliche Chancen, neue Alleinstellungsmerkmale zu finden und in den Produkten, Geschäftsprozessen und Dienstleistungen zu etablieren!



Frage: In welche Themen investiert Ihr Unternehmen in den kommenden zwei Jahren?; Skala von -2 = „gar nicht“ bis +2 = „sehr stark“; Alle Teilnehmer; Häufigkeitsverteilung; Werte beziehen sich auf die Antworten „eher stark“ und „sehr stark“; n = 138; (Künstliche Intelligenz/Machine Learning; n = 84; Supply Chain Management Tools; n = 56; Entwicklung von Embedded Software; n = 51; (I)IoT/Digital Factory/Connectivity; n = 58). Für die Themen „Hyperpersonalisierung“ und „Entwicklung von Embedded Software“ sind keine Vergleichswerte aus dem Jahr 2021 verfügbar.



DE Threat Landscape 2023

Powered by FortiGuard Labs



Total Threats Detected
10.6bn



Exploit Techniques Detected
6.12bn

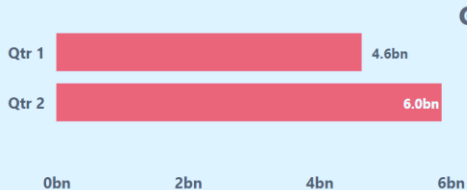


Malware Distribution Detected
9.32M



Botnet Activity Detected
23.18M

Malicious Activity by Quarter

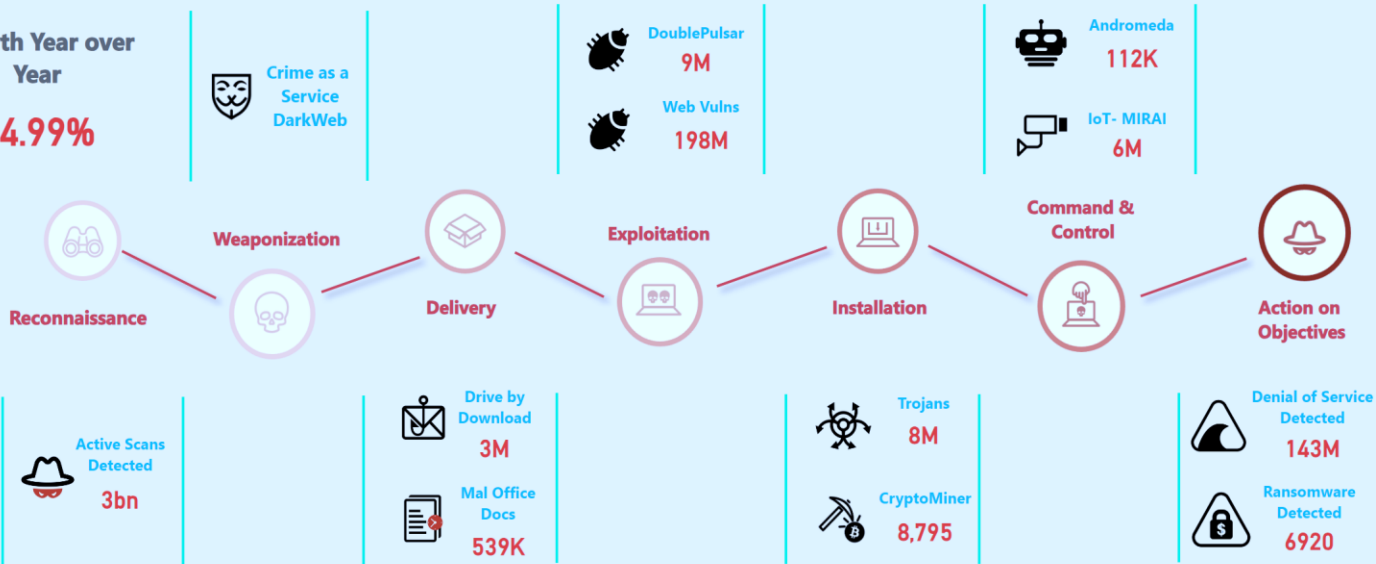


Growth Year over Year
74.99%

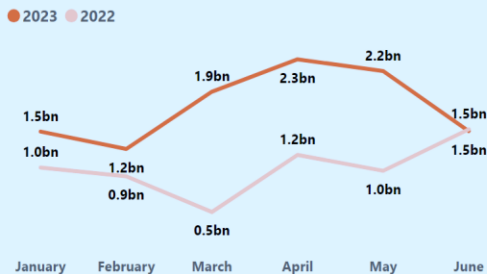


Crime as a Service
DarkWeb

Cyber Kill Chain Model



Behavioral Trend Analysis by Month



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CARRIER INNOVATION DAY 2023



**Cyber
Security**



Die Unternehmen reagieren...

