Regaining eminence and emerging stronger
Navigating the human and business impact of COVID-19 in the communications industry

August 2020
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INTRODUCTION
Since the outbreak of the COVID-19 pandemic, communications businesses have played a crucial role in keeping the world working, connected and informed. As a result, the research we have conducted shows that communication service providers (CSPs) have increased the trust consumers and businesses place in them. CSPs have asserted their relevance and regained eminence as customers recognize that the services they provide enable their economic and social well-being.

As countrywide lockdown measures are lifted, economies are re-opened and the world enters a new phase, CSPs can emerge stronger by building on that trust and relevance and developing new partnerships, products, services and business models to help people live, work and play in the Never Normal.
CSPs have played a crucial role in keeping our societies and economies functioning since the outbreak of COVID-19, now they have an opportunity to build on trust and relevance gained.

Moving from Rapid Response to Never Normal

CSPs have enabled loved ones to stay connected and economies to function since the COVID-19 pandemic began. The essential backbone they provide has proven resilient and has enabled more than a billion workers and students in a matter of weeks to work and learn from home. As the world has changed, it opens new possibilities and opportunities for CSPs to emerge stronger by helping the world live, work and play in new ways.

In our first Communication & Media paper focused on COVID-19, “Connecting, Informing, Supporting,” published in April, we detailed the impact of changing supply and demand and how these forces were disrupting business operations, using that analysis to inform our Rapid Response framework to support CSP leaders with decision making.

As the world moves from Rapid Response to the Never Normal, we identify key areas of opportunity for CSPs to capitalize on to emerge stronger, as leaders navigate the challenging road ahead.

Our research\(^1\) shows that the way CSPs proactively responded during the pandemic by supporting consumers, businesses and societies, has earned them greater customer trust and re-established their relevance.

92% of consumers say their CSP has met or exceeded their expectations in their response to Covid-19.
Our market research highlights the positive impact of CSPs during the crisis, and underpins the framework for forward-looking actions for CSPs

We carried out two key research pieces to support the development of our perspective on what CSPs must do next to maximize their relevance to customers and build greater resilience in a time of epic disruption. We also facilitated a global virtual forum of CSP CTO’s to better understand key challenges and share best practices. These insights have informed and supported analysis and recommendations in this paper.

**COVID-19 Communications & Media Consumer Survey**

Explores how consumers have engaged with their communications and media services during the crisis, and identifies the long-term, structural changes in consumers’ attitudes and behaviors that will impact new product opportunities. It also addresses consumer demand for digital interactions and clarifies what truly matters to consumers in core connectivity and entertainment services.

The survey was conducted during May 2020 and included 4,431 consumers in 12 markets.

**COVID-19 Communications & Media SMB Survey**

Explores the impact the crisis is having on small- and medium-sized businesses (SMB). It uncovers the dramatic effect lockdown measures had on SMBs and how their operations and ICT usage will be permanently affected.

The survey was conducted during May 2020 and included 420 SMBs in four markets.
In this paper, we address the global impact of the COVID-19 pandemic on consumers and businesses, identify key considerations for communications industry leaders and, crucially, how CSPs should use the crisis as an opportunity for re-invention by building on their platform of trust and regained eminence to offer consumers and businesses the services they need while strengthening culture and digital workforce.

To support CSP leaders, we have developed an “Emerge Stronger” framework – driven by our industry insights, client engagements and data from our research – built on five pillars to provide guidance on how to increase relevance and build resilience during a time of epic disruption.

**‘Emerge Stronger’ framework**

- **New Growth Opportunities**
- **Zero-touch Customer Experiences**
- **Culture & Digital Workforce**
- **Pervasive Networks**
- **Cloud Business Model**
CHAPTER 1: GLOBAL CONTEXT
The humanitarian crisis is rapidly evolving

As of early August, there have been more than 20 million confirmed cases of COVID-19 and over 750,000 deaths from the virus.

Governments worldwide have taken varying measures to prevent the exponential spread of the virus and limit the harm of this global tragedy.

We now see the virus replicating across countries at very different rates, primarily due to a lack of a coherent and consistent response strategy by policymakers and challenges with implementation – as indicated by the graph on the right.

This humanitarian crisis presents multiple challenges for business leaders who are looking to continue providing service to customers and ensuring the safety and well-being of employees while navigating a global economic recession.
The resulting restrictions on billions of people’s freedom to move around and interact with others are unprecedented. As people have stayed at home to work and study, their digital consumption has grown sharply.

People are connecting virtually with family and friends supported by apps like Zoom, WhatsApp, Facetime, Houseparty and others while also spending more time streaming content, with Netflix alone adding more than 26 million new subscribers since the start of the year.⁢¹³

COVID-19 has accelerated the shift to digital lifestyles that was happening already in terms of working online, remote education, shopping online, smart home adoption and engaging with service providers through channels like webchat and mobile apps.

**The Future Home and Office are here now**
Digital wins when opening up to the “Never Normal”

Economies and industries are now opening at different speeds and phases around the world. As they do, they are entering a world that looks very different.

Many of the trends that have been accelerated by the pandemic will persist, and organizations that were digital leaders before the crisis are emerging strongest. The COVID-19 crisis has widened the performance gap between organizations that invested in digital transformation and technology innovation before the pandemic and those that did not.

Accenture research conducted at the end of 2019 across more than 8,300 organizations measured differences in digital technology adoption, depth and culture penetration. The findings indicated the top 10% of companies (“leaders”) grow revenue at two times the rate of the bottom 25% (“laggards”).

Key trends that will persist and shape the post-COVID-19 world:

**Work from home is the “new normal”**

53% of people who never worked from home previously now plan to work from home more often in the future.⁵

**Every business will be a connected business**

57% of business respondents have had an increase in cloud usage in their operations, with 31% seeing a slight increase and 26% having a significant increase post-COVID-19 crisis.⁸

**Acceleration of digital transformation**

>50% of C-suite executives are accelerating digital transformation including shift to cloud across their organizations.⁹
Uncertainties loom large over the future

It is impossible to predict how the COVID-19 pandemic will play out and the impacts it will have. In many countries the initial peak has passed, and the emphasis is shifting to businesses and economies reopening, with targeted regional lockdowns implemented in places where spikes are observed. Governments are taking a phased approach to reopening, targeting specific sectors according to how essential they are.

The need to guard against new waves of infections is critical as countries seek to limit the re-imposition of lockdowns. It’s a very tricky balancing act where government and business leaders must weigh the risks of workforce exposure to COVID-19 with the potential impact on jobs and economic output of not reopening specific sectors.
Societal response and disease progression vary significantly around the world

There will also be different scenarios for the progression of the disease playing out at any time across the world. International CSPs will need to understand the dynamics of each market they operate in and vary their responses accordingly.

Each scenario has major implications for the workforce and the wider economy, so CSPs must be prepared for each of them, and take a region-(and even country-) specific approach. For example, New Zealand has managed to return day-to-day life close to previous normality while other countries, such as Brazil, United States and India, are still seeing an increase in the number of infections.

Building resilience in the face of considerable uncertainty will enable CSPs to address varying regional scenarios with the greatest degree of responsiveness and adaptability.
Scenarios centered on disease progression and societal response can support business planning across regions

**Cyclical Outbreaks**
Infections are controlled in past locations but spread to new hot spots and rebound in old. Patience wears thin with social distancing, opening societal fissures.

**Rapid Remission**
The disease is contained, and life returns to normal swiftly. Government measures work quickly to stabilize the economy.

**01. Rapid remission**
Infections are rapidly isolated until absent

**02. Flattened curve**
The rate of inevitable infections is slowed

**03. Cyclical outbreaks**
Chronic Covid-19 outbreaks due to uncooperative elements

**04. Prolonged chaos**
Non-compliance on two fronts

**Prolonged Chaos**
Effects to control the virus seem useless. Governments and societies are strained to the point of breaking. The economy is limited to necessities only and inflation soars.

