Sustainability Summit at MWC 2024

Energy Efficiency vs. P&L Transformation

Hosted by GSMA Intelligence

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GSMA Intelligence
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GSMA Intelligence is the definitive source of mobile industry insights, forecasts, and research, used around the world. Our insights cover every mobile operator, network, and MVNO in every country worldwide.

COMPREHENSIVE DATA PLATFORM	INSIGHTFUL RESEARCH	EXPERT ANALYSIS	BESPOKE CONSULTING	EVENT SUPPORT

Who we work with

- Mobile Network Operators
- Regulatory Bodies
- Government Departments
- Financial Corporations
- Cybersecurity Firms
- OEMs and Manufacturers
- Technology Companies
- Consulting Businesses

BY THE NUMBERS

7/10

of Forbes’ Top digital companies worldwide, rely on our data and insights

50m+

individual datapoints covering everything from operational to economic

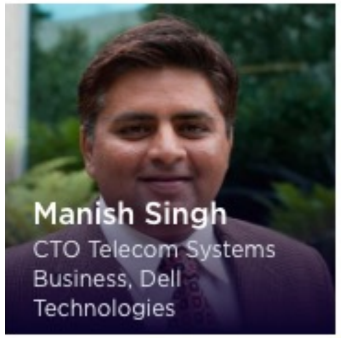
4,600+

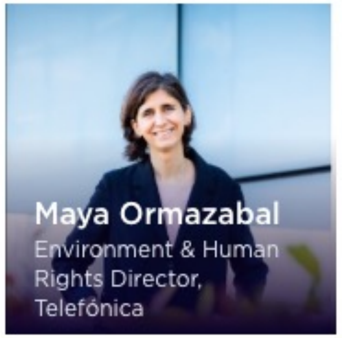
networks tracked, spanning every country

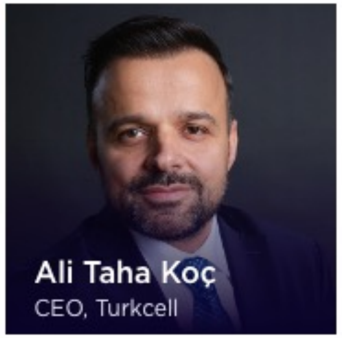
9/10

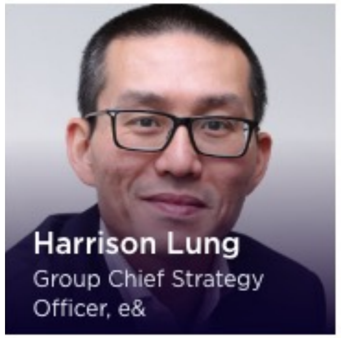
of the top Telecoms in the world work with GSMA Intelligence