Business Transformation



**Investition in
Digitalisierung**



**Service vs.
Technology**



**Flexible
Infrastrukturen**



**Kosten & Cash
Management**

Die Unternehmen reagieren...

Business Transformation



Investition in Digitalisierung



Service vs. Technology



Flexible Infrastrukturen



Kosten & Cash Management

Cyber-Security Strategien



Cyber-Security Platform vs. „Best of Breed“



Cyber-Threat-Intelligence Netzwerke und Austausch

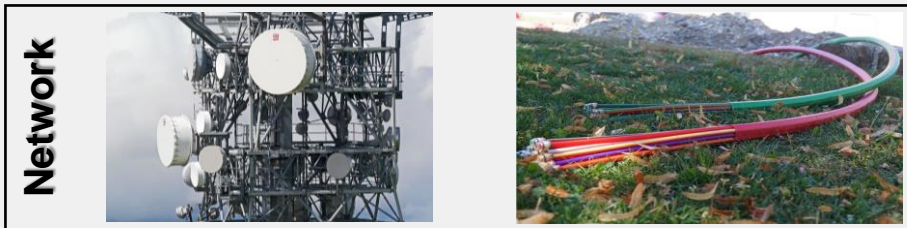
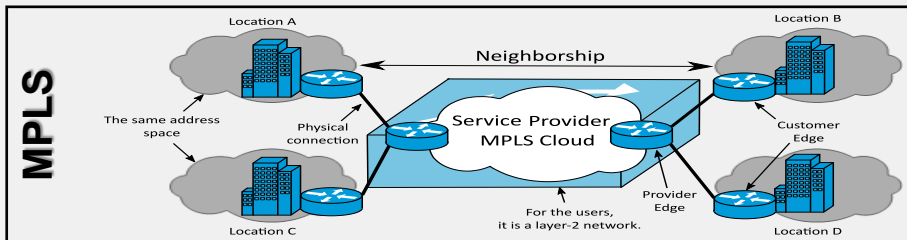
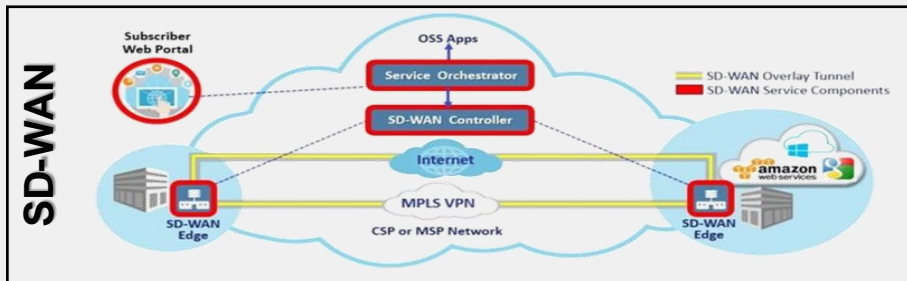


