

How digital technology is easing the burden of confinement

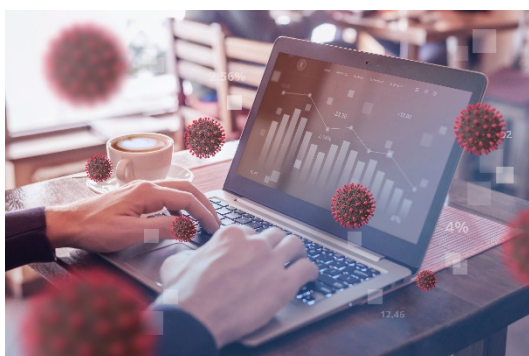
SUMMARY

The coronavirus pandemic is bringing an unforeseen acceleration in the digital transformation of societies around the world. This is the first pandemic in history in which digital technologies are being used on a massive scale to keep people connected while in isolation, allowing them to telework, follow online courses, shop online or consult health professionals from home. As a result, internet traffic has increased substantially since confinement began. According to EU Member States' national regulators, operators have so far been able to manage this surge, while also introducing many exceptional measures, such as temporarily removing broadband data caps and making extra data and free online content available.

The current crisis has highlighted the importance that upgraded telecoms networks and 5G will have for societies and economies. Furthermore, now that confinement has started to ease, it is increasingly clear that digital technology will continue to play a very important longer-term role in controlling the spread of the coronavirus. The scope of contact-tracing apps is likely to expand, and teleworking, telehealth and e-learning are likely to become more prevalent than before.

However, the most popular digital apps, whether for e-commerce, social media, videoconferencing or contact tracing are not of EU origin, posing concerns for the EU's digital dependency, competitive advantage and data privacy. In fact, the coronavirus crisis has further consolidated the existing dominance of 'Big Tech'.

The pandemic has further exacerbated existing issues; for instance, the digital divide has broadened further and there has been a global rise in cybersecurity incidents. The EU is poised to tackle these issues, while at the same time embracing the digital transformation in our lifestyles and allowing the internet to play a critical role in defeating the virus.



In this Briefing

- Context: A global surge in internet demand
- Online activities from home
- Emerging challenges
- What the EU is doing

Context: A global surge in internet demand

Much of the world's population has gone into confinement due to the coronavirus pandemic. Many have voluntarily chosen to stay at home and telework, or have been asked to do so because of quarantine. Some governments have stepped up restrictions in their efforts to limit social contacts, as a way to slow the spread of the virus. Confinement or lockdown has been used to contain the spread of very contagious viruses and illnesses since ancient times. What makes the current experience of confinement unique is the [key role](#) digital technologies have played in helping people, economies and societies to keep going and cope with the isolation and negative side effects. Among digital technologies, the internet has increasingly been in demand, whether for working, learning, shopping, communicating or accessing online content for entertainment. Social distancing has increased the demand for videoconferencing apps, for both business and personal use. For instance, [media](#) groups estimate that in-home online data usage has jumped by roughly 20 % on average across the EU and the US, with [300 % growth](#) in use of videoconferencing apps such as Zoom and Skype and 400 % growth in online gaming. Global internet traffic has experienced a year's worth of growth in just a few weeks.

This major shift to digital technologies in the EU and elsewhere is generating an unprecedented surge in traffic on telecoms networks. As a result, telecoms service providers have had to do their best to ensure that their [internet infrastructure](#) is up to the task, with enough capacity and ability to deliver all services at a high enough level. Demand for broadband communication services has increased in both mobile and fixed networks, with some operators experiencing as much as a [60 % increase in internet traffic](#) compared to before the crisis. In Italy, for example, where the lockdown has been one of the most stringent, data relating to upload traffic has grown by 40 % in some networks. Likewise, in Spain there has been a 40 % increase in internet traffic and a 50 % increase in voice calls.

