



Top 10 risks in telecommunications

Evolving sector considerations in 2023



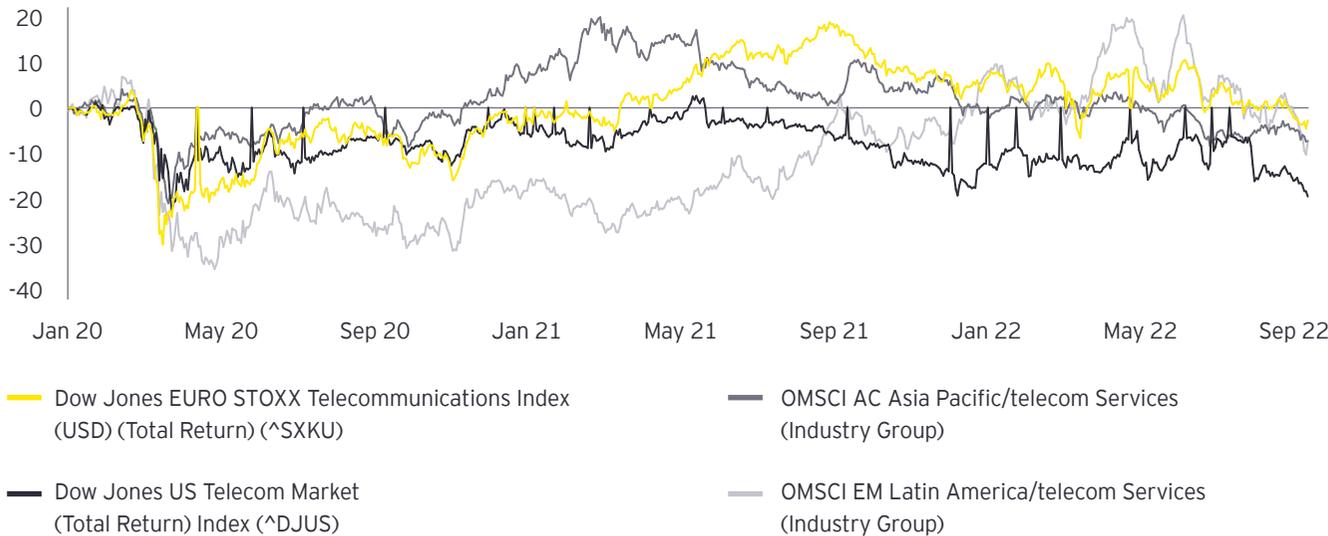
EY

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A recent record of industry resilience despite challenges

As the global telecoms industry enters 2023, it can be heartened by the resilience it has shown amid the recent geopolitical and economic turbulence. In the past two years, telcos have been supported by a combination of price increases, inorganic growth and government intervention. These factors have helped share prices across the global sector broadly recover from their lows during the early phase of the COVID-19 pandemic – although the rebound remains gradual and uneven.

Telecom share performance by region



Source: Capital IQ

Company strategies are being refreshed to surmount a volatile operating environment. Telcos' digital transformation initiatives are expanding in scope and ambition. And sustainability is re-emerging as a major focus at the board level while workforce considerations are being shaped more than ever by the drive to improve diversity and inclusion (D&I) and attract new talent.

The industry is also undergoing far-reaching network modernization in both fixed and mobile segments. To date, the capex burden has been mounting, but some markets are likely to witness lower capital intensity in mobile going forward as nationwide rollouts of 5G pass their peak.



Regional themes are in flux

North America:

The mobile segment is facing headwinds, both from inflation and rising competition; cable companies now account for about one in three mobile contract additions in the US. Among fixed telcos, there's an increasing focus on core connectivity and reduced appetite for content or platform assets. Looking forward, the bipartisan infrastructure law is set to stimulate further broadband network rollout.

Latin America:

Compared to other regions, Latin America remains relatively more insulated from geopolitical risks. The growth opportunity in FTTH is being supported by infrastructure carve-outs, and 5G for enterprise is a further focus. Going forward, 5G migration is set to accelerate in the wake of the national spectrum auctions in Brazil, Chile and the Dominican Republic.