Nutzung künstlicher Intelligenz



Alle sprechen mit Fortinet 😊





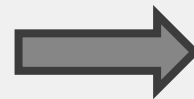
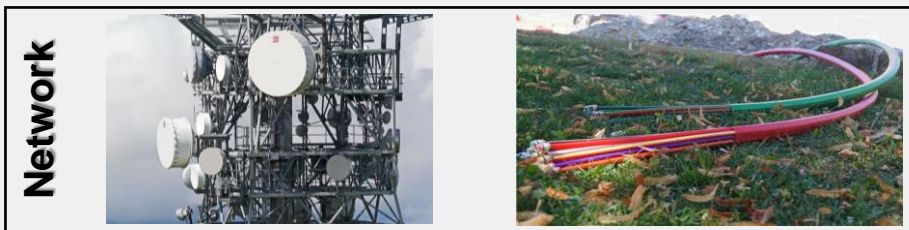
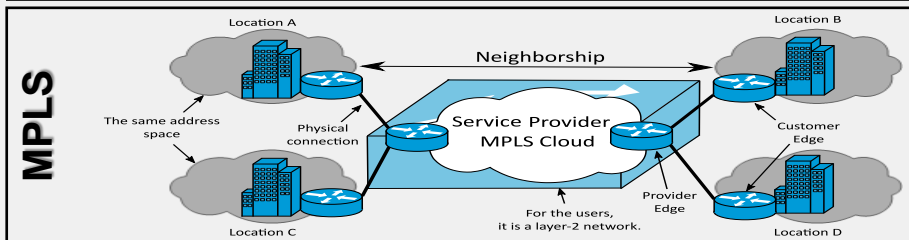
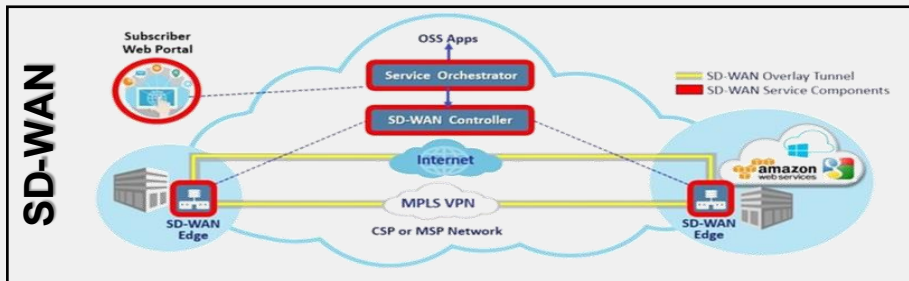
Commoditization

- As a Service Bezug
- SLA basiert
- Preis / GB oder Preis / User
- Einkauf entscheidet...



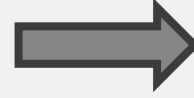
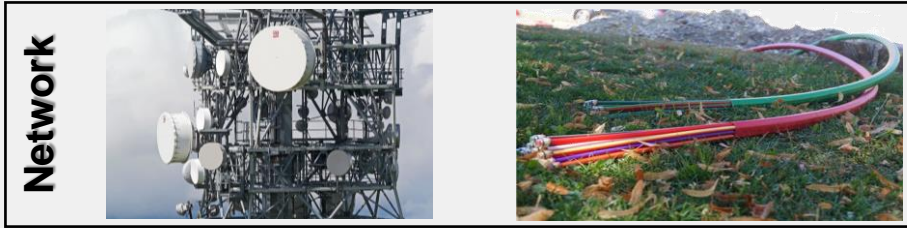
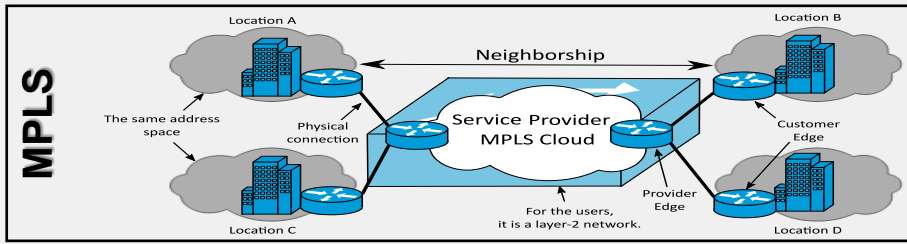
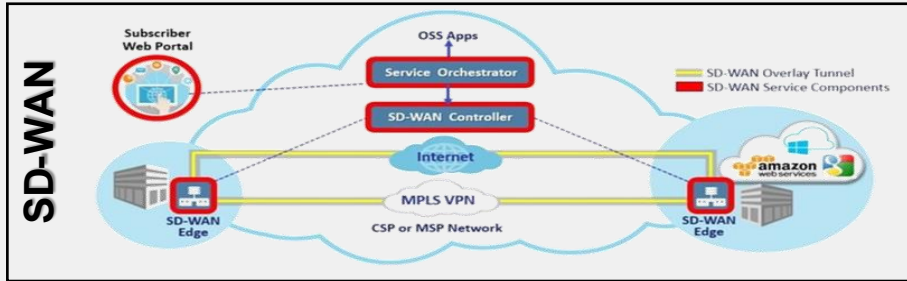
Kunden fragen nach sicheren Netzen