Confinement has forced people to engage in more activities online, which explains the fact that the largest share of traffic increase has been absorbed mainly by the fixed residential network, particularly through Wi-Fi, where the increase has [ranged from 20 % to 100 %](#) in different networks around the world. This has resulted in traffic shifting away from city centres, public areas and mobile networks, as people have been commuting a lot less.

The pandemic has highlighted the importance of telecoms networks as never before. According to the latest Body of European Regulators for Electronic Communications (BEREC) [report](#) on internet capacity,¹ most EU Member States' national regulatory authorities (NRAs) report of stabilisation and even a decrease in internet traffic from the peak reached in the early days of the pandemic. Yet traffic [remains](#) well above pre-pandemic levels. Despite the difficulties, BEREC points out that network operators and content providers have to date successfully maintained² services and efficiently utilised pre-existing capacity, and in certain cases expanded this capacity.

Regulators and telecoms operators have had to take measures urgently to further enhance network stability and resilience. For example, they have had to ensure access for network operators and content providers to communications equipment and data centres, while also enhancing technicians' mobility enabling them to address network-related issues at customers' homes.

At the international level, the [World Bank](#) reports that due to changes in the volume and geographical patterns of traffic, telecoms network operators have adjusted network configurations and expanded their capacity, while high bandwidth-consuming digital services have temporarily downgraded streaming quality. Collaboration with governments is helping ensure connectivity in remote and rural areas through the use of various technologies. Policy-makers and regulators can alleviate congestion in mobile networks by releasing additional spectrum on a temporary basis, or by approving temporary commercial spectrum transactions between providers to put unused spectrum into service.

For instance, on 27 March, the US Federal Communications Commission [granted](#) wireless internet service providers temporary spectrum access for 60 days to help them serve rural communities facing an increase in broadband needs. Similarly, since the start of the pandemic, satellite operators providing broadband connectivity directly to consumers have seen a 15-70 % (depending on the country) increase in data traffic and new subscriptions.

In the EU, several operators have implemented customer-friendly measures, for example, by increasing the amount of mobile data in subscription plans for a limited period at no additional charge. The BEREC report indicates that some countries' operators have also been offering additional free services to their clients and to front-line public healthcare staff, and to students; to people without internet access, some operators have offered additional TV content for free.

Below is a description of some of the main activities that online users have been carrying out from home, such as teleworking, online education, online health consultation, online shopping and communication, and entertainment through online content.

Online activities from home

Teleworking

Following [many governments'](#) recommendations or orders regarding telework from home, where possible, private-sector companies, which had until now been generally reticent to allow for wide-scale teleworking, have had to adopt it so as to ensure business continuity and reduce the risk of contagion among their staff. For instance, estimates show that only [about 5 %](#) of the EU workforce had been regularly teleworking in pre-pandemic times, while this will be the norm in many countries for at least half of 2020. In the US, a 2018 [report](#) estimated that 4.3 million people (about 3.5 % of the country's workforce) were working remotely at the time. By contrast, in a March 2020 [MIT](#) poll over two-thirds of executives reported that more than 80 % of their workforce was now working from home.

According to a report from [App Annie](#), a market data provider, this surge in teleworking accounts for the record growth in business videoconferencing apps, with 62 million downloads in March worldwide. For instance, Microsoft's Work Trend Index report has revealed a daily record of 2.7 billion meeting minutes via Microsoft Teams in a single day – an increase of 200 % compared to an average of 900 million minutes in mid-March. Similarly, videoconferencing service Zoom saw a 535 % rise in daily traffic in that month, as more and more people have been using it for telework and personal communication. Zoom has gone from 10 million users in December to 300 million daily users in the space of five months, helping lift its share price by almost 150 % since January. Likewise, Cisco Webex, another videoconferencing application, has been peaking at a volume [24 times](#) higher than before.

Again due to the pandemic, international business conferences and intergovernmental meetings have had to take place online, which [some believe](#) could pave the way for greater participation and openness in international affairs. Yet, videoconferences are also bringing many challenges to multilingual meetings because of the lack of face-to-face communication and technical difficulties.

