TeBIT 2020 Executive Report

In a Global Crisis, Telcos Help the World Adapt

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By Frank Felden, Thomas Krüger, Wim De Meyer

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Preface

This report marks the 10th anniversary of TeBIT, a benchmarking study jointly developed by ETIS—The Community for Telecom Professionals—and Boston Consulting Group. Anniversaries are times for reflection and often celebration, and in the midst of a global crisis, perhaps it's even more important to find, and cheer, the positive notes. One springs immediately to mind: in a year of pandemic, and a new reality, the world adapted. And telcos played a major part in making that happen.

Adapting to change has been a major theme in TeBIT reports. And little wonder. The idea behind the benchmark is to see how telecom operators are reacting to new trends, new market challenges, new customer preferences and behaviors. COVID-19 has all of that, supersized, and has put telcos' adaptation skills to a tremendous, unprecedented test. Many telcos are rising to the occasion. And then some. They are doing more than adapting their own products and processes to a greatly changed world. They are helping everyone else—businesses, governments, health care organizations, workers, students—adapt as well.

In one fell swoop, the pandemic has underscored the power, potential, and criticality of connectivity. Digital channels have replaced many in-person interactions; remote working and videoconferencing are now the norm. Telcos have helped to keep society and economies running. Their role has grown.

Each year, TeBIT takes a deep dive into a topic of particular interest to telcos. In previous reports, we've looked at agile methodologies, AI and analytics, and digital transformation, among other areas. These analyses always have a forward-looking component. What do the trends mean for the future? How can telecom operators use the TeBIT findings to be forward-thinking? To prevail over market pressures and dynamics that, left unchecked, will hinder growth? So while this year's deep dive looks at COVID-19's impact on customer needs and usage patterns, and how telcos responded to the crisis, it pays special attention to that bigger, more visible, more critical role. And how, perhaps, savvy telcos can expand it further.

For adaptation isn't just how you react to a crisis. It's also how you react to an opportunity. Many of the behaviors and preferences we are seeing now won't fade away when the pandemic ends. Connectivity will remain critical infrastructure. Digitization is no longer optional. Telcos have an opportunity to play deeper and wider in the digital ecosystem, moving well beyond their core—and largely commoditized—services.

This report looks at how telcos can get there. And it does so through something else that is more critical than ever: collaboration. Telcos participating in TeBIT shared information—about their response to COVID-19 but also about their IT unit's spending, performance, and processes—and allowed themselves to be compared with other operators. In return, participants can access a full set of benchmark results, along with further trend analysis.

During a pandemic, the traditional, in-person approach to collaboration doesn't work. So ETIS also adapted. Working groups, including new ones on COVID-19 response and managing supply chains, met via videoconferencing. The annual Community Gathering became a Virtual Gathering. More than 100 webinars have launched since the first lockdown in March 2020. This ensured that ETIS members could continue to share insights and best practices. Learning from one another, telcos can take smarter, swifter steps to make economies, societies—and themselves—resilient. In the face of adversity and long after the crisis is over.

Wim De Meyer
ETIS Managing Director

Frank Felden
BCG Managing Director and Senior Partner

Executive Summary

Telecom operators started 2020 in familiar territory. Revenues were stable and telcos continued their steady, if not always swift, adoption of digitization and agile ways of working. Then the pandemic struck. This year's IT benchmarking study (TeBIT), a survey of European operators' IT spending and performance that was completed in December 2020, takes a close look at how COVID-19 and a new reality have impacted customers and telcos alike. How have purchasing and usage patterns changed? How have telcos responded? We found that operators that stressed digitization and customer proximity—staying close to the customer with stores shuttered and telco workforces locked down—experienced less revenue decline. But the pandemic also demonstrated that digital transformation is no longer optional for any industry. And many businesses will need help accelerating their journey. Telcos provided essential connectivity when everything moved online. Now they can play an even bigger role in helping key verticals—like health care, government, and transportation—adapt to, and thrive in, the new reality.

Coming off a year with few surprises, telcos were soon tested by the COVID-19 pandemic, which triggered large-scale lockdowns by March. Revenues declined (particularly from roaming) but not as steeply as Europe's GDP.

- ETIS members saw just a 0.3% drop in revenues for 2019—and 38% of the telcos were able to increase both revenues and EBITDA margin.
- The majority of TeBIT participants—83%—boosted their IT spending in 2019. The increases were driven largely by IT capex investments in digital transformation as well as infrastructure consolidation and renewal.
- First-wave lockdowns led to a median revenue change of –3.4% for ETIS members in the second quarter of 2020. The third quarter, when many countries adopted less stringent measures, saw recovery: the median was just a 0.6% drop compared with the same period in 2019.
- Telco revenue declines were less severe than those in Europe's GDP, which fell by 13.9% in the second quarter and 3.9% in the third quarter.

When lockdowns caused telcos to shutter their retail stores, digital channels became critical. TeBIT participants that were able to leverage digitization to stay close to their customers—through the web and mobile apps—experienced less revenue decline.

- In lockdown, more customers used—and became used to—digital channels. Yet in a June 2020 BCG survey, 26% of respondents said they preferred to make their post-lockdown mobile purchases in a physical store.
- There are signs, however, that digital is gaining ground. The same survey found that digital was the channel of choice for 2.5% more respondents after lockdown than before it. And even after stores reopened, telcos continued to see increases in the number of customer requests they handled via digital.
- To make it easier for customers to pay bills, purchase plans, and obtain support online, telcos created simpler interfaces and introduced tools like chatbots and digital signatures. Improving the digital experience was particularly crucial in countries where many customers still made their payments and purchases in stores.
- Long term, the success of digital channels depends on how telcos use them to stay close to their customers and meet their needs. Savvy operators will stress personalized offers, intuitive features, and the ability to capture and quickly implement feedback.

During the pandemic, connectivity became a critical enabler of remote working, distance learning, and digitization. Although network usage increased, telcos reported no significant congestion, and many operators provided additional capacity to health care facilities and other essential institutions.

- During the first-wave lockdown, fixed data, fixed voice, and mobile voice traffic all increased sharply from prepandemic levels. This aligns with how customers were using telco networks: largely for videoconferencing, video streaming, and voice calls over broadband at home.
- Once restrictions eased, fixed data remained well above precrisis levels. This also makes sense, given that many businesses and schools continued to use fully remote or hybrid (a mix of in-person and virtual) models.

- Many behaviors developed during COVID-19 are likely here to stay—and many organizations will accelerate their digital transformation. Telcos need to invest in new network capabilities and technologies, like 5G and fiber to the home, that will enable the new reality.

- But telcos also have an opportunity to expand deeper into the digital ecosystem, helping verticals like health care and government with analytics, app development and enablement, and security—and even providing end-to-end solutions.

While some telcos had previous experience with remote working, none had adopted it on a massive scale. The transition to a fully offsite workforce was not entirely seamless—and some challenges were solved more easily than others.

- Many telcos lacked sufficient laptops or licenses to enable all employees to work from home immediately. But by modifying budgets, prioritizing key purchases, and implementing new training programs, telcos were able to move almost their entire workforce online.

- In some instances, teams found it challenging to maintain previous levels of productivity and performance. Kicking off projects in traditional waterfall ways of working was harder during lockdown—but TeBIT participants reported better results from their agile teams.

- After the first-wave lockdowns, many telcos adopted hybrid work models. The approaches varied. Some operators offered remote work as a flexible option; others split their workforce into “A/B” teams that alternated between onsite and offsite work.

For telcos, the pandemic was a crisis but also a call to action. Telcos reinvented themselves, working and serving their customers in new ways. Now they have a chance to expand their role even further.

- By accelerating their own digital transformations and taking a customer-centric approach to product development, support, and service, telcos can strengthen their core business. But they can also position themselves to move beyond the core.

- Telcos are no longer simply connectivity providers. They can be critical players throughout the digital ecosystem and help businesses of all types, and all sizes, accelerate their digital journey—if they so choose.

A Crisis and a Crossroads

For some years now, telecom experts—including us—have been hammering home a point: telcos need to embrace new ways of working, new business areas, and new technologies if they are to adapt to, and thrive in, a changing world. Maybe 2020 hit the nail a bit harder than anyone needed. But the world has changed, dramatically, and the question is, are telcos ready? Are they prepared not only to adapt to a new reality but to help lead the way?