- Security als Alleinstellungsmerkmal
- Disruption: SASE-Evolution
- Neues Wettbewerbsumfeld



- Security Orchestration @ Cloud
- Globales POP-Netzwerk
- Optimiertes Traffic-Routing





VERTRAUEN

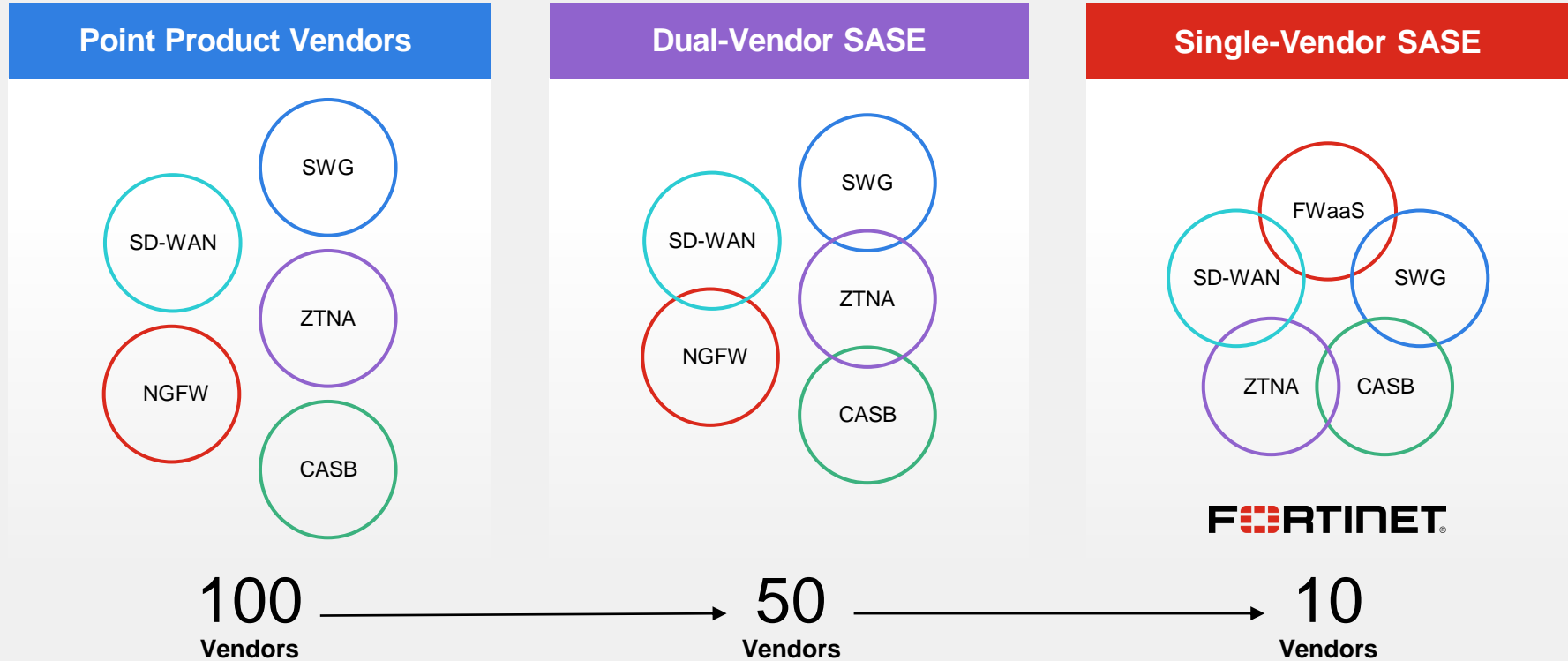
**„as a Service“
Kompetenz**

**Last-Line & Mobile
Network + near-by
POPs**

Carrier Service Provider

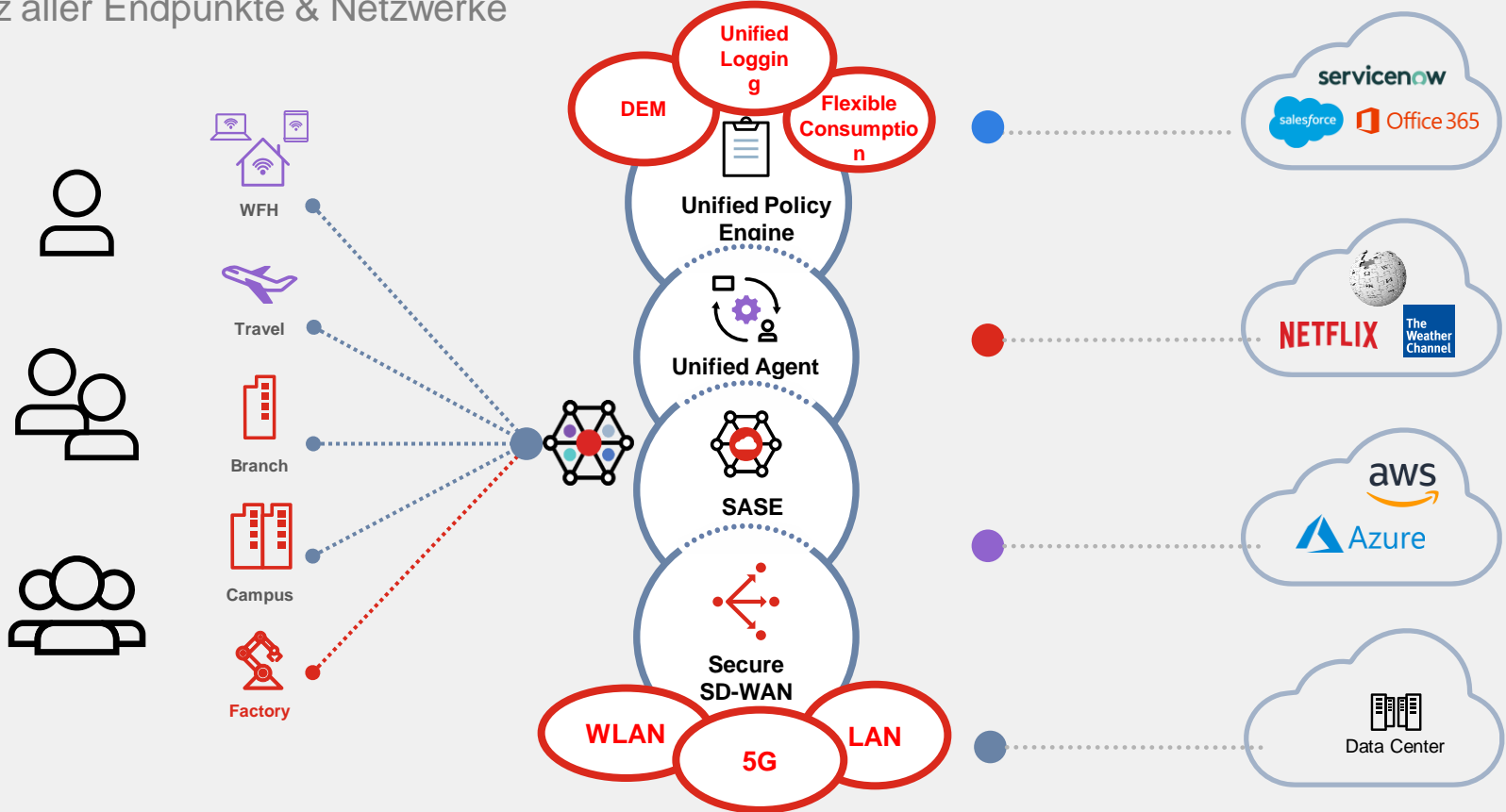


Evolution der SASE-Architektur



Fortinet Universal SASE Vision

Schutz aller Endpunkte & Netzwerke





**Security Kompetenz
aufbauen**



**SASE-Technologiepartner
wählen**



**Netzwerk & Security
Hersteller konsolidieren**



**Carrier Partnerschaften initiieren
und Netzwerk erweitern**



**SASE-Architektur
designen**




**Veränderung braucht Mut:
*Think big, smart & out of the box***

Cybersecurity is the protection of users, devices, applications, and data as well as from the disruption or misdirection of the services the organizations provide employees and customers.