On the other hand, not all companies and sectors are able to telework; for instance, multinationals are more likely to telework than SMEs, and not all jobs lend themselves to teleworking. In [Canada](#), data analysis has shown that teleworking worsens inequality by mostly helping high-income earners.

Governments have been providing different types of support to SMEs to help them develop teleworking capacities, including through financial assistance to purchase equipment and assistance in drafting suitable teleworking policies. For instance, according to the [OECD](#), enterprises in Japan are eligible for a subsidy of 50 % towards the cost of installing telework facilities. Likewise, Italy has set up a [website](#) for awareness-raising concerning the various available web-based tools that permit remote work and remote education for companies and individuals.

Some major tech companies, including Amazon Web Services, Cisco, Dropbox and Google, provide temporary free access to some of their communication and sharing tools to companies and workers.

However, teleworking does not come without difficulties for many. For some disadvantaged groups, poor housing conditions may make it difficult to self-isolate and to telework effectively. In general, as children are also at home due to confinement, this adds another challenge to telework, and many staff are doing overtime to catch up on work.

The long-term consequences of mandatory teleworking are yet to be seen. Many experts are predicting that it is here to stay and will result in [30-50 %](#) of employees using it occasionally in the near future, as many managers and workers have grown to appreciate its potential and therefore find it more acceptable.

Other [research shows](#) that the greatest productivity benefit comes from flexible working in normal conditions, when staff are given a choice of how much and when to telework.

So far, Big Tech companies such as [Google and Facebook](#) have announced that their employees will telework until the end of this year; many other organisations also recommend this mode of work for the time being.

Online education from home

As the coronavirus pandemic has spread across the globe, a majority of countries have announced the temporary closure of schools. According to the latest available data from [Unesco](#), this has affected 1.57 billion pupils in more than 190 countries worldwide, or more than 90 % of the total number globally.

Unlike tertiary education institutions, such as universities, which are quite used to delivering online courses, secondary and primary education institutions are less prepared for this mode of learning. According to the [OECD](#), this could be seen as an opportunity for experimentation and for envisioning new models of education and new ways of using the face-to-face learning time. Yet, many lack existing, ready-to-use online materials and have had to create them on the spur of the moment. Some countries already had national school platforms for online learning prior to the outbreak, while others did not and have had to improvise. As a result, videoconferencing apps, such as Zoom, have been widely deployed by schools, as they allow the delivery of a classroom-scale experience. At the same time, younger children are less likely to remain attentive through online lessons and videoconferences. In many instances, teachers have also been less motivated and at ease than in class, and have had the feeling of being monitored.

School closure due to confinement is inflicting a loss in development of human capital; furthermore, this measure is affecting children from disadvantaged families more strongly than children from well-educated ones. According to an [OECD](#) analysis, in normal times, children from disadvantaged families who have limited access to books and other learning resources at home lose one month of learning over the summer, while children from privileged families do not. An additional widening of disparities is likely to occur during the current period of confinement. Moreover, it is more difficult for schools to control [absenteeism](#), which also affects children from disadvantaged groups more than other children.

The OECD distinguishes three layers of the digital divide at schools, as follows:

- The first layer has to do with the fact that to be able to access online learning materials and digital education platforms, students need to have internet access at home. However, many, particularly those living in rural areas, do not have internet. In addition, there are also problems with the amount and type of devices available for students at home.
- The second level has to do with the digital use gap: digital tools are less useful for students from poorer socioeconomic backgrounds, as they may have less support at home to help them use these tools more effectively.

- The third layer has to do with the school digital gap: the capacities and capabilities of each school to provide digital learning for students, to promote and monitor engagement with the teaching materials, and to provide feedback that helps maximise learning outcomes, are not the same across the board.

According to the OECD analysis, most of the education systems covered by the OECD's latest round of assessments under the [Programme for International Student Assessment \(PISA\)](#) are not ready for the world of digital learning opportunities. For instance, there are countries where internet access at home is close to universal, while in others it reaches just half of 15-year-olds. Yet, according to the [European Schoolnet](#) the coronavirus crisis has led to more digital transformation in schools in a few weeks than in the past 20 years, obliging education ministries to rapidly put in place emergency remote-teaching initiatives to support schools. The next PISA assessment will therefore probably reflect this shift.

