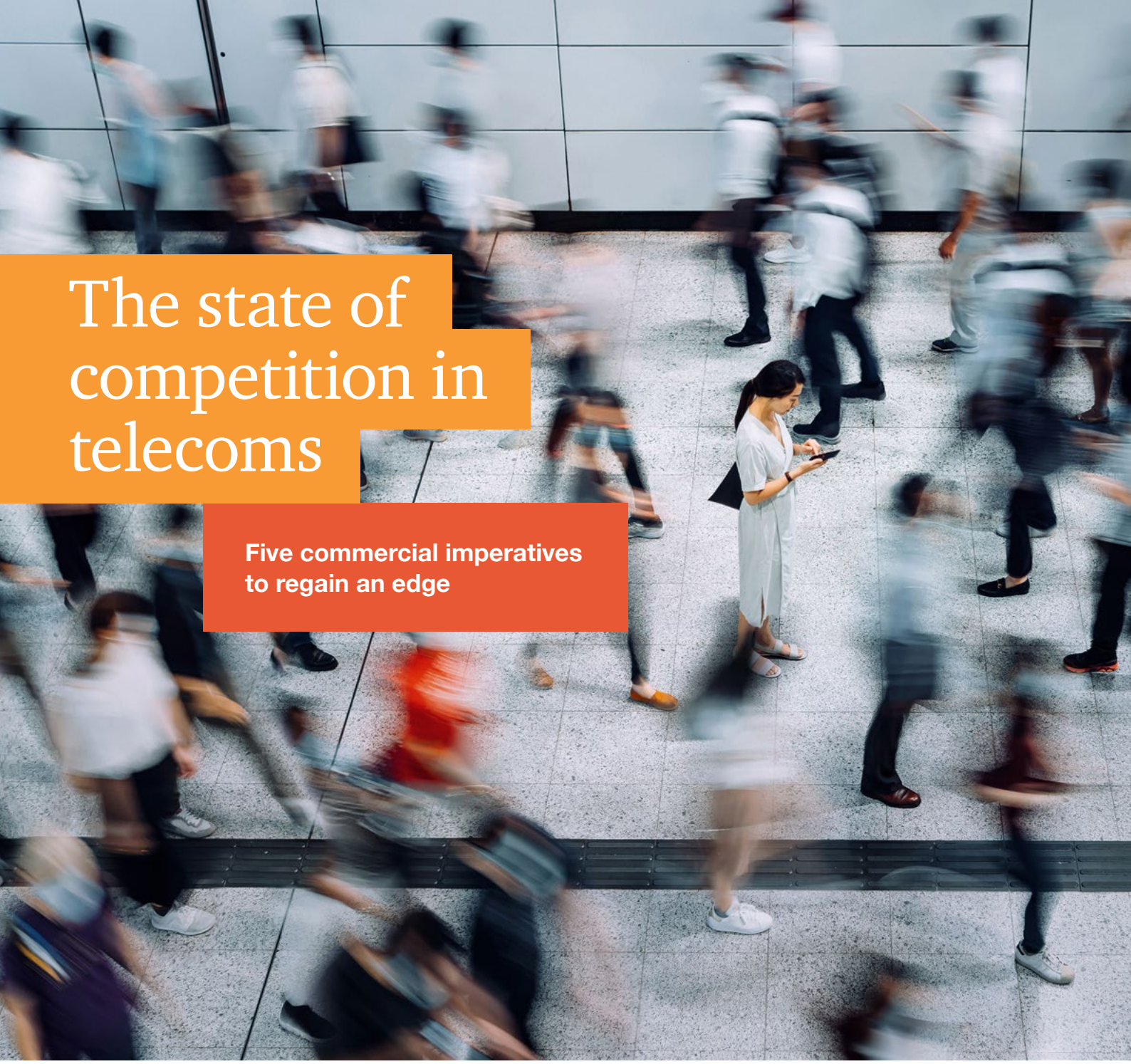

The state of competition in telecoms

Five commercial imperatives to regain an edge

March 2025

pwc

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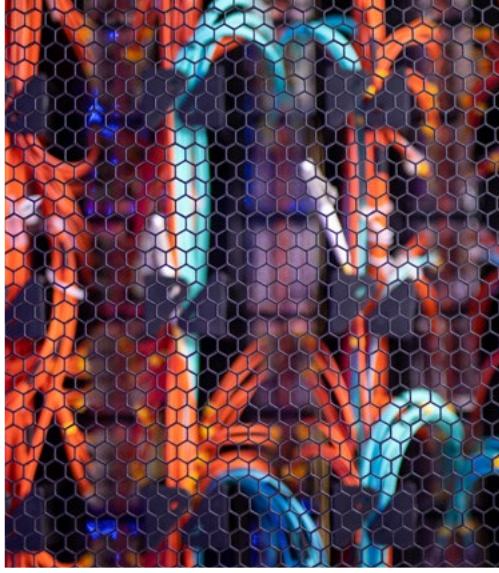


The state of competition in telecoms

Five commercial imperatives to regain an edge

Telecoms operators face a pressing need to improve their economic performance and cash generation to regain their competitive edge. PwC explores the market context and areas operators must focus on to do this – and highlights what they can learn from leading operators that have already started to separate themselves from the pack.

An industry facing increasing pressures on both revenues and costs

Telecoms operators across the world are under continued strain. The overarching cause? An intensifying demand/supply squeeze that's driving the industry towards commoditisation – thereby making the existing telco business model increasingly difficult to sustain, and demanding radical action to restore differentiation in the connectivity market.

