

IMPACT ANALYSIS: HOW IS THE TELCO INDUSTRY RESPONDING TO CORONAVIRUS?

A DATA-BASED REPORT RELATING TO THE CHANGES IN THE TELCO SECTOR BECAUSE OF COVID-19

CHALLENGES AND OPPORTUNITIES IN THE TELECOMMUNICATION INDUSTRY



SATURATED MARKET

With over 778M mobile subscriptions and 193M fixed broadband connections, the market for telecommunication across Europe is saturated. Turnover stagnates enforcing providers to invest into new revenue streams (e.g. data monetization) as well as innovative product bundling strategies (e.g. media-telco convergence, volume upselling).



CONSUMER-CENTREDNESS

While other industries have setup consumer-first approaches, such as online retail (free return) and online services (monthly cancellation), for a long time telcos have failed to create trust in their brands. They suffer from roaming charges, hidden price increases, sloppy customer care, subscription traps and over-promising of speed connections.



NETWORK

The net is at the core of telco providers' value proposition. Connectivity and digital services are on the rise for years and new innovations based on artificial intelligence and blockchains are awaited eagerly. Transitioning to fibre networks and 5G will fuel this innovation path. Its expansion lies in the hands of telco companies, comes with high investment costs but also tremendous opportunities.

COVID-19 IMPACT ON TELCOS
SHORT- AND MID-/LONG-TERM IMPLICATIONS



SHORT-TERM
IMPACT

Economic impact
Increased data usage
Adapted marketing communication



MID- TO LONG-TERM
IMPACT

Acceleration of digitization
Critical infrastructure
Economic growth opportunities

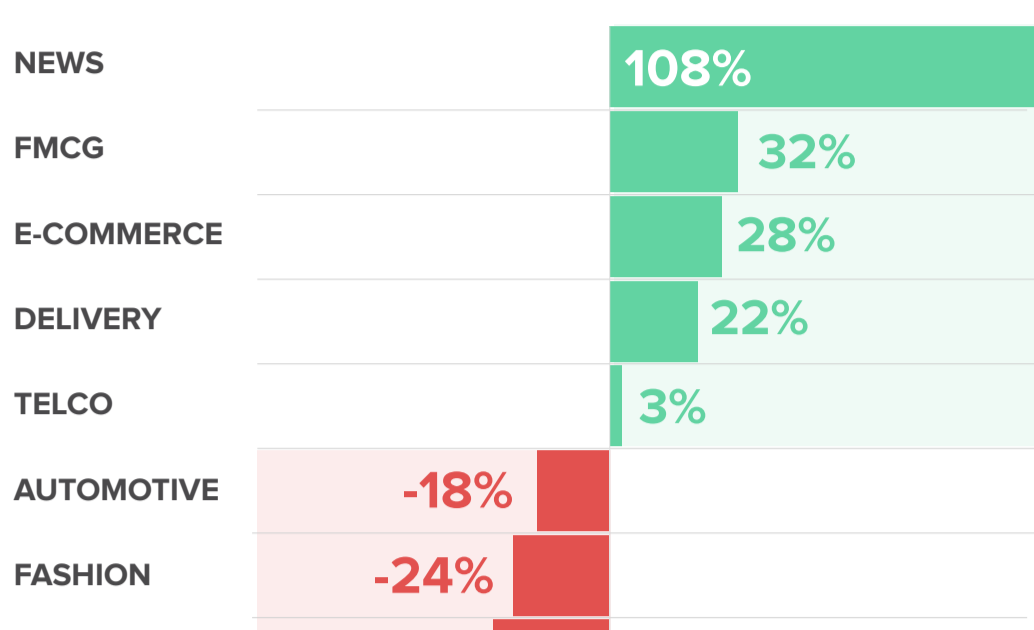
ECONOMIC IMPACT

CLOSED TELCO STORES LEAD TO LESS OFFLINE SALES, BUT BULK OF REVENUES ARE GENERATED FROM EXISTING CLIENTS. ON TOP, INTERNET ACCESS HAS BECOME CRUCIAL, AS SUCH INTEREST FOR BROADBAND RELATED OFFERINGS HAS INCREASED TREMENDOUSLY ACROSS EUROPEAN COUNTRIES.