Europe:

Telcos have outperformed the wider market, although competitive intensity remains high in Southern Europe. Deal-making remains active, with buoyant M&A in areas like infrastructure carve-out and tower deals. There's also relatively intense regulatory attention on the big tech players, coupled with policies supportive of network infrastructure such as the EU Recovery Fund.

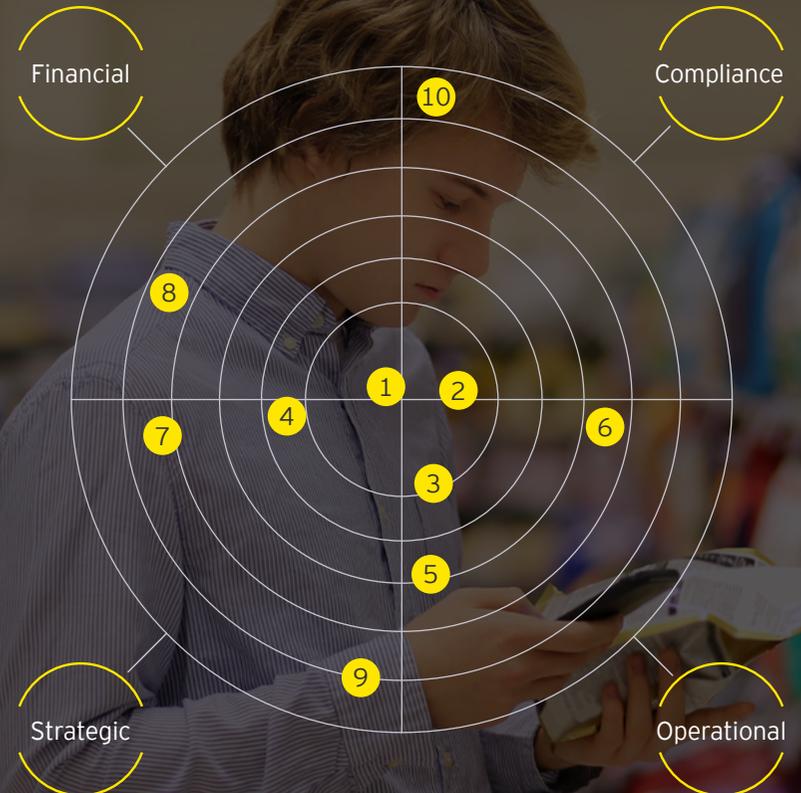
Asia-Pacific:

In Asia-Pacific, the environment for telcos varies by sub-region. China offers strong prospects for growth, supported by telco listings, while India is seeing revenues recover but growth rates remain below pre-crisis levels as corporate restructurings continue. Operators in the Association of Southeast Asian Nations (ASEAN) are experiencing rising capital intensity and lower return on invested capital (ROIC), as the mobile revenue mix shifts heavily toward data. In Oceania, restructurings and tower sales are helping to unlock value, but there's growing potential for fixed wireless access (FWA) to compete with fiber networks.

Mapping out the industry's risks

It's against this shifting global and regional background that we've conducted our analysis of the telecoms risk universe for telcos in 2023. As in previous years, we've combined insights from our industry, consumer and enterprise surveys with the evolving perspectives of our sector practitioners to pinpoint the most critical risks facing telcos today. As the "risk radar" shows, we organize the sector's risk factors into four domains – compliance, operational, strategic and financial – and rank each risk on its importance and impact.

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| 1. Insufficient response to customers during the cost-of-living crisis | 6. Failure to ensure infrastructure resilience and reach |
| 2. Underestimating changing imperatives in security and trust | 7. Failure to take advantage of new business models |
| 3. Failure to improve workforce culture and ways of working | 8. Failure to maximize value of infrastructure assets |
| 4. Poor management of sustainability agenda | 9. Ineffective engagement with external ecosystems |
| 5. Inability to accelerate efficiencies through digitization | 10. Inability to adapt to changing regulatory landscape |





The top 10 risks for telecommunications in 2023

At a high level, our risk analysis suggests that telcos will struggle to maintain their resilience and recovery into 2023 unless they respond appropriately to the challenges their customers are facing in the cost-of-living crisis, take full account of changing customer priorities around security and trust, and make active steps to improve their workforce culture. Other key risk areas to focus on include sustainability and infrastructure resilience and reach.

