LIVE WEBINAR

Unlocking the Value of 5G: **Beyond Connectivity**

A GSMA 5G Futures Community Webinar

Welcome

Wednesday 13 September 2023

Agenda

Keynote presentations

- GSMA Intelligence
- Telefonica

Fireside Q&A

- Digital content creator and influencer

Panel discussion

- All speakers

Audience Q&A

Session moderator

Barbara Pareglio
Technical Director, GSMA

Our Speakers

Peter Jarich
Head of GSMAi
GSMA

Juan Carlos Garcia Lopez
SVP Technology Innovation and Ecosystems
Telefónica

Jordi van den Bussche
(Kwebbelkop)
Influencer | Founder & CEO
JVDB Studios

Network transformation

Peter Jarich
Head of GSMAi
GSMA

GSMA™ Intelligence

5G Futures Community Webinar

Network Transformation: 2023

Strategic Agendas for Sustainable, Secure, Open and Profitable Networks

September 2022

5G Circa 2023: What we Know

5G continues to set the bar for mobile broadband uptake

	In Q2 2023	To end of Q2 2023	To end of 2023	To end of 2025	To end of 2030
Spectrum auctions	GUF, BLM, MAF, GTM	270 operators** in 79 markets	100 markets*** complete assignments		
Trials	10 trials in 8 markets	254 operators in 110 markets			
Commercial launches*	11 operators in 9 markets	256 operators in 98 markets	344 operators in 120 markets	424 operators in 140 markets	648 operators in 225 markets
Adoption		1.3 billion connections (15% adoption)	1.5 billion connections (17% adoption)	2.5 billion connections (28% adoption)	5.3 billion connections (54% adoption)

Data correct to 30 June 2023

For updates, see gsmaintelligence.com

Source: GSMA Intelligence

5G Circa 2023: What we Know

in the 5G Era, “making money” is the name of the game

Network Transformation Strategy Drivers

What is the primary criteria by which you measure the success of your network transformation strategy?

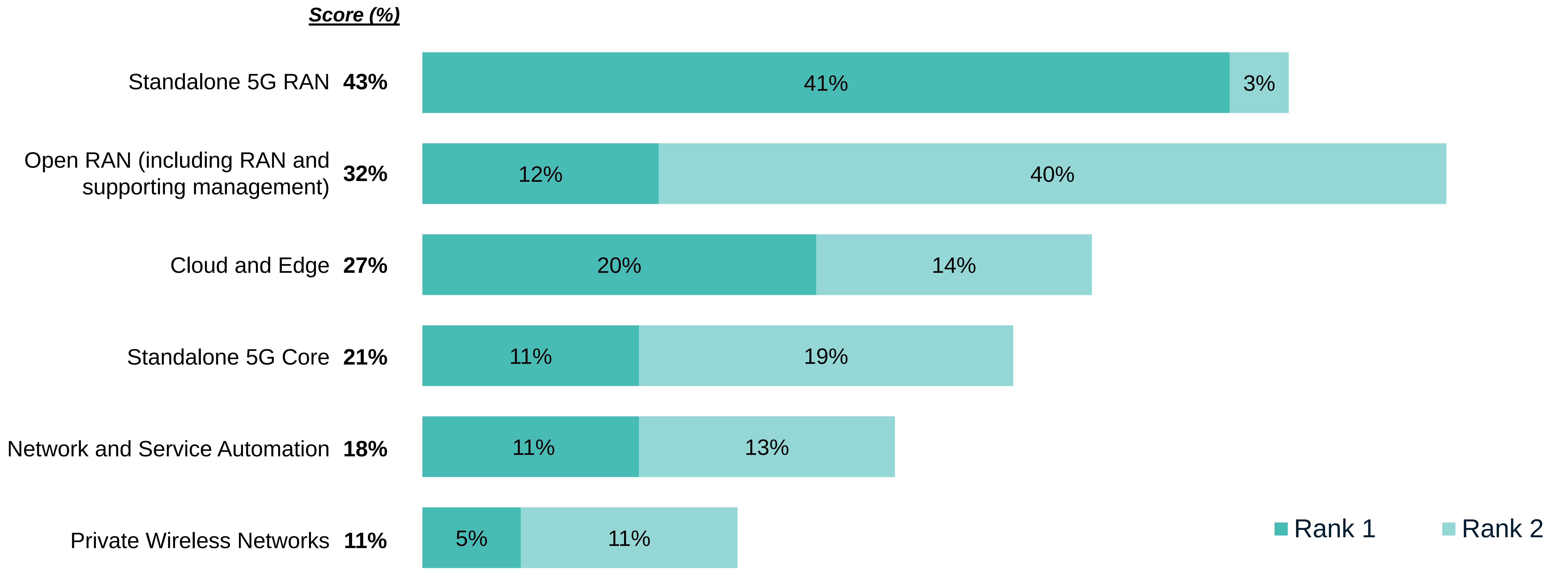
Source: GSMA Intelligence Operators in Focus – Network Transformation Survey 2023

5G Circa 2023: What we Know

standalone 5G is (finally) beginning to get the attention it deserves

Network Investment Priorities

Over the next 24 months, in which technologies and capabilities do you expect to make the greatest network investment?



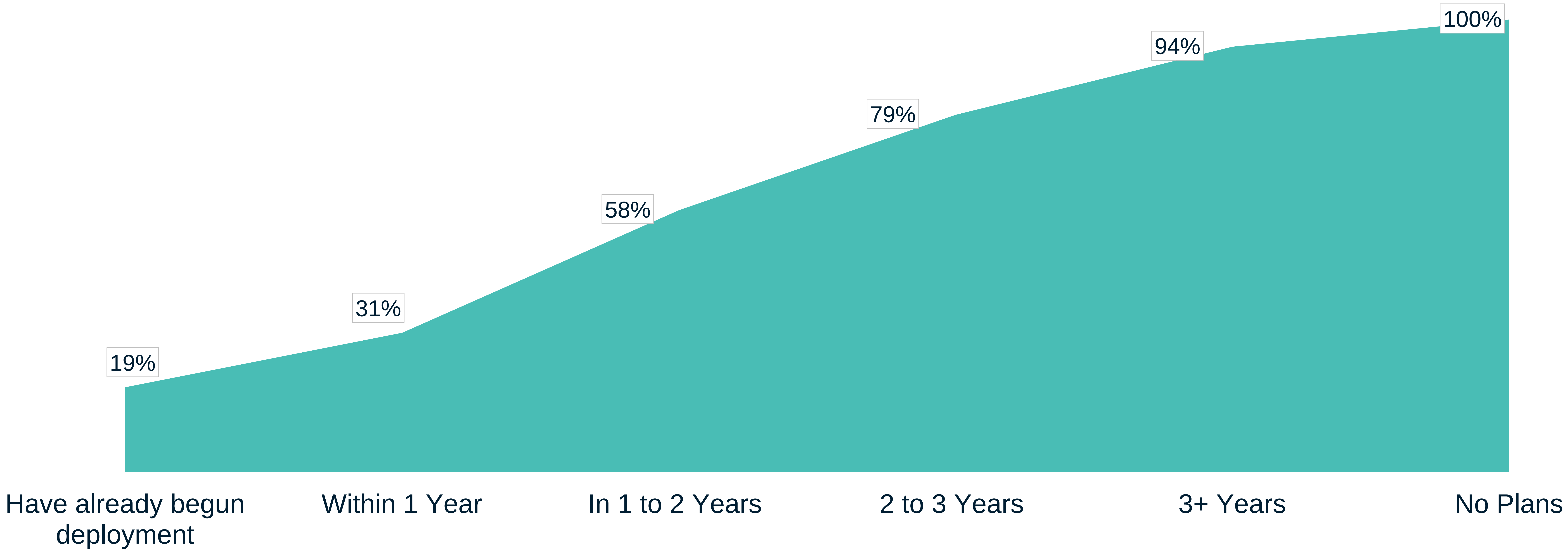
Source: GSMA Intelligence Operators in Focus – Network Transformation Survey 2023

5G Circa 2023: What we Know

early plans for Standalone deployment were overly-optimistic

5G Deployment Timing

Considering your current 5G network assets and network strategy, when do you plan to deploy Standalone 5G?