CONSUMER INTEREST FOR TELCO BRANDS
HAS SLIGHTLY INCREASED

DUE TO CORONAVIRUS MAKING IT ONE OF THE STABLE INDUSTRIES

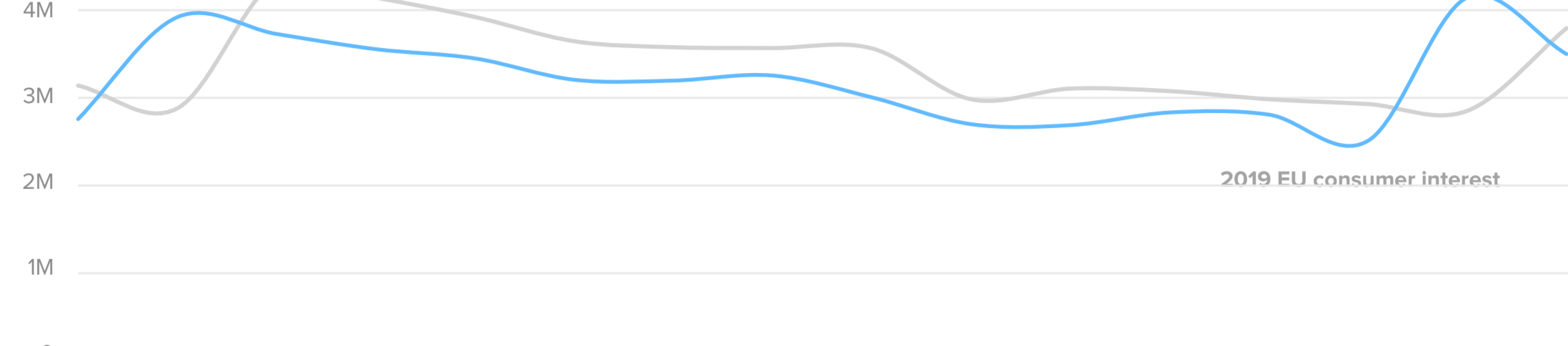
%CHANGE IN EU-5 CONSUMER
INTEREST FOR SELECTED
INDUSTRIES



EU-5 CONSUMER INTEREST IN TELECOMMUNICATION BRANDS

Due to the corona crisis, consumer interest for telecommunication in March-April 2020 has increased by 3% compared to the same period in the previous year (CW13-16 2019 vs. CW13-16 2020).