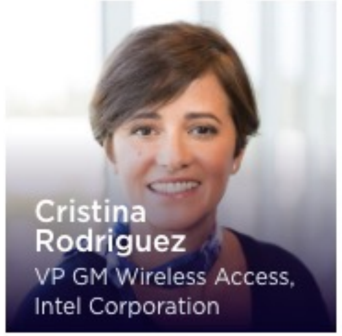
Speaker Line up

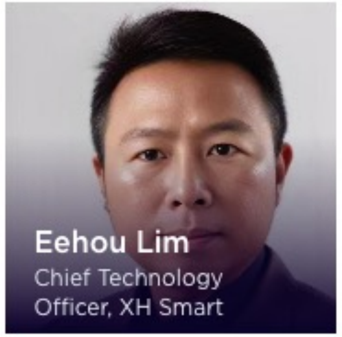


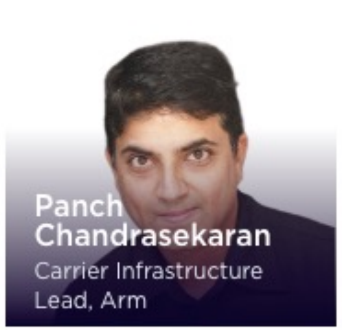


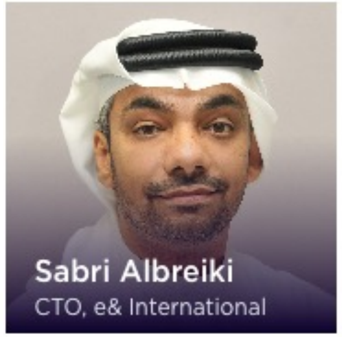


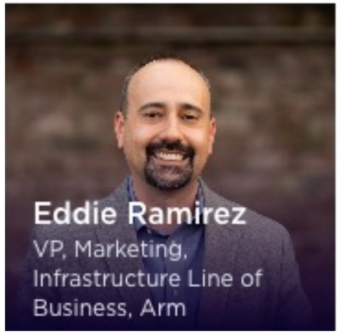


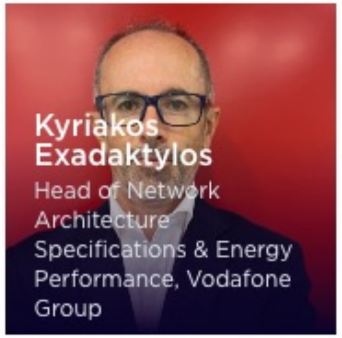


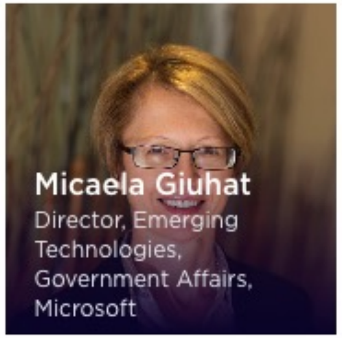












Why it matters in 2024

Costs, revenues and a sustainable economy

Environment

- **Targeting all Scopes.** Telcos account for around 1% of global energy usage. Huge efforts being made to tackle direct emissions (Scope 1 and 2), although with growing focus on Scope 3 – which, at 65% of the total, are the lion's share.
- **Decarbonisation opportunities.** The circular economy has emerged as an opportunity to help with decarbonisation and, to some extent, revenue growth across the value chain. Circular procurement is a key strategy operators can use to reduce their supply-chain emissions.

Financials

- **Stubborn costs.** Energy still takes 15-20% of opex, making it a stubbornly persistent cost impact for most telcos. Mitigating this through efficiencies (and renewables) remains a priority for financial health.
- **Don't forget about revenues.** The potential revenue gains from green products is less understood but equally valid. Green-linked tariffs on the consumer side and the use of energy efficiency as a USP for private wireless and IoT on the enterprise side are examples.

Partnerships

- **Co-innovation.** Over 75% of operators rate sustainability as a top 3 priority in their 5G network upgrades. The vendor innovation pipeline to service this need continues to be well stocked, with co-innovation (joint ideation and testing with clients) a growing part of the solution.
- **Circularity is not easy.** Complexities include the logistics of recycling equipment and how to incorporate refurbished parts into existing equipment. This means telco-vendor alignment are required to drive circular economy objectives.

The road to net zero

Commitments

At the end of 2023, operators continued to lead the market in terms of their commitment to key sustainability efforts.