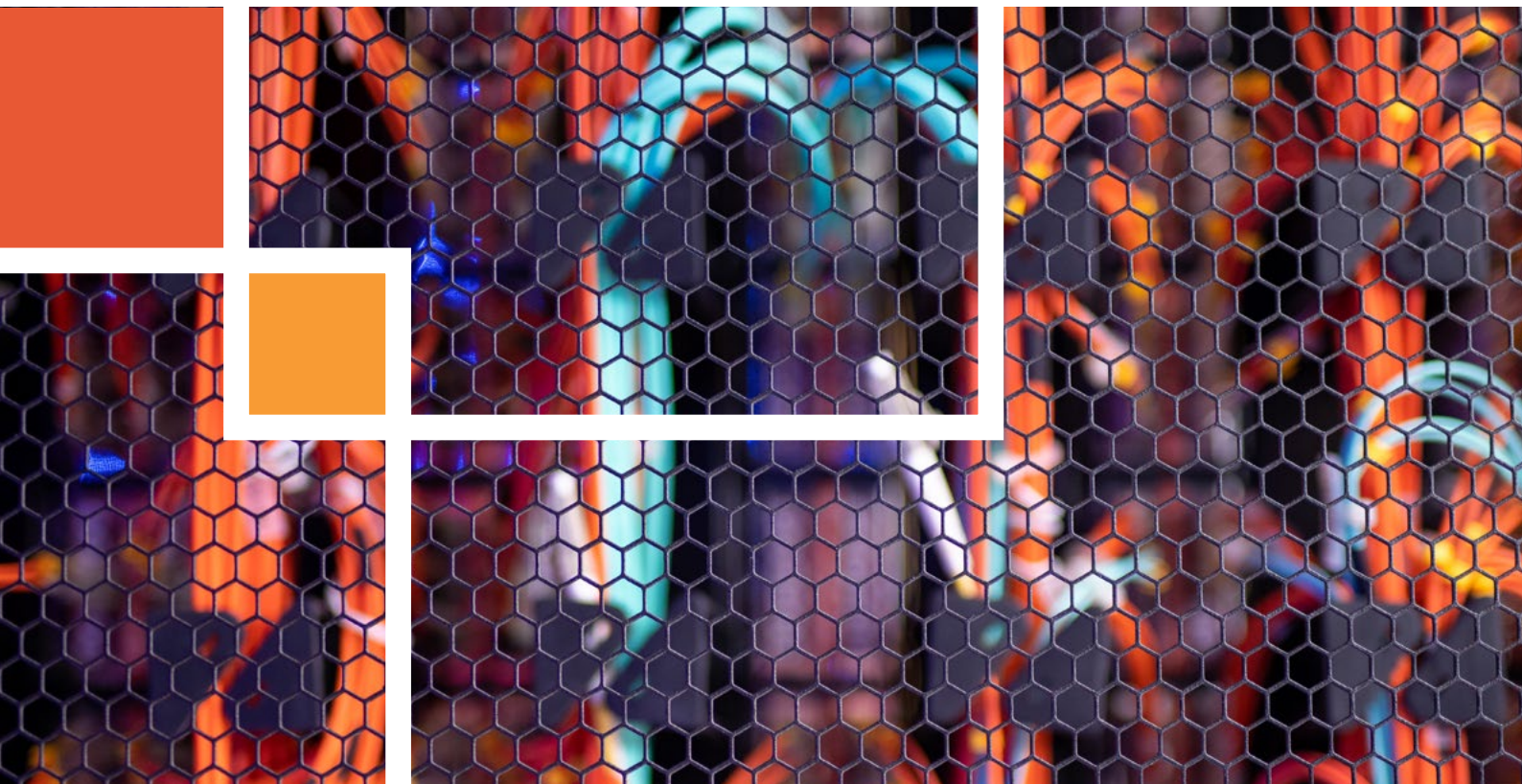
The squeeze has both revenue and cost components. On the revenue side – as highlighted in PwC's recent Global Telecoms Outlook Perspectives report – industry revenues are stagnating globally. In fact, they're projected to rise at a compound annual growth rate (CAGR) of only 2.9% over the five years from 2023 to 2028, held back by headwinds including slowing macroeconomic growth, increasing saturation in core telecoms markets, and uncertainties around new and emerging revenue streams like 5G services and business-to-business (B2B) solutions including internet of things (IoT) applications.

The other side of the squeeze facing operators is – inevitably – costs. These are increasing across the board, most obviously for energy and labor. But further “hidden” cost pressures are also arising, spurred by the widening global technological divide and supply chain shocks, as the growing polarisation between the West and East in terms of tech stacks puts the supplier ecosystem under strain and reduces overall scale. All of this is compounded by the effects of general economic weakness and uncertainty on telcos’ cost base, and the difficulty of fully passing through the recent spike in inflation onto customers’ bills.

AI: setting new expectations for efficiency

That said, advances in the use of AI technology may positively impact telcos in a number of ways during the period. One is that rising adoption of AI – including GenAI – is poised to deliver meaningful uplifts in telcos’ productivity and efficiency through automation and more effective use of their data assets, alongside greater intelligence at the customer front-end. Those players who do this well will be able to shape more personalised marketing offers and sales and service experiences for customers, boosting revenues and net promoter scores (NPS). The question is how long it will take for the competition to catch up with the early movers, turning these capabilities into table stakes. PwC has been helping several of these early movers – e.g., leading US operators – to drive better and more efficient customer experiences by deploying AI in its customer success organisation, improving revenues and customer retention.

At the same time, rising usage of AI will go hand-in hand with the construction of the ‘AI grid’ made up of connectivity, compute and the sustainable energy to power it all – opening up a massive digital infrastructure opportunity for not just for telcos, but also for cloud/data center service providers and utility companies as well. Given these competitive dynamics, it is by no means a given that telcos will gain the most from the building of the AI grid. But it does offer them a golden opportunity to serve the growing demand for connectivity, while also opening up possibilities for them to participate in other areas of the required digital infrastructure too, such as data centres and energy.



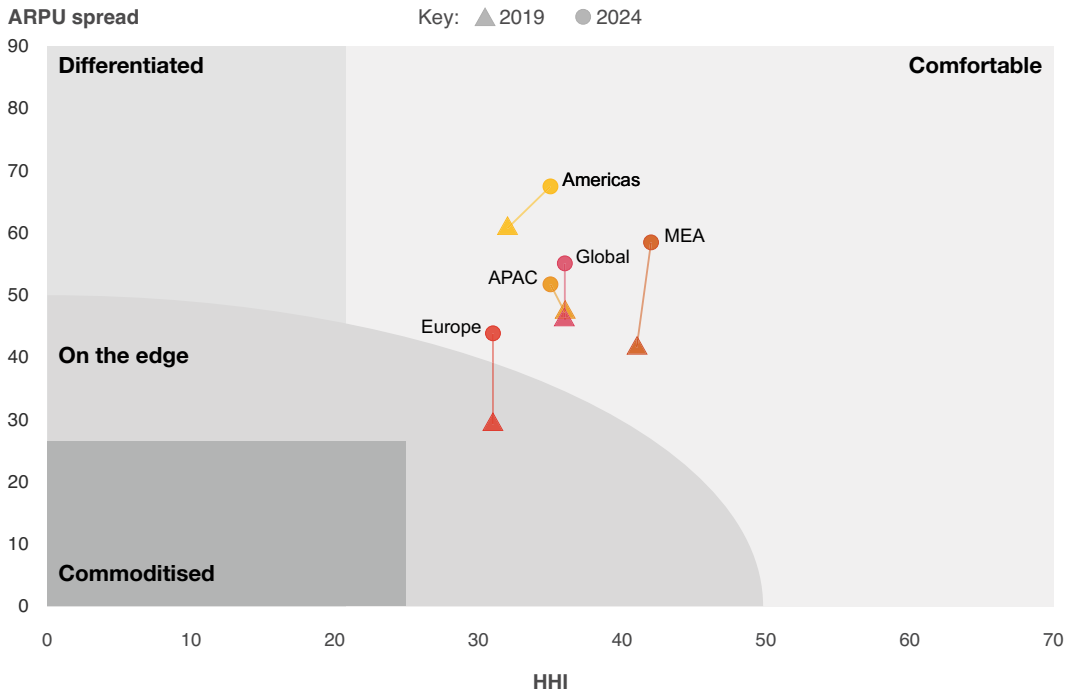
Mapping out competitive intensity in mobile telecoms worldwide

Against this challenging backdrop for telcos, PwC has conducted detailed research across 50-plus telecoms markets globally, aimed at mapping out the prevailing competitive pathway playing out in each. Some top-line findings? Average revenue per user (ARPU) growth, where still existent, is eaten away by inflation; paired with a low level of differentiation – especially in European markets.