**Flattened Curve**
The rate of infections is slowed but does not go into remission. The economy shrinks in near permanent ways. Society bends but does not break, pulling together to sustain government measures.
CHAPTER 2: INDUSTRY IMPACT
COVID-19 has impacted all industries, but CSPs have fared better than most

A cross-industry view of the impact of COVID-19 on market capitalization shows that the communications industry has fared better than other industries, seeing a recovery in market capitalization to +3.6% compared to a sharp decline across other industries, especially Travel (32.6% decline) and Aerospace & Defense (34.9% decline) since February.

While there has been short-term disruption to infrastructure and device supply chains as well as negative revenue growth, investors remain confident in the ability of CSPs to navigate the crisis.

Source: Accenture Client Value analysis based on iShares Global Comm Services ETF for Communications.
Despite uncertainties, CSPs are focused on making fresh investments in cloud, 5G and FTTX to aid future growth.

Despite the positive impact on demand, our analysis of the earnings of 23 communications companies highlights that a significant majority (74%) expect a decline in revenues over the next year, with an average projected decline of 2.5%.

Key drivers of this decline are negative SMB revenue growth as businesses close or reduce the scale of operations, and a sharp fall off in roaming revenues, with international travel restrictions in place and 2020 global passenger numbers expected to decline by 55% on 2019. Also, economic headwinds and restrained consumer spending are expected to have a negative impact, with the IMF projecting global GDP to decline by 4.9% in 2020.

Despite these challenges, CSPs are optimistic about the future, with 48% of the 23 companies analyzed expecting to increase their CAPEX spend in the next 12 months.

CSPs are expected to face near-term headwinds due to the disruption from the pandemic. Still, the recovery is likely to be faster compared to other industries.
The surge in voice and data traffic and decline in churn has not led to revenue growth

**Data and voice traffic surge as broadband delivers growth**

Up to 70% increase in data and voice traffic volumes has been observed since the crisis began.

However, this is not expected to drive significant revenue growth as monetizing this increased usage is challenging given the popularity of “all you can eat” voice and data packages and the fact that much of this increased consumption has been over Wi-Fi in the home. Many CSPs have also removed voice/data caps to support customers during the crisis, limiting revenue growth.

CSPs have witnessed strong growth in broadband with Charter reporting 850,000 new internet subscriptions in Q2 2020 vs 258,000 in Q2 2019. In Europe, Vodafone delivered a record 429,000 NGN broadband additions in period April-June.

**Roaming collapse**

60-80% decline in roaming revenues reported by CSPs due to lockdowns, travel restrictions and fall off in international travel. There is also an impact on business revenues as a result of the severe curtailment of business travel.

Deutsche Telekom’s retail roaming revenue declined by 80% during mid-March to end of April 2020.

**Decline in churn**

13% decline in expected mobile phone shipments in 2020 vs. 2019 as major manufacturers, including Samsung, Xiaomi and Apple, have been forced to delay launching flagship phones. This delay combined with retail closures and consumers spending more time at home has significantly reduced churn. This allows for higher ARPU as customers are not switching to lower-priced tariffs and telecommunications have reduced sales and marketing spend on new customer acquisition.
While there is a risk of price wars, the crisis is generating new opportunities

During previous crises, CSPs had a dual-shock, the economic downturn and the ensuing price wars.

The last recession in 2008 resulted in communications industry price wars across many markets as restrained consumer spending and aggressive discounting by new market entrants resulted in significant decline in ARPU. While the current recession is very different in nature to 2008, CSPs must build defensive strategies and take advantage of new commercial opportunities to avoid similar decline in ARPUs.

COVID-19 is providing new opportunities for CSPs:

- 30% expected sales surge in voice control smart home devices in the coming months.\(^2\)
- 59% of SMBs expect to invest in home automation systems in the coming year.\(^1\)
- 40-50% of consumers stated preference of CSPs to be the provider of digital services like smart home, e-health and digital payments.\(^2\)
- 48% of SMBs expect to increase spend on broadband after the crisis.\(^1\)
- 63% of SMBs expect to increase use of public cloud in the next twelve months.\(^1\)
- 20% increase in smart city spending expected in 2020 vs. 2019.\(^2\)
- 54% of SMBs expect the usage of network security to increase in next twelve months.\(^1\)
- 59% of consumers plan to invest in home automation systems in the coming year.\(^2\)
- 48% of SMBs expect to increase spend on broadband after the crisis.\(^1\)
- 63% of SMBs expect to increase use of public cloud in the next twelve months.\(^1\)
- 20% increase in smart city spending expected in 2020 vs. 2019.\(^2\)
- 54% of SMBs expect the usage of network security to increase in next twelve months.\(^1\)

\(^{1,2}\) Source data to be added. Copyright © 2020 Accenture. All rights reserved.
CSPs have re-gained eminence and asserted relevance in their positive response to the crisis, supporting people, businesses and governments.

### Connecting People

**1. Suspension of usage limits:**
Many CSPs temporarily suspended data caps for consumers while others provided free data packets.

**2. Priority for health and social services:**
CSPs ensured zero-rating of health and social service as well as removing fines and out-of-bundle charges for access to critical services.

**3. Financial support:**
CSPs provided waivers for late fees and overage charges on top of support for low income households.

MTN announced investment of ZAR 150mn (~USD 9mn) to support customers through free packages, zero-rating of health, educational sites, etc. 24

### Supporting Businesses

**1. Financial support:**
CSPs offered payment concession and waiver of late fees for businesses impacted by COVID-19. CSPs also accelerated payment to suppliers and partners.

**2. Service extension:**
Businesses were provided with access to 6 months of free unlimited broadband usage.

**3. Provision of new products and services:**
CSPs introduced new conferencing and collaboration tools, supported remote working set-up for business customers.

Telia provided six months free access to Telemöte remote working solution and offered advice to improve home working productivity. 25

### Helping Society

**1. Free capacity expansion:**
CSPs expanded the network capacity for essential service providers, including hospitals, social service agencies and other first-responders.

**2. Special offers and support:**
Municipalities, educational institutions and other public sector firms were provided with connectivity services at no cost while students and teachers were given increased data allowances.

**3. Monetary and in-kind donations:**
CSPs set up funds to provide donations for first-responders.

AT&T committed USD 15.5mn to support first-line responders and created a fund to support parents, teachers and students with home learning. 26

### Protecting Employees

**1. Safety-first approach:**
CSPs ensured a rapid transition to remote working for all workers, with specific focus on the health and safety of the field workers.

**2. Incremental pay:**
Many CSPs provided a pay rise to frontline workers, including engineers and call center workers, due to the increased workload from COVID-19.

**3. Protecting employment and reskilling:**
Some CSPs made a commitment not to lay off any employees as well as reskilling retail workers as stores closed.

Virgin Media raised salaries by 2.2% for its frontline and customer service workers. 27
We will now deep-dive into the impact of the pandemic through three lenses:

- Consumer
- Business
- Operations
Consumers’ ubiquitous demand for connectivity allows for a positive outlook for the communications industry in the medium- to long-term. The surge in demand for communications services experienced since the start of the COVID-19 crisis is expected to continue as consumers increase dependence on digital services to connect with family and friends, work from home and shop online.

However, despite this increase in demand, CSPs can expect some headwinds. Although we are not witnessing it at scale yet, declining disposable incomes and rising unemployment may result in consumers migrating to lower-priced plans while the risk of increased competition and price wars could erode revenues and margins.
Resilient network performance leads to positive consumer sentiment

The key role that the communications industry played during the pandemic is evident in the network patterns that emerged during the crisis. Across mobile and landline broadband, surging network demand impacted performance and placed a strong emphasis on effective network management. Mobile network performance decreased almost uniformly across the world. Country data for March shows declines in network performance of between 5% to, in exceptional cases, more than 30% while video traffic was up by 30%, with one network recording a 300% rise in data uploads driven by remote working.

While speeds declined for many users, CSPs have performed well, with the results from our survey of consumers and SMBs showing overwhelming satisfaction. An interesting insight from our survey is that the most significant quality of service component that consumers value is consistency – more important in driving their satisfaction than speed, coverage or value, which makes sense when you consider frustration caused by dropped connections.