Cybersecurity, wo immer sie benötigt wird.



A Fabric is an Integrated mesh between converged network and security nodes across the entire infrastructure attack surface delivering unified security and management framework.





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PANELDISKUSSION

Was ist die richtige Antwort auf IT-Bedrohungen?



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Hoffnung
ist keine Strategie.

Bernd König, Fortinet
Head of Business Development DACH



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KI und Quantencomputing werden den Bereich Cybersecurity nachhaltig beeinflussen.

Hendrik Kahmann, Axians Deutschland
Head of Innovation



Cyberangriffe nicht unterschätzen – sie stören die Abläufe in Unternehmen für mehrere Monate.

Fabian Bühring, Stadtwerke Neumünster
CEO & Prokurist



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IMPULSVORTRAG

Zusammen in die Zukunft! Warum Menschen gemeinsam innovativer sind.

Gerriet Danz
Innovationsexperte





Inside an Airbnb co-founder's latest venture: building tiny backyard homes

by Shawn Johnson — November 14, 2022 in Innovation







What is Bumble?

A dating app for women who want to

- Control
- Empower
- Engage
- Grow
- Protect

By making the first move
women get to set the tone for a
conversation



bumble 
for friends

18:05



**You're
friends!**

Send a message...



#kreativität



REDUCED CALORIE **28% FEWER CALORIES** THAN REGULAR JELLY BELLY JELLY BEANS



THE ORIGINAL GOURMET JELLY BEAN®

Sugar-Free

SUGAR-FREE

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Möbel.

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sind **GROSS.**



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Clarks

HEJ!

50%

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nach Gebrauch auf
dem MÜLL.

IKEA geht nur
MIT Möbeln.

IKEA® ÄTBAR

Öppettider
11-11 august
1100-21.00
IKEA Ätbar



VELKOMMEN TIL IKEA ÄTBAR

IKEA ÄTBAR er ingen vanlig restaurant, som gjest hos oss tar du bare med deg enrivare du kunne tenke deg å få brukt opp - og tilbake får du et måltid tilberedt av våre kokker. Vi tror nemlig at de beste opplevelsene i og rundt kjøkkenet de man skaper sammen. Kom inn og slå deg ned!

Les ut mer...



Fleischbällchen
bestehen
aus **FLEISCH**.