A deeper drill-down into the research findings confirms that two specific shifts are happening at once. First, average revenue per user (ARPU) is undergoing a gradual decline, indicating the impact of price-focused competition – a trend that's manifesting itself to varying degrees in each region, and which is amplified by the effects of general price inflation, as shown in Exhibit 5 below. Second, while differentiation and concentration levels point to commoditised markets - indicating a general lack of differentiation, low pricing power, and an inability to maintain leading market share positions - ARPU spreads have slightly increased over recent years in key markets, indicating that leaders are able to regain pricing power, using a set of key methods outlined below.

The combined effects of these two trends are illustrated in Exhibit 1, where ARPU spreads are plotted – the gap between minimum and maximum ARPU – in regional mobile markets in 2019 and 2024 against the Herfindahl-Hirschman Index (HHI). HHI is a measure of industry concentration: essentially, ranging from an industry with low concentration (e.g., restaurant business) to a fully concentrated industry (i.e., a supply monopoly). The chart shows that while differentiation in all regions has increased over the five years, Europe continues to lag behind the others in resisting commoditisation – likely reflecting the greater fragmentation and complexity of the European market.

Exhibit 1:
Overview ARPU spread vs. HHI (both in %) in mobile markets per region, 2019-2024



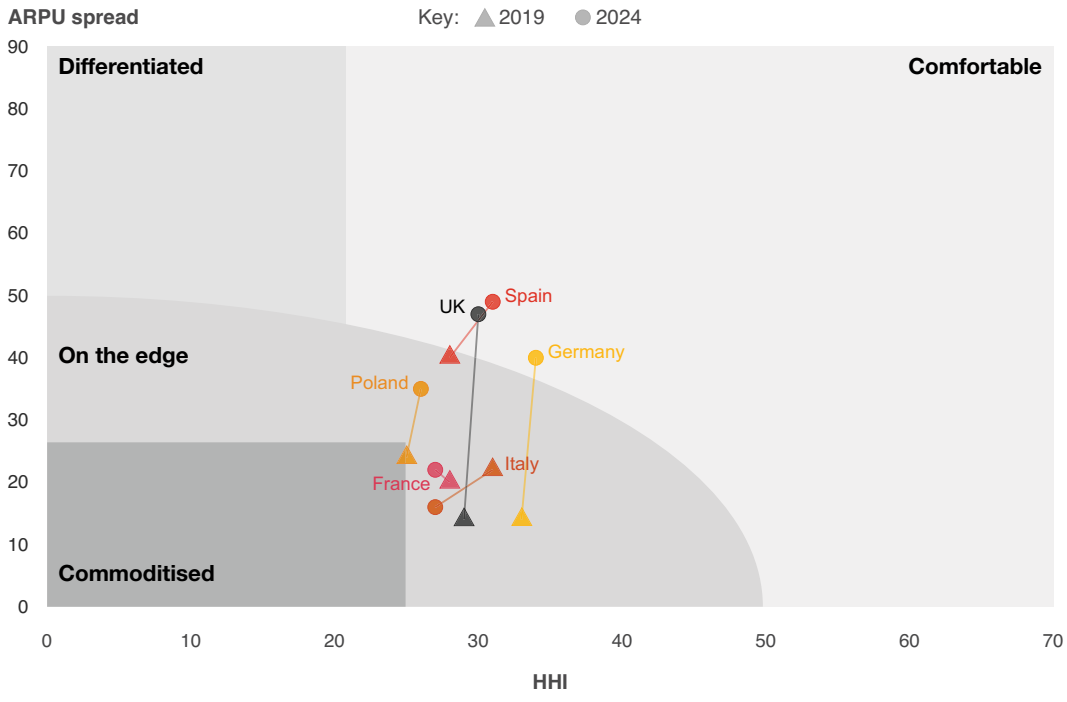
Source: PwC Global Telecom Outlook 2024-2028

Mobile operators are close to the edge of commoditisation

A deeper drill-down into the data at the country level underlines the continued pressure towards commoditisation in mobile markets globally, and especially in Europe. As Figure 2 shows, countries in most regions – the Americas, Middle East & Africa (MEA) and Asia-Pacific – exhibit variations in competitive intensity, reflecting their widely differing economies. Meanwhile, national mobile markets in Europe are still mostly closely bunched together in the lower left quadrant – although the data reveals an upwards trend in ARPU spread among some countries with an increasing ARPU spread, indicating that a handful of leading players are successfully breaking from the pack and regaining pricing power. That said, the overall situation for operators, especially in Europe, remains challenging, with ARPU generally declining – even more so in real terms when allowing for inflation, as discussed later in this report.

Exhibit 2:
Overview ARPU spread vs. HHI (both in%) in mobile markets per country, 2019-2024