We also asked consumers if they were aware of how their CSP responded to the COVID-19 crisis in terms of crisis response activities (financial support, collaboration with government/health sector etc.) and 64% were aware, with 39% having received a direct communication. In comparison, almost half rated their CSP’s response above expectations, with only 8% believing the response was below expectations. This enhanced relationship is a valuable platform for CSPs to build on.
Consumers are embracing remote working and willing to pay a premium for solutions that drive higher efficiency

01 Connectivity is ubiquitous

68% of consumers say the importance of home broadband has increased following the pandemic and 64% say the same for wireless/mobile.

Connectivity has enabled the changes in consumer behavior that COVID-19 has accelerated while also playing a critical role in the functioning of our economy.

02 Trust is on the rise

62% of consumers trust their CSPs for their data security.

While some digital native companies have developed a reputation for playing fast and loose with their customers’ data, CSPs remain trusted stewards of personal data.

When it comes to tracking consumers’ locations to fight against COVID-19, one in three say they’re comfortable generally. In contrast, half say they’d trust their provider with their data, more than they trust governments or digital natives.

03 Home and work merge

98% of people said they would like the option to work remotely for the rest of their careers while 53% who never worked from home previously plan to work from home more often in the future.

As working from home has become the new normal for so many, it is likely to become an expectation. That is creating a new opportunity to support homeworkers – and their employers – with the connectivity and services they need to be productive e.g. VPN, collaboration tools, dedicated connectivity etc.

34% of consumers would be willing to pay for solutions that help them to work at home more effectively.
Consumers are interested in accessing new digital services, with CSPs as the preferred service provider in many cases.

Consumers are interested and willing to pay for digital services that address their needs

How interested are you in the following digital services?22

- Keep in touch with family & friends: 56% interested, 68% willing to pay
- Make secure payment transactions: 60% interested, 61% willing to pay
- Monitor my own health & wellbeing: 66% interested, 55% willing to pay
- More effective work from home: 63% interested, 53% willing to pay
- Monitor health & wellbeing of others: 67% interested, 50% willing to pay
- Smart Home: 68% interested, 46% willing to pay

Willingness to pay out of those interested: e.g., 46% of the respondents are interested in smart home service and 68% of them are willing to pay for it.

CSPs are preferred providers by consumers for digital services

Who would be your preferred provider for the different digital services?22

- Keep in touch with family & friends: CSPs 45%, Social Media Platforms 19%, Tech Companies 4%, Other 18%, E-commerce Providers 14%
- Make secure payment transactions: CSPs 53%, Social Media Platforms 26%, Tech Companies 14%, Other 7%
- Monitor my own health & wellbeing: CSPs 43%, Social Media Platforms 38%, Tech Companies 10%, Other 9%
- More effective work from home: CSPs 52%, Social Media Platforms 31%, Tech Companies 8%, Other 10%
- Monitor health & wellbeing of others: CSPs 46%, Social Media Platforms 33%, Tech Companies 9%, Other 12%
- Smart Home: CSPs 43%, Social Media Platforms 33%, Tech Companies 14%, Other 10%

% of respondents interested in the digital service

Willingness to pay out of those interested

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Increased use of digital channels helped CSPs handle the surge in service requests after lockdown and consumers liked it

01
Customer service requests peaked after lockdown

21% increase in call volumes to communications companies immediately post the lockdown was imposed in the U.S. 31

To combat the effects of the increased demand due to COVID-19, CSPs retrained retail workers and temporarily hired additional capacity for the contact center. In Australia, Telstra hired an additional 3,500 people across the contact center and other customer service touchpoints.

60% increase in call abandonment rates were observed across all industries due to higher call volumes, lower speed and increased staff absence. 32

02
CSPs are accelerating the use of digital channels and virtual contact centers

80-100% of customer service representatives have been enabled to work from home since lockdown. 32

With challenges in re-opening contact centers at anywhere near full capacity due to the social distancing measures applicable globally, CSPs are accelerating the adoption of AI, machine learning and cloud-based technologies to improve their contact efficiency.

CSPs are also considering the value in returning customer service employees to a physical contact center office as virtualization allows for new team structures, call routing and reduced costs expected to be in the region of 30%.

03
Consumers have shown an increased desire to use digital service channels

85% of customers are more interested in using online chat again for service interactions following the crisis. 33

% of customers who satisfied their goals through their first contact channel and % satisfied during the crisis 34

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As consumers demand touchless experiences, CSPs need to reinvent their digital presence

Consumers have developed new digital habits

As consumers have experienced an extended period where CSP retail stores were shut, digital channels (online) have become the “go-to” for many – and that preference looks set to persist. Our research found that 61% of CSP service interactions were digital after COVID-19 vs. 56% before COVID-19 while 80% of consumers were satisfied with digital sales interactions during the crisis.22

Channel migration – a shift away from retail

Consumers’ marked shift to digital channels may present an opportunity for CSPs to offset some of the likely decline in consumer revenues as economies stall. Leading companies like AT&T in the U.S. and Virgin Media in the U.K have already announced their intention to reduce or close their physical store footprint. Our analysis also shows that the savings from closing physical stores and moving to digital could significantly reduce Opex costs for CSPs while enhancing customer satisfaction with 60% of consumers feeling little sense of loss if physical stores were never to return.22

Expected cost and capex savings in USD mn for a representative CSP with a revenue of USD 40bn35

<table>
<thead>
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<th>% retail stores moving online</th>
<th>20.0%</th>
<th>30.0%</th>
<th>40.0%</th>
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<th>60.0%</th>
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<td>30.0%</td>
<td>115.5</td>
<td>173.3</td>
<td>231.0</td>
<td>288.8</td>
<td>346.6</td>
<td>404.3</td>
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<td>40.0%</td>
<td>136.1</td>
<td>204.1</td>
<td>272.2</td>
<td>340.2</td>
<td>408.3</td>
<td>476.3</td>
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<td>50.0%</td>
<td>156.7</td>
<td>235.0</td>
<td>313.3</td>
<td>391.7</td>
<td>470.0</td>
<td>548.3</td>
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<tr>
<td>60.0%</td>
<td>177.2</td>
<td>265.8</td>
<td>354.5</td>
<td>443.1</td>
<td>531.7</td>
<td>620.3</td>
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<tr>
<td>70.0%</td>
<td>197.8</td>
<td>296.7</td>
<td>395.6</td>
<td>494.5</td>
<td>593.4</td>
<td>692.3</td>
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<td>80.0%</td>
<td>218.4</td>
<td>327.6</td>
<td>436.8</td>
<td>545.9</td>
<td>655.1</td>
<td>764.3</td>
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Data excludes those who do not use services.
COVID-19 has had an immediate impact on CSPs’ business-to-business (B2B) revenues both in the Enterprise segment and the SMB segment, which is proving more exposed to the economic impact of the crisis.

In recent years, CSPs have increased the focus of their B2B business on SMBs, and for a good reason, as SMBs employ almost half of the U.S. private workforce, accounting for 45% of U.S. GDP, while in the U.K. the number of SMBs increased more than 30% over the last 20 years.

For many CSPs, the SMB segment had been the key driver of B2B growth. We launched a global SMB survey to better understand how SMBs have been impacted, how their operations and use of ICT services will change, and how their relationships with CSPs have evolved.
The COVID-19 induced recession means turbulent times ahead for businesses and CSPs’ B2B revenues

Despite increased demand and usage in certain sectors, total ICT spending is expected to decline by 2.7% in 2020, compared to a 3.5% growth in 2019.36

CSPs’ B2B revenues are being negatively impacted as a result of the closure of some SMBs and the decline in traditional ICT spending by others. On the enterprise front, large organizations are implementing spending cuts on capital expenditure and, in many cases, pausing technology investments.

On a more positive note, with employees working from home and customers migrating to digital sales and service channels, companies are expected to accelerate the take-up of cloud-based services, with public cloud services expected to grow by 19% in 2020.37

In order to better understand the challenges SMBs are facing as well as the areas they do plan to make investments in, we surveyed more than 400 businesses across 4 markets (US, Germany, Italy, UK). The results help to identify opportunities for CSPs to grow SMB revenues in what will be a challenging market.