For telcos, that starring role may be the biggest reveal from COVID-19. Telecom operators provide the connectivity, sure, but they also have the expertise, infrastructure, data, and know-how to support and enable the new normal that's now upon us. Digitization and remote work are no longer exceptions; they are the rule. New digital channels and business models are helping a lot of companies survive. Telcos have to define their place and purpose in a postpandemic world. How can they meet the needs of customers who, suddenly and starkly, are in danger of losing much of their livelihood? How can they ensure that everyone now working and learning from home can do so effectively? And can telecom operators do these things while also building their own resilience—and even new businesses?

This year's telco IT benchmarking study—a survey of European operators' IT spending and performance that was completed in December 2020—shows that no matter the route telcos choose, the road ahead won't be business as usual. But it can be good business, even growing business, if they take certain steps.

We found that operators that stayed close to their customers—proactively reaching out with information and boosting call center capacity and digital channels when retail stores closed—experienced a smaller revenue decline than their less digital, less customer-centric peers. We discovered that some operators were able to respond quickly and effectively to rapid shifts in how customers, and their own employees, work. We saw that as digitization accelerated, some telcos were well positioned to support new kinds of solutions and capture new kinds of customers. That was no small thing as traditional routes to revenue, like roaming, deteriorated.

Why were these telcos able to adapt? Enablers were key. Telecom operators have increasingly, if not always wholeheartedly, embraced digital transformation, agile methodologies, and data and analytics. In a highly digital world, where requirements—and expectations—are evolving, these enablers are no longer optional.

Telcos have to define their place and purpose in a postpandemic world.

Mindset is important, too. With people more reliant on fast and stable connections at home, telcos have an opportunity to strengthen and differentiate their core, particularly their fixed and broadband businesses. But they also have opportunities to expand beyond the core, into areas like health care; to become vital players in all layers of the ecosystem. And to help drive a future that isn't just more digital but more sustainable and more resilient. Moves like this will take telcos in less familiar and perhaps less comfortable directions. But sometimes you need to embrace change in order to adapt to it.

By seizing these opportunities, telcos can help ensure that the new reality can be a thriving reality, for people, for businesses, for society. But they can also help themselves. Telecom operators have been under pressure for a while, and as this year's TeBIT shows, it was more of the same before the pandemic struck. Competition from over-the-top players, commoditized offerings, price pressure: the business environment presents few surprises. But telcos hold a few aces. It's time to play them. And turn things around—for everyone.

The Calm Before the Storm

Going into 2020, European telcos were seeing familiar trends in their financial performance. Overall, revenues remained stable in 2019, and although TeBIT participants increased their budgets for IT, they did so, in large part, for an unsurprising reason: digital transformation. But then came COVID-19 and suddenly, in ways few would have imagined, the world changed. By the second quarter of 2020, the impact of the pandemic was clearly visible in telco revenue drops. Yet those decreases were relatively modest compared with the overall economic decline in Europe.

Before COVID-19, the challenges for telcos were familiar as well: traditional fixed and mobile offerings continued to be under price pressure—and often commoditized. Yet on average, ETIS members saw just a 0.3% drop in revenues for 2019 while TeBIT participants notched a hair of a gain with a 0.2% increase. Significantly, improvements in customer experience and efficiency, driven largely by digitization, appeared to be paying off: even in a challenging market, 38% of ETIS members were able to increase revenues and EBITDA margin. (See Exhibit 1.)

While the pandemic impacted revenues, telcos do not appear to have been hit as hard as some other industries.

The majority of TeBIT participants—83%—boosted their IT spending in 2019; on average, we saw an increase of 18%. There was notable variance here, though. Some participants were pursuing large transformational programs, and IT spending as a share of revenues varied from 3.7% to 11.9% (the average was 7.1% of revenues, higher than we've seen in the past few TeBIT reports, when the figure ranged from 5.6% to 5.9%).

Exhibit 1 - Nearly 40% of ETIS Members Saw Both Revenue and Margin Growth in 2019

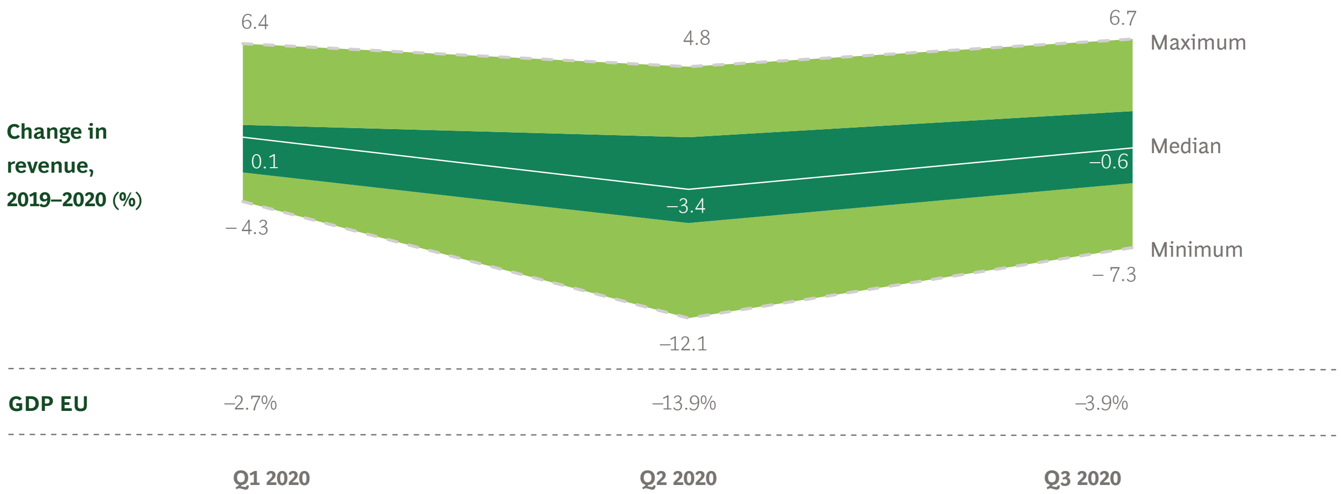
Sources: TeBIT 2020; individual ETIS members' annual reports, 2018 and 2019.

A breakdown of IT spending shows that the increases were driven by IT capex investments, in two areas in particular: digital transformation (including system renewals and automation) and infrastructure consolidation and renewal. On average, 59% of IT spending was directed to IT capex; the remaining 41% went to IT opex, which covers areas such as the cloud, where telcos pay vendors as they use a solution, instead of paying upfront for licenses.

Then COVID-19 arrived. Analysis of ETIS members' annual and quarterly reports shows that 2020 started off without a bang or a bust—just more of the same: revenues remained stable in the first quarter, with the median change a 0.1% rise. But by the second quarter of 2020, when the pandemic and ensuing lockdowns hit a first-wave peak and many retail shops were closed, the median was a 3.4% drop (though the range, extending from a 12.1% decline to a 4.8% gain, shows that some telcos fared better than others). The third quarter, when many countries dialed back mitigation policies, saw considerable recovery. Telcos had a median revenue change of just –0.6% compared with the same period in 2019.

A few points about these findings. First, while the pandemic impacted revenues, telcos do not appear to have been hit as hard as some other industries. GDP for the European Union declined by 13.9% in the second quarter and 3.9% in the third quarter—sharper drops than operators, on average, experienced. (See Exhibit 2.)