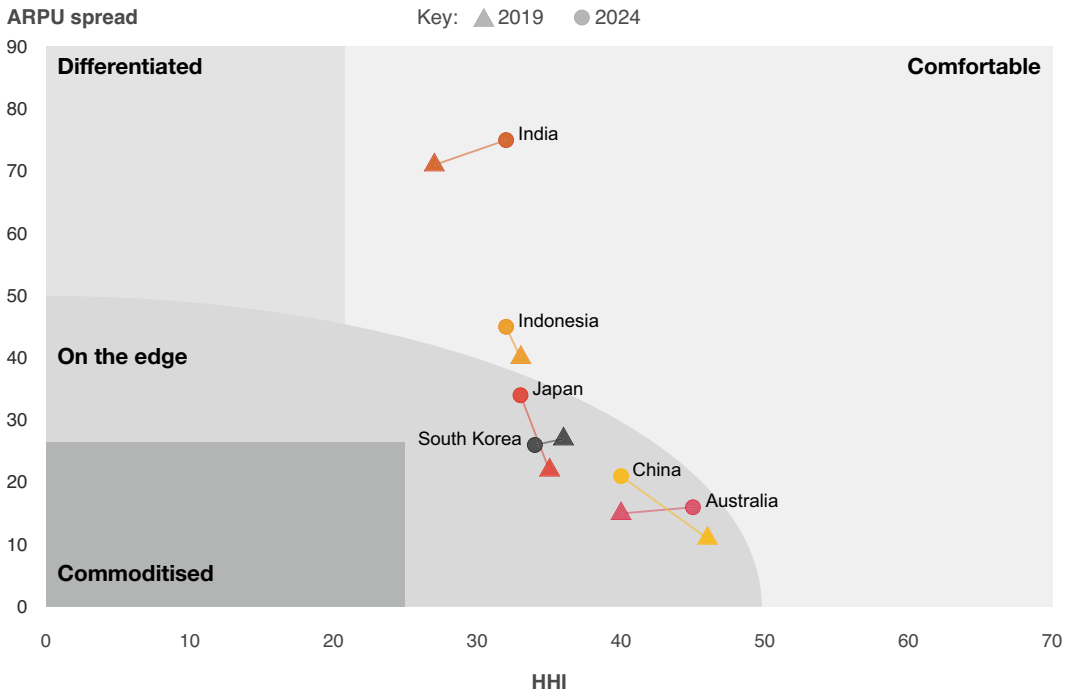
Europe



Source: PwC

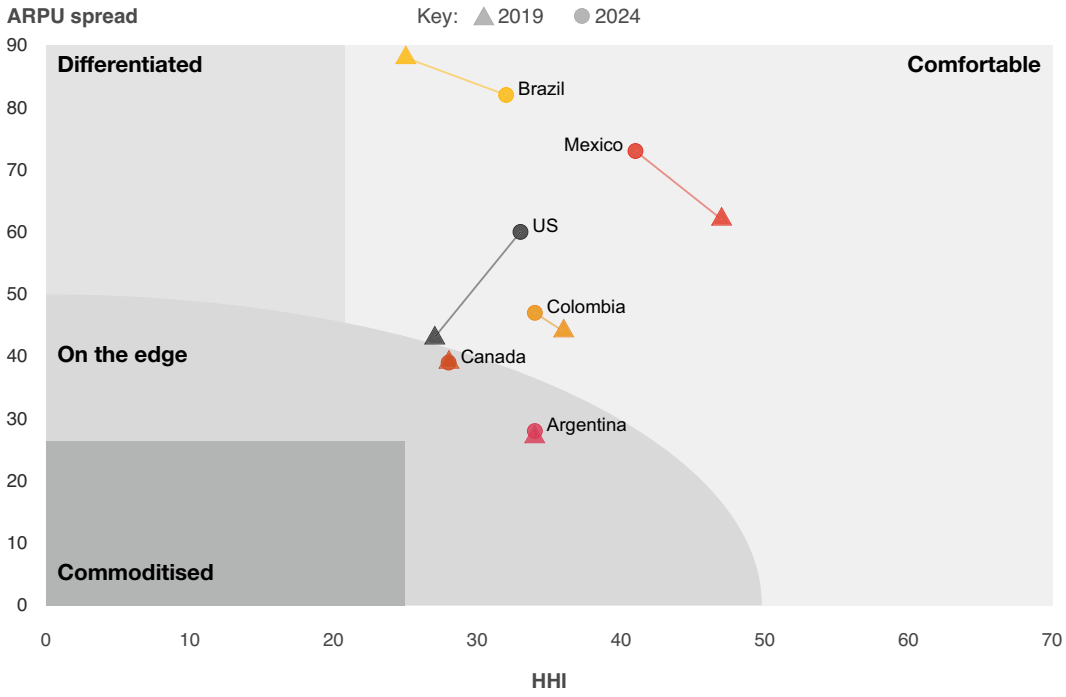
Exhibit 2 – Continued

Asia-Pacific



Source: PwC

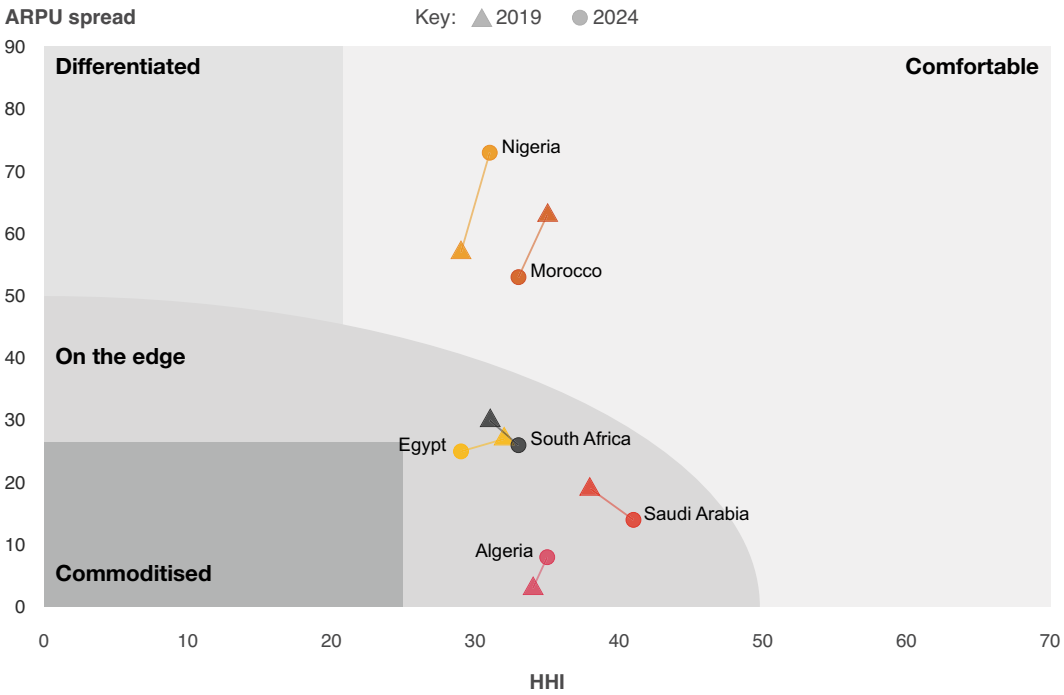
Americas



Source: PwC

Exhibit 2 – Continued

Middle East & Africa



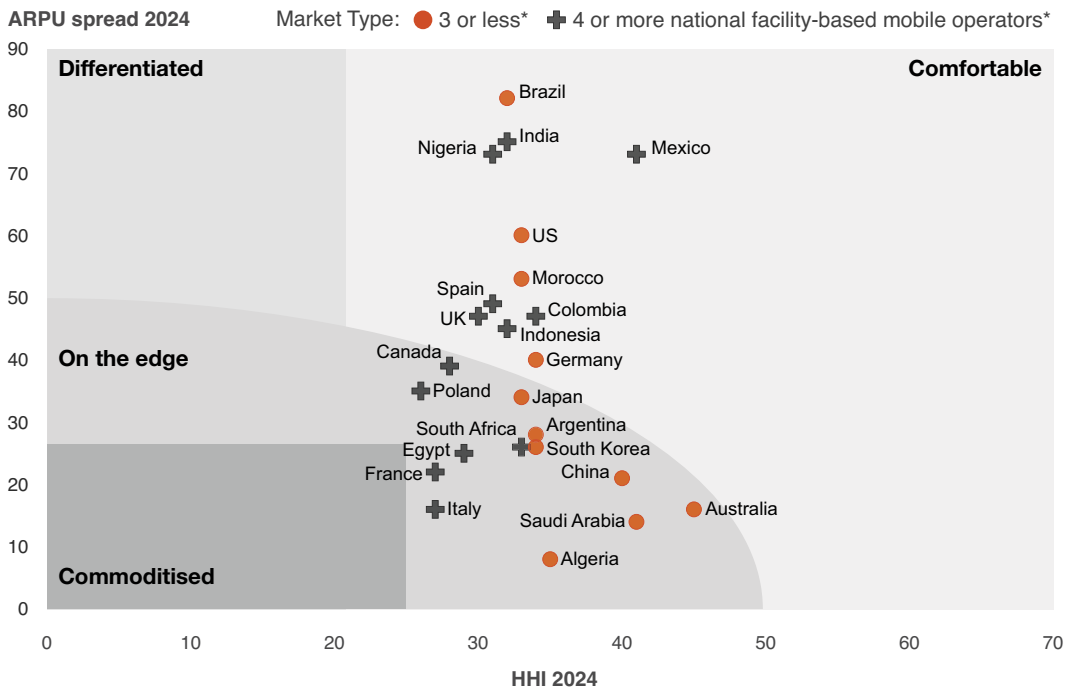
Source: PwC

That said, an interesting light is cast on the findings by the chart in Exhibit 3, comparing competitive intensity in markets that have three players or fewer, with those in markets that have four or more. As the chart shows, there's little difference overall: ARPU spreads (and therefore differentiation) are similar in both groups, while HHI is – as expected – slightly higher in most four-operator markets, helping industry to move away from commoditisation in a number of cases. This appears to suggest that the long-running

industry debate over the “optimal” number of players in a national mobile market may have less relevance to the level of competitive intensity than has previously been assumed.

These findings might give European regulators pause for thought, perhaps signalling the need to consider loosening the historically tight constraints on consolidation – a step they’ve traditionally been reluctant to take.

Exhibit 3:
Overview ARPU spread vs. HHI (both in %) in mobile markets on country level, 2024



*Referring to the number of players with at least 5% market share (subscriptions) in the respective country.
Source: PwC Global Telecom Outlook 2024-2028

How competitive pressures are impacting operators' financial performance...

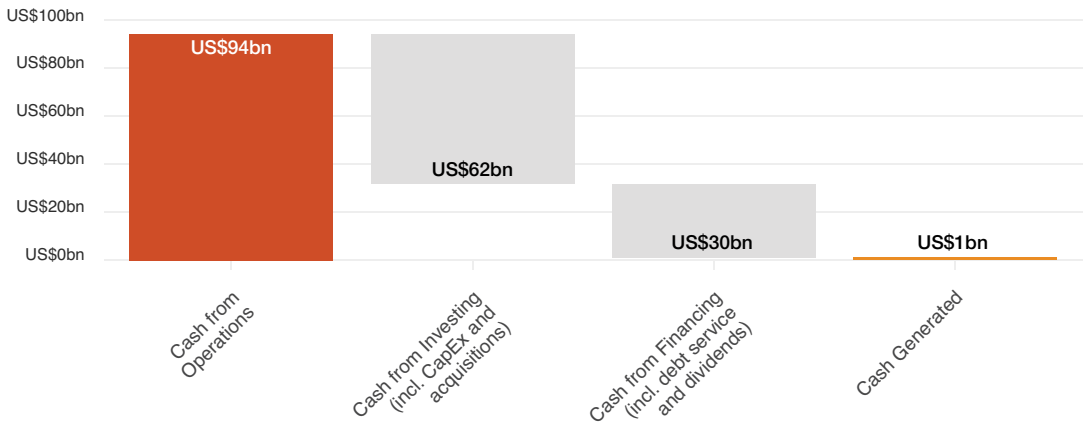