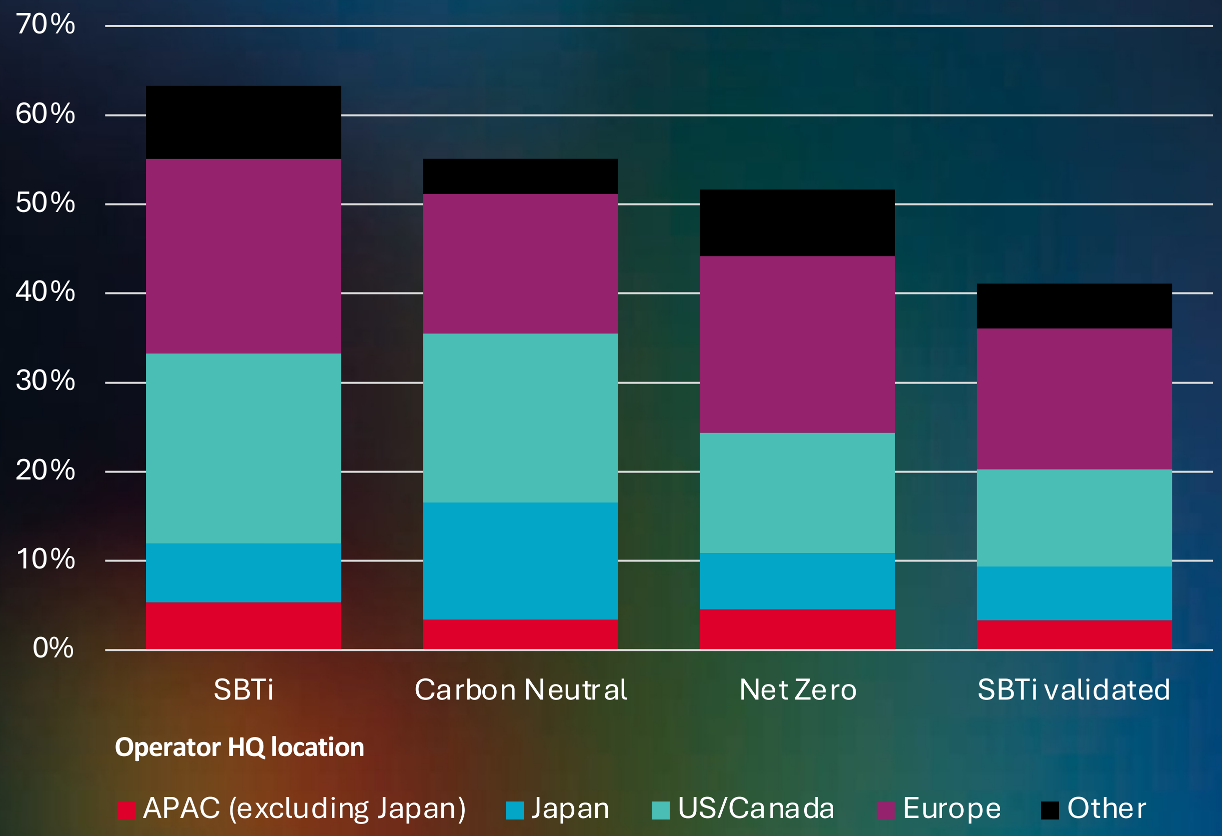
- 63% @ Science Based Targets initiative (SBTi)
- 52% @ UN Race to Zero pledge

Stark Regional Variations

- Global averages mask significant regional variation
- Europe still ahead, though momentum growing in India and Asia in particular

Global market share (mobile revenue) of operators by commitment

Source: GSMA Intelligence



Net Zero vs. 5G Era compute demands

Push factors

- Access networks: 5G and fibre build outs lay the basis for higher bandwidth applications
- Cloud and edge: continued expansion in datacentre capacity in the public cloud, and on-prem infrastructure for edge compute (variety of sectors)

Pull factors

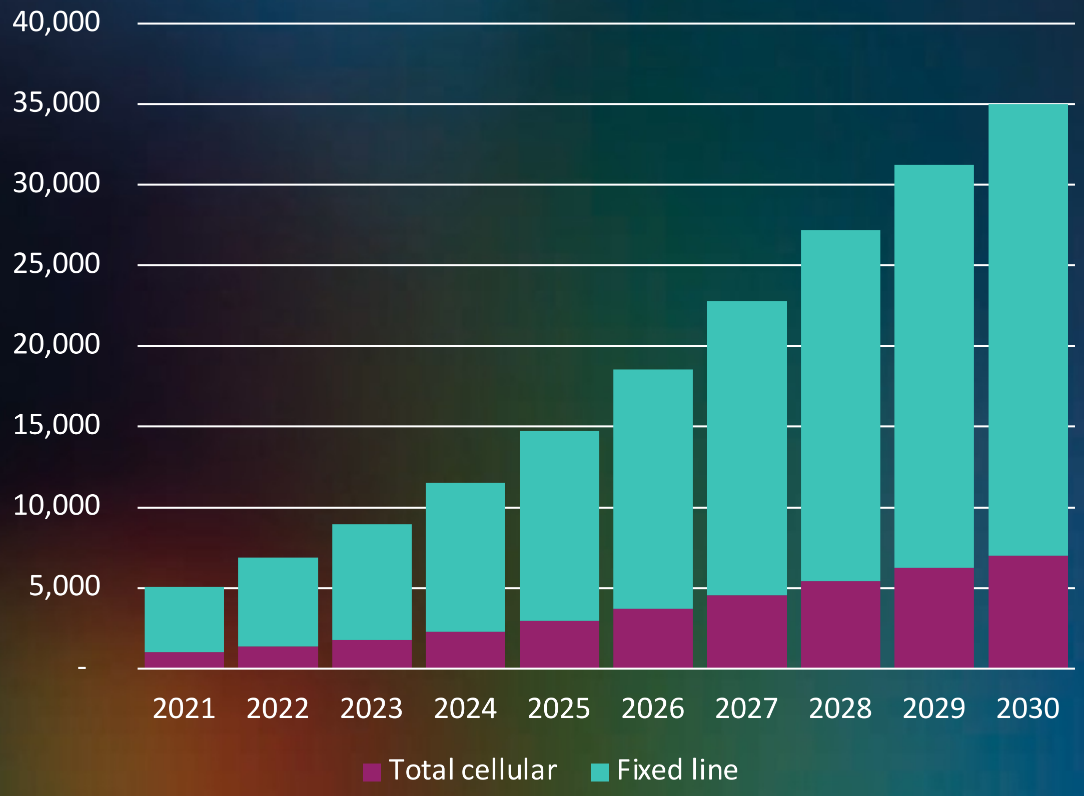
- Demand: higher bandwidth use cases (streaming, gaming, XR potential)
- = higher usage per person per month