Online health consultations

Digital technologies are becoming critical in the fight against the ongoing pandemic. They have been used, among other things, for online medical consultations from home or for increasing the efficiency in diagnosis and treatment of patients through telemedicine, which, similar to teleworking and online education, has been a novel experience for many. According to a recent market research [report](#), about 84 % of patients using virtual care in March were doing so for the first time. Health workers have been utilising telemedicine to diagnose patients remotely. For instance, [China](#) has developed new e-health apps allowing patients to assess their Covid-19 symptoms remotely. Videoconferencing has been [helping to diagnose Covid-19 patients](#) in their homes, and has allowed them to remain in touch with their families once they have been hospitalised, including while in intensive care.

Patients with existing critical illnesses, who had been reluctant to go to hospital lest they be exposed to Covid-19, have been able to have online consultations from home and have in some cases been monitored remotely. Moreover, thanks to digital health records and e-prescriptions available in many EU countries, it has been possible to refill a prescription remotely, limiting unnecessary contact between doctors and patients and reducing the chances of exposure to the disease.

The global telehealth market is therefore expected to grow by 64 % post-Covid-19, compared to the anticipated 32 % pre-Covid-19. Usage and adoption of the virtual care market is also projected to mark a 100 % increase in the remaining eight months of 2020, according to a [market research report](#).

Yet, many countries on the losing end of the digital divide cannot benefit from the advantages offered by medical treatment and health prevention delivered digitally. The [International Telecommunication Union \(ITU\) with support from Unicef](#) is set to work with telecommunications companies to deliver vital health messaging about Covid-19 directly to people's mobile phones in order to raise their awareness about the pandemic despite the digital divide.

Entertainment and communication

Stuck in confinement, people are increasingly turning to videoconference apps for personal social interactions, such as keeping in touch with family and friends and following a variety of classes, including fitness, music and cooking, from home. As people stay at home more, they also download more online content and games for entertainment.

As a result, social media platforms have recorded historic levels of [usage](#) by online participants. For instance, Facebook has experienced an increase of 100 % in voice calls and 50 % in WhatsApp text messaging. Facebook usage overall has increased by 37 %, while China's domestic social media apps have seen usage climb by 58 %. Meanwhile, social networking video app Houseparty has also seen phenomenal growth in European countries such as Italy and Spain during lockdown and confinement. Italy, in particular, has reported a rise in on-line activity, including a 1 000 % rise in

group video chats. Meanwhile, Twitter said in March that it had seen an 8 % increase in the number of its daily average users. A surprise to many has been that voice calls have also increased over the period. In Europe, for example, Spain, Germany and Switzerland have seen a significant increase in mobile voice calls of up to 50 % in recent weeks. Voice-over-Wi-Fi services have seen a 180 % increase in the Netherlands.

Regarding entertainment and online content platforms, news websites have been enjoying a resurgence, and streaming is now more popular than ever as people try to stay abreast of the news. Many regional news sites entered traffic measurement site Alexa's top-50 lists [for Italy](#) and [Spain](#) after the March lockdown.

However, other types of content, such as sports, have suffered dramatically due to cancellations of live competitions. As a result, demand for e-sports [is rising](#), and also for [online video games](#). Likewise, artists, creators and cultural operators have been [severely affected](#) by the enforcement of social distancing measures and the consequent cancellations or closures of cultural events. At the same time, [drive-in](#) cinemas are emerging as an alternative safer formula to watch movies in some countries such as South Korea.

Consequently, the demand for entertainment content online has been increasing significantly. Netflix has gained 15.8 million new subscribers worldwide in the first three months of 2020 alone, doubling the pre-pandemic forecast. Netflix has also laid out plans to [reopen](#) production on its shows and films, to avoid eventually [running out](#) of content.