The challenges facing telcos around competitive intensity are equally marked when looking beneath the high-level KPIs of telecoms markets and focus on the business performance of individual telcos. Based on market data and PwC's extensive ongoing work with telecoms operators, suppliers and regulators, there are several clear signs of how creeping commoditisation is impacting financial performance in the industry.

Three indicators are particularly telling in this regard. One is the industry's limited ability to generate cash to reinvest in operations and new services. Another is the fact that the top-line impact of recent costly technology upgrades such as 5G networks has been limited at best, and in some cases even non-existent. The third is the emergence of new and additional competing technologies for areas of the market that were previously underserved, and which represent low-hanging fruit for new entrants.

Let's examine each of these three indicators in turn. Zeroing in first on the difficulties that telcos are facing in generating cash, this research analysed cash generation over the past five years by major US and EU mobile carriers (see Exhibit 4). The data shows that on average over the five years from 2019 to 2023, these mobile operators generated between them a collective total of US$171 bn of cash in from operations – of which US$98 bn went out as investment (including Capex and acquisitions) and US$72 bn as cash out from finance (including debt servicing and dividends). As a result, the remaining cash was close to zero, leaving very little available for funding additional innovation and future capabilities.

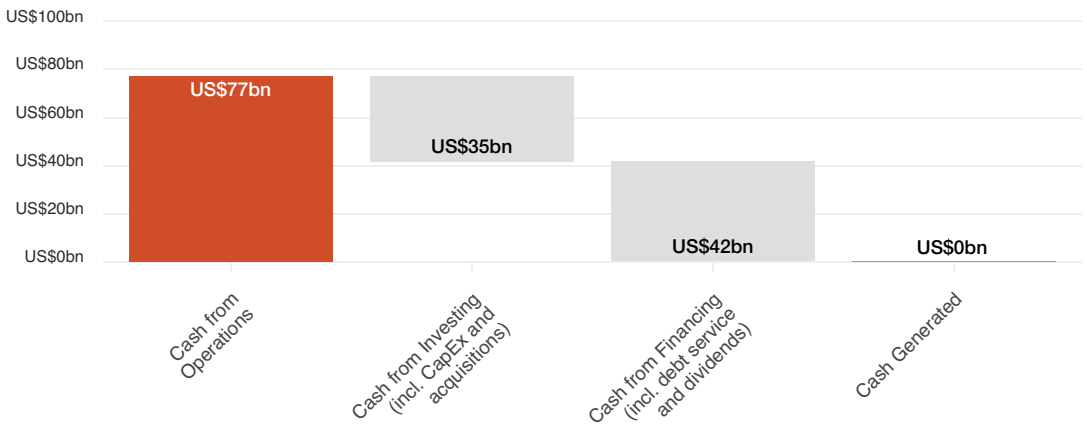
Exhibit 4:
Cash generation by major US and EU telecoms (USD bn, annual avg. 2019-2024)