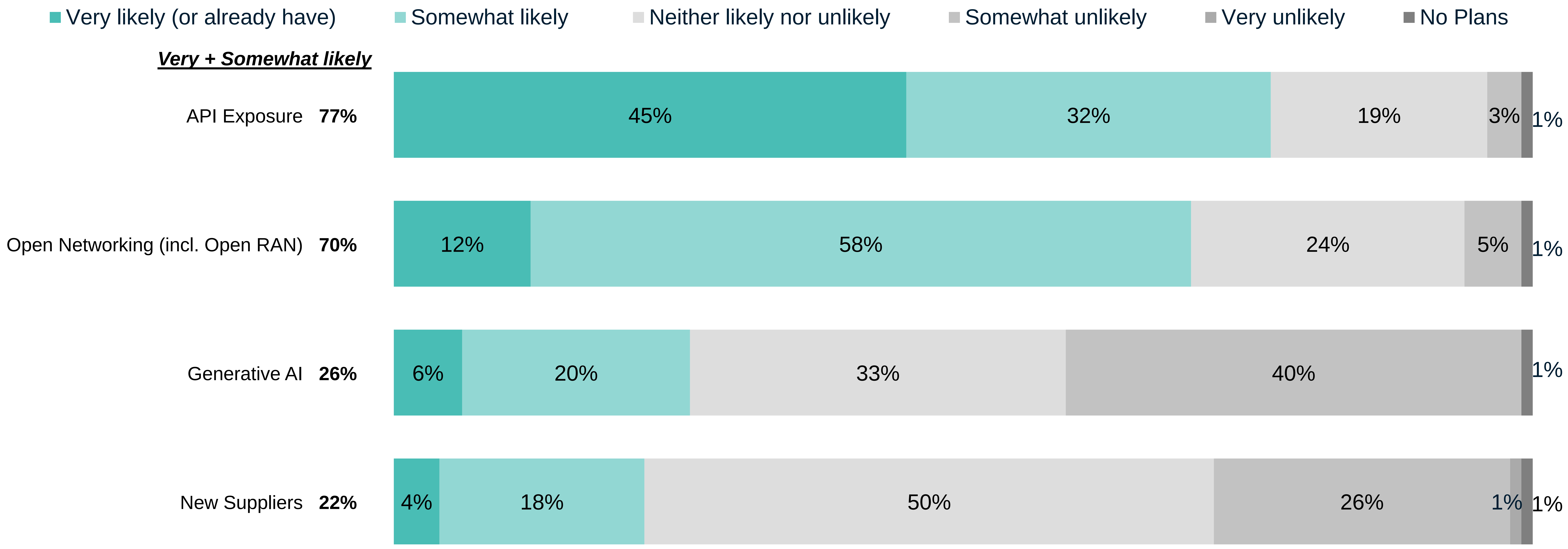
Source: GSMA Intelligence Operators in Focus – Network Transformation Survey 2023

5G Beyond: What we Need to Figure Out

how will Standalone 5G investments be monetized?

Standalone 5G: Network and Service Operation Implications

How likely are you to leverage Standalone 5G to introduce new network suppliers and technologies into your network?



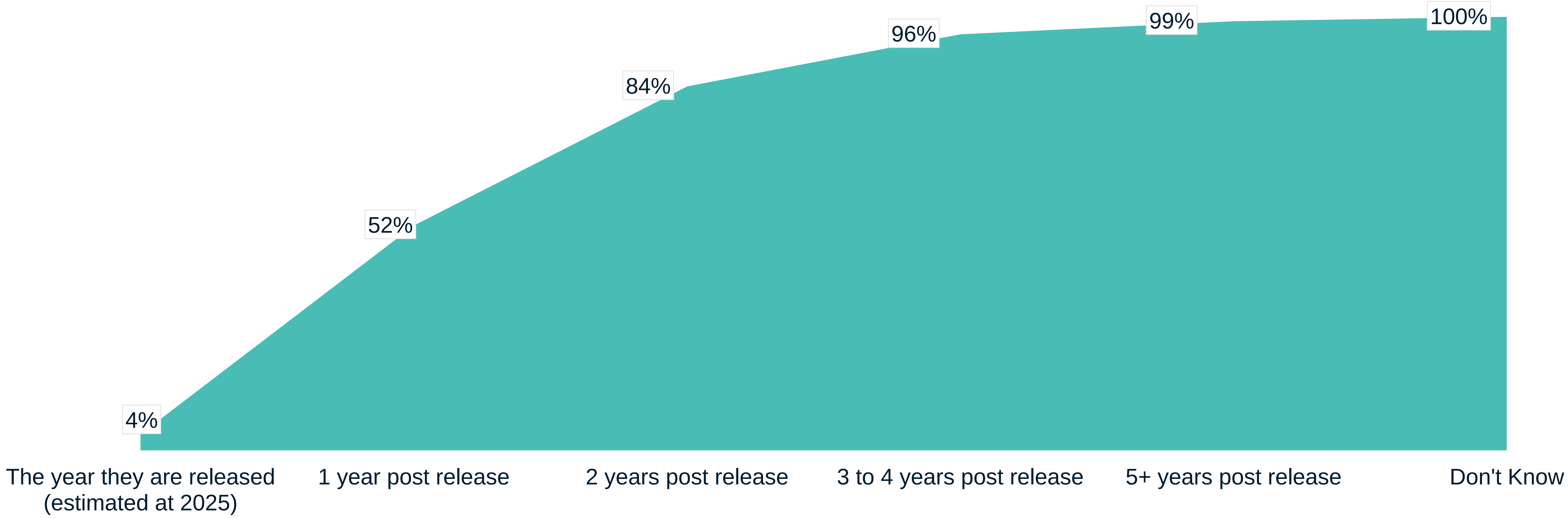
Source: GSMA Intelligence Operators in Focus – Network Transformation Survey 2023

5G Beyond: What we Need to Figure Out

will 5G-Advanced deployment expectations mirror Standalone?

5G-Advanced Deployment Timing

How long after commercial availability do you expect you will deploy 5G-Advanced?



Source: GSMA Intelligence Operators in Focus – Network Transformation Survey 2023

LINKEDIN POLL

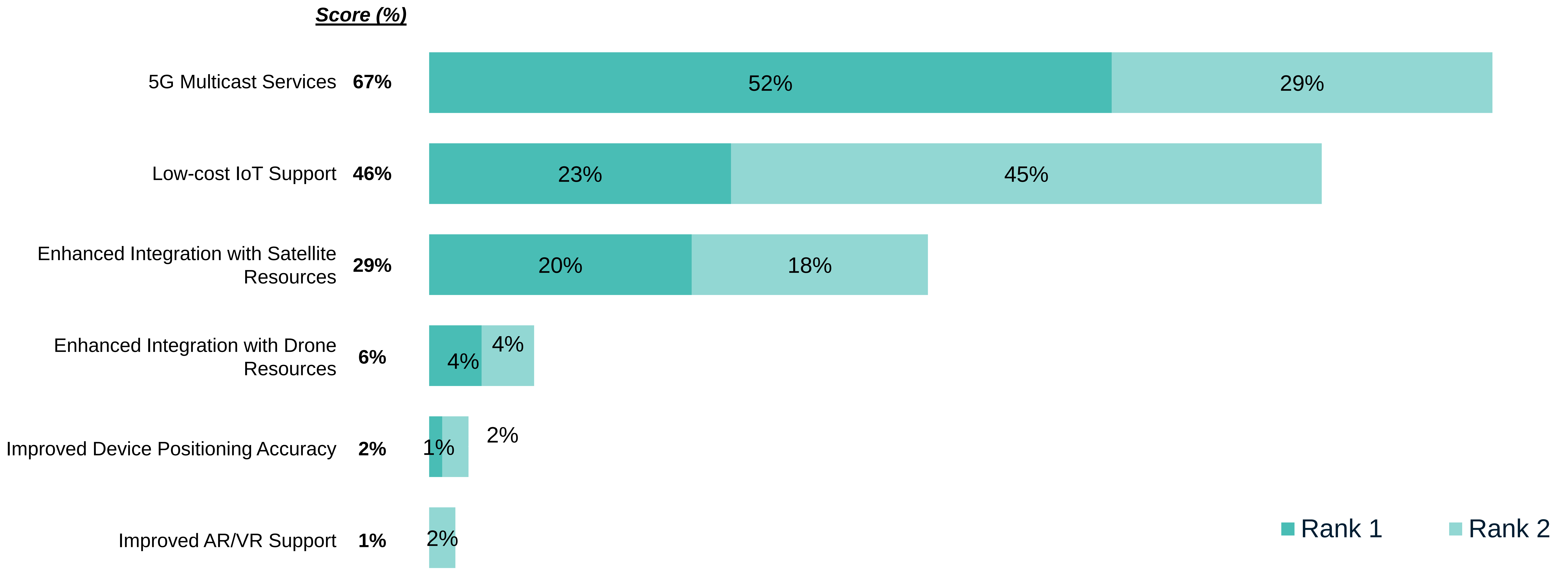
What do you think is the top priority 5G use case for operators in their considerations for 5G-Advanced?

5G Beyond: What we Need to Figure Out

and what will we do with 5G-Advanced?

5G-Advanced Use Cases

Which 5G-Advanced use cases and applications are most important to your network transformation priorities?