Here's a drilldown into the 10 biggest risks we've identified across the sector.

1

Insufficient response to customers during the cost-of-living crisis

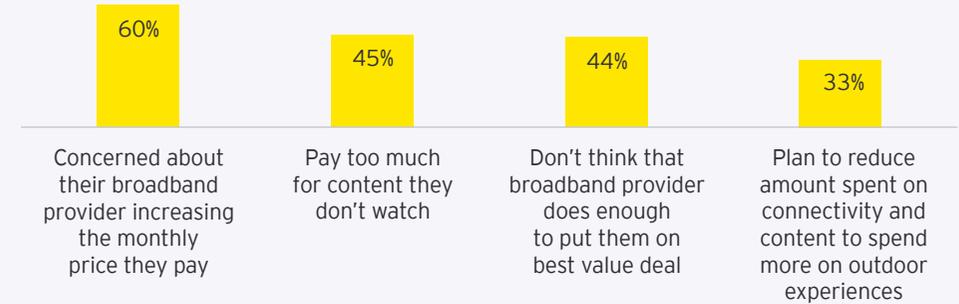
The cost-of-living crisis is forcing consumers to reappraise their needs, making them hyper-focused on whether they're getting value from their telecommunications providers.

Telcos ignore this shift in the consumer mindset at their peril. By way of context, the pandemic triggered higher demand for connectivity and content services, which acted as a lifeline for many people during lockdowns. Now the cost-of-living crisis has forced households to readjust their spending priorities.

EY research¹ across several countries shows that six in ten households are worried about future increases in broadband subscription prices. Meanwhile, nearly half (45%) believe they overpay for content services, and a similar proportion (44%) believe their broadband provider doesn't do enough to direct them to the best deal. With households planning to reduce spend, risks of churn and "spin down" are increasing.

Household attitudes toward connectivity and content services²

Percentage of households



These threats are compounded by increasing pressure from regulators on behalf of consumers – with some policy-makers demanding that telcos do more to offer "social tariffs." Meanwhile, operators in some markets are already linking price increases to inflation rates. While this has historically helped justify price hikes, customers are unlikely to welcome additional price increases in the current climate.

A further factor is that communicating offers of discounts or price savings can carry their own complexities and may not necessarily improve customer experiences. EY analysis shows that while 54% of consumers say that introductory offers played a role in their decision to sign up for a new broadband package, 49% believe such offers make it harder to work out which package offers the best value.



2

Underestimating changing imperatives in security and trust

Telcos are struggling to stay ahead of growing cyberthreats, with EY research³ showing that 46% of consumers believe that it is impossible to keep their online data secure.

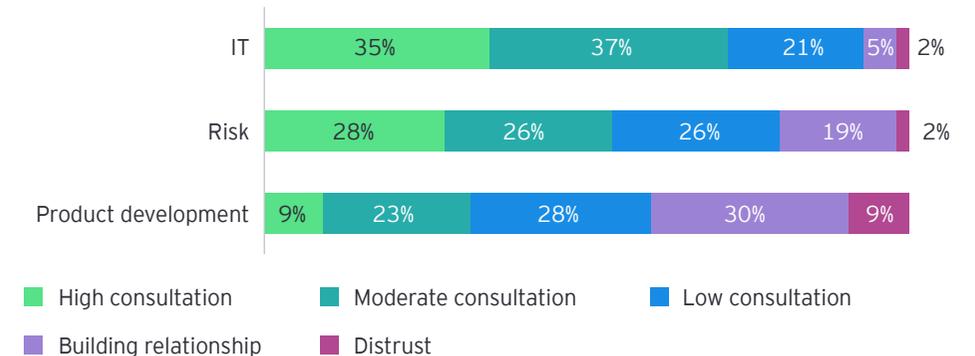
Equally worrying, while nearly half of telco chief information security officers (CISOs) believe that cybersecurity has never been under more scrutiny, 61% of telcos only discuss cybersecurity at board level quarterly or annually. This gap between the perceived levels of scrutiny and actual frequency of board attention can create additional challenges. For example, over one-third (39%) of telecoms CISOs believe security aspects aren't adequately factored into strategic investments.