US

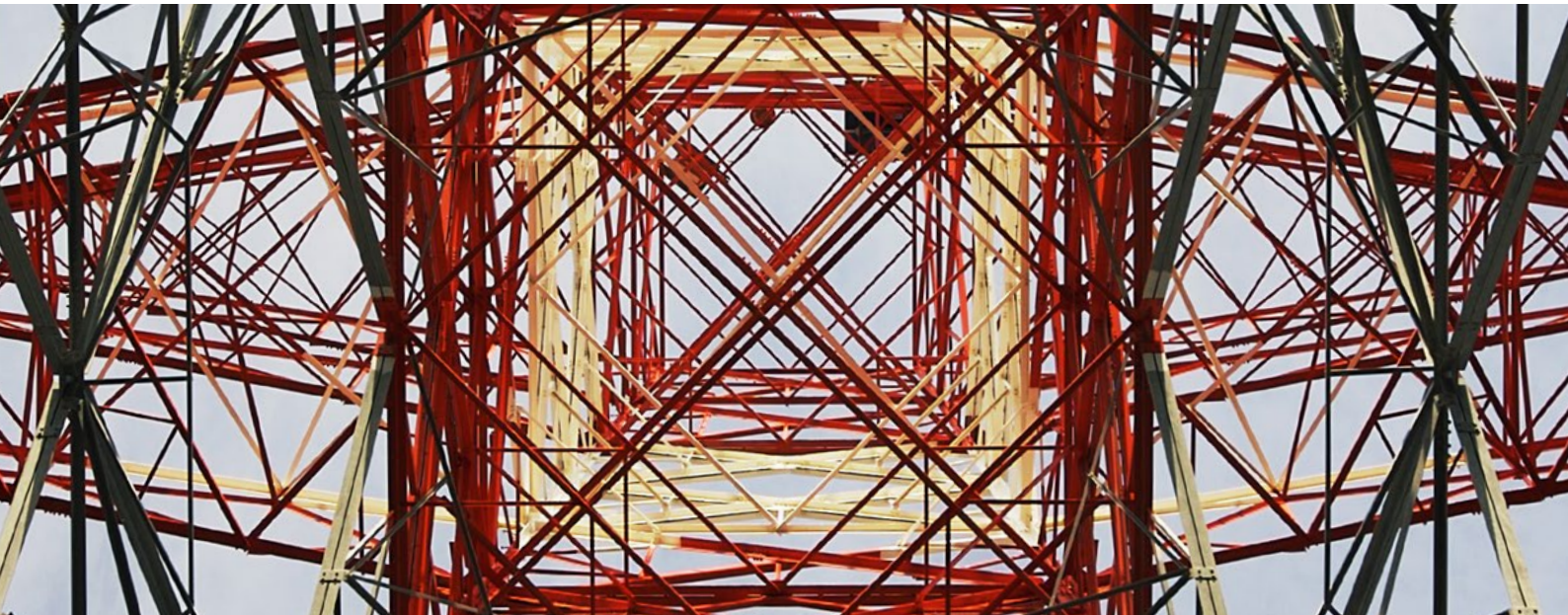


Note: Considering major US and EU Telco Players; Including Deutsche Telekom, Vodafone, Telefonica, Verizon, US Cellular, AT&T, T-Mobile US, Telecom Italia, Orange, Bouygues; 2024 as latest 12 month reported.
Source: Capital IQ, PwC analysis

EU



Note: Considering major US and EU Telco Players; Including Deutsche Telekom, Vodafone, Telefonica, Verizon, US Cellular, AT&T, T-Mobile US, Telecom Italia, Orange, Bouygues; 2024 as latest 12 month reported.
Source: Capital IQ, PwC analysis



...compounded by the inflation-driven erosion of remaining ARPU growth, despite the 5G rollout

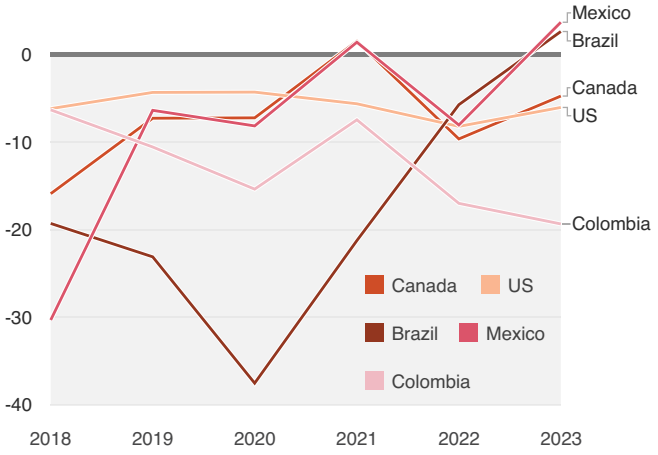
Turning to the limited-to-non-existent top-line impact of costly technology upgrades mentioned above, the analysis shows that despite significant investments in new technology, most notably the rollout of 5G, overall ARPU on average is continuing to trend downwards, albeit slowly. And, adjusted for inflation in each market, there has been no significant real-terms increase in ARPU levels in the wake of major investments (see Exhibit 5) – with ARPU growth over the five years from 2018 to 2023 consistently lagging behind inflation with only a few exceptions.

As the charts show, inflation-adjusted ARPU growth in most markets has been bumping along below zero, with operators seemingly unable to pass rising costs on to their customers. The roll-out of 5G has failed to enable operators to break out of this cycle – the relatively slow pace of 5G monetisation is explored in more detail in PwC's Global Telecoms Outlook Perspectives report.

Exhibit 5 – Telecoms underperformance index (ARPU growth/inflation spread) (in pp%), 2018 – 2023%*

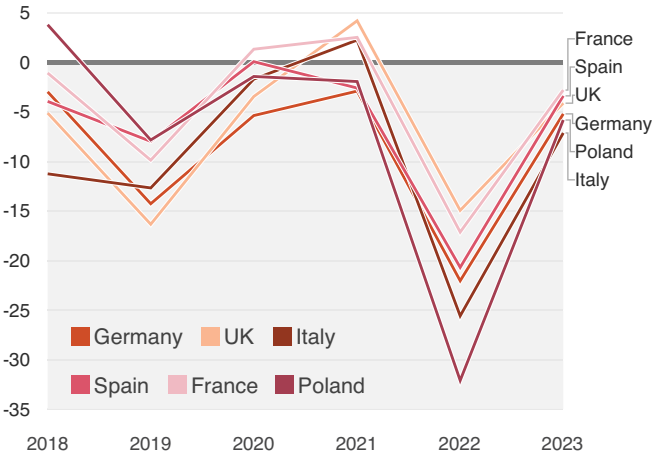
*ARPU inflation spread defined as YoY ARPU growth (%) – YoY inflation (%) of a year