Source: GSMA Intelligence Operators in Focus – Network Transformation Survey 2023

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EU regional perspective on customer & enterprise markets

Juan Carlos Garcia Lopez
SVP Technology Innovation and Ecosystems
Telefónica

in

GSMA™

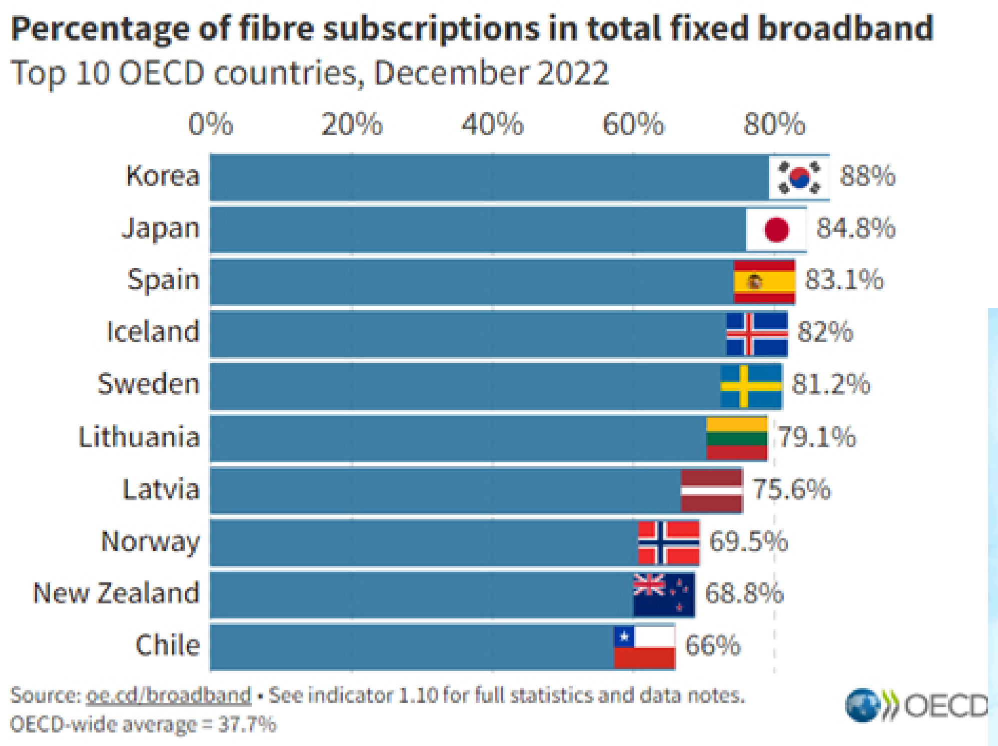
Ready to GO

https://www.telefonica.es/es/servicios/casos-de-uso-5g/

5G and fiber capabilities have been widely tested and shown in multiple use case trials.

Telecom operators and their potential customers know quite well what are the technical capabilities 5G provide.

if 5G capabilities are so valuable and spectrum, devices, technology are ready, why 5G is not fully realizing its benefits and business potential?



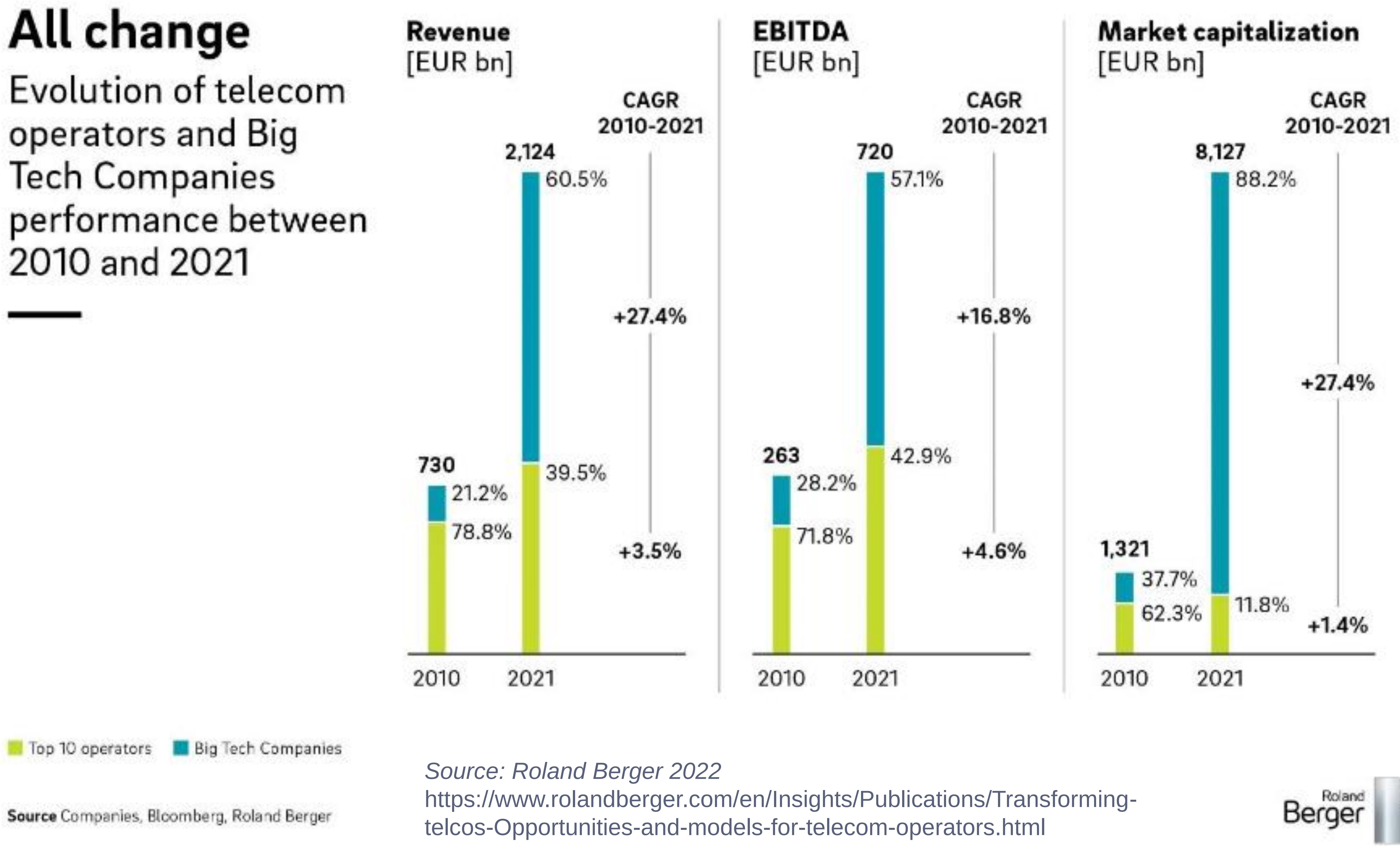
https://www.oecd.org/digital/broadband/broadband-statistics/

MNOs heavily invested on 5G spectrum, fiber and coverage but 5G radio deployment is still driven from MBB capacity demand (higher spectral efficiency in 5G, more bps per Hertz).

Population coverage reached 82% as of March 2023 (58% on New Radio) in Spain.

https://www.lamoncloa.gob.es/serviciosdeprensa/notasprensa/asuntos-economicos/Paginas/2023/300323-informe-cobertura-banda-ancha.aspx

Being a key player to enable them, MNOs have not captured the big value digital services generate



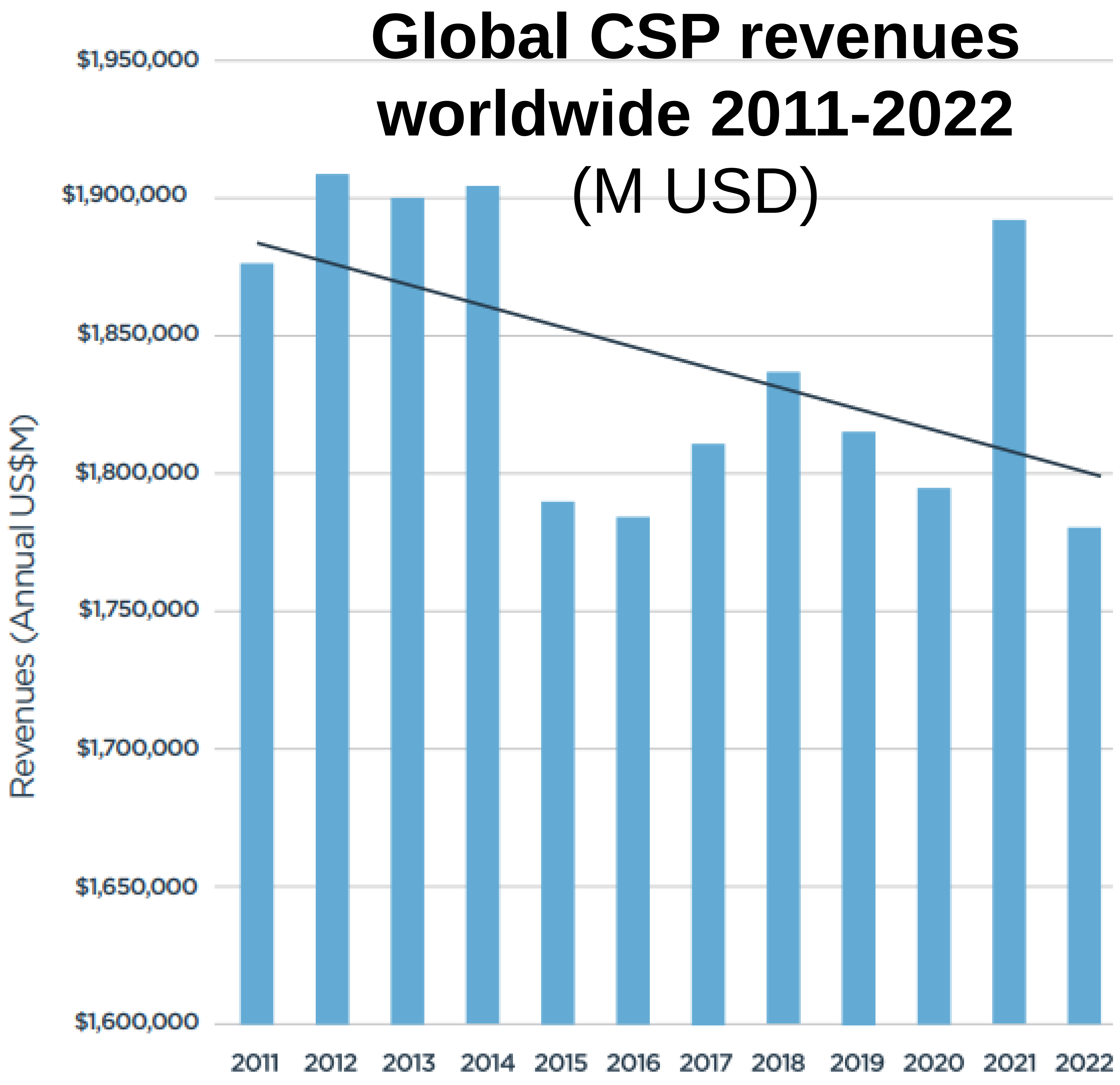
"Our industry's investment, some $1 trillion in the last 5 years, has delivered 0.9% growth. This is simply not sustainable, we've become disconnected from growth…"
Nik Willets, TMForum

"Telco's inability to evolve quickly has led them to be commoditized, asset-intensive businesses ..."
TMForum's CEO Playbook.