The pressure on CISOs' oversight of the security agenda is compounded by poor internal collaboration, with uneven levels of trust between security teams and the wider organization. EY research shows cybersecurity is becoming an ever more critical principle for telco organizations, with 58% of CISOs believing the pandemic has allowed cybersecurity professionals to raise their profile.

But the growing prominence of the security function is being undermined by inadequate relationships with other parts of the business. While over half of CISOs believe that relationships between security teams and IT or risk teams are founded on moderate or high levels of trust, just 31% consider their relationships with product development teams to be similarly grounded.

Trust between telco security teams and other business functions is uneven⁴

How would you rate the relationship between the security team and other business functions?



3

Failure to improve workforce culture and ways of working

The views of employers and employees on workforce culture and the future of work are diverging – indicating a need for action to sustain a positive culture and retain vital skills.

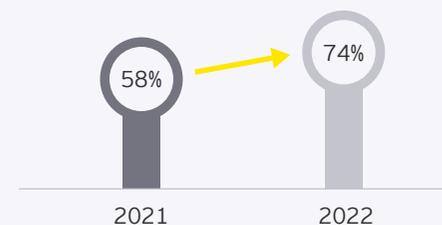
The fact that employers are experiencing significant staff turnover is making them more pessimistic about how the pandemic has impacted company culture. By contrast, employees are feeling empowered: they have an increasingly positive view on how the culture has developed.

This divergence of opinion pivots on contrasting views of remote working. An overwhelming 91% of Technology, Media & Entertainment and Telecommunications (TMT) employees want to work remotely for two or more days a week, but 25% of TMT employers believe everyone should return five days a week. And employers' wariness of remote working also impacts their workforce technology strategies. While 85% of TMT organizations say they will need to enhance workforce digital technology to support higher productivity, only 43% say the same of technology for remote working or virtual planning.

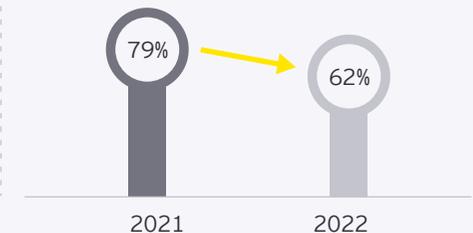


TMT employer and employee attitudes toward company culture⁵

TMT employees agree company culture has gotten better since the beginning of the pandemic.



TMT employers agree company culture has gotten better since the beginning of the pandemic.



Telcos' approaches to new ways of working also impact their access to talent. Looking across industries, employees' perceptions of their employers have been positive during the pandemic: 78% believe the organization they work for responded well. However, TMT employees are significantly more likely than their counterparts in other sectors to think their employer's post-COVID-19 workforce strategy will affect its ability to retain talent in the future. In addition worker churn is ultimately a greater threat in TMT: 53% of TMT employees say they plan to leave in the next 12 months, against an average of 43% across all sectors.

4

Poor management of sustainability agenda

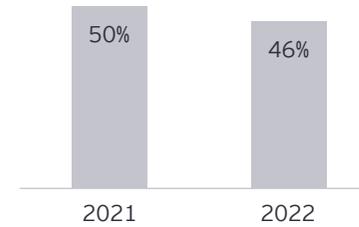


According to the EY Global Climate Risk Disclosure Barometer,⁶ the quality of telecoms operators' climate change disclosures has worsened year-on-year – and the gap between the quality and coverage of disclosures has widened substantially.