Americas



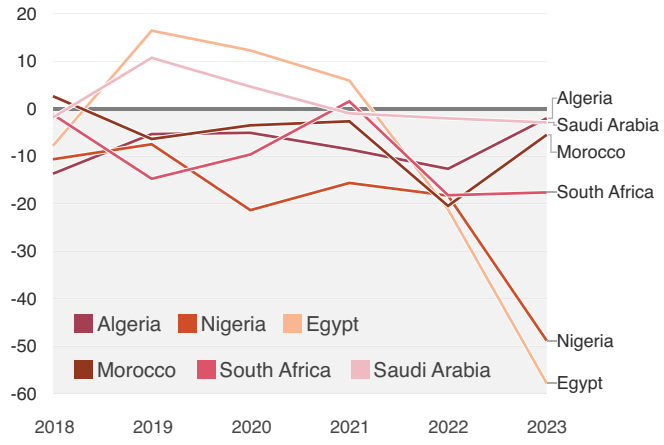
Source: PwC Global Telecom Outlook 2024-2028

Europe



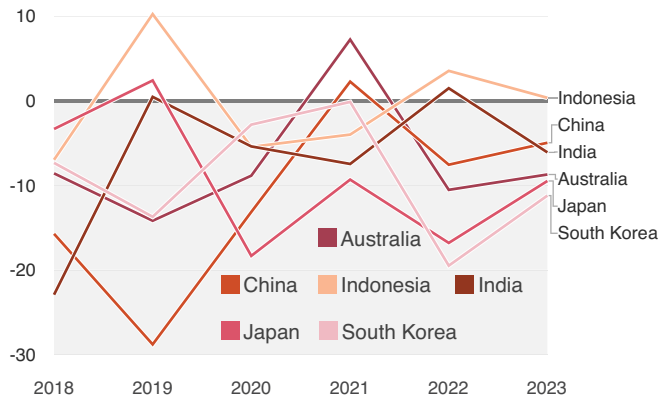
Source: PwC Global Telecom Outlook 2024-2028

Middle East & Africa



Source: PwC Global Telecom Outlook 2024-2028

Asia-Pacific



Source: PwC Global Telecom Outlook 2024-2028

These manifestations of declining competitive intensity are arising against the background of a market that's challenging and highly price-competitive, as discussed above – and which emerging technologies and new entrants are now making even more difficult. The advent of new technologies and players is putting further pressure on telcos' share of customers' wallets in segments that were historically underserved or less competitive, such as remote rural fixed and mobile broadband services. In this context, the data shows a rapid increased of Fixed Wireless Access, albeit from a relatively low base – a further development explored in PwC's Global Telecoms Outlook Perspectives report – alongside a potentially emerging direct-to-satellite model for basic remote rural mobile connectivity.

Actions to boost revenues and margins: focusing on the 'five Cs'

What does all of this mean for telcos wrestling with declining differentiation, intensifying competition and limited cash generation? In PwC's view, telco CEOs need to pull all the levers at their disposal to enhance both their competitive position and economic performance. These actions will in turn enable them to generate the cash needed to fund the reinvention that's now required if they're to remain relevant and competitive into the future.

What do these actions consist of? Essentially a well-defined set of actions that will drive higher growth through bringing a more compelling commercial posture into the core business, and boost margins and profitability by regaining and re-exerting the pricing power that telcos have lost in recent years – or have never fully exercised. Pricing power refers to a company's ability to influence the prices of its products or services in the marketplace.

To get their pricing power back, telcos should focus on actions centred on 'five Cs': **convergence, customer experience, commercial innovation, cost excellence, and complexity management**. Looking across telecoms markets globally, there are already a wide range of pricing strategies at play – including the likes of bundling diverse services, tiered pricing, pay-as-you-go models, dynamic pricing, data-only plans, and more. Among these diverse strategies, the approaches where success stories emerge are especially those focused around the 'five Cs. Let's explore each of these in turn.

1 Convergence

Convergence – or "bundling" – strategies focus on providing one contract for fixed, mobile and other services (e.g., TV), instead of one contract per connectivity type. They can position a telco to extract a price premium, or raise prices out of a position of strength, grounded in a combination of delivering a superior product/service/brand/experience to the customer, and/or providing an essential utility/service. Experience shows that consumers will still buy things like gas, food and power even if it gets more expensive, and the same should be true of broadband connectivity, given the essential role it now plays in many aspects of life.

Convergence strategies reinforce this importance in customers' lives, thereby strengthening connectivity's status as a non-discretionary purchase. As a result, they can simultaneously drive a higher share of wallet, increase customers' loyalty, extend their lifetime value, and reduce churn, since customers who subscribe to multiple services are more 'sticky' and less likely to leave. While bundling is a game that has historically been dominated in markets such as the US by CableCos through their mobile virtual network operators (MVNOs), the asset-based mobile network operators (MNOs) are now successfully fighting back, as evident by recent moves of the major US MNOs.

2 Customer experience and service excellence

Historically, telcos – and especially CableCos – have been widely regarded as being among the worst-performing industries when it comes to customer experience and service. However, advances in AI are now giving telcos the opportunity to leapfrog back, by enabling them to improve customer and service experience in two ways. First, by avoiding incidents and outages pre-emptively in the first place, through better, more targeted and more predictive action. And second, by reducing the time and customer pain of incident recovery, for example through customer call centre agents being supported by AI for resolution. At the same time, by leveraging technologies such as NBx algorithms (next best offer, next best experience, etc.), telcos can increase their up-sell/cross-sell opportunities.

A good example of such strategies in action is Charter Communications' success at driving better – and more efficient – customer experiences by deploying AI in its customer success organisation. At a recent conference, Charter CEO Chris Winfrey described how the company's AI tools enable its customer service agents "to get to a better answer faster and actually show more empathy along the way." And during an investor call in 2023, he summed up the benefits that he believes AI will deliver: "Ultimately, AI will improve both customer and employee satisfaction, and enhance our operating efficiency by driving fewer physical service transactions, lower cost and lower churn for years to come."

3 Commercial innovation

This involves enriching service bundles beyond propositions such as fixed-mobile convergence (FMC) by embedding and integrating other – often third-party – elements including content, insurance, and more. These commercial innovations can be either broad or targeted at specific customer segments. Examples of the broad approach might include bundling-in a Video-on-Demand service. By reaching a supply agreement, e.g., with an OTT Player, with volume pricing for a large number of subscriptions, the telco can offer its customers a competitively priced inclusion of the service – while also, of course, boosting revenues for the operator. Meanwhile, a niche play in the commercial

innovation category might involve targeting a specific customer segment with a specially constructed bundle, such as offering tourists or short-term international stays a data package and international calls, perhaps with a public transportation ticket also included.

There are many instances of commercial innovation by carriers across the world. In the US, T-Mobile initially led the way with including a Video-on-Demand subscription and 'T-Mobile Tuesdays'. Other carriers, both in the US and internationally, have since caught up. One example is Verizon, which took commercial innovation a step further with myPlan, allowing post-paid customers to personalise their plans by adding or removing premium components like Video-on-Demand, gaming, and other subscriptions for a fixed monthly fee. Shifting from rigid bundling to a customisable subscription model enabled Verizon to strengthen its market position.