Source: Roland Berger 2022
https://www.rolandberger.com/en/Insights/Publications/Transforming-telcos-Opportunities-and-models-for-telecom-operators.html

Roland Berger

We must face the reality in terms of revenues…



Sources: TMForum, CEO Playbook. 31 August 2023.

B2C revenues are flattening at best:
- Mobile penetration above 100% for many years.
- High competition (100s of operators in Europe).
- New 5G revenue sources are limited (e.g., FWA succeeds only where Fiber is not available)

Consumers seem to have **appetite for digital services and applications** (like XR, gaming, etc, built over the top), but not on the connectivity itself.
- In the case of XR, affordable devices and contents are an issue, in addition to the need of some network capabilities.

Shift of **focus to B2B**, although growth is slow in that segment (long sales cycle). Many prospects still in PoC phase. Lack of solution industrialization (e.g., Edge, IOT).
Need to increase **innovation**, **agility** and **flexibility**.

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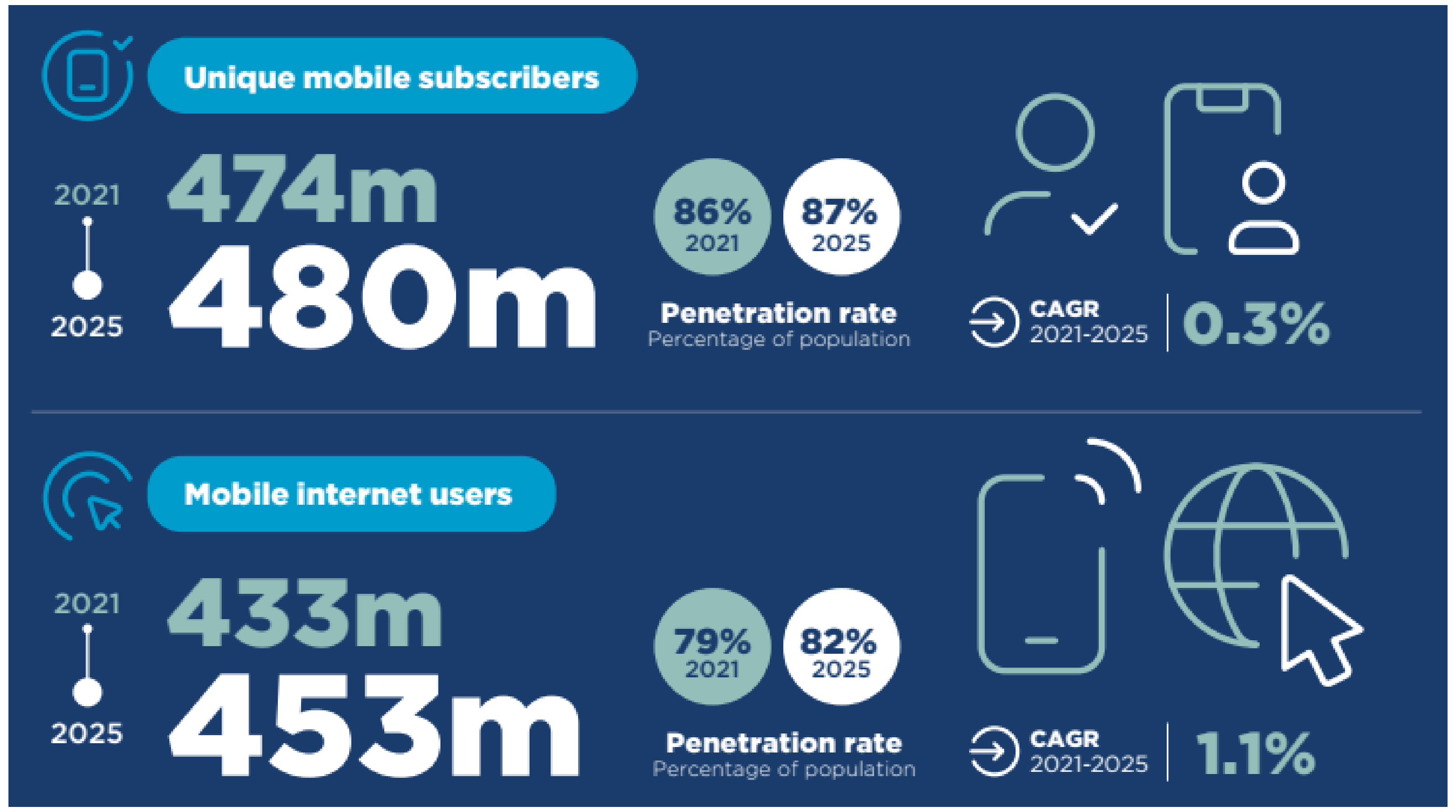
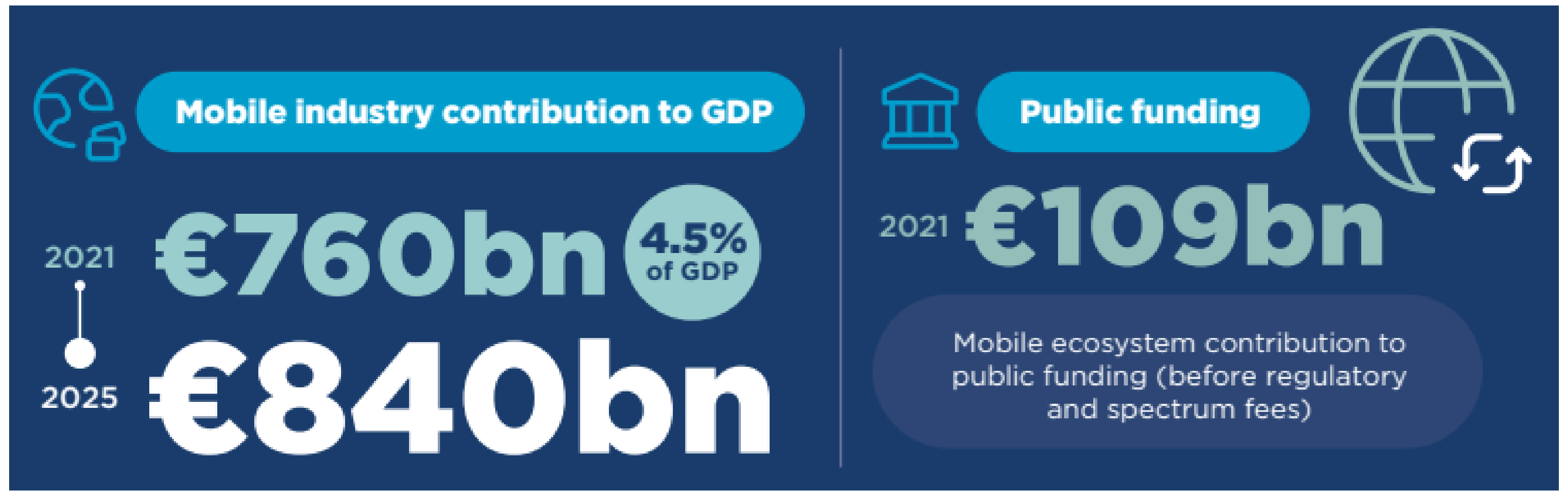
Competition is especially strong in Europe