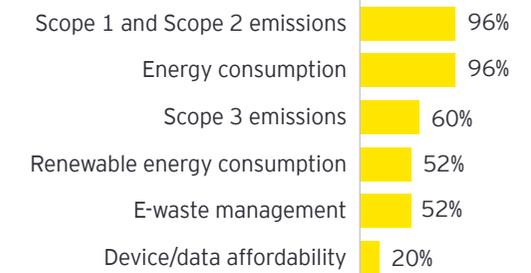
Meanwhile, reporting across key environment, social and governance (ESG) indicators is lacking in key domains. Furthermore, there are overall failings around sustainability strategies and goals: 39% of telcos do not disclose a specific net-zero strategy, transition plan or decarbonization strategy.

Climate change and ESG reporting among telecoms operators⁷

Quality of climate change financial disclosures among telecommunications companies¹



ESG reporting by topic among mobile operators²



¹ Global Climate Risk Disclosure Barometer, EY, September 2022

² ESG Metrics for Mobile. GSMA and EY, June 2022

Yet while telcos' sustainability reporting is stalled, customers' demands and expectations in this area are evolving rapidly, putting operators under growing pressure to improve their communications and revamp product portfolios. EY research⁸ shows that 39% of consumers do not believe that connectivity providers are doing enough to address climate change and sustainability, while 29% don't think their broadband provider offers enough sustainable options. Sustainability demands are even higher among large enterprises,⁹ 68% of whom say they're more interested than before in 5G and IoT use cases that can help them meet sustainability goals. Almost half of large organizations surveyed don't believe vendors' offerings meet their needs.

5

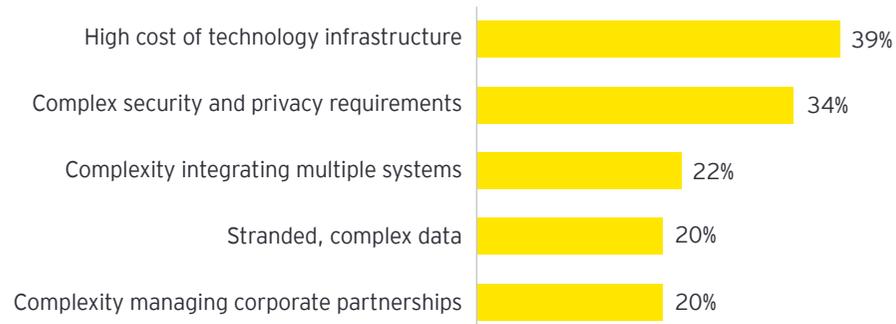
Inability to accelerate efficiencies through digitization

Increasing levels of efficiency and agility are critical for telcos, especially given current inflationary pressures.

Yet according to EY research,¹⁰ telcos' ability to transform through new technologies is hampered by complexity in various forms. Tasks ranging from meeting data security requirements to accessing stranded data to managing supplier partnerships all work against progress. Taken together, these issues represent a bigger challenge than the cost of new technology infrastructure itself. There's also a mismatch between the objectives of digitization and the pain points that stand in its way. The top transformation objectives cited by C-suite telco executives include improving the quality of products and services (cited by 44%) and meeting changing customer demands (41%). But aims related to reducing complexity score much lower, with accelerating agility cited by just 16%.

Top five data and technology barriers to telco transformation¹¹

What are the most significant data and technology barriers to executing your transformation?



Human factors are also limiting progress: EY research¹² shows that the negative impact of remote working on collaboration is viewed as the top cultural challenge facing telcos' transformation agendas. While many telcos were encouraged by the tactical transformation they executed during the early stages of the pandemic, it now seems that the rapid shift toward remote working risks compounding functional silos. Cultural differences between geographies ranks as the second biggest barrier, underlining the relatively greater challenge faced by multi-market operators.