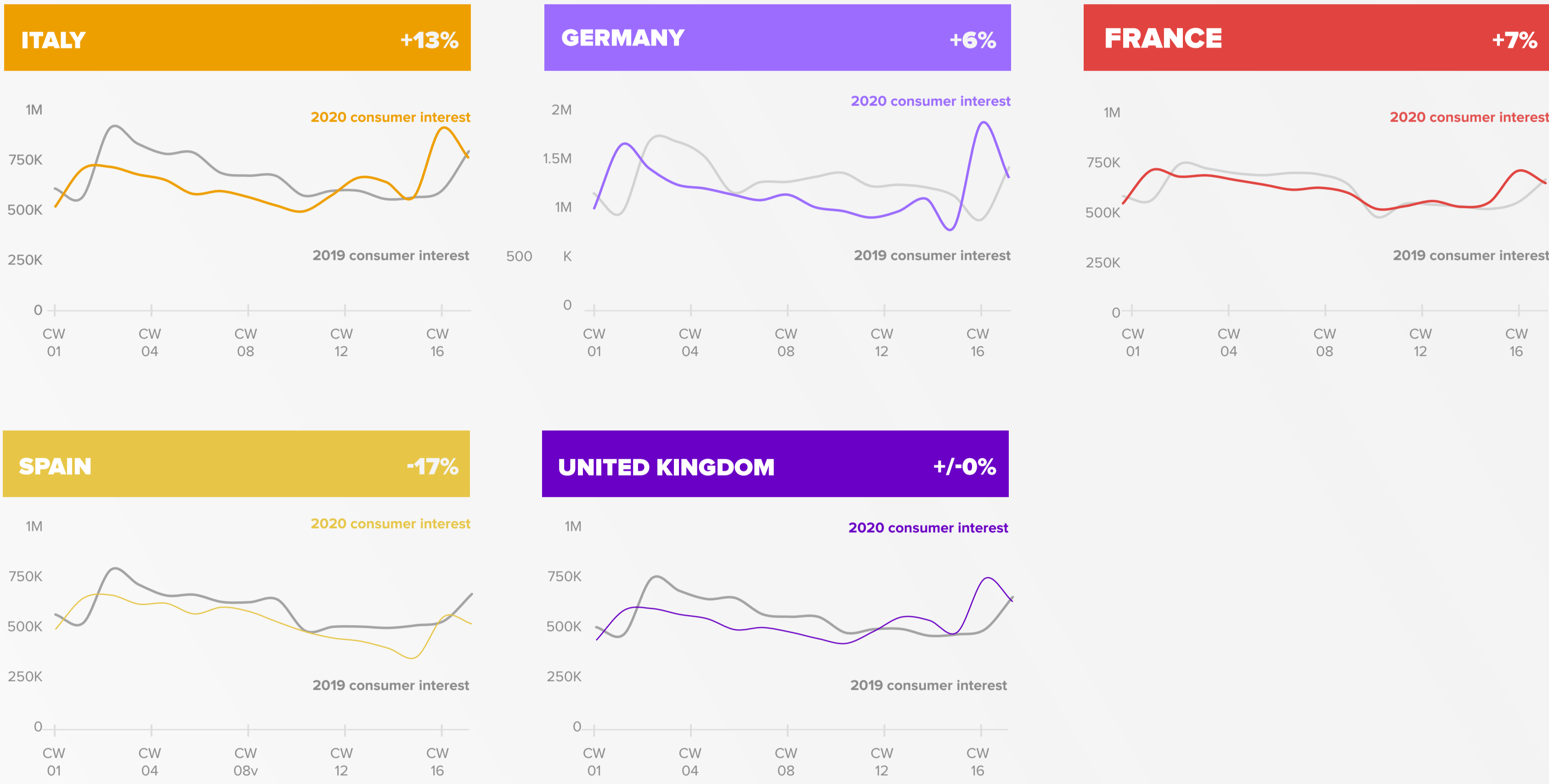
+3%
VS. MARCH/APRIL
2019



Search data retrieved from Quantin across 5 markets (DE, ES, IT, FR, UK), growth rate compares March-April 2020 with March-April 2019 (CW13-16 2019 vs. CW13-16 2020)