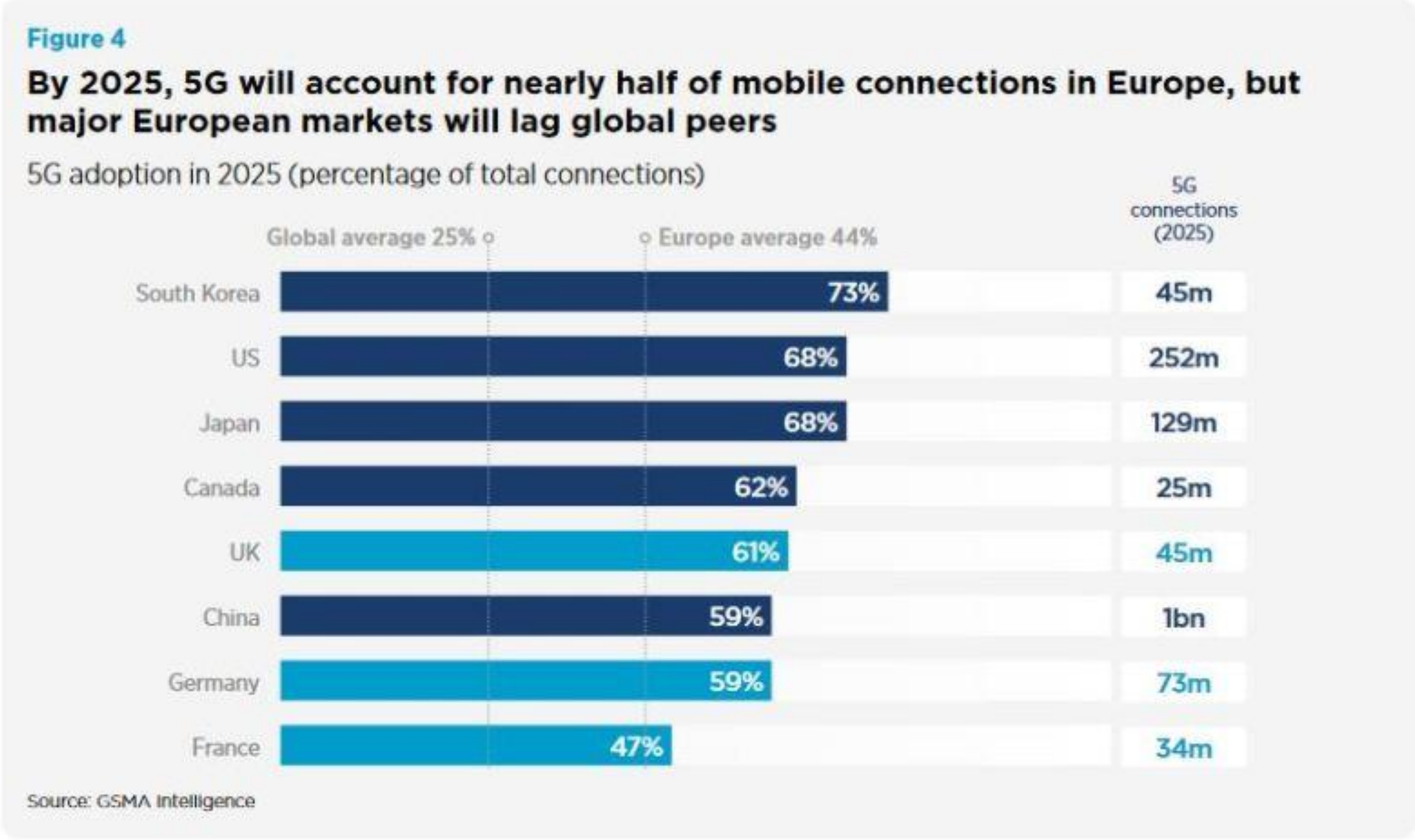
Limited revenue growth and high investment requirements…



…while its contribution to economy and society is recognized

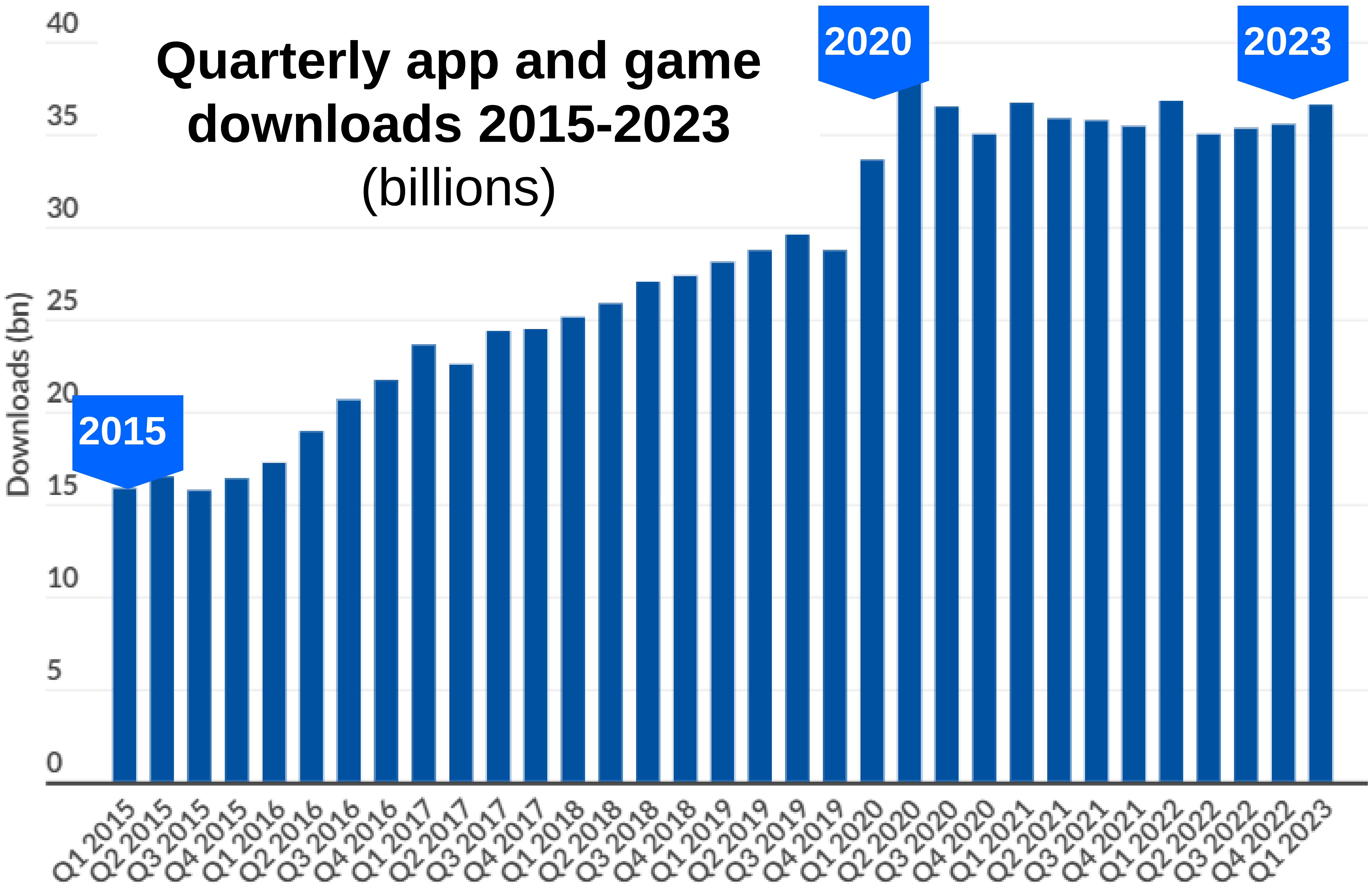


As a consequence, not much motivation:



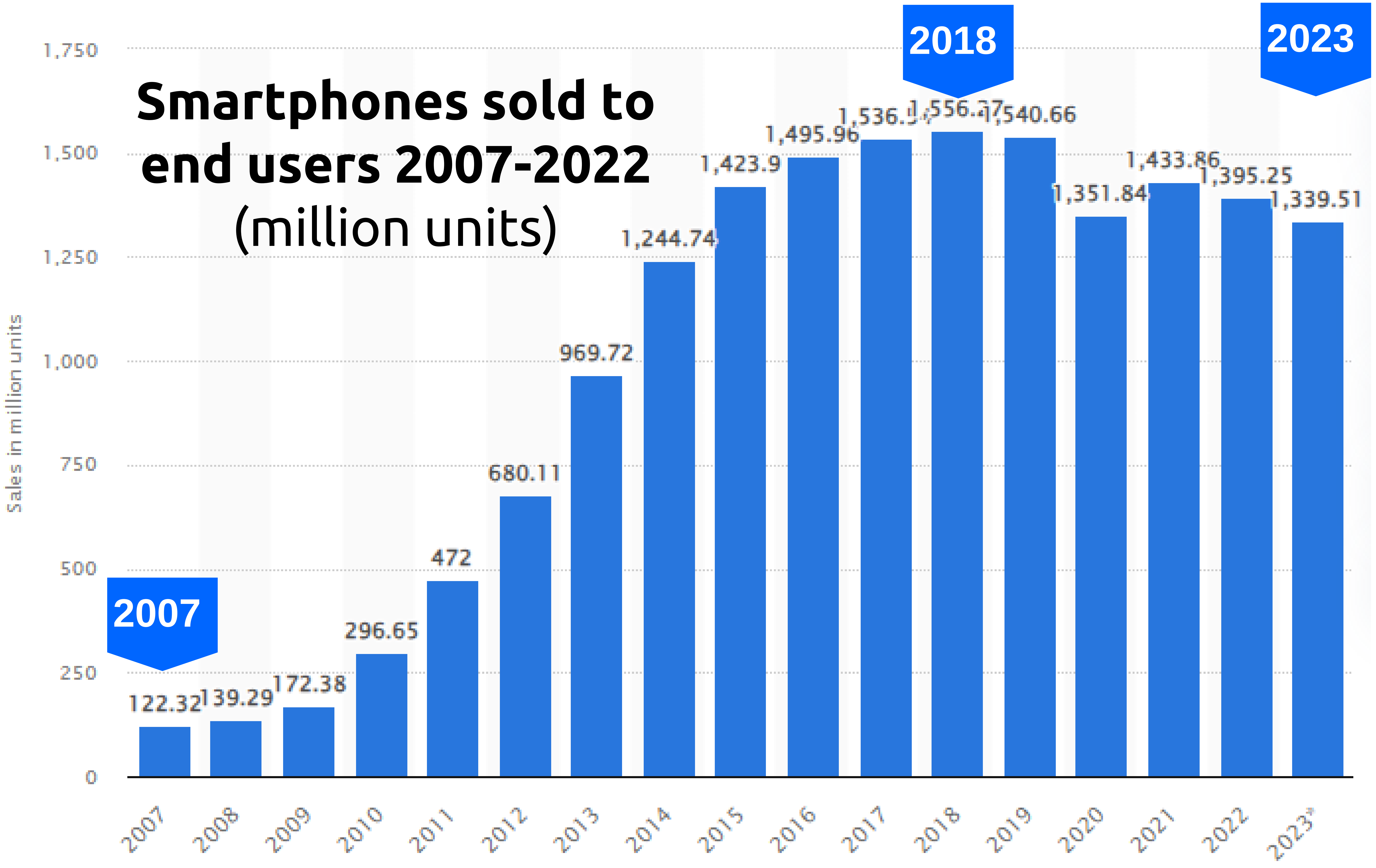
Source: GSMA Intelligence. The Mobile Economy in Europe 2022.