Exhibit 2 - COVID-19 Impacted 2020 Revenues—but Telcos Fared Better Than Many

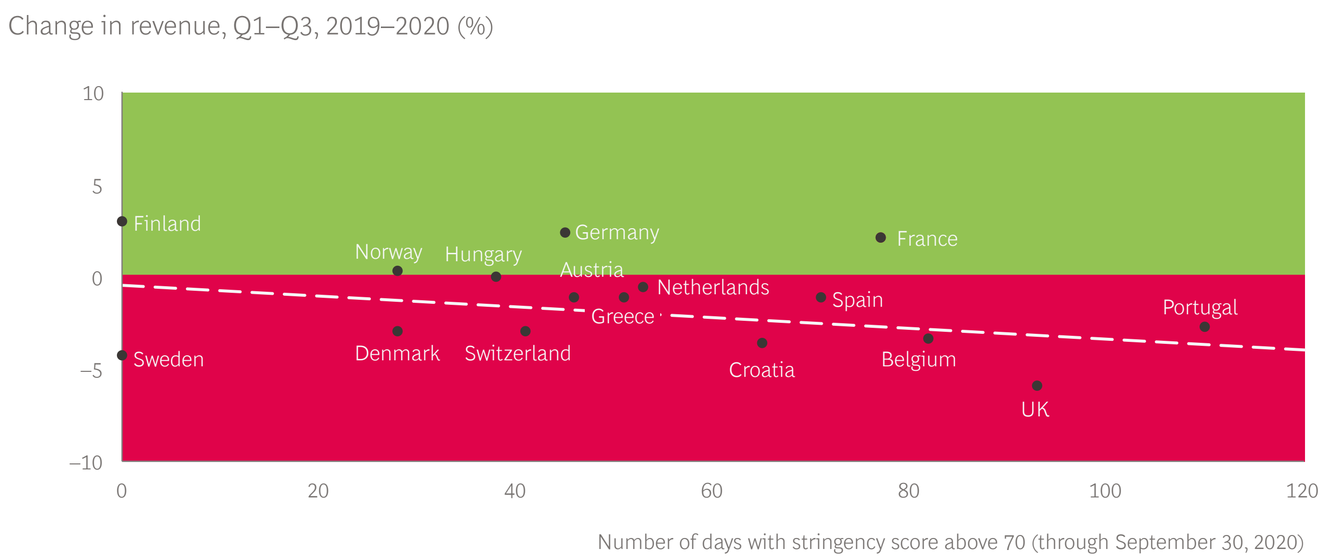


Sources: Individual ETIS members' annual and quarterly reports; Eurostat news release, October 30, 2020; BCG analysis.

Second, the correlation between national mitigation policies and telco revenue development was a bit more nuanced, perhaps, than expected. As a point of measure, we used the Oxford COVID-19 Government Response Tracker, which, for a given country, assesses the stringency of policy responses and aggregates them into an overall score. We found that maximum stringency did not necessarily translate to maximum revenue impact. Rather, the stronger indicator was the number of days a country maintained a stringency score greater than 70. (See Exhibit 3.)

We also saw that certain types of revenue were hit harder than others. With travel substantially reduced, revenues from roaming dropped sharply. Data from TeBIT participants and members of ETIS's Network and IT Transformation Working Group reveals decreases of up to 75%. That added still more pressure on traditional offerings—and more pressure on telcos to reinvent themselves. As we'll see in the following pages, the pandemic has triggered shifts in needs, preferences, and behavior, shifts that suggest a way forward for both customers and the telcos that serve them.

Exhibit 3 - Telcos in Countries with Longer-Term Strict Measures Tended to See Greater Revenue Declines



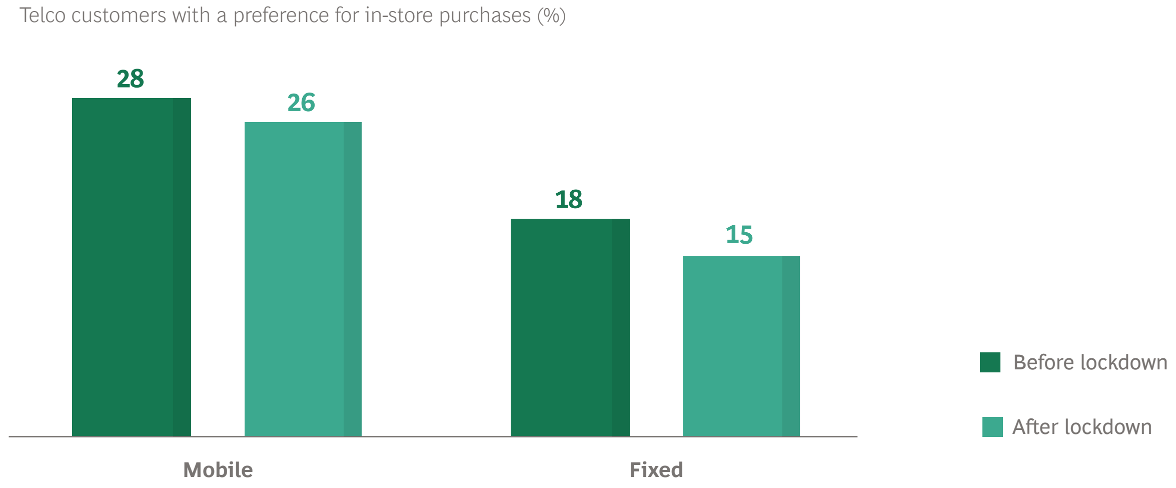
Sources: ETIS members' annual and quarterly reports; Oxford COVID-19 Government Response Tracker; BCG analysis.

Staying Close to the Customer

When lockdowns forced telcos to shutter their retail stores, digital channels immediately gained prominence—and became essential to business continuity. But a seamless transition was not a given. For telecom operators, shops are a focal point for sales and support, perhaps their most important channel. Would digital channels fill the gap? How could telcos adjust them, quickly, to meet new needs emerging in the crisis? And just as crucially: How would customers respond?

In exploring these questions, we found both nuance and reason for optimism. Most TeBIT participants saw a surge in online device sales in March and April—the height of the lockdown. Yet once stores reopened, sales via digital channels returned quickly to their prelockdown levels. This suggests that, at least when it comes to purchasing devices, many customers still have a preference for in-person interaction. A BCG survey of telco consumers, completed in June 2020, lends support here: a not-insignificant proportion of respondents, 26%, said they preferred to make their postlockdown mobile purchases in a physical store. (See Exhibit 4.)

Exhibit 4 - Retail Shops Will Remain Important—but Perhaps Less So Than Before COVID-19



Source: BCG survey of telco consumers, June 2020.

In lockdown, customers really had no choice but to use digital channels. So at first glance, it might appear that what we are seeing, with customers once again buying in stores, is simply a return to traditional preferences. But there are signs that preferences *are* changing and that digital is—perhaps gradually rather than dramatically—gaining ground. In customer care, digital's upward trend has, so far at least, continued. A majority of TeBIT participants reported that the number of requests they handled via digital channels increased during the lockdown months and is still growing. And when the consumer survey asked respondents to note their preferred pre- and postlockdown channels, digital saw a slight uptick on the "after" side of the comparison: 2.5% more respondents now consider it their channel of choice.

TeBIT participants that were able to stay close to their customers during the crisis—through online, mobile apps, call centers, and so on—experienced less revenue decline.

Long term, the success of digital channels depends on how well they meet customer needs. And this is where the optimism enters. During lockdown, digital channels provided a way for telcos to remain close to their customers. And customers seem to have valued that connection. TeBIT participants that were able to stay close to their customers during the crisis—through online, mobile apps, call centers, and so on—experienced less revenue decline.

This suggests that if telcos develop these channels in ways that emphasize and enhance closeness to customers, they can accelerate and sustain a shift to digital. Then the payoff becomes even greater. Digital enables telcos to create—and generate value through—a link that is more direct, more immediate, and less expensive than traditional channels. They can push notifications and targeted offers and more easily cross-sell, up-sell, and measure feedback.

So how can telcos get closer digitally? Innovation is often born in crisis, and already we are seeing some promising ideas. One TeBIT participant, for example, is using its mobile app to offer customers free data and minutes, among other things, to make life a little easier during the pandemic. (See the sidebar "Getting Closer to the Customer.") The offers do double duty. They meet emerging needs but also serve as a gateway of sorts: spurring customers' interest in using the app and discovering other features, like bill payment, and even new add-on services.

Telcos need to do double duty as well: addressing the new challenges their customers face but also sparking growth and resilience in their own businesses. By skillfully blending digitization and customer proximity, they can do both—and do them well.

Getting Closer to the Customer

An Interview with Branimir Spajić of Hrvatski Telekom

A crisis can test a relationship. But it can also strengthen one. When Europe went into lockdown, connectivity became more critical than ever, and user demands and challenges increased. Telcos needed to understand the shifts and, with retail stores closed and workforces homebound, find new ways to address them. And do it all quickly and effectively. For details on one telco's approach—and how it sparked the use, and success, of its digital channel—BCG and ETIS spoke with Branimir Spajić, the director of customer experience management at Hrvatski Telekom.