Online shopping

The current severe health crisis has highlighted the positive aspects of using e-commerce, one of which has been the possibility for quarantined people to order food and other essential items online and get them delivered at home. Confinement and fear of infection are resulting in e-commerce spreading even further to product categories such as groceries. For instance, in one of China's counties most strongly affected by the virus, fresh food sales on JD.com [jumped 215 %](#) during a 10-day period in February. Generally, online and offline grocery stores are witnessing '[panic buying](#)' and bulk shopping for categories such as fresh food, household chemicals, personal hygiene and health. Some of these categories have seen [90 %](#) growth rates since the onset of the health crisis. On the other hand, the crisis has meant people are not reserving travel, hotels or tickets for events online, hitherto one of the biggest areas in online purchasing.

Efforts to eliminate human-to-human contact and the touching of cash over fears of Covid-19 contamination have also triggered a rise in contactless payments and contactless pick-up [in China](#); likewise in South Korea, for instance, card and mobile payments grew 30 % between January and February.

Another trend that has seen a boost is [livestream e-commerce](#), replacing face-to-face product presentations in shops. Augmented reality or virtual tools adopted by retailers such as Ikea and Wayfair are also increasingly being used to introduce products to customers. The coronavirus crisis has also served to encourage the use of [drones](#) to deliver food and medicines. However, there have also been some negative effects.

Some sellers have tried to profit from panicked shoppers, among other things by selling face masks and hand sanitisers at up to 2 000 % of their normal retail price on Amazon. The company [responded](#) by removing 1 million items from its platform for violating its policies on these fronts. Similarly, Italy's competition authority [launched](#) a probe over coronavirus price gouging. In France, [over 8 000 persons](#) have signalled fraudulent practices to the authorities on a dedicated investigative platform. Similarly, major e-commerce and marketplace companies in the US including Amazon, Walmart, eBay and Etsy have taken action against sellers who inflate their products' prices, as well as against those claiming their products provide a cure for Covid-19. E-commerce supply chains have also been affected by the pandemic, as a large part of manufacturing is based in China and other affected countries, and some factories have been forced to suspend or lower production.

Freight and international transport have also been disrupted, given the lockdown of some regions and countries and big changes in demand patterns. Amazon's 'prime now' and 'fresh deliveries' have both been [put to the test](#) due to the demand surge that has strained the platform's delivery capacity. [Both UPS and FedEx](#) have warned of shipment disruption worldwide and delays in countries most affected by the coronavirus outbreak. This, together with the ongoing US-China trade war, may lead many businesses to expand their manufacturing footprint [outside China](#). The pandemic [has highlighted](#) the costs of being dependent on a few suppliers, while also exposing other problems as shown below.

Emerging challenges

Digital divide

The coronavirus crisis is showing that the digital divide [is a reality](#) for 3.5 billion people who cannot access the internet at all, and that this problem needs to be tackled as a matter of priority. According to the ITU, only about half of the global population is connected, with people in poorer regions far less likely to be online, along with women, elderly people and those living in remote and rural areas. [Only 19%](#) of the population living in the least developed countries is using the internet.

In the EU, despite [basic broadband being available for all](#) since 2015, there exists a geographical [urban-rural digital divide](#) in terms of the quality and affordability of broadband networks. Furthermore, there is also a digital divide usage gap for those who are digitally illiterate or with low skills. For instance, not all people have the digital skills [to ask remotely](#) for social protection after they have lost their job as a result of the pandemic, or to communicate remotely with public administrations, given that most of them remain closed.

Hence, the pandemic is creating an economic crisis that might affect the purchasing power of many people and companies and their ability to afford an internet connection. According to BEREC, many operators in the EU have, throughout the confinement period, continued providing internet services even when bills have not been paid, to allow people and businesses to carry out their online activities from home. Similarly, US broadband and telephone providers have pledged to continue providing residential and small business consumers open access to public Wi-Fi hotspots for a 60-day period, and waive late fees.

Nevertheless, broadband provision is not considered an essential service in [most countries](#), and once the immediate crisis is over some users might not be able to pay for their connection.