6

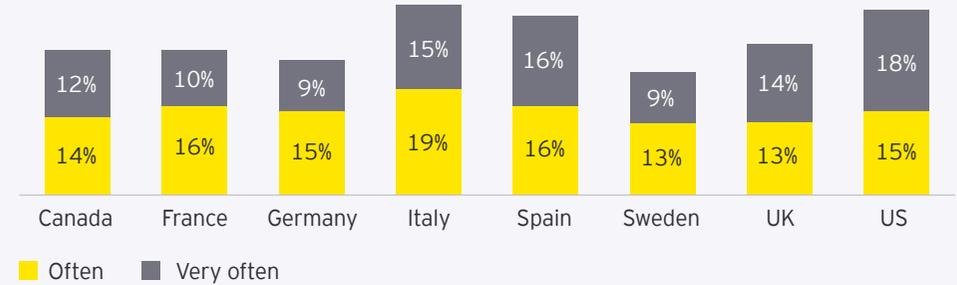
Failure to ensure infrastructure resilience and reach

Network reliability remains a pain point for customers. According to EY research,¹³ 28% of households experience an unreliable broadband connection “often” or “very often,” whether in the form of network outages, dropped signals or buffering during streaming.

The issue is compounded by surging demand: incumbent operators in some countries have been reporting new internet usage records, such as in the UK in December 2021. And global data usage continues to rise exponentially, with new digital concepts such as the metaverse adding to concerns that networks will come under additional strain in the medium term. The prospect of energy rationing also means that infrastructure power supply cannot be taken for granted.

Households' experiences of unreliable broadband¹⁴

How often do you experience unreliable internet while using home broadband or Wi-Fi?



The intensifying pressure on infrastructure is accompanied by continuing worries over the digital divide. The pandemic has further polarized the digital haves and have-nots, with those already connected doing more online. And growth in infrastructure coverage is slowing, with 5% of the global population living in more remote areas that are proving very hard to reach. A range of approaches can help bridge the digital divide, with horizontal partnerships between infrastructure providers becoming ever more important. But even where infrastructure is available, adoption often lags; there's a 41% share of the global population who can access the mobile internet but don't do so.¹⁵ As a result, service affordability and digital literacy also require urgent attention.



7

Inability to take advantage of new business models

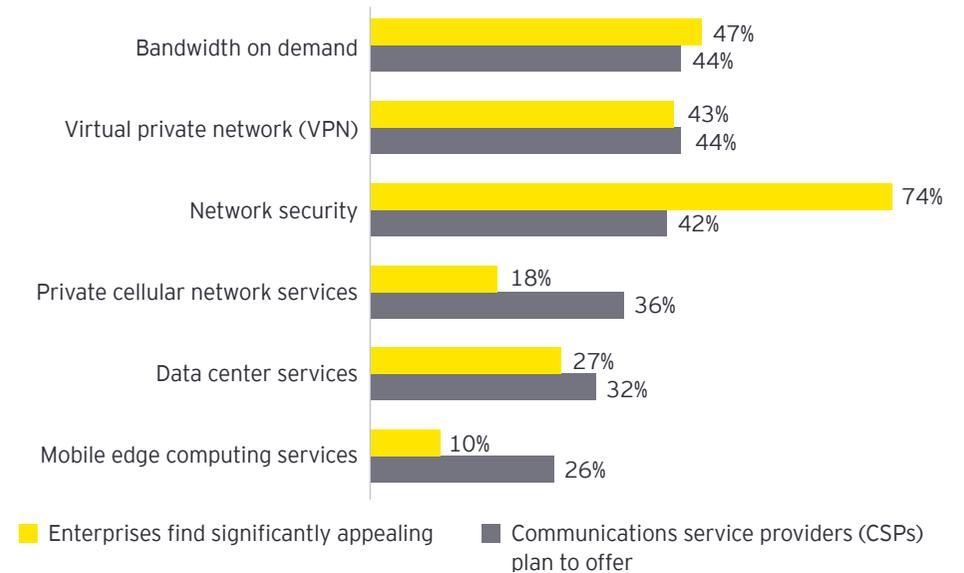


A combination of saturation in consumer markets and constrained average revenue per user (ARPU) growth means many operators are prioritizing growth opportunities in the enterprise segment.

But this focus on business-to-business (B2B) has yet to deliver meaningful growth. One reason is that the higher-growth products and services – the likes of IoT, cloud and security – still account for a relatively low share of overall B2B revenues. Margins in some of these can also be limited by a reliance on partnerships. And the worsening macroeconomic outlook is a further issue, particularly among smaller businesses.