IN MOST EU-5 MARKETS INTEREST IN TELCO BRANDS
HAS RISEN WITH COVID-19 LOCKDOWN

EU-5 CONSUMER INTEREST FOR TELECOMMUNICATION BRANDS ACROSS MARKETS

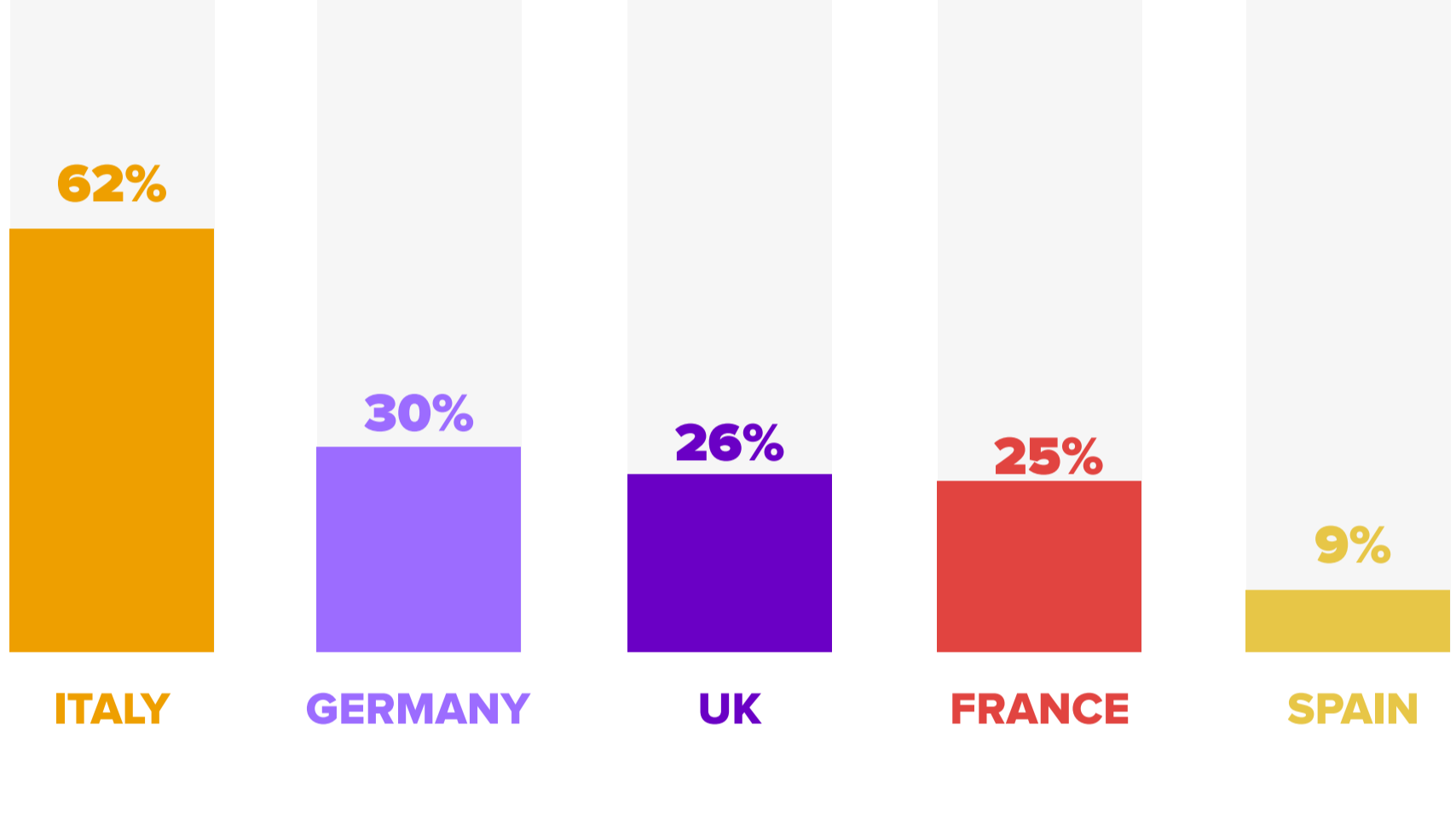


Search data retrieved from Quantin across 5 markets (DE, ES, IT, FR, UK), growth rate calculated as month-over-month comparing March-April 2020 with March-April 2019.

LOCKDOWN RAISES CONSUMERS' INTEREST
IN INTERNET ACCESS FROM HOME

WI-FI SERVICES, DSL PRODUCTS AND CABLE BECOME MUCH MORE IMPORTANT

% change in consumer interest March-April 2020 vs March-April 2019*
for "Fixed broadband"