60% of SMBs faced a decline in revenues during COVID-19.1

30% of SMBs required government financial support.1

18% of medium-sized businesses laid off workers.1
The crisis has adversely impacted SMBs

No part of SMBs’ business escaped disruption during the crisis.

To what extent were the following parts of your business disrupted during COVID-19?¹

<table>
<thead>
<tr>
<th>Category</th>
<th>1 - disrupted</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5 - Very disrupted</th>
</tr>
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<tbody>
<tr>
<td>Sales</td>
<td>35%</td>
<td>18%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Distribution/Logistics</td>
<td>28%</td>
<td>17%</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Workforce</td>
<td>31%</td>
<td>13%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Supply Chain</td>
<td>26%</td>
<td>16%</td>
<td></td>
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<tr>
<td>Production/Manufacturing</td>
<td>26%</td>
<td>15%</td>
<td></td>
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<tr>
<td>Customer Service Support</td>
<td>28%</td>
<td>11%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procurement/Finance</td>
<td>27%</td>
<td>10%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IT</td>
<td>24%</td>
<td>9%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Landline/Mobile Comms</td>
<td>16%</td>
<td>9%</td>
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</table>

¹ 40% of SMBs reduced opening times during the COVID-19 crisis.

60% of SMBs experienced sales decline during COVID-19.

55% of medium-sized businesses increased remote interaction with customers.
CSPs have been able to increase trust amongst SMBs

Increased trust is opening new opportunities

Echoing the findings from the consumer survey, SMBs gave favorable ratings to their CSPs for reliability and speed. They were slightly less positive about the support they received and the cost/value of services. Overall, however, CSPs earned SMBs’ trust during the pandemic.

The increased trust provides CSPs a platform to build on to become connected industry orchestrators – provided they are prepared to take the right actions.

Which of the following companies do you trust to act responsibly in its commercial offers / deliver on the reliability and quality of service offered / deliver the highest level of customer care? [Average Top 3 ranked] 1

- Wireless / mobile provider: 34%
- Landline broadband internet provider: 31%
- Energy & Utility provider: 29%
- Cloud services provider: 29%
- Banking service provider (Bank): 28%
- IT Consulting provider: 28%
- Managed IT security provider: 27%
- Insurance provider: 26%
- Enterprise Software provider: 23%
- IoT provider: 19%

Average results for responses across three components of TRUST.

55% of SMBs expect landline broadband to become more important to their business post COVID-19. 1

30% of SMBs shop local for new digital services, with only 10% selecting CSPs for new services. 1

45% of SMBs increased their trust in CSPs during the crisis. 1
CSPs must offer new services to deliver growth in this important segment

01
SMBs are likely to be severely impacted as the pandemic continues into 2021

1 out of 3
of SMBs are expected to be out of business due to the widespread impact of COVID-19 on the operations and finances of SMBs.  

3 out of 4
SMBs indicated that they have two months or less in cash in reserve.  

1.5x
reduction expected in the SMB workforce compared to large businesses. Historically, the SMB segment has been more adversely impacted by crises. During the financial crisis of 2007-09, 40% of the overall employment decline was attributed to small businesses alone.  

02
CSPs need to develop new products and services

With many SMBs likely to be impacted by the crisis, the CSPs will see a significant decline in their traditional revenues.

To sustain their business, CSPs need to develop new products and services that support the digital transformation of SMBs and capitalize on customers’ changing behavior and preferences in the post-COVID-19 environment.

Growth needed to offset expected decline in SMB revenue (%)
SMBs are looking to accelerate their digital capabilities

SMBs accelerate shift to digital
Due to the closure of the traditional channels, 35% of SMBs moved to online-only sales. Connectivity, important before, is now an imperative post-COVID-19. Half of SMBs expect to increase their spending on broadband as the shift to digital that they made in response to the pandemic becomes a permanent move.

Digital priorities
As they re-open their businesses and adjust to the new context, SMBs are looking to take greater advantage of digital. The top priorities over the next six months will be:

<table>
<thead>
<tr>
<th>Medium-sized businesses</th>
<th>Small businesses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online presence</td>
<td>Billing</td>
</tr>
<tr>
<td>Digital marketplaces</td>
<td>CRM &amp; online training</td>
</tr>
<tr>
<td>Advertising</td>
<td>Business intelligence</td>
</tr>
</tbody>
</table>

Omnichannel care
Both small and medium-sized businesses are looking for support from their providers to help them harness new technologies effectively. And they want to access this support across digital and non-digital channels – online, automated and video services are all seen as more important post-COVID-19, while the human connection still remains of value.

35% of SMBs moved to online-only sales due to COVID-19.¹

63% of SMBs expect to see an increase in the use of PaaS public cloud over the next twelve months.¹

54% of the SMBs expect an increase in usage of network security over the next year.¹

64% vs. 55% of medium businesses vs. small businesses are interested in using automated services post COVID-19.¹
CSPs need to partner to become the preferred choice for SMB digital services

CSPs currently aren’t the first-choice providers of digital services for SMBs

Small businesses are most likely to engage local IT providers for new digital services, with only 10% of the SMBs currently buying such services from CSPs. However, when asked who they are likely to purchase digital services from, 16% of SMB respondents selected CSPs. Currently, two thirds of SMBs purchase ICT services from three or more service providers, but 50% of SMBs are interested in consolidating this number of service providers.

With high levels of trust and customer satisfaction, CSPs have an opportunity to become the provider of choice of digital services for SMBs leveraging global and local ecosystem partnerships.

Which providers are you most likely to purchase digital services from? (Average)

<table>
<thead>
<tr>
<th>Provider</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Local IT service provider</td>
<td>29%</td>
</tr>
<tr>
<td>Enterprise Software provider</td>
<td>27%</td>
</tr>
<tr>
<td>Large IT systems integrator</td>
<td>25%</td>
</tr>
<tr>
<td>Online advertising/technology company</td>
<td>16%</td>
</tr>
<tr>
<td>Wireless/ Landline connectivity provider</td>
<td>16%</td>
</tr>
<tr>
<td>Specialist Technology Provider</td>
<td>12%</td>
</tr>
<tr>
<td>Cloud Platform Provider</td>
<td>10%</td>
</tr>
</tbody>
</table>

55% of SMBs expect broadband to become more important to their business post-COVID-19.1

50% of SMBs are interested in reducing the number of service providers.1

45% of SMBs had increased their trust in CSPs during the crisis.1

16% of SMBs are likely to purchase digital services from CSPs.1
Enterprise revenues are expected to decline although cloud, security and SD-WAN offer growth opportunities

01
Traditional voice and data services decline
10% decline in fixed revenue and a 12% decline in mobile revenue is expected in 2020.41
- Decline in fixed voice and broadband revenue due to business closures and workforces shifting to remote working.
- Near-normal demand by 2022 with expected recovery levels of employment.
- Reduced business travel and higher unemployment will impact mobile revenue, partially offset by increased phone and broadband provision to work-from-home employees.
- Migration from TDM to VoIP is expected to be temporarily put on hold or slowed down.

02
Corporate data services grow driven by SD-WAN
85% growth expected in SD-WAN managed services during 2020.42
- Changes to key WAN infrastructure is unlikely as companies are focused on supporting remote workers.
- Higher SD-WAN usage due to an increase in remote working across companies.
- While adoption of cloud-oriented WAN infrastructure may be accelerated, it might not drive higher revenues for CSPs as businesses will try to limit non-essential expenditure.

03
IT services offer significant growth
5.7% growth expected in public cloud infrastructure expenditure and 6.2% growth in cybersecurity market expected in 2020.43
- While businesses are less likely to embark on major new IT projects in the current environment, the adoption of cloud solutions will likely feature prominently as IT departments evaluate how to deliver improved business resilience in the face of the pandemic.
- Increased investments in UC&C tools, network management, and datacenter networking have been observed since the crisis started.
- A rise in demand for cybersecurity services has been observed due to employees remote working and increased threat landscape.
CSPs can accelerate enterprise digital transformation through edge computing, security and next generation connectivity

Continued growth of digital transformation

10.4% p.a.