When we analyzed the TeBIT data, we saw that telcos that stayed close to the customer—through messaging, support, and easy accessibility—fared better during the crisis. How has Hrvatski Telekom maintained customer proximity?

For us, this crisis started with a devastating earthquake here in Zagreb, so our priority was to quickly respond and protect our employees, our customers, and our business continuity. At the same time, we had to make sure that everyone stayed safe and connected. We managed to start with work from home early in the crisis, and we ensured full service for our customers. In terms of customer proximity, companies that recognize this crisis as an opportunity to get to know customers better, and get closer to them, strengthen the relationship by addressing needs with extreme empathy. We use a program, which we call In Good Hands, to get closer to our customers and support them in these challenging times. Through our digital channel, customers can activate a set of benefits, from additional gigabytes for free, to other telco perks and entertainment content such as exclusive music content. With this program, we continuously engage and communicate with our customers, surprising them with meaningful rewards and providing them with relevant information and customer journeys.

You mentioned that In Good Hands works through a digital channel. Do you mean through an app?

We have a unified mobile app called OneApp. Customers access In Good Hands through this app and can see a list of benefits available for them at any moment. To make their home life more enjoyable, we've added a lot of features to the app during the pandemic, for customer service and support and so on. The app has been valued as an important channel for communication and interaction, as it enables customers, for instance, to pay their bills digitally or chat with agents. This is a long journey, and along it we're learning how best to bridge the digital divide and meet customer needs.

How did the reopening of physical stores impact the digital channels? Did the utilization level off, drop, or continue to rise?

We've kept the positive momentum. We are really proud of what we did, and more importantly, how we did it. Month over month, we are seeing increased penetration of our mobile app—our stores opening didn't change that. Sales through the digital channel are also improving. I think a big lever for success is how we educate our customers; changing their mindset on digital and showing how easily they can perform tasks. You can't simply push a digital feature in front of customers and make it mandatory. You have to create a supportive environment for customers to learn and understand how that feature works and how it brings value for them.

To change the mindset on digital, did you need to adjust your digital agenda—perhaps introduce more online support?

We reprioritized our agenda to focus on features that would be particularly useful during the crisis. Basically, we scanned all of our analog processes and reassessed the company's digital priorities in order to create digital workarounds that support new business requirements in a simple and effective way. To accelerate your digital agenda, you have to be bold in embracing a fast-paced test-and-learn environment. And you have to ensure digital trust by measuring the customer experience continuously and making improvements based on what you learn.

As we speak, Europe is in a second wave of the pandemic. How have the lessons of the first wave shaped your strategy and product development?

Certainly, we keep adjusting our business models based on the situation with the second wave of the pandemic. Our goal is to find the best way to serve our customers by responding to a higher demand effectively. We continue to digitalize customer journeys. We continue with our successful story known as Smart Work—our flexible work-from-home model. Also our focus will remain on network performance and stability, in order to provide connectivity and infrastructure for customers, employees, and society. In regard to product development, we continue to design customer-centered solutions with a focus on the customer journey and an agile way of thinking and doing things.

Do you see opportunities to help specific verticals—for instance, health care—with digital transformation?

We are exploring new opportunities constantly and are closely looking at what is going on in the market. The COVID period has highlighted areas where there is potential for telcos to develop new revenue streams and new collaborations. One interesting area is digital education. A second area—one that I saw at an ETIS presentation and is personally interesting to me—is telemedicine. I think there is great potential here, especially with the capabilities of 5G. Accordingly, a few months ago Hrvatski Telekom launched the first commercial 5G network in Croatia.

Let's talk a bit about the internal perspective. What were the key changes and challenges you faced in the transition to remote work?

I would first note that the pandemic really underscored the potential of agile. We started introducing it toward the end of 2019, and at the moment we have more than 400 people working in agile. In setting up agile, we introduced digital tools for collaboration. So we already had that set when the crisis hit.

Shortly after the pandemic struck Croatia, we introduced our Smart Work model, which was a key first step in ensuring business continuity. It gave our employees full flexibility on where they worked and integrated tools that helped us communicate effectively and measure our performance, especially in support functions. To manage the crisis, we have to be transparent with our employees and customers and communicate with clarity and humility so they can see, from an early phase, that we're in this together. We also implemented a new operating model for employees who worked in our stores. After closing the stores, we adjusted all processes so that these employees could work from home and we educated them on a new set of tools.

Looking into the future, how do you envision the "new normal" customer experience?

I think the new normal for customer experience started when COVID started. Companies that can identify customers' needs in an early phase of the new normal, and adapt their business and operating models, will be in a much better position—and ready for what the next normal will bring. It's all about experiences that are built around customer needs and expectations, instead of telcos looking into their own yard only and at what their competitors are doing and how they are doing it.

The needs of our customers are much different now than they were just a year ago, and they will be much different in 2021. Telcos have to reconsider the ways they address needs and expectations. You have to get to know your customers, gain insights into their behaviors and requirements, and be more responsive to their expectations. This is the reason why it is so important to enhance digital experiences. And why it is so important to create a data-driven, test-and-learn culture to drive successful customer experiences in the new normal.

Are you seeing higher customer satisfaction?

Yes, but we are also seeing higher employee satisfaction. We know that engaged and satisfied employees are fundamental for creating satisfied customers. We are proud that our employees recognize the effort and actions that we take to protect them and how we demonstrate success through difficult times as a team. The lesson here—for all telcos—is that extraordinary commitment and dedication to support employees, customers, and society during unprecedented times, and using the crisis as a catalyst for business and digital transformation, will pay off in the long run.

> **The lesson here—for all telcos—is that extra commitment to supporting employees, customers, and society, and using the crisis as a catalyst for transformation, will pay off in the long run.**

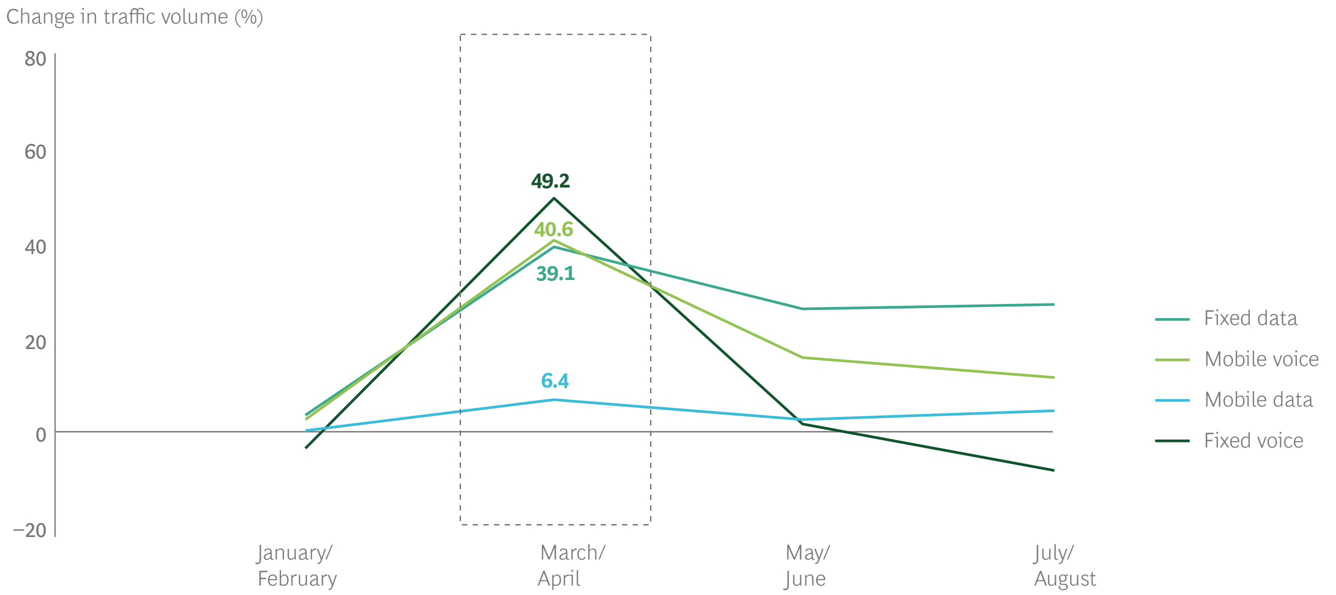
Branimir Spajić
Hrvatski Telekom

Keeping Pace with Shifting Usage Patterns

Connectivity is the lifeblood of a world in lockdown. With much of Europe shuttered in the early months of the pandemic, telco networks became a critical enabler—fueling the remote working, distance learning, and e-commerce that would keep economies, and society, running. While network usage increased, it also changed in important ways, creating both challenges and opportunities for telcos.