But other related sectors are getting into a similar situation…



Sources: AppFigures, Sensor Tower, BusinessofApps https://www.businessofapps.com/data/app-statistics/

Smartphone sales are also flatenning or even decreasing…



Everything points to the need of:

- **New capabilities** accessible to application and solution developers to create the next wave of applications and devices

But also:

- **A new business paradigm** to make telco sector again sustainable and attractive for investors

Sources: Statista 2023 https://www.statista.com/statistics/263437/global-smartphone-sales-to-end-users-since-2007/

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We need to change the model…

The Network needs to complete its digital transformation…

GSMA THE LINUX FOUNDATION

Digital capability exposure

- CAMARA THE TELCO GLOBAL API ALLIANCE — Open Source **Telco Service APIs** → Facilitates NaaS usage by developers
- GSMA Operator Platform — **Telco Capability Exposure** Platform → Facilitates NaaS implementation by telcos

High capacity low latency Cloud-native Network

- Cloud RAN Cloud FBA
- Cloud Transport
- Cloud Core
- Service Platforms

Facilitates Telco Cloud operation & management

- Manages Telco Cloud diversity ← Sylva — **Cloud Software Framework** for Network and Edge applications
- Reduces Infrastructure heterogeneity ← Anuket — **Reference Infrastructure framework** for Network Functions

NEPHIO — Cloud native **intent-based automation**

Carrier-grade, packaged, industrial Cloud environment

… in order to improve all business parameters…

Digital capability exposure

Increase agility and flexibility to generate new business and **revenue** opportunities

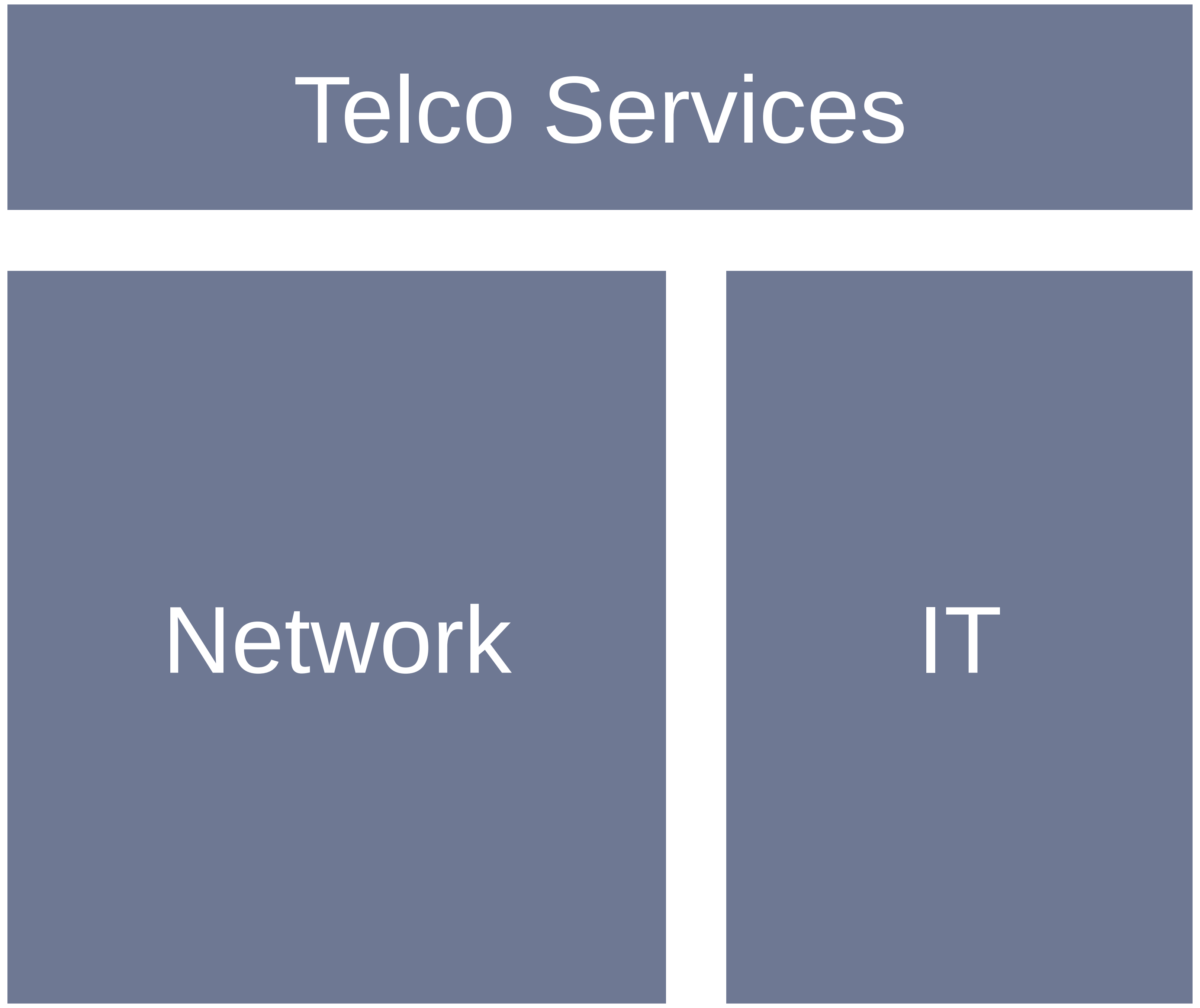
Cloud-Native Network

Improve **margins**: streamline operating costs
Increase quality of experience

Carrier-grade, packaged, industrial Cloud Infrastructure

Rationalize infrastructure **investment**: increase asset utilization

Traditional telecom architecture was vertical…



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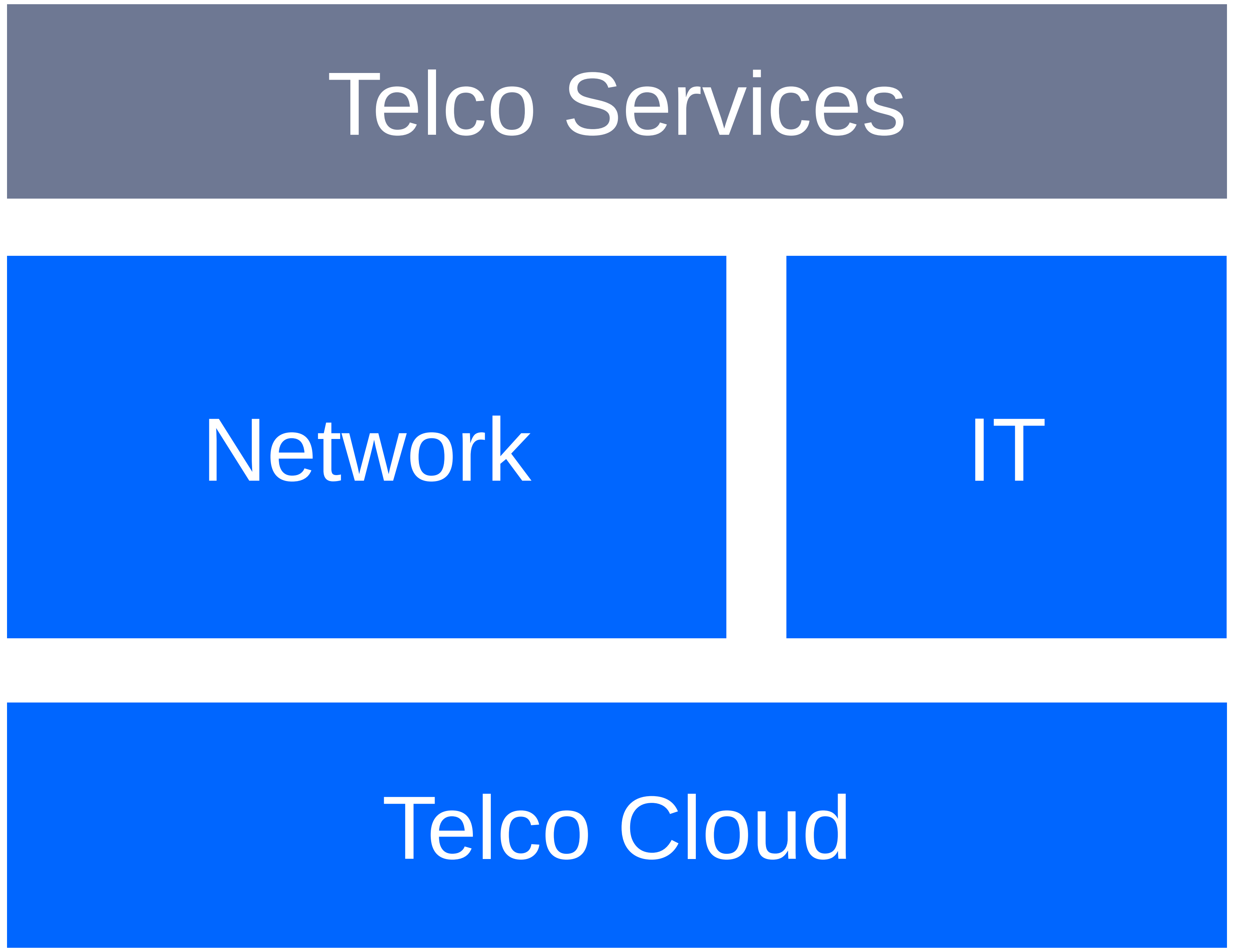
…and is moving to horizontal solutions based on cloud