Growth in global spending on digital transformation and services expected in 2020 as businesses prioritize investment in digital technologies to build resilience.

The potential of the edge offers CSPs promising growth opportunities

32% p.a.

Growth expected in global edge computing market during 2020-24.

30%

Of IT budget spend will be spent on edge cloud computing by enterprises over coming 3 years.

36%

Of operators surveyed believe that CSPs will be most important in creation of new revenue services from edge computing.

COVID-19 is leading to focus on key use cases for the enterprise:

AI Enabled Analytics

49%

Of major organizations are expecting to increase cybersecurity spending following the COVID-19 crisis.

Enterprise security

70%

Of large enterprises are either launching new analytics and business intelligence projects or moving forward on projects that had already been planned.

Online Learning

425%

Increase in global enrolments with online education platforms due to a rapid, widespread adoption of digital learning.

Enterprise strategic plays:

CSP next generation connectivity

Enterprises have a strong marketplace appetite for wireless networking to capture the transformational benefits of digitalization and automation.

CSP multi access edge compute

CSP networks are already moving towards a virtualized, cloud-based model that can provide the platform for future edge computing deployments.

CSP managed security services

Telecom operators are focusing on delivering managed security services to SMBs and Enterprises with services ranging from device management, anti-phishing, threat intelligence to full Security Operations Centre.
CSPs can play an integral role in the adoption of smart infrastructure

Major investments planned for smart infrastructure and digitization

Governments globally have signaled plans for major new investments in smart infrastructure and digitization in coming years to support rebuilding damaged economies post COVID-19. These funds will be used to support SMB digital transformation, energy transition, ubiquitous connectivity for all citizens to bridge the digital divide, online education, telemedicine and smart cities amongst other initiatives. The global smart city market alone is expected to grow at a CAGR of 23% p.a. up to 2024. Many countries and cities have already made a start, for example:

- In June 2020, Singapore announced a 30% increase in FY 2020 ICT spend to accelerate digitalization and help businesses recover from COVID-19 impact.
- Copenhagen partnered with Ørsted, Maersk, and DSV among others in May 2020, to develop a facility to produce green fuels for road, maritime, and air transport in Copenhagen.

COVID-19 is leading to emergence of new smart infrastructure use cases:

01 Drones
use for delivery of medical supplies – e.g., Sweden uses drones to deliver defibrillators for out-of-hospital cardiac arrests.

02 Real-time dashboards
use of smartphone data crowdsourcing for location tracking – e.g., New Orleans is making use of power BI to set-up tracking dashboards.

03 New surveillance
AI-based remote temperature sensing – e.g., Kogniz Health launched an AI-enabled camera system that identifies anyone with an elevated temperature in a crowd.

04 Digital twins
real-time visibility for resources, assets, and services – e.g., Siradel helps build a city’s digital twin to help authorities understand their territory better.

Smart City strategic plays:

CSP as connectivity provider
Chungwa Telecom is the connectivity player for smart city services in Taiwan, offering services like smart street lighting, smart garbage collection and recycling.

CSP as a platform
Telefónica offers a platform that allows cities to view aggregated sensor data to make better decisions on how to manage and forecast smart city operations.

CSP as smart city co-creator
NTT Docomo signed a deal with the government of Yonaguni Island, Taiwan, to develop and manage all IoT services for the island.
The initial lockdown called for both dramatic action and a rapid response from CSP leaders. Entire workforces had to shift to remote working including millions of contact center customer service agents. At the same time, closure of between 40-80% of the retail network resulted in a surge of online and telephone customer service requests as consumers could no longer visit their local store for sales and service.

Network teams and field engineers have been limited in their ability to complete installs in consumers’ homes while delays with government permits has slowed down rollout of fiber and 5G services. CSP network operations teams have also had to manage up to 70% increase in traffic volumes as well as shifting demand patterns.

CSPs’ rapid response has been effective as seen in positive consumer and business sentiment towards service providers and the robust performance of networks. The industry has also been innovating with new investments in intelligent customer sales and service solutions and touchless installation support. As we prepare to live with COVID-19 for the foreseeable future, now is the time for CSP leaders to shift operational planning from rapid response to future business resilience. Taking action now to accelerate the shift to become intelligent, lean and cloud native will position CSPs favorably to navigate the challenging times ahead.
CSPs successfully transitioned to remote working and now need to consider future workplace strategy

01
CSPs effectively transitioned to remote working, while providing additional support to frontline essential workers

~70-80% of CSPs’ workforce transitioned to remote working in the very first month of crisis.

1-5% pay hike and additional allowances were provided to field-force workers and other customer care professionals by many CSPs.

AT&T in the US provided employees with an additional four weeks of paid time off for COVID-19 related needs on top of paying a 20% bonus above the regular hourly base rate to frontline employees.59

02
Employees are also preferring to work from home

73% employees enjoy working from home.22

55% of employees are professionally more satisfied working from home.22

Optus in Australia have announced plans to permanently move its call center operations to home working.60

03
The world is moving towards “hybrid working”

3 in 4 employees want a mix of office-based and remote working.61

79% of executives believe that businesses will benefit from increased flexibility around the office and remote working.62

Ooredoo Group in Qatar has extended its work-from-home policy to all workers who do not need to be physically present in the office until the end of 2020.63
CSPs are well positioned to continue hybrid working into the future

Phasing the reopening of industries requires an understanding of the number of jobs in each industry, the proportion of those that can plausibly be performed from home, and the potential occupational risk from exposure to COVID-19 balanced against how essential it is to society.

- Very high occupational risk—but vital
- High occupational risk—non-essential
- Lower occupational risk—Essential
- Essential—can be performed from home

Sources: Jobs data from US BLS; percentage plausibly working from home based on Dingel & Neiman; C-19 occupational risk based on Visual Capitalist.
Any future hybrid strategy must prioritize employee wellbeing and collaboration

Re-inventing the office

Before the pandemic, offices were critical to productivity, culture, and collaboration, as well as a tool for winning the war for talent. Many CSPs built large-scale campuses and competed for prime office space in the city centers, leading to high employee density.

In today’s world, with social distancing a requirement and restrictions on physical movement, the office experience requires re-invention. A recent MIT survey indicated that employee interactions are narrowing, with people exchanging more messages within a smaller pool of contacts leading to opaque social bubbles. Organizations are also concerned that employee ideation and innovation is more challenging in a virtual environment without the possibility of serendipitous conversations with colleagues around the water cooler.

Employee needs and new leadership skills

While 48% of employees have highlighted remote working to be more effective, the lack of physical connection with colleagues has resulted in increased stress and anxiety levels with ~70% of employees signaling the importance of employer support for their mental wellbeing during the crisis.

Remote and hybrid working also require new leadership skills. Research has found that more than half of managers feel that they have not been able to support their employees working remotely in the same way they previously had done so in the office. While remote working has many benefits, there are workforce implications that need to be addressed and CSP leaders must develop a long-term vision and workplace strategy for the future of their organizations.

28% of employees say that their mental health got worse during the pandemic.

2 in 5 employees say their managers have met or exceeded expectations on checking in on their mental wellbeing.
Despite rising demand, changing usage patterns and new use cases, CSP networks have been resilient

01 Networks have been resilient despite the increase in demand due to COVID-19

50%-70% surge in total internet hits in the first month of the crisis with continuing high levels of demand.67

74% global consumers perceive mobile networks to have performed the same or better during the crisis than before.68

76% consumers say they are satisfied with their fixed broadband’s overall performance during the crisis.22

02 Mobility restrictions have led to new consumption patterns

Internet access patterns have shifted from high density business districts, like city centers and business parks, to residential areas like suburbs and outlying towns. There is also a shift in traffic from mobile to fixed line as people spend more time at home on Wi-Fi networks.

10% decline in internet traffic in office areas.69

20% increase in internet traffic in residential areas.69

5% decline in internet traffic in campuses.69

03 New use cases are gaining prominence due to the COVID-19 crisis

The healthcare system has benefited from improved response times, patient monitoring and remote collaboration due to the application of technologies such as 5G.