Data compiled from TeBIT participants and ETIS working groups reveals the shape and shifts of usage patterns. During the first-wave lockdown, in March and April 2020, all forms of traffic peaked, with fixed data, fixed voice, and mobile voice up sharply from prepandemic volumes. (See Exhibit 5.) Mobile data, however, rose more modestly. This makes sense: with in-person activities restricted, telco customers increased their use of videoconferencing, video streaming, and voice calls (videoconferencing hours, for example, jumped by 58% during the first lockdown period, according to BCG's survey of telco consumers). And with much of their usage occurring over fixed broadband networks at home, customers placed comparatively less demand on mobile data networks.

Exhibit 5 - Traffic Volume Peaked During Lockdown



Sources: TeBIT 2020; ETIS Network and IT Transformation Working Group; BCG analysis.

Once restrictions eased after the initial lockdown, fixed voice usage declined sharply, but fixed data remained well above pre-COVID-19 levels (if not quite at its lockdown peak). And mobile data usage remained relatively stable, maintaining a slight uptick from prepandemic days. These usage patterns also follow, as many people continued to work and learn remotely, either fully or in hybrid models. (At the time of this report's preparation, Europe was in the midst of a second wave of coronavirus—prompting new lockdowns and restrictions—and first-wave traffic patterns were reemerging.)

As the world adapted to virtual interactions, telcos kept pace. When Europe locked down in March, telcos immediately started sharing their experiences in ETIS working groups, and it quickly became apparent that no operators were facing serious issues with their network. One factor working in telcos' favor: the network loads, while high, were not unprecedented. Even during lockdown, daytime traffic increases did not reach the evening peaks seen in more normal times, when streaming, calling, and web usage typically spike.

Telcos did, however, take steps to reduce outage risks. They put planned but noncritical network and site work on hold. They also developed—as a last resort—prioritization and throttling strategies, though they did not ultimately need to apply them (over-the-top players like Netflix and YouTube temporarily lowered video quality in several countries). And to ensure that critical functions were not interrupted, operators provided additional capacity to health care facilities and other essential institutions.

Operators provided additional capacity to health care facilities and other essential institutions.

Indeed, the link between critical functions and connectivity demonstrates just how vital telcos have become to resilience and economic stability. Traditionally, telecom operators have provided infrastructure that keeps communications flowing. Now that same infrastructure keeps countless processes—in health care, logistics, education, and many other areas—running as well. In this respect, telcos have become as important as power and water providers.

The usage trends are also significant for what they signal about the future. Many new behaviors and preferences—remote working, for example—are here to stay. Indeed, BCG's telco consumer study found that, overall, consumers plan to increase their spending on fixed broadband, opting for bandwidth upgrades and other enhancements. The study also revealed that, going forward, service failures will have more impact on purchasing decisions.

> **Telecom operators have a chance to expand deeper and wider in the digital ecosystem. They can play a role that goes far beyond network connectivity.**

For telcos, there are some clear messages here. Operators need to ensure the reliability of their infrastructure. This means increasing the use of network automation (which allows telcos to address—or avoid—incidents, without human intervention) and optimizing for low-latency performance (which is important for gaming, virtual reality, and real-time applications used in manufacturing and other areas). Telcos should also invest in new technologies and network capabilities: 5G and fiber to the home are key enablers for accelerating digital transformation and making the new reality a thriving reality.

But perhaps the biggest takeaway for telcos is that they have new opportunities. Across industries, the pandemic has jump-started digital transformations—or at least the impetus for them. Businesses and organizations are operating in more digital ways: telemedicine is one example. Telecom operators have a chance to expand deeper and wider in the digital ecosystem, becoming more diversified and differentiated companies. They can play a role that goes far beyond network connectivity and touches on application development and enablement, analytics, security, and end-to-end solutions. Some telcos have already started down this path. (See the sidebar "Adept at Adaptation.")

At the ETIS Virtual Gathering in October, participants ranked health care, government, and transportation as the three most promising verticals for digitization. Helping these and other industries transform will take many telcos out of their comfort zone. But that's something that operators—like the rest of us—have had a lot of experience with lately.

Adept at Adaptation

An Interview with Henri Korpi of Elisa

In a crisis, agility is crucial, but it's not just about moving quickly. It's also about moving in the right direction: knowing where to focus and what matters most. In the midst of a pandemic, how were some telcos able to respond with both speed and precision—and even seize opportunities beyond the core? For insight, BCG and ETIS spoke with Henri Korpi, executive vice president, international digital services, at Finland's Elisa, who describes the power and essential role of experimentation, customer centricity, and playing to your strengths as you try something new.

Telcos needed to react quickly in the face of the pandemic. How was Elisa able to adapt so rapidly?

I think there were two key factors. First, videoconferencing and remote working were already familiar to us. We sell videoconferencing as a managed service, so several years ago we decided that we should be the model. In all levels of the company—from the very top, the board and the management team—we had meetings where people could attend from anywhere. Of course, there were parts of the organization, like customer service, where remote working wasn't so widely adopted, but we had the infrastructure in place, and we had supervisors who were already trained on what it is like to manage remote work. This made it relatively easy to transition to a fully remote model. The other factor is that our network operations are highly automated. Initially, we weren't sure if the automation could adapt to a radical change in usage patterns. But it did, quite smoothly.

In our discussions with telcos, one question that comes up is how to measure productivity. There can be a lack of trust that people are really working when they're home. But there are also concerns about overburdening people with measurements. What is Elisa's approach?

What's crucial is transparency. We believe strongly in measuring results, but at the same time, we make it very clear to everyone—from the leaders down—what is expected of them, what targets they should be meeting. Then managers can focus their actions on those who need support. For us, it's gone smoothly because we have experience in remote working and already had these mechanisms in place.

What were Elisa's priorities at the start of the pandemic? Have they changed over time?

The first order of business was to make sure our people were safe and able to work safely. But it was also important to increase our communications with customers. We didn't want to sit in a bunker and think about the kind of support customers might need. We had to go and ask. Then we'd set our priorities around that, whether it's more VPN connections or robust connections for everyone now working and learning at the same time at home. In effect, we co-created with our customers. This was especially important because very early on, we decided that we were sticking with our targets. Roaming was going away and that is a profit-making business. So we needed to come up with new sources of revenue. The idea was, we could help our customers adapt, keep society functioning, and turn that into business opportunities.

Can you give some examples?

Here's one from my own area of responsibility, telecom software. Traditionally, we'd go onsite, making sure that everything works in the customer's environment. When that became impossible, we completely reconfigured the way we delivered software, creating ready-made packages customers can install and test themselves. In our consumer business, we wondered what we could do for the many elderly people in Finland who were now isolated, alone and far from relatives. So we configured a tablet to simplify the process for making a video call. There are just a few buttons on the screen, and the tablet itself guides you along, so you can find contacts quickly and start communicating. There are tens of examples like that. Here's a problem, here's how we can help. Thinking like that leads to new offerings.

How do you evaluate, pursue, and fund such ideas—especially opportunities outside the core business?

We've fostered—over many years—a culture of experimentation, and this has really helped in the current situation. In our traditional development process, we use something we call Elisa X, which is a combination of design thinking and lean startup. It's based around the idea that first you need to understand what the customer really wants. Then you build a prototype and start testing your hypotheses. But a very close relative of this is something we adapted from the Toyota production system: the use of kaizen, or continuous improvement. We have trained some 400 kaizen coaches. So in the midst of the pandemic, when we need to be fast and agile, we are able to experiment and quickly see what works and where we should continue investing. Instead of trying to figure out everything in planning, we figure it out with real customers in real situations.

Did you also conduct or support activities for the public domain—for example, the assessment of movement patterns, or app development for health care?