AI X-Factor

- Traffic rise may be mitigated by more efficient processing
- AI is a big change factor here, affecting chipsets, processing algorithms, and even overall network design

Global internet traffic: 6x up by 2030 on today's levels

Source: GSMA Intelligence



Net Zero vs. complex compute architectures

It takes a village

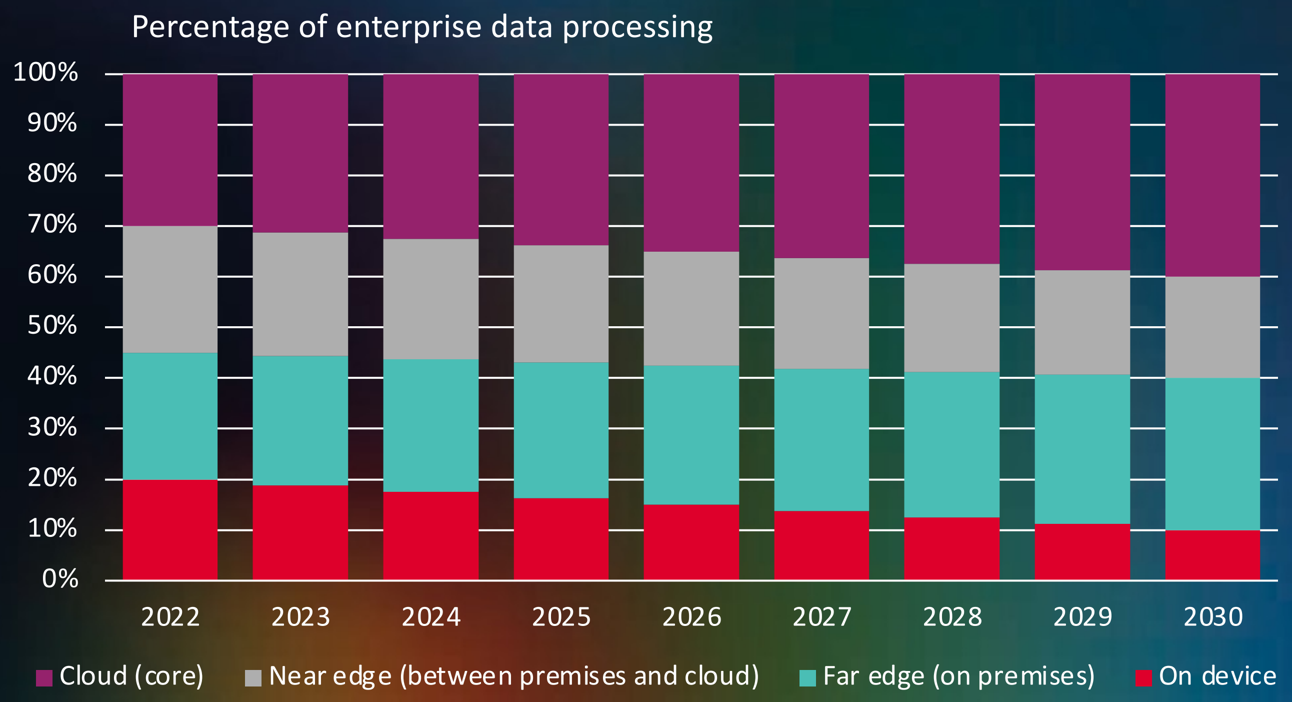
- Traffic rises and virtualization foreshadow rise in cloud and edge processing
- This means telcos need to work with IT, cloud and SI's to optimize traffic processing