Countries and healthcare providers are looking to use technologies to reduce the burden on the healthcare system arising due to COVID-19.

90% of physicians used some form of telehealth service during crisis.70

60% of physicians plan to continue using telehealth practice even after the crisis.70
Investment in capital infrastructure and next generation networks is set to rise

“….. a rapid acceleration of our FTTP build with a target of 20 million premises passed by the mid- to late-2020s, including a significant build in rural areas.”

Philip Jansen
BT CEO

“We are also bringing forward AUD 500 million of capital expenditure planned for the second half of the fiscal year 2021 into calendar year 2020. This investment will increase capacity in our network and accelerate our roll out of 5G. This will inject much-needed investment into our economy at this time.”

Andrew Penn
Telstra CEO

5G Deployment

After initial disruption, 5G deployment is back on track

~96% expected CAGR of 5G investments up to 2022.71

When lockdowns were initially imposed, 5G rollouts were disrupted as a result of challenges obtaining government permits and sourcing equipment, with supply chains ground to a halt. A number of countries also postponed spectrum auctions further delaying network deployment plans.

As economies have reopened, 5G plans are back on track with 22 CSPs launching commercial 5G services in Q2. CSP spend on 5G infrastructure is expected to scale faster and peak higher than initially anticipated due to increased government investment in next-generation connectivity across many countries including China, U.S., Japan, South Korea and Singapore, to name a few.

FTTX Deployment

State sponsored economic recovery plans to accelerate deployment of fiber

12% increased growth in global FTTP CAPEX in 2021 compared to pre COVID-19 estimate.72

Governments across the world are making commitments to increase spending on FTTX deployment as part of their economic recovery and stimulus plans. The exodus out of cities across many countries has brought into sharp focus the absence of fiber connectivity outside of densely populated urban locations.

For example, the UK plans to invest GBP 5bn into the rollout of full-fiber networks given the current coverage (12%) is significantly below their European neighbors.73 In the Netherlands, KPN is planning to accelerate the rollout of fiber to reach a target of 1mn (FTTH) passes in the Netherlands by the end of 2021.74
CHAPTER 3: EXECUTING TO WIN, WHAT TO DO NEXT
Communications organizations must now build on a successful rapid response to COVID-19 and take steps to capitalize on consumer trust and regained eminence to build a new relationship with consumers, reasserting their relevance and supporting acceleration to a post-COVID-19 world.
We have developed a comprehensive framework aimed at supporting CSPs to emerge stronger from the crisis

Our framework aims to support profitable growth for CSPs responding to the COVID-19 crisis and provide clear guidance for leaders in the communications industry on how best to outmanoeuvre uncertainty at this critical time, as they shift from rapid response to future business resilience.

The ‘Emerge Stronger’ framework has been developed based on our market insights, client engagements and data from our research organization. The framework is focused on emerging revenue and growth drivers, elevating the customer experience, building a digital workforce, capturing the promise of the pervasive network and leveraging the power of the cloud across the entire business to support CSPs to emerge stronger from the COVID-19 crisis.

A detailed analysis conducted by HBR after the last recession highlighted that companies with a comprehensive focus on growth, operational efficiency and asset strength – similar to our framework – emerge far stronger from economic downturns on both growth (+13.0%) and profit improvement (+12.2%) post crisis than other firms who focused on performance improvements through employee reduction and organizations that were unidimensional in their focus on either only growth or asset expansion.
Framework for CSPs to emerge stronger

New Growth Opportunities

1. As remote working is normalized with 75% workers wanting to continue working from home, CSPs can take advantage of billing relationship and ecosystem partnerships to sell enhanced connectivity, security and remote working solutions.
2. Increased trust and the home now acting as a central service hub for living present a second chance for CSPs to increase their relevance in the Future Home significantly by placing the user at the center with 46% consumers choosing CSPs as their preferred smart home provider.
3. CSPs can become the powerhouse of SMB digital transformation by partnering with local service providers and becoming ecosystem orchestrators for localized software solutions while re-inventing retail to support local business.
4. COVID-19 is accelerating investment in connected industry solutions and digital transformation of public services where CSPs can play a strategic role, with the Telemedicine and online education markets expected to grow at >20% and 29% p.a. respectively & governments increasing spending on digital transformation.
5. Become an active player in the ecosystem to leverage increased investment in smart infrastructure as governments look to accelerate economic recovery through major investment initiatives (e.g. ~20% increase in smart city investment in 2020 vs 2019, smart meters, public transport, building retrofit, energy transition etc.)

Zero-touch Customer Experiences

1. Advance AI care maturity and chatbot experience as >35% of customers would prefer to move to a digital/AI solution at the time of the call when given the option.
2. Reduce service-related truck rolls by 20%, improve NPS by 25bps and enhance workplace safety with remote visual assistance for device installation & support.
3. 60% of consumers would feel little sense of loss if CSP physical stores closed, but their sales and service expectations remain. Deliver next-generation retail omnichannel experience and accelerate customer migration to digital with the immersive Virtual Store.
4. Redesign Customer Operations operating model to support remote working, reduce cost by 30% and improve customer experience.

Culture & Digital Workforce

1. Build on COVID-19 response actions and CSP eminence by revisiting company purpose with a focus on inclusion, digital society and sustainability. Purpose-driven companies have delivered 4X returns vs. S&P 500.
2. Improve in-office/remote productivity, participation and collaboration by adopting new tools (Mural, Whitespace, etc.) to enable design thinking, innovation and agile teams while redesigning office for hybrid teaming and asynchronous collaboration.
3. Safeguard trust by prioritizing safety and employee wellbeing in return to workplace strategy and virtual working. Execute hybrid strategic workforce planning informed by analytics.
4. With 64% of employees facing anxiety over job security, lead with compassion and re-invent the employee experience making physical and mental health a priority.
5. Double down on capability development and build a culture of continuous learning. Upskill employees in digital skills and reskill where demand has shifted.

Pervasive Networks

1. Realign investments as a result of changing usage patterns, with less density required in downtown build and increased demand in suburban locations.
2. Partner with governments to accelerate, extend and enhance connectivity (5G, Fiber, FWA) to reduce digital divide and inequality.
3. Reinvent product development by accelerating 5G edge cloud network deployment to power the industrial internet with ecosystem partners (smart cities, manufacturing, real time data apps, security, etc.)
4. Create incremental revenue opportunities leveraging 5G and cloud to extend corporate WAN/LAN to address 60% increase in broadband with the shift from the office to home.
5. Partner and shed non-strategic network functions to lower cost by 15-20%.

Cloud Business Model

1. A modern technology stack is needed to give CSPs control over innovation and reduce their dependency on software providers.
2. Innovating quickly requires a new operating model, one that’s outcomes-focused, highly collaborative, and geared toward speed to value.
3. New skills, especially those in IoT, cloud, AI, data science, and security, will be required, some of which could be sourced from third parties.
4. CSPs’ approach to the ecosystem must shift from simply “buying” to collaborating and co-creating with innovative partners to develop compelling new offerings.
5. Old operations-focused metrics must give way to value- and outcomes-oriented ones that emphasize efficiency and output.
New Growth Opportunities

1. Enable the work-from-home economy with enhanced connectivity, security and remote working solutions
2. Grasp second chance at Future Home by placing the user at the center
3. Power SMB digital transformation through local partnerships and ecosystem orchestration
4. Play a strategic role in the development of connected industries (e.g. telemedicine/ education/public service)
5. Become an active player in the ecosystem to leverage increased investment in smart infrastructure
Enable the work-from-home economy with enhanced connectivity, security and remote working solutions

34% of consumers are willing to pay for services that enable them to work at home more efficiently.22

Offer next-generation connectivity services
• Launch new connectivity services to meet the increased demand, focusing on FTTH, mesh network, high-speed fixed wireless offerings and second/dedicated line connections for home working.

Provide security solutions
• Offer suite of security services to protect consumers against the evolving threat landscape, which has seen cyberattacks increase by 34% since the start of the COVID-19 crisis.75

Develop customized work from home offerings
• Develop new connectivity and service plans tailored to meet the remote office needs including VPN, software and hardware.
• For Enterprise customers offer secure connectivity solutions to be provided to employees.
• Partner with ecosystem players to offer software, collaboration tools and hardware solutions for the SMB segment.