#kollaboration



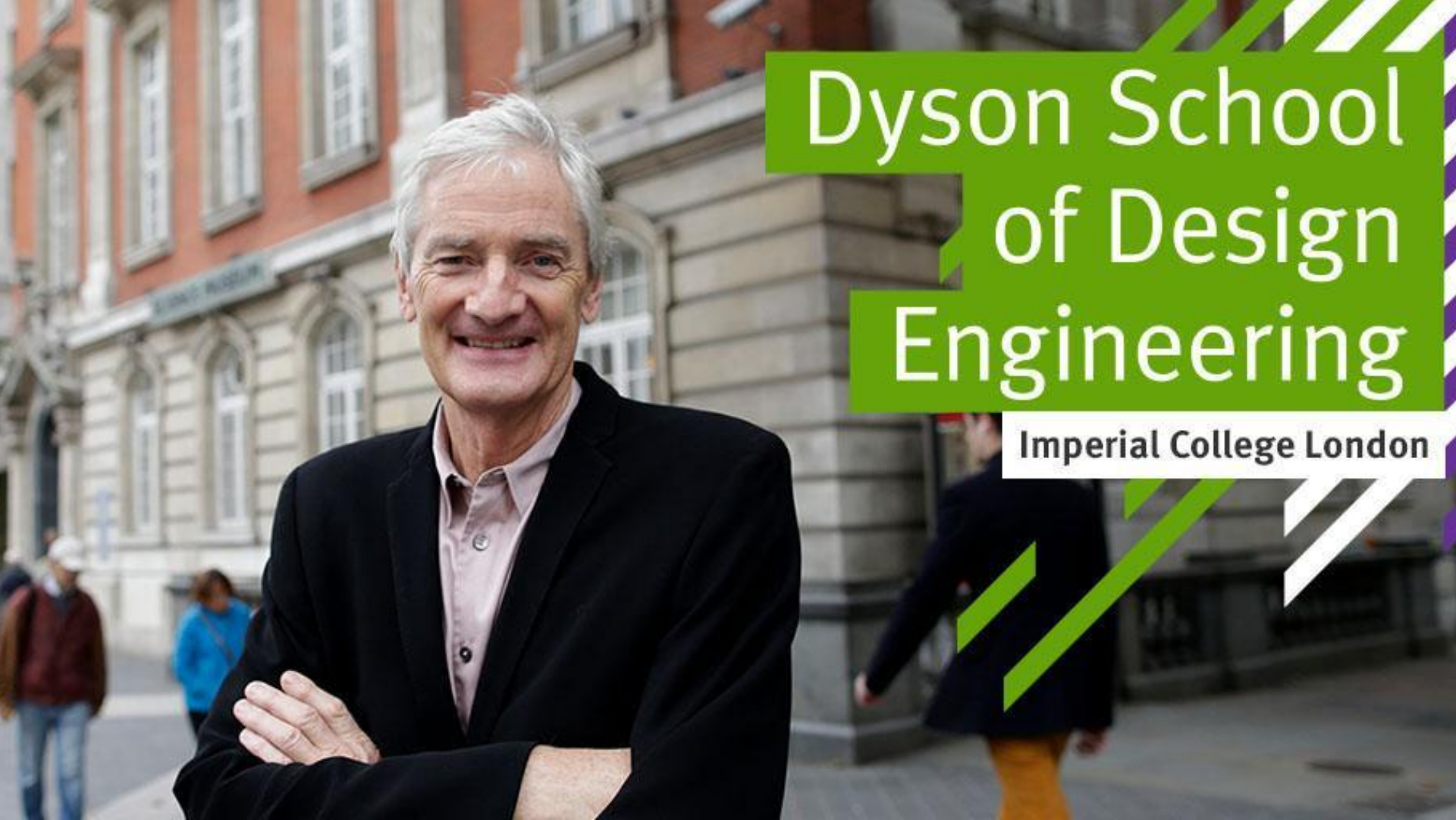


Close
Light
Toothpaste



#diversität





Dyson School of Design Engineering

Imperial College London

#fehlerkultur





VELMONTY PITBOH

VELMONTY PITBOH
WAS BORN ON THE 12TH OF OCTOBER
1978 AND DIED ON THE 12TH OF
OCTOBER 2004.
HE WAS A VERY LOVING AND
CAREFUL PERSON WHO WAS
ALWAYS THERE FOR YOU.
2004-2008



The Wich

The Wich that was,
Was wicked good,
And all was well
For quite a spell.
However it was,
The Wich that was
Was ditched... because.

2004-2006



WAVY GRAVY

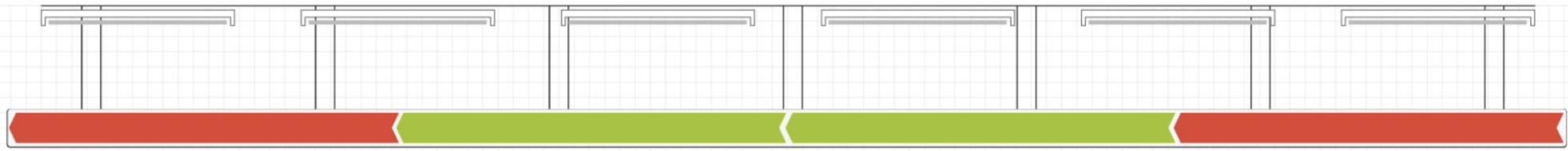
Just so there's no confusion
We thought we oughtta warn ya:
Wavy Gravy isn't dead -
He lives in California.