The United Nations target for affordable internet is 2 % of monthly income for one gigabyte of data, an amount deemed to guarantee basic internet access. However, most individuals who make up the offline population live in poverty and therefore do not have the resources to afford an internet connection. In developed countries, such as the US, public utilities such as electricity, gas, water and telephone services, are often subsidised for those who cannot afford them. Some argue that [access to an affordable and reliable internet connection](#) should be treated the same way, given its critical role. Resilient and trustworthy telecommunications networks and services are essential as more countries, companies and individuals turn to digital technologies to respond to and cope with the impact of the coronavirus outbreak.

Upgrading of telecoms networks and 5G deployment

The crisis has highlighted the need to invest in and maintain robust infrastructure, and to launch the transition to 5G.

It is expected that in the medium term regulators could stimulate telecoms operators to deploy more [broadband fibre](#) and gradually phase out xDSL technologies.

According to European Commission estimates, the EU is short by €155 billion of the total €500 billion needed to meet the Commission's 2025 [internet connectivity](#) objectives. Among these

are the set of targets in the [5G action plan](#), aimed at ensuring that the EU will assume a leading global role in the deployment of 5G services.

The coronavirus crisis has affected the calendar of some of the spectrum auctions dedicated to 5G this year, causing delays for some of them.³ Other auctions planned for 2020 may still take place as per the Commission's 5G action plan calendar.

In a recent [event on spectrum](#) and 5G, some argued that the pandemic might lead to a change in the [5G business models](#), which, once accomplished, could trigger the adoption of 5G. Thus, some suggest that the pandemic might change the 5G concept in such a way as would allow it to have a broader range of applications at home, including in the area of telemedicine. Other remaining questions are what [the value of the spectrum](#) will be after the pandemic, also considering the lower purchasing power that some affected business and citizens might have and the fact that 5G-enabled phones and other 5G-related infrastructure could be scarcer, given the disruption in supply chains.

Another aspect that could delay deployment is that there have been false claims linking 5G rollout to the spread of the virus, which has resulted in 5G infrastructure [being attacked](#) in some countries. Even if different organisations have disproved this misinformation, [it continues](#) to inflict damage.

At the same time, the economic crisis is also affecting companies in the telecoms sector, although to a [lesser](#) extent than other sectors. According to global consultancy and research firm [Analysis Mason](#), a decline of 3.4 % in revenues is forecast for the sector this year, in contrast to a pre-Covid-19 forecast of a 0.7 % increase. Telecoms are relatively resilient and will perform better than the generally negative GDP trends. Furthermore, given telecoms' reinforced status as essential infrastructure, the firm also expects that some governments will include 5G and fibre in stimulus packages to protect the investment made.

Cybersecurity

During this unprecedented situation, there has been an increase in malicious cyber-activity across EU Member States. Criminals are exploiting the coronavirus crisis to their own advantage, as revealed by a recently published Europol [report](#). There has also been [an alarming increase](#) in online child abuse.

Cyber-criminals are taking advantage of the pandemic by using widespread interest in the subject to trick users into revealing their personal information or clicking on malicious links or attachments and unwittingly downloading malware on their computers. Coronavirus-related email 'phishing' attacks have spiked by [over 600 %](#) in Europe since the end of February. Criminals may present themselves as credible government organisations or centres for public health. Other attacks during the pandemic include '[Zoom-bombings](#)', where hackers or trolls hijack a group video call that is being carried out via Zoom.

Increased e-commerce and cashless payments also bring on increased risks of cybercrime attacks and cybersecurity breaches. [Over 87 %](#) of EU citizens consider cybercrime an important challenge: with payments becoming increasingly cashless, online theft – of money but also of personal data – has been on the rise.

Some expect that these trends will weaken as confinement starts easing in many countries, and companies such as Zoom take [more measures](#), including end-to-end encryption, to protect their users. WhatsApp has already stated that it has seen a drop of 70 % in 'highly forwarded' messages – the kind that may spread misinformation about coronavirus.