Grasp second chance at Future Home by placing the user at the center

43% of respondents consider CSPs as their first-choice providers for smart home services.22

Orchestrate services around the consumer
• While the smartphone has acted as the remote control for our lives for more than a decade, now with COVID-19 and consumers spending more time at home, there is an opportunity to develop personalized, intelligent smart home services built around the individual user and the household.
• CSPs can operate as multi-sided platforms, playing a pivotal orchestrator role at the center of Future Home ecosystems, moving from proprietary systems to open APIs.

Attract and build with right ecosystem partners
• Break out of the persistent data siloing to enable the ecosystem to learn, adapt to, and anticipate user needs.
• Create a joint, compatible data reservoir for developers to set up and deploy with ease.
• Enable seamless experience in and out of home as fixed-mobile convergence accelerates and addresses consumers’ security needs.
New Growth Opportunities
What to do Next? (2/2)

Power SMB digital transformation through local partnerships and ecosystem orchestration

30% of SMBs shop local for new services, and ~50% of SMBs are interested in reducing the number of digital service providers post COVID-19.

Become an ecosystem orchestrator to support SMB digitization
• Develop partnerships with local technology service providers and systems integrators to provide a range of connectivity and digital services to accelerate SMB digitization.

Develop digital marketplace for SMBs
• Develop online marketplace to support connectivity and technology needs of SMBs by offering end-to-end services like SaaS, IoT, and security as well as hardware and devices, in addition to the traditional connectivity services.

Re-Invent existing retail footprint to support SMBs
• Redesign physical retail stores as co-working spaces and locations where SMBs can get advice, support, and connect with service providers.

Play a strategic role in the development of connected industries (e.g. telemedicine/education/public service)

Telemedicine market is expected to grow at >20% p.a.\textsuperscript{76} and online education market at ~29% p.a.\textsuperscript{77}

Develop ecosystem partnerships
• Collaborate with ecosystem players to foster portfolio innovation, fulfill regulatory requirements and accelerate time to market for new propositions.

Prioritize mission-critical use cases
• Identify critical use cases to support society’s functioning during a time of social distancing and travel restrictions.
• Focus on Edge and 5G Network Slicing to tailor and customize the network for specific applications. For instance, the mission-critical IoT slice can ensure increased performance reliability for Health and Education use cases.

Transform operating model and build expertise
• Shift from siloed service creation supply chain to a horizontal and software powered supply chain and develop vertical expertise.

Become an active player in the ecosystem to leverage increased investment in smart infrastructure

~20% increase in smart city spending in 2020 vs 2019.

Develop relationships across public and private sector
• Build trusted relationships with local and federal government agencies to better understand pain points, investment priorities and use cases as countries learn to live with the pandemic.
• Forge partnerships with developers and construction companies as well as technology players and device manufacturers.

Expand core connectivity capabilities
• Become the go-to connectivity player and ecosystem partner with emphasis on security
• Invest in new access technologies and future connectivity to close capability gaps in developing 5G, building campus networks, etc.

Move beyond connectivity
• Building on connectivity move to orchestrating a platform of partners for the rollout of smart infrastructure, learning to work with companies that may be perceived as competitors.

\textsuperscript{76}\textsuperscript{77}
Zero-Touch Customer Experiences

1. Advance AI care maturity and improve chatbot experience
2. Reduce truck rolls, improve NPS and enhance workplace safety with remote visual assistance for device installation & support
3. Deliver next-generation retail omnichannel experience and accelerate customer migration to digital with the immersive Virtual Store
4. Redesign Customer Operations operating model to support remote working
Advance AI care maturity and improve chatbot experience

>35% of customers would prefer to move to a digital/AI solution at the time of the call when given the option.22

Augment and automate service with virtual agents and chatbots

- Optimize care center traffic management by launching AI-powered virtual agents that can resolve standard customer complaints while supporting human agents in solving more complex problems.
- Reduce Opex with -30% savings per voice engagement expected to be realized.29
- Provide near-human experience and enhance the quality of customer interactions by deploying conversational chatbots across apps and websites.
- Transform customer experience by simplifying service interactions and enabling DIY/ self-care.

Reduce truck rolls, improve NPS and enhance workplace safety with remote visual assistance for device installation & support

Remote virtual assistance would help reduce service-related truck rolls by 20% and improve NPS by 25bps.

Accelerate deployment of virtual tools for real-time remote assistance

- Transform physical field-force interactions for service requests and installations to a virtual model employing remote collaboration tools such as TechSee.

Embrace self-installation tools and services

- Switch from products requiring assisted in-person installations to self-installation and self-repair devices through over the air updates.
- Develop software for CPE hardware in consumers homes such as routers and set top boxes to enable more comprehensive remote support and enhanced functionality.

Empower employees to transition from field-force to digital service

- Rapidly upskill workforce to support the transition to “touchless engagement model”, so that even field agents can offer touchless support to the customers and improve customer experience.
Zero-touch Customer Experiences
What to do Next? (2/2)

Deliver next-generation retail omnichannel experience and accelerate customer migration to digital with the immersive Virtual Store

60% consumers would feel little sense of loss if CSP physical stores closed but their service and sales needs remain. 22

Recreate in-store shopping experience at consumer’s homes
• Revamp the online shopping experience and recreate a vibrant virtual replica of the in-store experience to attract and retain customers online with ability to walk around the virtual store, browse devices and video chat with agents.

Personalize shopping experience while fulfilling the need for social interactions
• Provide a personalized experience and cater to the consumer demand for increased social interactions to drive growth on your online platform.
• The virtual store can be personalized around individual customers and also be easily redesigned to reflect customers location, national holidays, festivals and sporting events.

Adopt advanced technologies such as AR / VR to create an immersive experience
• Technologies such as AR / VR can take the immersive shopping experience to the next level.
• AR technology can also be used in physical stores to enhance the shopping experience and seamlessly blend the physical and virtual retail experience.

Redesign Customer Operations operating model to support remote working

An estimated 50% of call centers will not go back to a traditional brick and mortar physical arrangement and stay virtual with at-home agents helping to achieve ~30% cost reduction.

Revisit customer care operating model to identify roles that can be transitioned to permanent remote working
• Transition roles to permanent remote working without impacting customer experience, leading to the elimination of overhead and operations support costs.
• Source, train and grow talent in various locations as call centers decentralize, moving away from large on-site locations to geographically dispersed talent.

Transform organization structure to include more work flexibility
• Transition from a team-driven hierarchy to a more flexible work environment with greater emphasis on domain specialization.
• Routing strategies that used to be based on location can now be hyper-individualized based on skills, leading to better call flow and seamless customer experience.
Cultures & Digital Workforce

1. Revisit company mission and purpose
2. Improve productivity and collaboration via new tools
3. Safeguard trust and prioritize safety in return to workplace
4. Lead with compassion and re-invent employee experience
5. Double down on capability development
Culture & Digital Workforce
What to do Next? (1/2)

Revisit company mission and purpose

80% of employees feel that their employer is responsible for ensuring a better working world after pandemic.79

Give your company’s mission & purpose new meaning

• Building on response actions and regained eminence for CSPs, revisit company mission and purpose by redefining how you can contribute to society during and post the COVID-19 pandemic.
• Sharpen focus on supporting the acceleration of a broader digital culture, diversity and inclusion, sustainability and the drive to net-zero emissions.
• Identify partner organizations to collaborate with and support to realize company purpose.
• Define targets and timeframe for diversity and sustainability metrics and report progress quarterly.

Improve productivity via technology & innovation

76% of executives agree there is a need to bring technology and people together in a more human-centric manner.80

Adopt new tools to support collaboration

• Deploy virtual technologies to seamlessly connect remote and office-based employees.
• Re-imagine how design thinking and innovation sessions can be run virtually.
• Increase adoption of collaboration tools (e.g., Mural, MS Whitespace).

Redesign office for collaboration and innovation

• Take a fresh look at how much and where space is required and how it fosters desired outcomes for collaboration, productivity, culture and the work experience while ensuring employee safety.