...for Wavy's flavor,

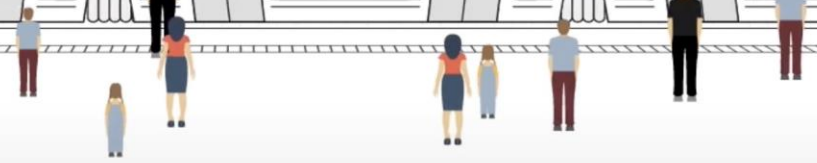
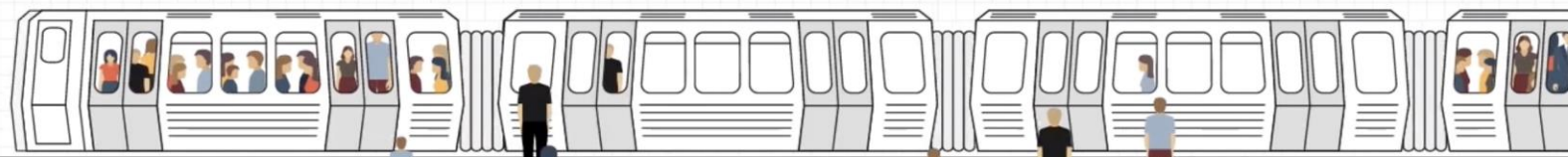




INNOVATION NATIVES



HALTESTELLE









WANDSBEK - MARKT

KURZZUG

DB BAHN

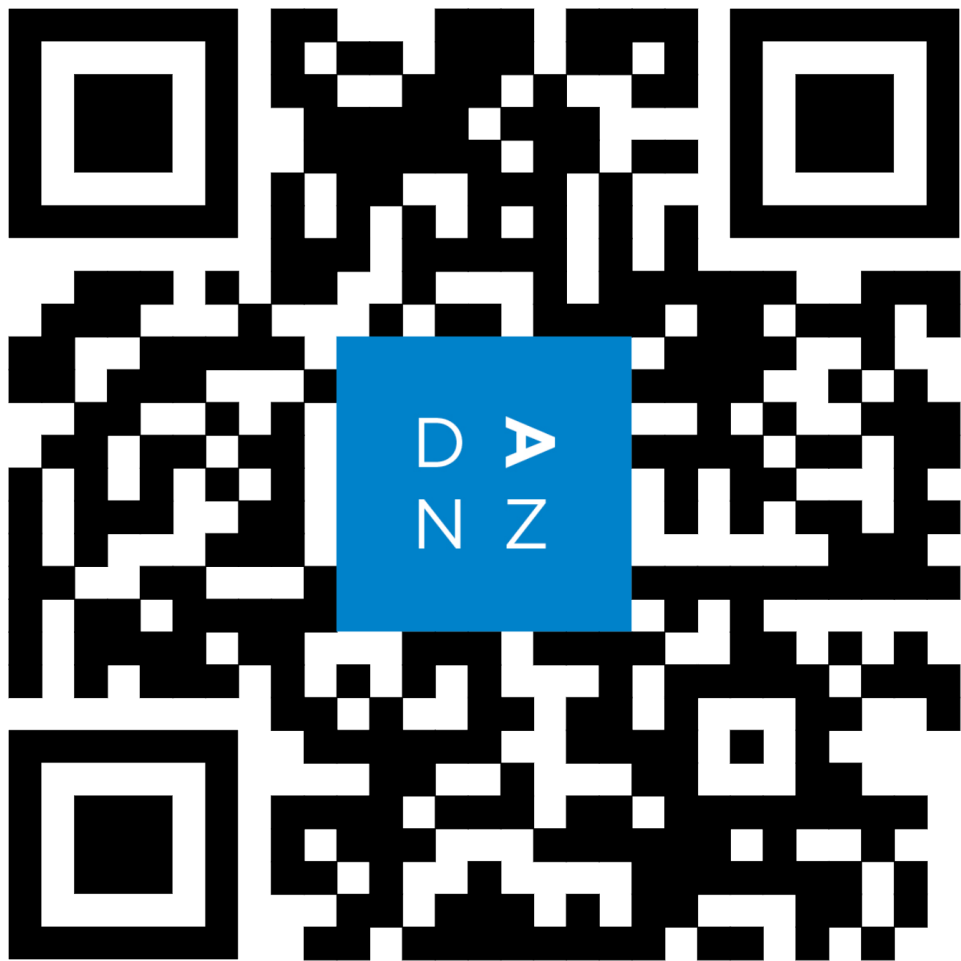
peiker



D
A
N
Z

ZUKUNFTS LISTE





D A
N Z

www.gerrietdanz.com

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Danke, für dieses tolle Event!

Wir freuen uns auf das gemeinsame Kochen um 19:00 Uhr.

Sascha Fiedler, Axians Networks & Solutions

Head of Business Unit CSP & BBU



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