Telcos' efforts to address these challenges are being hampered by a lack of synchronization between their new offerings and the needs of enterprise customers. While network-as-a-service paves the way to new forms of service provisioning, there's often a gap between what telcos plan to offer and the specific products that enterprises would find appealing. Industry research indicates that network security is something that customers would find attractive if delivered "as-a-service," but which less than half of telcos plan to offer. Other capabilities delivered "as-a-service," such as private network or mobile edge capabilities, are currently less of a focus for enterprise customers. Better education of customers on the benefits of new business models should be a priority.

Telco and enterprise attitudes toward network-as-a-service offerings¹⁶



8

Failure to maximize the value of infrastructure assets

Telcos' drive to unlock the value of infrastructure is gathering pace. Netco and servco business models are receiving greater focus as telcos assess the optimal infrastructure ownership positions across a range of value chain elements, from fiber networks and data centers through to mobile towers.

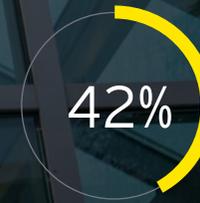
Such moves are underway worldwide, triggering rapid changes to market structures through various types of transaction, including divestments, carve-outs and the formation of joint ventures. Activist shareholders are a further catalyst: EY research¹⁷ finds that 63% of telcos say activist pressure has prompted them to review their strategic options.

However, while the financial and strategic benefits of selling or separating infrastructure are clear, challenges are limiting the upside. Nearly all telco CEOs believe that a clearer delineation between core and non-core could enhance their divestiture plans, and over 4 in 10 struggle to communicate the value of the separated entity. While the positive impact on the residual business is easier to communicate, more than half of CEOs believe they could have done more to improve the positioning of RemainCo. A further issue is that product-level portfolio reviews can miss potential carve-out opportunities.

Telco CEO attitudes to divestment strategies¹⁸



Telecoms CEOs who believe providing better guidance on what's core vs. non-core can enhance the identification of divestiture candidates



Telecoms CEOs who cite articulating the value of the separated entity on a stand-alone basis as a challenge when deciding to divest



Telecoms CEOs who wish they had used a divestiture as an opportunity to reimagine RemainCo

9

Ineffective engagement with external ecosystems

The network infrastructure landscape is increasingly fluid, with the mobile network supply chain increasingly constrained. Restrictions on high-risk vendors are in place in various countries, ranging from partial to complete bans.

Meanwhile, technology developments such as Open Radio Access Networks (O-RAN) have spurred the arrival of new software-centric network suppliers. Many operators are also working with traditional network vendors on collaborative solutions for enterprises, such as private 5G networks. Taken together, these changes mean telcos must adapt to working with a wider range of suppliers in more varied ways.

However, despite this need for collaboration, ecosystem engagement is still not central to many telcos' strategies. EY research¹⁹ suggests that while all telcos leverage partnerships and business ecosystems, ambition for these is lacking. Asked about the role ecosystems play in transformation, 78% of telco executives highlight the role of a specific partnership, rather than multiple partnerships, and only 11% view multiple partnerships as core to new business models. These views contrast sharply with those of enterprise customers, 75% of whom say ecosystem strategies will become a significant driver of growth in the next five years. In addition, 73% say they'll prioritize suppliers that can provide relevant ecosystem relationships.²⁰ The message? Telcos need to raise their game in ecosystem engagement.

Role of partnerships and business ecosystems in telco transformation²¹

Which of the following best describes the role of corporate partnerships/ business ecosystems in your transformation?