4 Cost excellence

This primarily involves 'classic' cost reduction initiatives aimed at tackling both internal labour costs and external spend. Labour costs can be reduced through the implementation of a more global delivery model that, in essence, reduces the average price of labour, for example by establishing centres of excellence (CoEs) in lower labour-cost regions. The other way to bear down on internal cost is to reduce total employee numbers, especially through the use of more automation and AI: these technologies were historically deployed mainly in back-office functions, but are now being used more and more in customer-facing areas (call centres, sales) as well, and are also starting to significantly impact core functions like network and software. Meanwhile, external spend – money paid for supplies and services – need to be tackled via rigorous demand management and strategically sourcing partners and suppliers, leveraging and optimising the power balance between the supply- and demand-side to reduce and keep tighter control of all money spent.

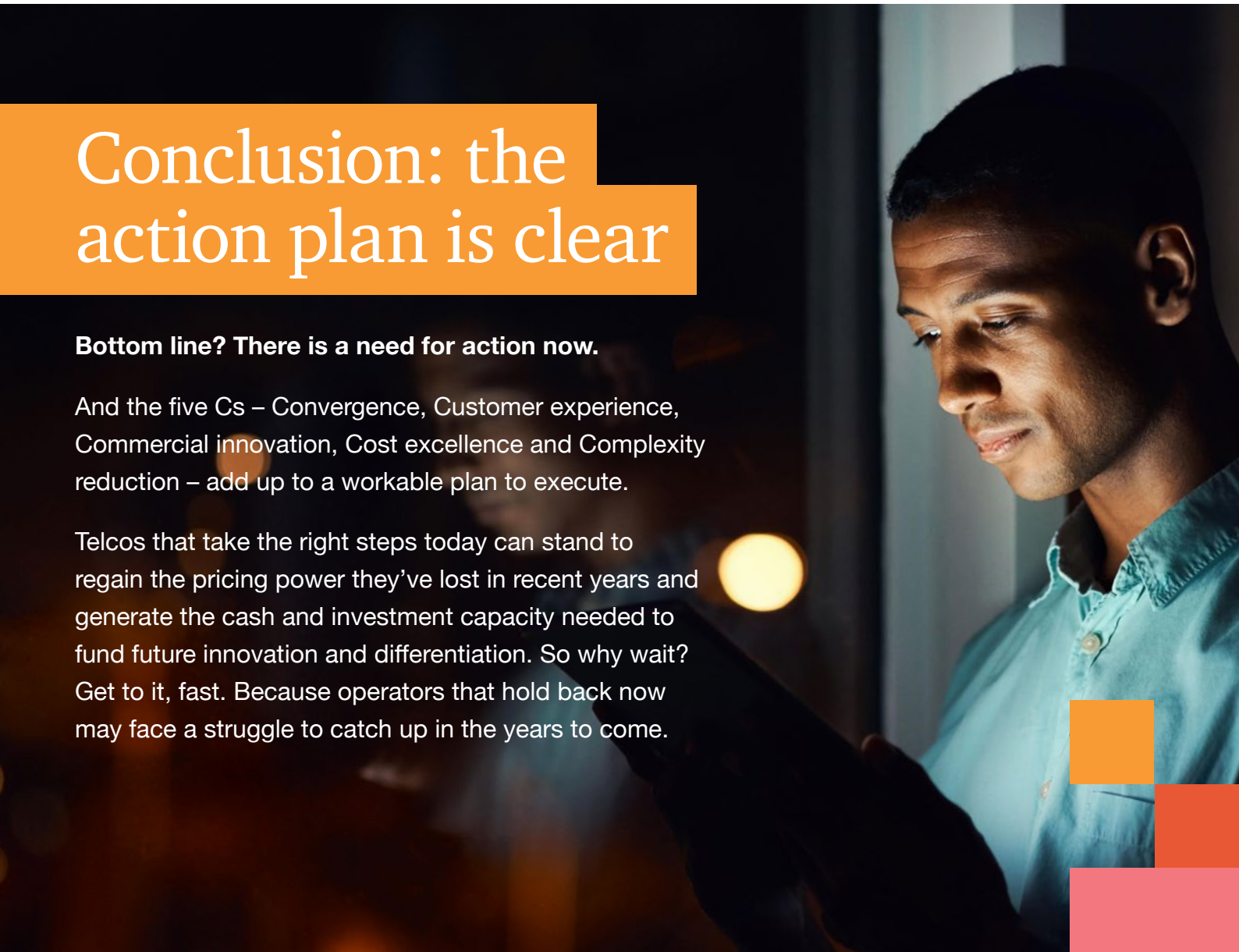
Examples of cost excellence programmes in the industry have included Vodafone's VOIS (Vodafone Intelligent Solutions), which centralised part of the company's back-office and technology functions into global hubs, reducing operational costs and bundling innovation power. This shared-services model streamlined efficiency, optimised workforce allocation and future-readiness, and enabled the savings to be reinvested in core telecom operations, underlining that cost excellence can be a competitive differentiator. Meanwhile, as an example of using AI and automation, Rakuten Mobile disrupted the traditional telecom cost structure by implementing a fully virtualised, cloud-native network with extensive AI automation. This approach reduced both Capex and Opex by minimising the reliance on proprietary hardware, enabling dynamic resource allocation, and automating network operations.

5

Complexity reduction

As opposed to ‘classic’ cost excellence, this ‘C’ targets ‘structural’ cost reduction, aimed at taking complexity out of the business by reducing the variety of products, platforms and technology, a burden built up over decades. A core focus is usually legacy retirement/clean-up work, which is challenging and unglamorous, but necessary to break out of the self-perpetuating and spiralling costs trap. Progress and continuous momentum can – for example - be created by establishing a ‘legacy relief factory’ to continuously review legacy product and technology portfolios, and oversee the retiring/modernisation of the technology stack. This should be guided and supported by a comprehensive blueprint articulating the components required to deliver the defined business strategy, and to shape the underlying target technology architecture for required future capabilities, maximising the use of modular, reusable components.

As a leading industry example, a large mobile operator in Continental Europe brought its product and technology teams together in an agile, sprint-based programme to systematically unwind and retire its legacy network assets, product platforms and IT systems. This extensive programme took three years to deliver – but the significant reductions in internal cost and external spend that resulted from it more than justified the effort and investment involved.



Conclusion: the action plan is clear

Bottom line? There is a need for action now.

And the five Cs – Convergence, Customer experience, Commercial innovation, Cost excellence and Complexity reduction – add up to a workable plan to execute.

Telcos that take the right steps today can stand to regain the pricing power they’ve lost in recent years and generate the cash and investment capacity needed to fund future innovation and differentiation. So why wait? Get to it, fast. Because operators that hold back now may face a struggle to catch up in the years to come.

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