Safeguard trust and foster inclusivity

>60% CEOs have yet to measure employee trust while only 34% have plans for building or maintaining employee trust.81

Ensure holistic return-to-work standards

• Focus on psychological and physical safety to build employee trust.
• Reimagine e2e employee journeys from home to physical/virtual office from a health & safety perspective.
• Utilize strategic workforce planning & analytics tools to plan phased & managed return to work reinforced by data/insights.

De-centralize office location, de-densify space and deploy touchless technology

• Redesign your office space to adhere to health and safety requirements and implement touchless devices and solutions.
• Redesign processes for field workers leveraging new remote assistance technology to minimize human contact.
Culture & Digital Workforce
What to do Next? (2/2)

Lead with compassion and re-invent employee experience

74% of employees want their managers to showcase a leadership style focused on empathy and a supportive attitude.\(^2\)

Address physical and mental health needs

- Make mental health a priority and support individuals’ mental wellness recognizing increased pressure on employees as a result of COVID-19.
- Support employees in building human resilience by augmenting the tools, techniques and channels available to increase resilience levels (offering employees a subscription to apps like Headspace and Calm is a good start).
- Provide managers with the training and resources on how to talk with employees about mental health and what they need to work.

Personalize “hybrid working”

- Install a culture that prioritizes meritocracy and moves away from hours worked to output and quality of work.

Be responsive

- Identify and support leadership behaviors needed to dial-up trust, listen for feedback from employees, and rapidly align people programs and policies to respond to externalities.

Double down on capability development

Organizations see a 5x impact on productivity for every hour spent on continuous learning.

Build skills to succeed

- Identify key future skills for your organization and engage all employees in skill building – for CSPs, this may include agile, design thinking, blockchain, quantum computing, etc.
- Prioritize training for managers on empathy, engagement and virtual people development.
- Reskill employees working in areas with lower demand, e.g., retail employees trained to support contact center.

Create culture of continuous learning

- All employees should develop a training plan which forms part of their performance management process.
- Accessible tools and learning platforms (across mobile, laptop, tablet, etc.) are essential for supporting individuals learning journey.
Pervasive Networks

1. Create incremental revenue opportunities leveraging 5G and cloud
2. Partner with governments to accelerate, extend and enhance connectivity
3. Generate cost savings through virtualization and AI-powered networks
4. Accelerate 5G cloud NW deployment to reinvent product development
5. Partner and shed non-strategic network functions
Pervasive Networks
What to do Next? (1/2)

Create incremental revenue opportunities leveraging 5G and cloud

60% increase in daytime load compared to only 25% increase in peak load for US CSPs during the height of COVID-19 crisis.\(^83\)

Reshape investments to enhance connectivity

- Work toward powering enhanced connectivity with guaranteed cloud/IT service, security and foundational Industry X.0/ IoT platform capabilities to provide new horizontal QoS-based and mission-critical services for enterprises.

Tap on increasing broadband demand due to remote working

- By leveraging 5G and cloud services, focus on extending corporate WAN/LAN to address a 60% rise in broadband demand from remote working.

Achieve cost savings owing to a change in usage pattern

- Reduce presence in high cost dense urban office cell sites and shift to local cell sites, in line with changing usage patterns, to realize savings in network costs.

Partner with governments to accelerate, extend and enhance connectivity

40% rural mobile internet gap in low- and middle-income countries primarily due to poor connectivity.\(^83\)

Guide digital transformation of public services

- 51% of Americans prefer digital access to government services\(^84\), with COVID-19 creating a need for digitization of services.
- Drive digital transformation for governments by creating a digital roadmap and offering assistance to execute it.
- Through a XaaS model, provide connectivity combined with platform solutions, supporting government agencies in becoming more resilient and future-proofing them for the digital-first world.

Drive faster network deployment to serve remote educational, health and other essential services to those left behind by the digital divide

- Partner with government and OTT service providers to expand broadband and digital services access to underserved areas (e.g., 40% of kids in the US don’t have reliable internet\(^85\)), including acceleration in network investments, community service options, etc.
**Pervasive Networks**

What to do Next? (2/2)

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**Generate cost savings through virtualization and AI powered network**

- **40%** savings in CAPEX and **25%** savings in Opex can be achieved by moving to virtualized, cloud-based architectures.\(^6\)

**Deploy AI-powered network**

- Realize faster resolution times for network outages and significant overall cost savings through AI.
- Achieve **30% reduction in energy-related outages** through deployment of AI-powered infrastructure.

**Virtualize through cloud-driven transformation**

- Cloud driven network transformation will limit the need for physical repairs and improve incident response times, ultimately bolstering customer experience.

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**Accelerate 5G cloud NW deployment to reinvent product development**

- **30%** of IT budget spend will be spent on edge cloud computing by enterprises over coming the three years.\(^7\)

**Tap on the power of edge computing**

- Shift towards a virtualized, cloud-based model that can be the platform for future edge computing deployments.
- Leverage the control point of edge compute to power industrial internet with ecosystem partners (smart cities, manufacturing, real-time data apps, security, etc.).

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**Partner and shed non-strategic network functions**

CSPs can lower costs by **15-20%** by eliminating non-strategic network functions through partnerships.

**Outsource non-strategic network functions**

-Partner with managed network services provider and outsource various aspects of the network, back-office functions and application platforms to reduce Opex.

**Focus on sharing of passive network infrastructure**

- Share non-electronic infrastructure at a cell site, such as power supply and management system, while keeping network equipment separated.
1. Reduce vendor dependency with modern technology stack
2. Innovate quickly with an outcome focused Operating Model
3. Rapidly build new skills in key technologies
4. Collaborate and co-create with the ecosystem
5. Shift from operational to value metrics
Cloud Business Model
Transformation into a modern telco-tech - What to do Next?

Technology Stack
Reduce vendor dependency with modern technology stack
FROM - CURRENT: Poorly Mapped System; End of Life Platforms
• Siloed stacks with duplicated functions
• Legacy impeding innovation
• No clear target state
TO - TELCO TECH: Supporting Modern SW Engineering
• Decoupled and microservice-based architecture
• Technology simplification
• Open Platforms for ecosystem contribution

Operating Model
Innovate quickly with an outcome focused Operating Model
FROM - CURRENT: Ill Defined Processes with too many Handoffs
• Heavy on waterfall
• Friction internally (Dev/Ops) & externally (Digital, R4B)
TO - TELCO TECH: Outcome Based and Business Driven
• Digital Hub to build own IP with an new agile WoW
• Collaborative decision-making
• Focus on speed-to-value & Innovation (try & fail)

Skills and Talent
Rapidly build new skills in key technologies
FROM - CURRENT: Unempowered Resources with Outdated Skills
• Core capabilities outsourced
• Limited incentives to innovate
• Resources more vendor managers than technologist
TO - TELCO TECH: New Workforce with Tech Dominance
• Build skills and talents to reduce vendor dependency
• Co-sourcing with a strategic partner

Ecosystem Partnership
Collaborate and co-create with the ecosystem
FROM - CURRENT: Fragmented Vendor Landscape
• Few vendors at scale to act as strategic partners
• Rigid contracts, rigid solutions
• Ecosystem held at arms length from tech org
TO - TELCO TECH: Platform Approach
• Vendor consolidation initiatives
• Service co-creation and product innovation with selected strategic software vendors

Outcomes and Measures
Shift from operational to value metrics
FROM - CURRENT: Lack of Meaningful Delivery Metrics
• Reporting manual and inconsistent across the organization
• Frequent cost and schedule overruns
• Blackbox investment model
TO - TELCO TECH: Business Outcomes Focus
• Value-driven measurement model
• Maturity model: Efficiency and output
Accenture’s people, proven accelerators and ecosystem partners are available to help your business emerge stronger.
We are here to help

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Each topic highlights specific actions which can be taken now and what to consider next as industries move towards a new normal.

From leadership essentials to ensuring productivity for your employees and customer service groups to building supply chain resilience and much more, our hub will be constantly updated. Check back regularly for more insights.

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