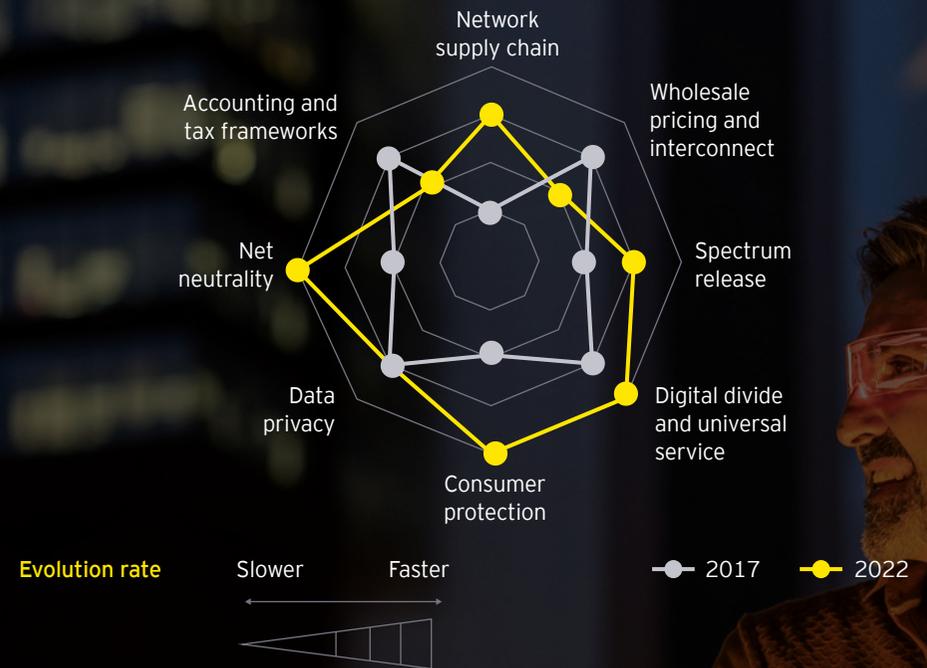
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Inability to adapt to changing regulatory landscape

Regulatory priorities are shifting, with the pandemic and geopolitical factors intensifying stakeholder focus on network supply chains and the digital divide. The cost-of-living crisis and concerns over online safety are also prompting greater attention on support for vulnerable customers – while the net neutrality debate is growing louder in Europe and the US.

However, while regulation and policy are often viewed as external risks, they can also open up opportunities: witness the support for infrastructure upgrades from the EU Recovery Fund and US Bipartisan Infrastructure Law. More generally, government funding and incubation of digital ecosystems can help foster telcos' ability to monetize demand from enterprise customers. With these different forces in play, telcos that can build more substantive relationships with policymakers stand to thrive.

Regulatory domains impacting operators²²



Fragmentated approaches pose ongoing challenges. Data protection and privacy rules epitomize this, with a number of countries either passing new legislation or amending existing laws. Despite the fact that many recent laws and directives introduced worldwide are modeled on the EU's general data protection regulation (GDPR), details differ. Ultimately, these developments point to growing risks of regulatory complexity. Looking further ahead, the growing interdependence between AI and data privacy regulation could signal greater levels of unpredictability.



How EY Teams can help

The telecoms sector is at the heart of the digital disruption and convergence agenda. Given this positioning, are you embracing the right opportunities and mitigating the right risks?

EY is one of the world's leading and most trusted professional services organizations, which serves most leading telcos worldwide. EY professionals can help you to find the right answers and prioritize your transformation needs across a range of dimensions.

Whether your focus is on scaling and accelerating returns from digitization initiatives, achieving the right level of infrastructure resilience and reach in the most efficient way, or making sure that your customers and stakeholders trust you as much as possible, we offer a range of solutions that can provide positive outcomes.

EY solutions

Our digitization solutions include:

- ▶ Digitally integrated customer experience
- ▶ Intelligent automation
- ▶ IoT platforms
- ▶ Data and analytics

Our network and IT effectiveness solutions include:

- ▶ Agile business transformation
- ▶ Capex allocation and operations
- ▶ Network engineering, deployment and operations
- ▶ Business support system (BSS), operational support system (OSS) and IT transformation
- ▶ Convergence post-merger integration

Our enterprise trust solutions include:

- ▶ Cybersecurity
- ▶ Legal managed services
- ▶ Tax finance operate
- ▶ Climate change and sustainability

In all these areas and more, EY teams can help you to develop the right long-term strategy. As major events – from geopolitical tensions to rising inflationary pressures – continue to unfold, the ability to adapt and respond with energy and purpose has become crucial.

Although the risks landscape is more challenging than ever, taking advantage of the right opportunities can help you thrive in the now, next and beyond.



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