Shifting trend: Demand for localized compute

- Broader trend of B2B clients seeking to have more compute handled on-premises as part of industry digitization
- MEC and cloud compute are two sides of the same coin

Cloud and on-premises edge to soak up the majority of the load, with share for devices falling

Source: GSMA Intelligence survey on operator edge compute (June/July 2023)



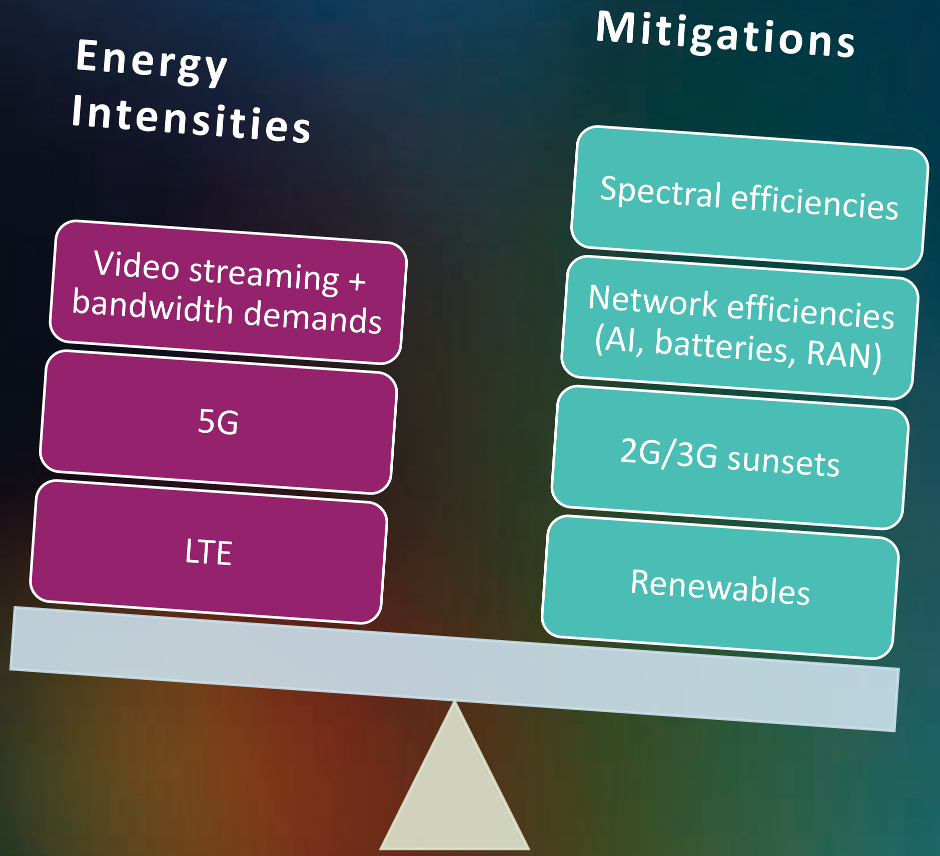
Lowering energy for telcos is a holistic challenge…

Holistic vs. silos

Need to view energy reductions as part of a systemic process rather than individual solutions