Network and IT move to a highly distributed
Computing environment

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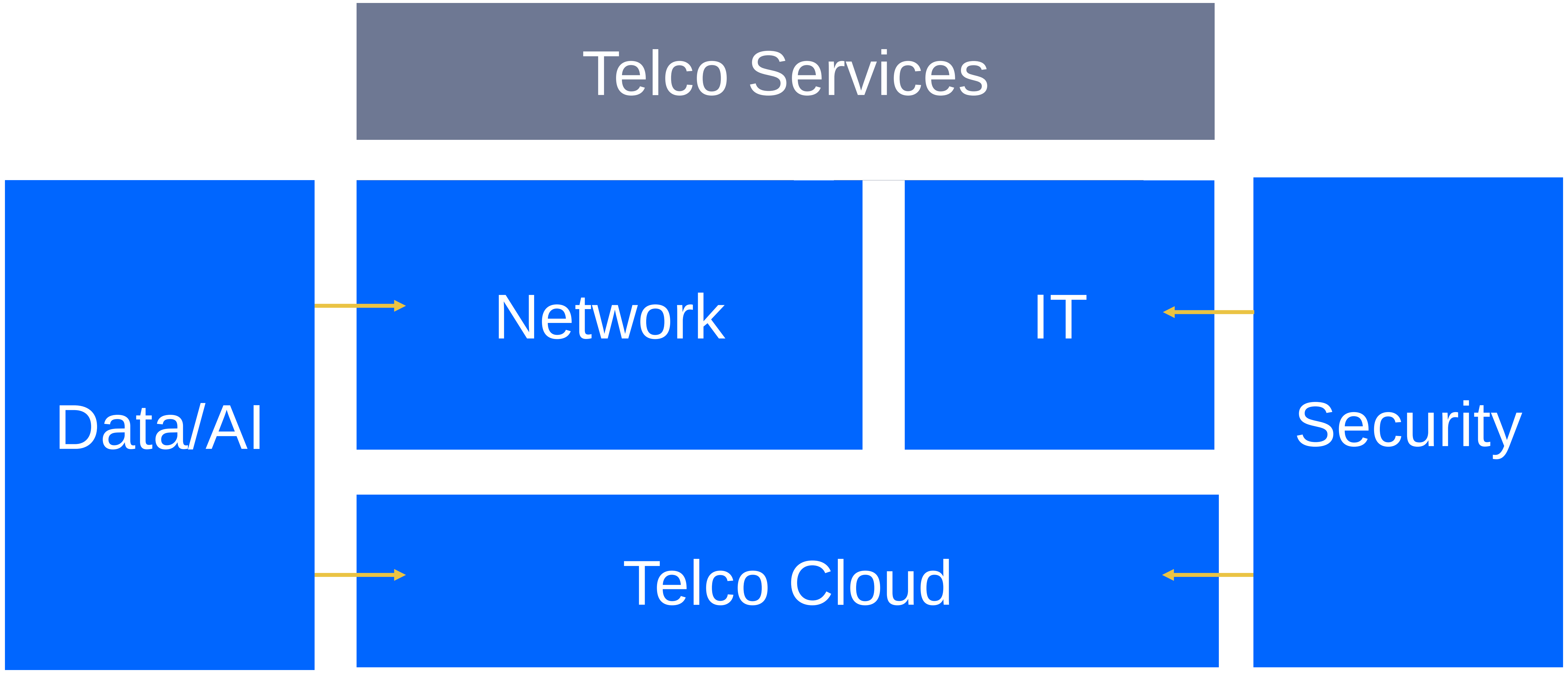
…with new functionality to cope with the increased complexity



Data/AI by design:
Operations are data-driven, AI/ML-assisted, Data/AI distributed across domains

Security by design:
Security considered in all domains and E2E systems from Day 0

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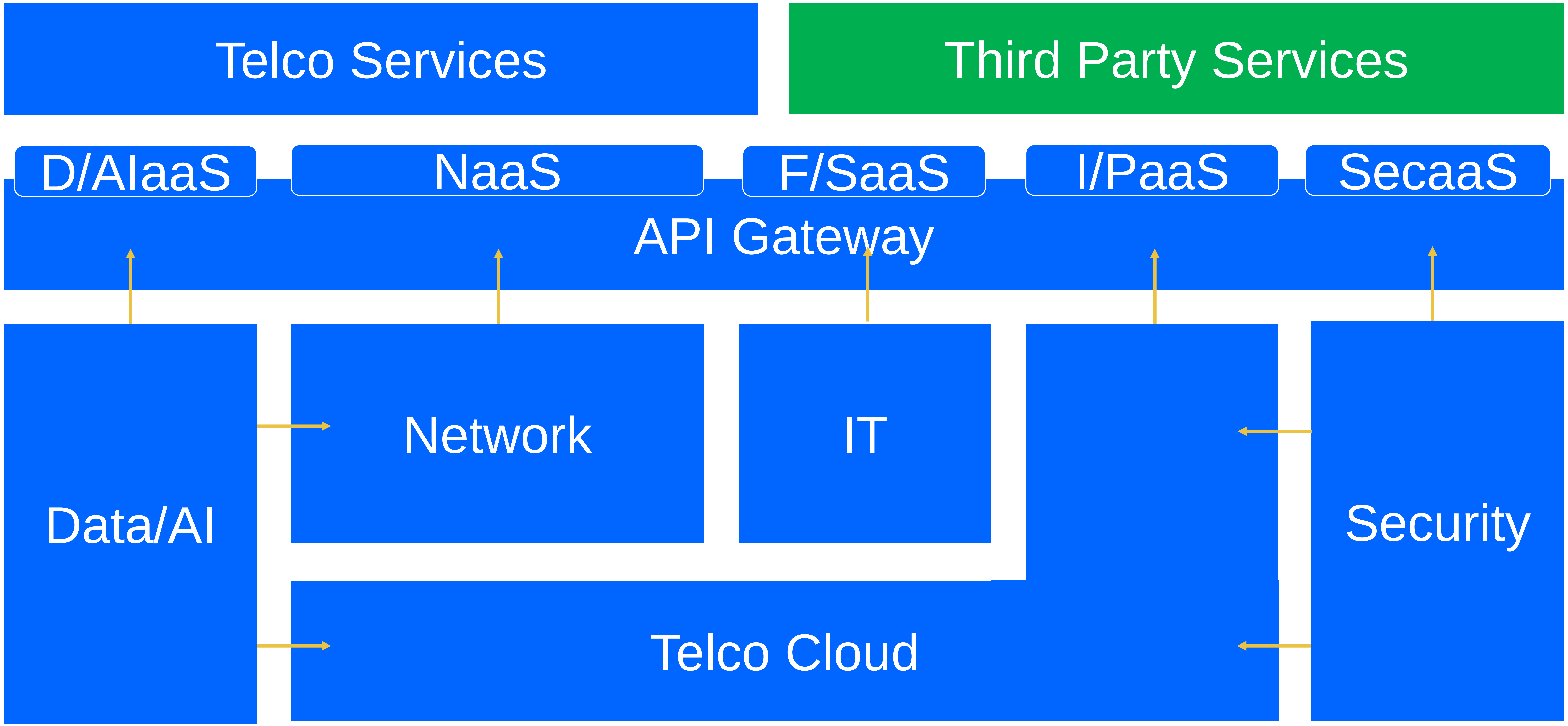
…and adding new capabilities and mechanisms to monetize them

New generations of telco services



3rd parties provide services using telco capabilities

Diverse capabilities exposed via Standard Service APIs

Challenges:
- New elements: **API Gateway**, Data/AI.
- **3rd Party Services** may affect Network and IT performance.
- **Security** gain relevance when the Network is open.