We did. Although we are not the incumbent in Finland, we have a strong relationship with the public sector. When the crisis struck, we helped agencies and ministries expand their videoconferencing capabilities. One thing we are very proud of is our work with the Helsinki University Hospital (HUS). They faced a huge challenge in managing their resources—personnel, equipment, spaces—as they expanded their capacity. We had developed a set of applications to help our manufacturing clients run their factories. So we offered to adapt that to a hospital environment. We connected to their data sources and created dashboards and other visualizations that let the hospital better understand and coordinate everything under its roof. The solution became so important, so integrated into daily management, that the hospital system became our customer. And an offering designed for factories became an offering for hospitals, too.

At ETIS's Virtual Gathering in October, there was a lot of interest in how Elisa has successfully monetized new opportunities outside the core. Many telcos worry about betting on the wrong things. You mentioned the health sector, but what other verticals hold promise?

I think it's important to note that we have not always been successful, but we have learned a lot. Most importantly, we've learned that the chances for success are greatest when you build on what you know, and do, well. It's tempting to say, "I have a large customer base and a lot of assets, I can do this new thing." But most of those ventures fail. Our experience—and how we approach expansion—is that it has to be based on processes and capabilities we have already mastered.

That's how we ended up providing automation software to other telcos. We developed technology for automating our own network, and we saw that we could use that know-how to provide value to other operators. The smart factory, another area in which we are investing, is a very close relative. Both of these businesses are based on our long-term investment, and experience, in data analytics. So I can't tell you where a telco should go because every telco needs to look inward, identify what it is very good at, and build from that.

Any additional recommendations for telcos as they tackle the new reality?

I would stress the importance of experimentation and of building the capabilities and practices that foster it. This is where the truth is, not in a planning department or a meeting room, but in experimenting with real people, real customers. Good communications are also essential. That was a big lesson for us as we adapted to working from home. We started biweekly sessions where our CEO addresses everybody directly. And we've seen a huge change within the organization, how people feel about working at Elisa, as every second week you can hear how we are doing, what our plans are, what is new—directly from the CEO. There is an opportunity now to communicate more directly, more immediately, more effectively. And telcos need to figure out the mechanisms that work for them.

> **We didn't want to sit in a bunker and think about the kind of support customers might need. We had to go and ask. Then we'd set our priorities around that.**

Henri Korpi
Elisa

Minimizing Internal Disruption

Once the crisis struck, telcos had three core priorities: business continuity, workable remote work, and cash management. Each area presented some immediate, but ultimately solvable, challenges.

While network congestion was an initial concern—with so many people now working and learning at home—telco networks handled the load well. A far larger issue, it turned out, was the supply chain. With factories and transportation services scaling back operations, telcos needed to keep a sharper eye on stock levels in order to identify and address potential shortages. A drop-off in production in China, a major source of equipment, was particularly concerning. In some cases, operators had to scramble to find alternative supplies within Europe. For at least one ETIS member, supply chain management became a key component of its crisis program. (See the sidebar "Telcos Take Center Stage.")

Telcos Take Center Stage

An Interview with Paul Slot of KPN

As the world adapts to a new reality, telcos are emerging as key players—and enablers. Their networks support digitization and remote work on a massive scale. Their expertise can propel the new applications and business models that will move economies ahead. But in the midst of crisis, there's also opportunity: a chance for telcos to move forward themselves. For thoughts on the new landscape and role for telcos, we spoke with Paul Slot, the chairman of ETIS and the executive vice president for network, mobile, and IT infrastructure at KPN.

At the ETIS Virtual Gathering, we heard about the major trends and lessons of the pandemic as they relate to telcos. For example, operators are accelerating their digital transformations. For KPN, were there any additional lessons?

I would add two observations. First, in this industry, people tend to be very good at firefighting—they like working with adrenaline. We saw this at the beginning of the crisis: people eager to be involved, a lot of energy within the organization. And productivity actually went up. But you can't live on adrenaline forever. So I think there is a question about what it means to be 100% working from home. An engineer is no longer sitting next to three other engineers, talking about changes and getting insights that may improve results. You're missing the spontaneity.

Telcos should also consider how they handle organizational change and the uncertainty that can spring up around it. If you're in the office and you hear about organizational change, you can go see someone, talk about it by the coffee machine. That's pretty much gone. So the uncertainty is magnified now, it gets bigger to people. How do you mitigate it? We are doing a lot of things to support employees who, just like you and me, are sitting at their screens all day.

What should telco executives think about in terms of contingency and long-term planning? Any lessons from the pandemic there?

An area that jumps to mind is the supply chain. That was high on our agenda and it remains so. Another thing we realized is that our business continuity plans were technology focused—not so much looking at what happens if a whole team gets sick. So there was a new dimension that we had to add to our plans.

Longer term, one thing that's interesting to me is our position with respect to the over-the-top players. When this started, we thought, what if everyone is working from home, and the kids can't go to school and can only watch Netflix? We concluded that the network should be able to handle it, but say it didn't. You can't shut down services because then you are making a distinction between types of traffic, and in the Netherlands we are committed to net neutrality. So you need government support. As it turned out, the European Union asked streaming services to reduce their bit rate and traffic went down 25%. Then the bit rates were restored. This isn't a discussion telcos normally have with over-the-top players, and I think the crisis has underscored that the model isn't quite right.

You mentioned the supply chain. Could you give examples where you had interruptions?

Two things happened in relation to the supply chain—more or less at the same time. First, of course, was COVID. International transport was reduced significantly, and production in China also dropped. So as part of our crisis program, we started an initiative to manage the supply chain. You have to have good insight into your stock levels, because you don't just have one stock somewhere but in a lot of places. When you have that insight, you can have specific discussions with suppliers. Then there was the US government's measures regarding Huawei. There were restrictions on the delivery of material based on US intellectual property. This was happening in parallel with COVID, and it made things even more complex.

The crisis has also underscored the role that telcos play in society. How has KPN viewed that role—and has it taken steps to play an even larger one?

The crisis has accelerated digitization, so on one hand, we have been able to support that—in health care and other areas—with the things we already do, like providing a stable network. But you're right, it has become increasingly clear that telcos have, and should take, a key role in helping out. We placed temporary mobile capacity at hospitals, created programs to provide free connectivity to families that couldn't send their children to school but didn't have the money for connectivity—lots of things that have had an impact. We're very proud that we're among the top five telecom companies, worldwide, according to the Dow Jones Sustainability Index, and COVID has not changed our commitment to becoming a carbon-neutral company by 2030 and fully circular by 2025.

So I think there is an intrinsic motivation for playing a key role in society. But there is also a business motivation. Telcos are under pressure and digitization is an opportunity, a way to get relief from that pressure. If we don't do it, we're going to miss revenue, we're going to miss opportunities for growth.

What can telcos do to position themselves to seize those opportunities?

It is a little strange to talk about the digitization of society and then not do the same in your own organization. They are linked. Digitization means that customers will expect a sort of instant delivery. If they want a new connection, is it okay for them to wait for two months or a week or even a day? So definitely digitization should happen internally. Telcos need the ability to deliver their portfolio quickly but also the ability to adapt that portfolio quickly.

Fiber to the home and 5G will be key enablers in moving economies and societies forward. At the same time, 5G in particular has been facing public scrutiny. How can telcos reconcile this paradox?

The Netherlands was, I believe, the second European country to see arson attacks, so certainly KPN and other Dutch telcos have been thinking about this. And something that has become clear is that we shouldn't be the ones explaining that there is no issue with 5G, because we are the ones selling it. So we have worked closely with the government to get the word out on what 5G really is—what it can bring you, what it can bring society. We are committing ourselves to the standard the government defines. Fiber will help a lot as well. Actually, we're spending most of our money on fiber because in a country like the Netherlands, where our population is condensed, it's an easy investment model. Once you have your fiber network, you're able to make your revenues for the next 30 years.

As digitization and remote work become more prevalent—and more important—we're likely to see more concerns around data privacy, data protection, security, and so on. What is KPN's view on this?

As an enabler of digitization, we have to live up to the highest standards of security. But we are also part of an ecosystem. So it is also up to a Microsoft or an Amazon to ensure that the data itself is secure. It is up to a Nokia or a Huawei to ensure that their equipment meets those high standards. The chain is only as strong as the weakest link. So the ecosystem as a whole needs to be operating at the highest level of security.

To what extent have cooperation and knowledge sharing increased during the pandemic?