Network stack, bottom to top

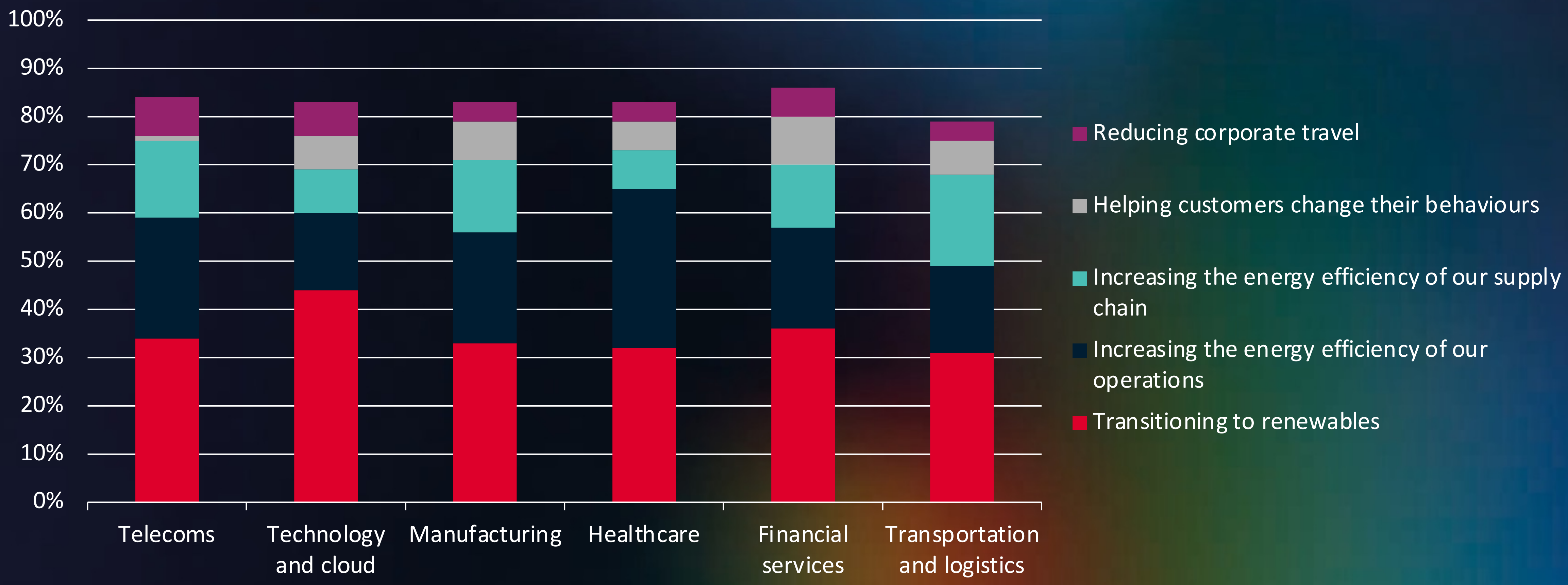
- RAN accounts for the majority of the energy usage, but…
- Virtualisation means edge and cloud architectures are increasingly key, as are chipset designs at the base layer



…but renewables and energy efficiency dominate thinking

What do companies view as the No.1 way of getting to a zero-carbon business model?

Source: GSMA Intelligence



Health check: circularity

Definitions

- Basic but still important
- Key to help move from concept to commercial reality

Operator roles vs. others

- Operators are among biggest buyers of handsets, CPE and other H/W
- However, OEMs and vendors are closer to manufacturing process…and by extension, product design
- Coordination key

Market mechanisms

- Certifications
- Secondary trading markets (e.g. metals)

Deployments and need for proof points

- Only around 15% of handsets recycled so far
- Upping this, and expanding to network equipment, needs case studies and proof points on process and value gain

Key circularity practices for operators

Source: GSMA Intelligence

Supply Chain

- Sourcing of sustainable materials
- Reusing and refurbishing products taken back
- Sales of refurbished devices
- Sales of long-lived devices
- Device recycling
- Design equipment for end-of-life disposal
- Tracking system and standardised metrics
- Understanding consumer behaviour

Operations

- Reusing and repairing network equipment
- Recycling network equipment
- Refurbishing network equipment
- Resale of network infrastructure
- Network softwarisation

Products and Services

- Attractive device take-back programmes
- Device repair offers
- Device-as-a-service
- Raising consumer awareness of the environmental impact of device disposal

Health check: competitive weakness vs. strength

High level thinking

Everyone understands the value of a focus on sustainability.

Competitive weakness

But…most operators see themselves as behind the curve (survey data in chart)

Why?