Telco Cloud is open to host 3rd party applications as well

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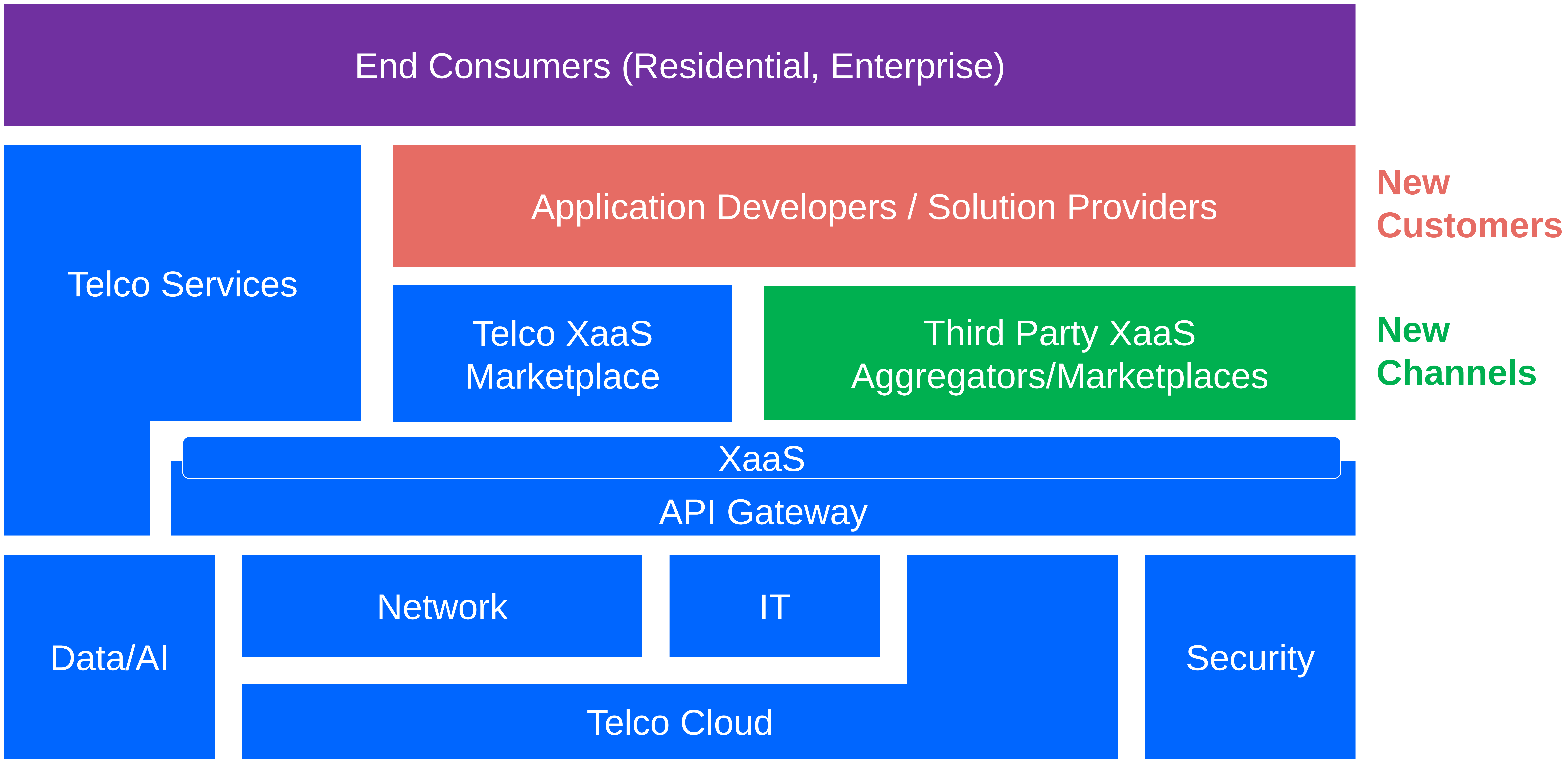
… and setting up new digital business models (B2B2X)



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Conclusions

- We should face the current situation of the Telecom Industry.
  - It suffers structural problems that require a deep model transformation

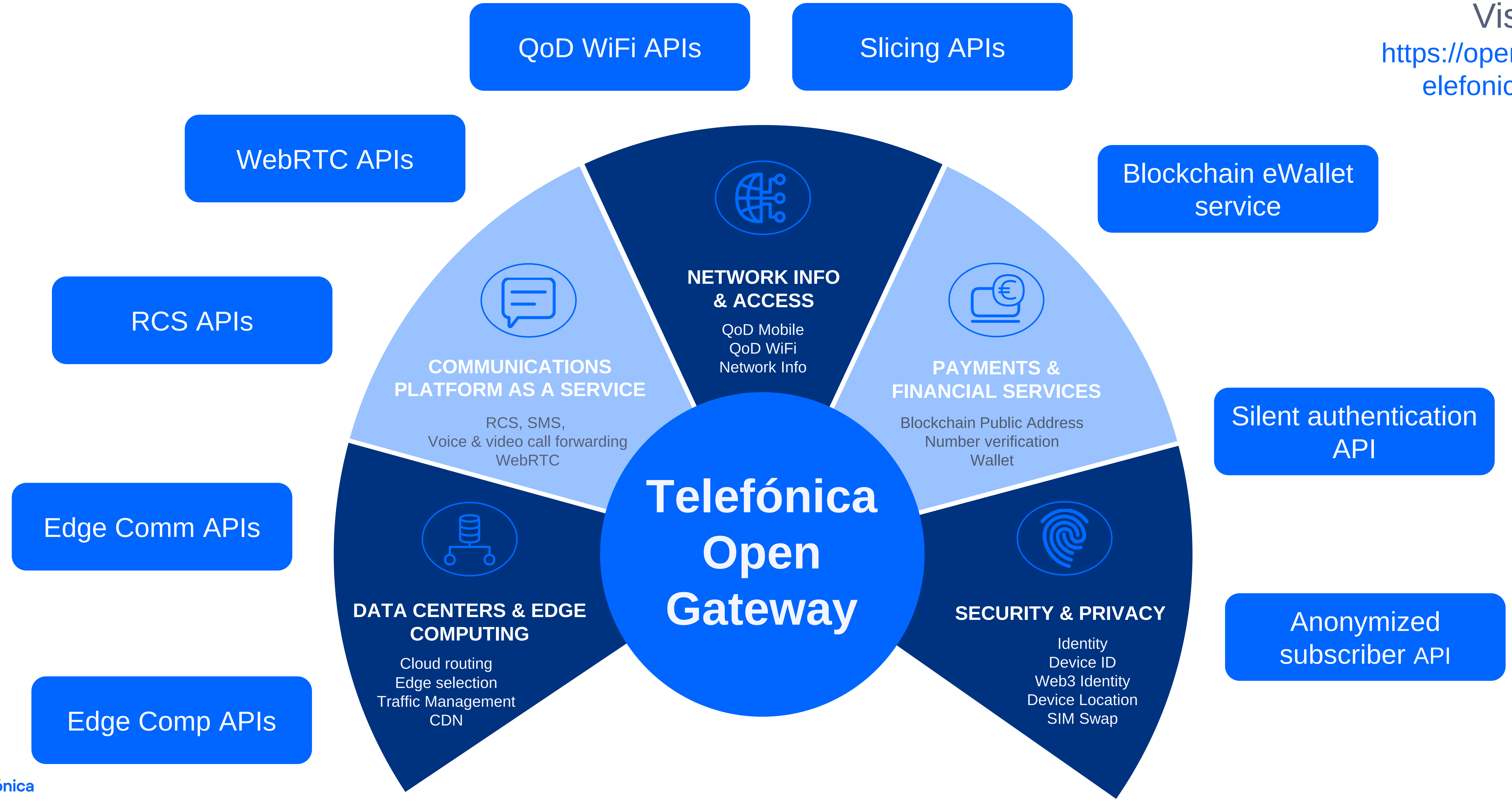
- Technology offers new capabilities that enable a new wave of services and applications, most of them coming from third parties,
  - but the enablers to expose and monetize these capabilities are missing

- Technology progress in Cloud, NaaS (APIs), Slicing, Edge and Automation/AI is required to make all these capabilities available
  - the investment to deploy them will have to be backed by a sustainable model

- Good news is that the Industry is already working to deliver solutions for this in the short term with initiatives like
  - Open Gateway and Slicing initiatives at GSMA, CAMARA, Sylva, Anuket, Nephio at Linux Foundation, and Operate APIs and ODA at the TMForum (among many others…)

As an example, Telefonica is building a rich and dynamic portfolio of capabilities based on GSMA Open Gateway APIs

Visit:
https://opengateway.telefonica.com/



Fireside Chat
The consumer standpoint

Jordi van den Bussche (Kwebbelkop)
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Panel discussion

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Upcoming GSMA webinars & in-person events

LIVE Webinar
5G New Calling

Wednesday 20 September 2023

11:00 – 12:15 BST

LinkedIn Live (online)

Register here

MWC23 Las Vegas
5G Futures Summit

Tuesday 26 September 2023

14:00 – 17:30 PDT

Las Vegas Convention Center

Register here

MWL Unwrapped Webinar
The 5G Evolution

14 – 16 November 2023

Online webinar

Register here

Thank you

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