Within ETIS, we started a few new working groups, focusing on the supply chain, on resistance to 5G, on COVID in general. I think these examples show that close cooperation is important, that telcos learning from each other is important. And it is particularly important for the smaller telcos that lack the scale of the big players. But to come back to the idea of the ecosystem, cooperation—like security—is a key aspect there. Telcos need to have discussions with over-the-top players and others in the ecosystem. If they have discussions on their own, it won't work. We need to be able to adapt. ETIS showed agility in its approach, starting new groups and moving to virtual participation. But agility is a big thing for all of us, for every telco. And maybe that's the most important thing we've learned this year: you need to know how to respond quickly in order to survive.

> **Agility is a big thing for all of us, for every telco. And maybe that's the most important thing we've learned this year: you need to know how to respond quickly in order to survive.**

Paul Slot
KPN

At the same time, telcos needed to manage their workforce—or more precisely, ensure that their workforce could actually work. While some operators had already adopted flexible work policies in one form or another, none had envisioned, let alone experienced, remote work on a massive scale. And in the initial pandemic months, nearly all telco employees were suddenly offsite.

The transition was not entirely seamless. Many telcos lacked sufficient laptops and licenses for using collaboration tools and other solutions remotely. Not all employees had been trained on—or had access to—the software they now needed to use. And in some instances, teams found it challenging to maintain previous levels of productivity and performance. For instance, kicking off a project in traditional waterfall ways of working was much harder during lockdown.

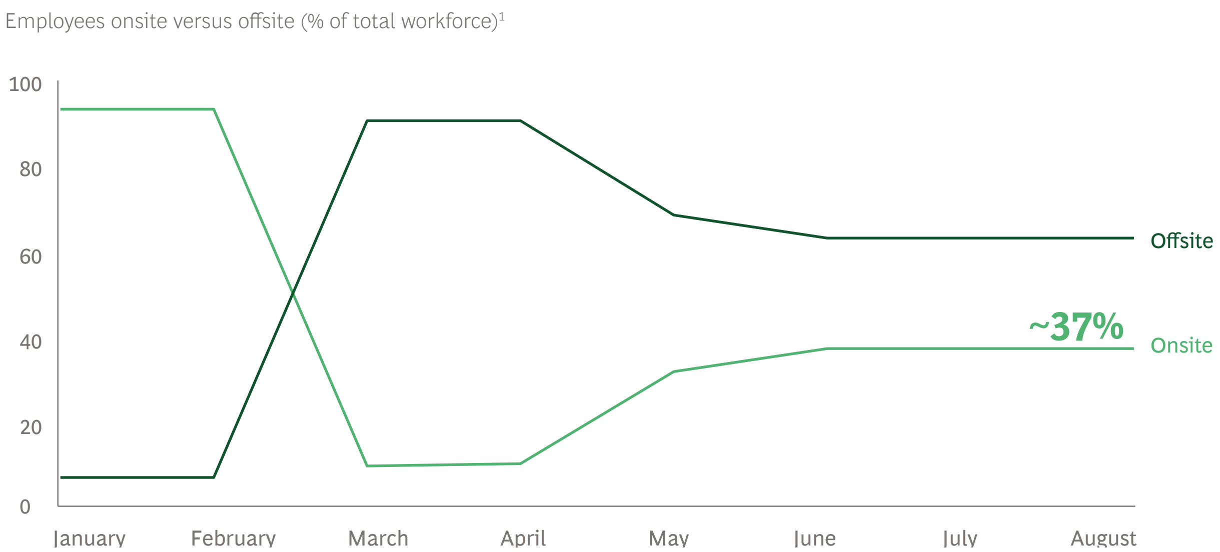
These challenges were, perhaps, especially vexing for telcos, as the industry's mission is to connect people. But operators were quick to unblock some of the key bottlenecks. By modifying budgets, telcos were able to buy more licenses or give themselves increased flexibility in purchasing laptops (potentially opting for a more expensive model if that's all that was available). Training programs brought employees up to speed on the tools they needed to use in remote work.

Work styles, however, are not so quickly transformed. Today's waterfall does not become tomorrow's agile. But the crisis may act as a catalyst to speed the process. TeBIT participants reported better results from their agile teams. For some telcos, that came as a bit of a surprise—and a relief. They had concerns about how agile would perform. Yet if anything, the crisis underscored how the key pillars of agile (collaboration, flexibility, and adaptability) are uniquely suited for handling sudden, even dramatic, changes in the working environment. Moreover, many agile teams were already familiar with the tools for remote work. Telcos that have been contemplating agile, or experimenting with it in pilots, may want to move it up on their to-do list and accelerate its spread throughout the organization.

While network congestion was an initial concern—with so many people now working and learning at home—telco networks handled the load well.

It's especially important to perfect remote working because it's likely here to stay, in one form or another. After the initial lockdown, many telcos shifted to a hybrid model, and much of their workforce is still working remotely. Looking at data from operators participating in TeBIT or in ETIS working groups, we found that telcos had, on average, just 37% of their workforce onsite in August. (See Exhibit 6.)

Exhibit 6 - After Lockdowns, Telcos Adopted a Hybrid Work Model



Sources: TeBIT 2020; ETIS Working Group discussions; TeBIT interviews.

[1]Excludes the field force and call center.

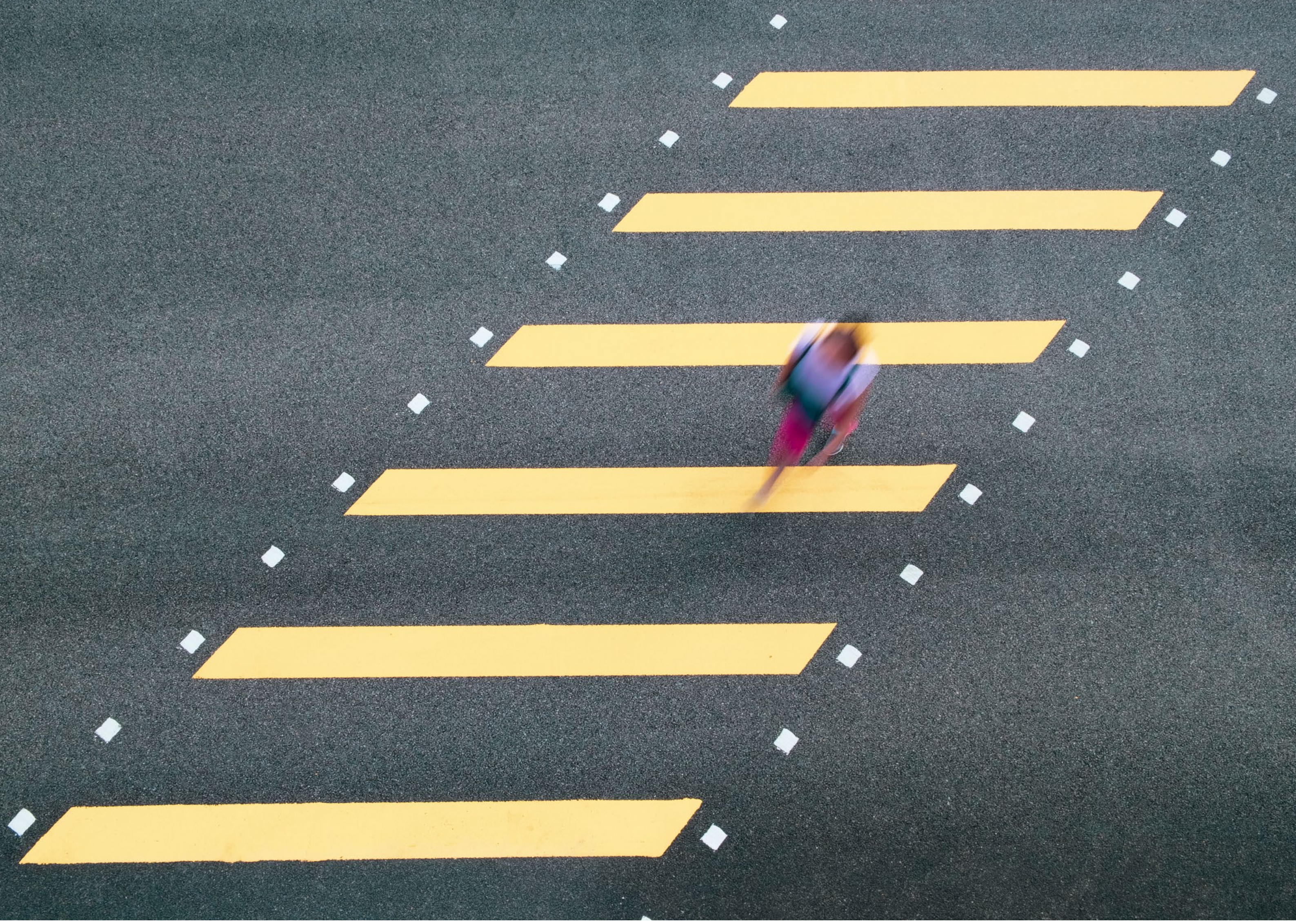
Some telcos are offering remote work as a flexible option. Others are using it to implement an A/B split: with an "A team" and a "B team" alternating between onsite and offsite work (the idea is to prevent physical contact between the groups, protecting one team if infections strike the other). Several factors contributed to the adoption of the hybrid model: a continuing health crisis, improved capabilities—and skills—for remote working, and a generally positive experience during the first-wave lockdown, for agile teams in particular.