There are also important concerns about privacy and data protection related to the use of digital technology to fight the pandemic. The European consumer association, BEUC, has raised some [legal and ethical issues](#) that have been triggered by the digitalisation of healthcare and need to be tackled, among others in terms of data protection and privacy in relation to [digital tracing apps](#), for instance.

From the health crisis point of view, it is unlikely that the Covid-19 testing capacity will be sufficient for exhaustive population-wide testing. In the shorter term, this means that until a vaccine is discovered, authorities need to prioritise who should be tested. For this selection, digital contact tracing is likely to become a core component of governments' Covid-19 lockdown exit strategies. For these to work effectively, large-scale adoption of digital contact-tracing will be necessary at national and international levels. Singapore is one of the countries to apply the most highly digitalised means for fighting the disease, and it is also a front-runner in terms of developing and using a tracing app. Called [TraceTogether](#), this app has been adopted by [about 25 % of the population](#), still far from the 75 % needed for it to be effective. Privacy concerns as well as the speed at which it drains phone batteries have been cited as reasons for its low adoption rate.

Different models are emerging globally for collecting and sharing individual location data. Worryingly, EU countries are choosing different solutions. Some, such as Germany, Italy and Austria, are choosing decentralised models, such as that being jointly developed by [Google and Apple](#), while others are choosing their own centralised models (such as the ones developed in France⁴). Many, such as Spain, remain undecided. In Poland, the government has [launched an app](#) that uses geolocation data and facial recognition technology to control those under quarantine, through requesting selfies.

These divergences among EU models together with possible low adoption rates pose many challenges to their interoperability and ultimately their [effectiveness](#). In addition, there are also [digital divide concerns](#), as not everybody owns a smartphone that can use these apps, and children as well as elderly people might be excluded as a rule.

From a cybersecurity perspective, some experts argue that centralised models pose more risks in case [databases get hacked](#), whereas others argue that a balance should be struck between considerations of privacy and considerations of public health, and that a centralised approach gives more speed and insight to fight the pandemic.

The European Commission has published guidelines recommending that tracing solutions should respect the General Data Protection Regulation (GDPR) rules. However, in April [Hungary](#) took an emergency decision to suspend applying parts of the GDPR in this domain. Many governments outside Europe have used various intrusive measures such as tracking mobile location data, CCTV, and credit-card transaction records, to broadly monitor citizens' activity and to apply penalties and other sanctions on those who are not respecting the quarantines at home.

Digital dependency

The pandemic has [further](#) consolidated the dominance of Big Tech companies, such as Amazon, Netflix and YouTube, which have seen their net worth increase manifold as a result of [their stock market rebound](#), given their increased use and role during the pandemic. A similar boost has been witnessed by the world's most popular videoconferencing apps, [none of which](#) is European.⁵ Amazon and Netflix have both increased in value by roughly 30 % this year, while Zoom's value has doubled. For instance, Amazon's market valuation is now about US\$1.17 trillion, [about the size of the entire Spanish economy](#). The five Big Tech companies – Microsoft, Apple, Amazon, Alphabet and Facebook – account for a fifth of the market capitalisation of the entire Standard and Poor's 500 index.

These companies continue to gain competitive advantages [among other things](#) by means of a mechanism known as the feedback loop (that is, improving their quality and value by using data already at their disposal or revenue generated from business users, such as from targeted online advertising). This concentration of power is making it increasingly difficult for smaller companies, also weakened by the pandemic, to challenge them. In France, [over 80 %](#) of start-ups have lost revenue during the crisis. As a result of this general situation, achieving digital sovereignty has emerged as one of the EU's strategic goals.

What the EU is doing

Fostering digital transformation is higher than ever on the EU's political agenda, and has been identified as a priority for unlocking future growth in Europe.