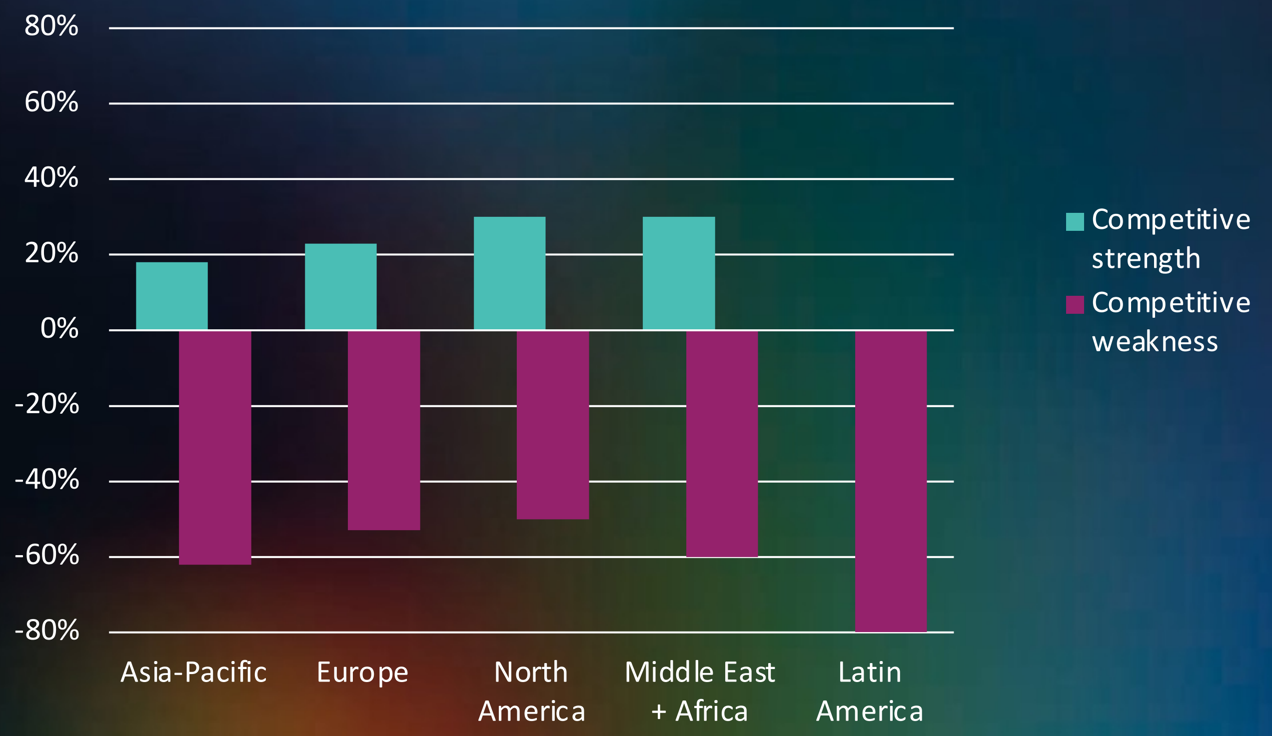
- Lag effect: boardroom to strategy to product
- Not historically a selling point
- Sales approach

Window of opportunity

Implies chance for early movers to capitalise

Most telco operators see themselves as BEHIND on sustainability (even though it's a priority)

Source: GSMA Intelligence



Where do we go from here?

Embedding sustainability into the product

Technology

- **Energy efficiencies:** do the numbers keep moving in the right direction as 5G scales? How is AI best used?
- **Chips story:** how do you extract energy efficiencies when Moore's Law slows and processing demands grow?
- **Energy-as-a-service:** new models for accessing renewables + streamlining passive infra ops. Can these go mainstream? Role of tower co's and energy groups?

Partnership/ Biz model

- **Scope 3**: lion's share of emissions (65%+), but how to coordinate up/down supply chain?
- **Network buyers and sellers:** how can network design be co-architected between telcos and suppliers?
- **Circular economy:** does recycling go beyond smartphones? How to form a proper secondary trading market (e.g. network equip, metals)?

Regulatory

- **Government action:** under 30% of nation states have *legislated* net zero. When does this change?
- **ESG impact:** how much does ESG reporting KPIs act as a ratings or valuation criteria?
- **Investors and exchanges:** do stock exchanges impose listing req's?
- **Procurement:** only 1% of companies screen 75%+ of their suppliers on sustainable criteria.

Recent Reports – Available with a public account

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