Cash management—another focal point for telcos' initial response—was complicated by tradition: in some regions, such as Eastern Europe, many customers still paid their bills in retail stores, now shuttered by the lockdown. The solution was no trade secret. Telcos needed to move these payments to digital channels. But to do so successfully, they had to make the online experience smoother and more intuitive for customers who, so far, had shown no interest in paying their bills online. Operators also had to think about how they could make it easier for customers to sign off on contracts and interact with sales agents and customer support in a virtual way.

The most successful strategies required changes to the digitization roadmap: prioritizing simpler interfaces and customer journeys (making credit card payments easier, for example) as well as tools like chatbots and digital signatures.

It's especially important to perfect remote working because it's likely here to stay, in one form or another.

COVID-19 forced telcos to look at their operations inside and out. While ensuring that their customers could work safely and efficiently, operators also had to ensure the same for their employees. By accelerating their digital transformations, they were able to meet both goals—and bring a measure of certainty to an uncertain time.



A Path and a Purpose

A crisis, the saying goes, is both danger and opportunity. In the midst of an emergency, it's often hard to see—or even contemplate—the latter: the focus needs to be on reducing harm, providing relief, and averting disaster. During the pandemic, telcos have done yeoman's work on those fronts. They've ensured robust connectivity when customers needed it most, provided enhanced services to critical institutions like hospitals, and helped governments use movement data to inform, and improve, their mitigation efforts. They've played a new role and are perceived in a new light: as crucial players in making economies, and society, more resilient.

In the process, a couple of things have become clear. Digital transformation is no longer optional: organizations of all types, in all industries, need to step on the gas. Getting closer to—and better understanding—customers is also essential. Companies need to design products, interfaces, and customer journeys around needs and preferences. The TeBIT data shows how these ideas are already impacting telcos. Participants that stressed digitization and customer proximity during the crisis experienced less revenue decline.

By reprioritizing and accelerating their own digital transformations, and by taking a needs-based approach to product development and customer interactions, telcos can boost their resilience and strengthen their core business. But they also can position themselves to expand further and deeper into the digital ecosystem.

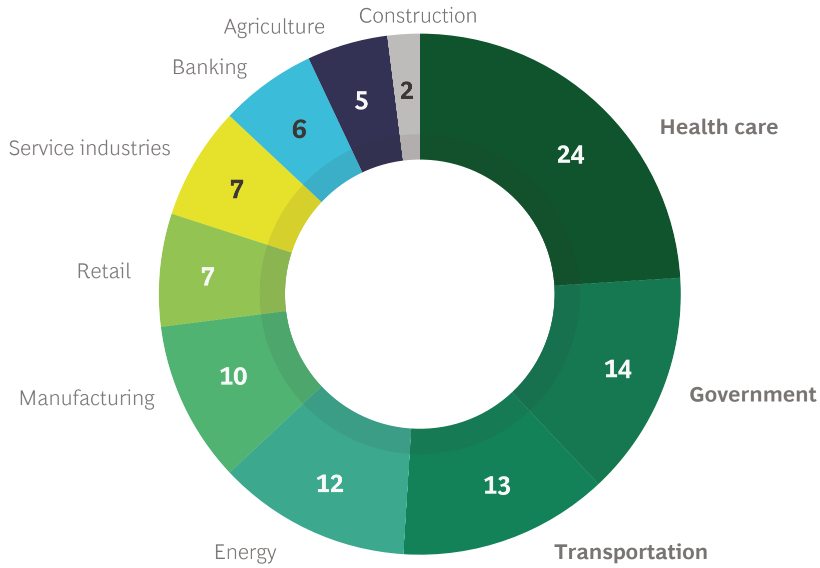
Already, telcos are assisting with application development and enablement, and with data and analytics, in areas like health care. But they're just scratching the surface of possibilities. (See Exhibit 7.) Small and midsize businesses in particular will need help if they're to become more digital, fast. Telecom operators can help—in ways that go beyond providing connectivity.

Telcos are perceived in a new light: as crucial players in making economies, and society, more resilient.

So how can telcos speed their own journey to becoming more diversified and more influential players? The first step is to apply what they've learned from the pandemic. Double down on digitization and customer proximity. Fast-track upskilling to create a digital-ready, digital-centric workforce. Pursue agile at scale, expanding more flexible and more collaborative ways of working throughout the organization. Invest in network technologies, like 5G and fiber to the home, that don't just improve connectivity, but enable digital transformation and new business models.

Exhibit 7 - Telcos See Health Care, Government, and Transportation as Hotspots for Digitization

The vertical that holds the most promise for digitization (% of responding Virtual Gathering participants)



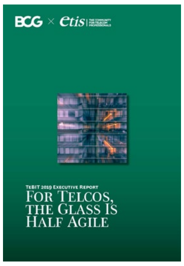
Source: ETIS Virtual Gathering, October 2020.

Those can be business models that telcos support or—perhaps even more intriguing—models that telcos themselves pursue. Consider an estimate by the Global Business Travel Association that up to 25% of annual business travel revenues could be lost forever because of new behaviors and preferences in a postpandemic world. Consider all the sectors that are replacing in-person activities, and the spending that goes with them, with digital alternatives. If telcos could capture just 15% of the lost revenues in their respective countries (whether through videoconferencing services, enhanced connectivity, or other offerings that are still to come), they could increase their own revenues by 5% to 10%.

One more element is key: purpose. Telcos have reinvented themselves during the crisis by working and serving their customers in new ways. But they have also assumed a larger, more visible role in society. Businesses, individuals, and vital institutions no longer see telcos as simply connectivity providers, but as critical enablers for the adaptation and transformation—along with the resilience and sustainability—that the new reality requires. So it's not just about applying the lessons of the pandemic. It's also about telcos embracing and building on their new role and new momentum. By doing so, they can drive real change, within and beyond their organization. And they can move economies and society, as well as themselves, forward.

For Further Reading

This publication is part of a series of TeBIT Executive Reports—telco IT benchmarking studies jointly developed and conducted annually by ETIS and Boston Consulting Group.



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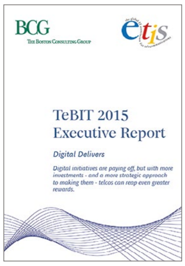

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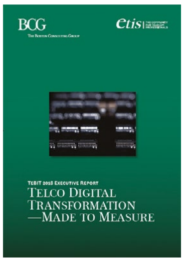

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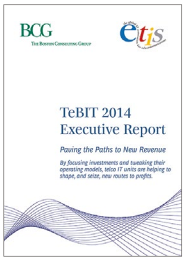

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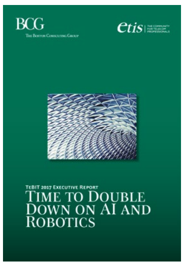

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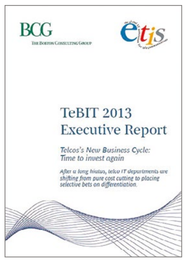

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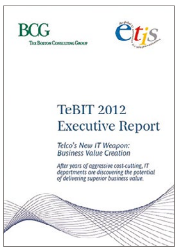

Telco's New IT Weapon: Business Value Creation
The TeBIT 2012 Executive Report, October 2012

Note to the Reader

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