The EU will increase its support for digital transformation in the coming years, as illustrated by the proposed 2021-2027 Digital Europe programme, which will be the first-ever funding programme dedicated solely to supporting digital transformation in the EU. Further EU action will be needed, notably to increase infrastructure investment, boost innovation, foster EU digital champions and businesses' digitalisation, reduce existing digital divides, enhance EU cybersecurity capabilities and ensure respect for privacy and data protection. The important role played by digital technology in the coronavirus crisis has further underlined the importance of continued network investment to meet the Commission's Gigabit Society objectives for 2025, in particular through 5G and fibre networks and the fight to bridge the digital divide.

Following the surge in internet traffic owing to coronavirus confinement, the Commission has called upon players such as the major platforms, BEREC, telecoms operators and the public to cooperate in order to establish connectivity and open internet across Europe. In addition, the Commission has [asked](#) streaming platforms, such as [Netflix and YouTube](#), to offer their streamed content in standard rather than high definition and to cooperate with telecoms operators. Several application providers, such as Netflix, Akamai and YouTube, have agreed to reduce their video streaming quality at peak times in Europe, and some have shifted default settings from high-definition to standard-definition globally.

On 8 April, the Commission [recommended](#) adopting a common pan-European approach for Covid-19 mobile applications and using anonymised mobility data for contact tracing, to be developed together by Member States and the Commission. On 16 April, the Commission published [guidelines](#) on the development of new tracing apps to ensure compliance with EU privacy and personal data protection legislation. The Commission recommended the use of voluntary apps and Bluetooth communication between devices to determine proximity, because this 'appears more precise, and therefore more appropriate, than the use of geolocation data' and because this functionality avoids the possibility of tracking.

Likewise, in a [resolution](#) adopted on 17 April, the European Parliament stressed that any digital measures against the pandemic must be in full compliance with data protection and privacy legislation. It said that the use of apps should not be obligatory and that they should stop being used once the pandemic is over.

During their videoconference of 5 May 2020, EU Member States' telecommunications ministers exchanged views on the use of tracing apps and electronic communication data for the purpose of tackling Covid-19. They also held a broader debate on the role of the digital sector in the post-Covid-19 recovery, including measures to incentivise investment in the deployment of upgraded high-capacity digital infrastructures and 5G.

MAIN REFERENCES

[Policy Responses to Coronavirus](#), OECD website, 2020.

Testing for COVID 19: [A way to lift confinement restrictions](#), OECD, May 2020.

Stress on networks, [the Global Network Resiliency Platform](#), ITU, March 2020.

[The impact on spectrum awards of the Covid-19 pandemic](#), PlumConsulting, April 2020.

ENDNOTES

- ¹ In a 19 March 2020 joint statement with the European Commission, on how network operators can cope with the increased demand on network capacity, BEREC stated it had set up a special regular reporting mechanism to monitor the internet traffic situation in each Member State in order to be able to respond swiftly to capacity issues.
- ² However, according to [recent academic research](#), it appears that the EU is not in such a good position compared to the US and some Asian countries in terms of readiness to telework.
- ³ For instance, in countries such as France, Spain, Austria and Portugal, while Sweden has announced its spectrum auction for November 2020.
- ⁴ France's Stopcovid-19 solution is expected to be mainstreamed in the country as of 2 June. The UK is also launching a centralised Covid-19 tracing app called NXSH.
- ⁵ Even if Skype is of European origin, none of the most used videoconferencing apps worldwide is from the EU at present.

DISCLAIMER AND COPYRIGHT

This document is prepared for, and addressed to, the Members and staff of the European Parliament as background material to assist them in their parliamentary work. The content of the document is the sole responsibility of its author(s) and any opinions expressed herein should not be taken to represent an official position of the Parliament.

Reproduction and translation for non-commercial purposes are authorised, provided the source is acknowledged and the European Parliament is given prior notice and sent a copy.

© European Union, 2020.

Photo credits: © Stanistic Vladimir / Adobe Stock.

ep@ep.europa.eu (contact)

www.eprs.ep.parl.union.eu (intranet)

www.europarl.europa.eu/thinktank (internet)

<http://epthinktank.eu> (blog)