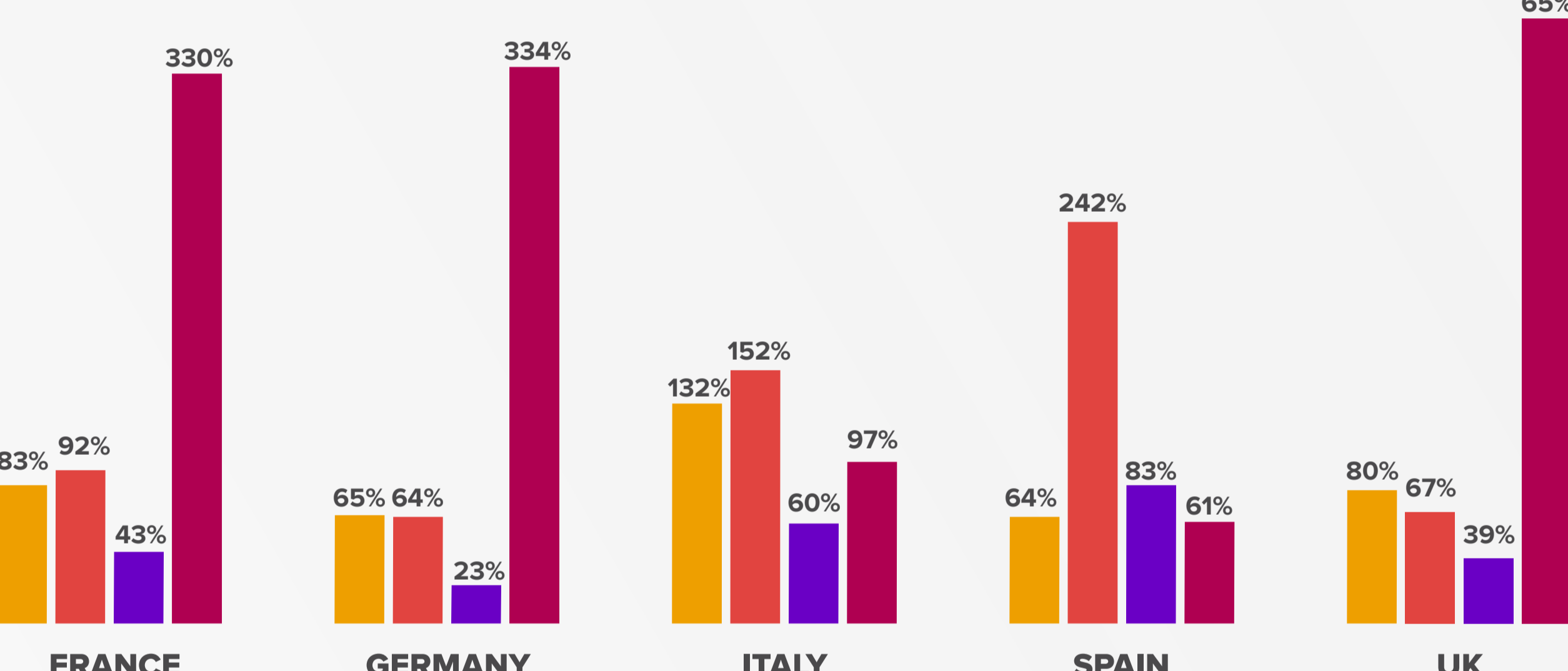
Search data retrieved from Quantin across 5 markets (DE, ES, IT, FR, UK), growth rates compares March-April 2020 with March-April 2019 (CW13-16 2019 vs. CW13-16 2020).

CONSUMERS REQUIRE STABLE BROADBAND FOR
ONLINE ENTERTAINMENT, I.E. GAMING & WORKOUTS

TELCO PROVIDERS HANDLE INCREASED TRAFFIC DUE TO THE GLOBAL LOCKDOWNS

% change in consumer interest March-April 2020 vs March-April 2019 for various data intensive streaming services

■ App Store ■ Gaming ■ Video on Demand ■ Online Workouts



Search data retrieved from Quantin across 5 markets (DE, ES, IT, FR, UK), growth rates compares March-April 2020 with March-April 2019 (CW13-16 2019 vs. CW13-16 2020).

ADAPTED MARKETING
COMMUNICATION

MARKETING W/ FOCUS ON NEEDS

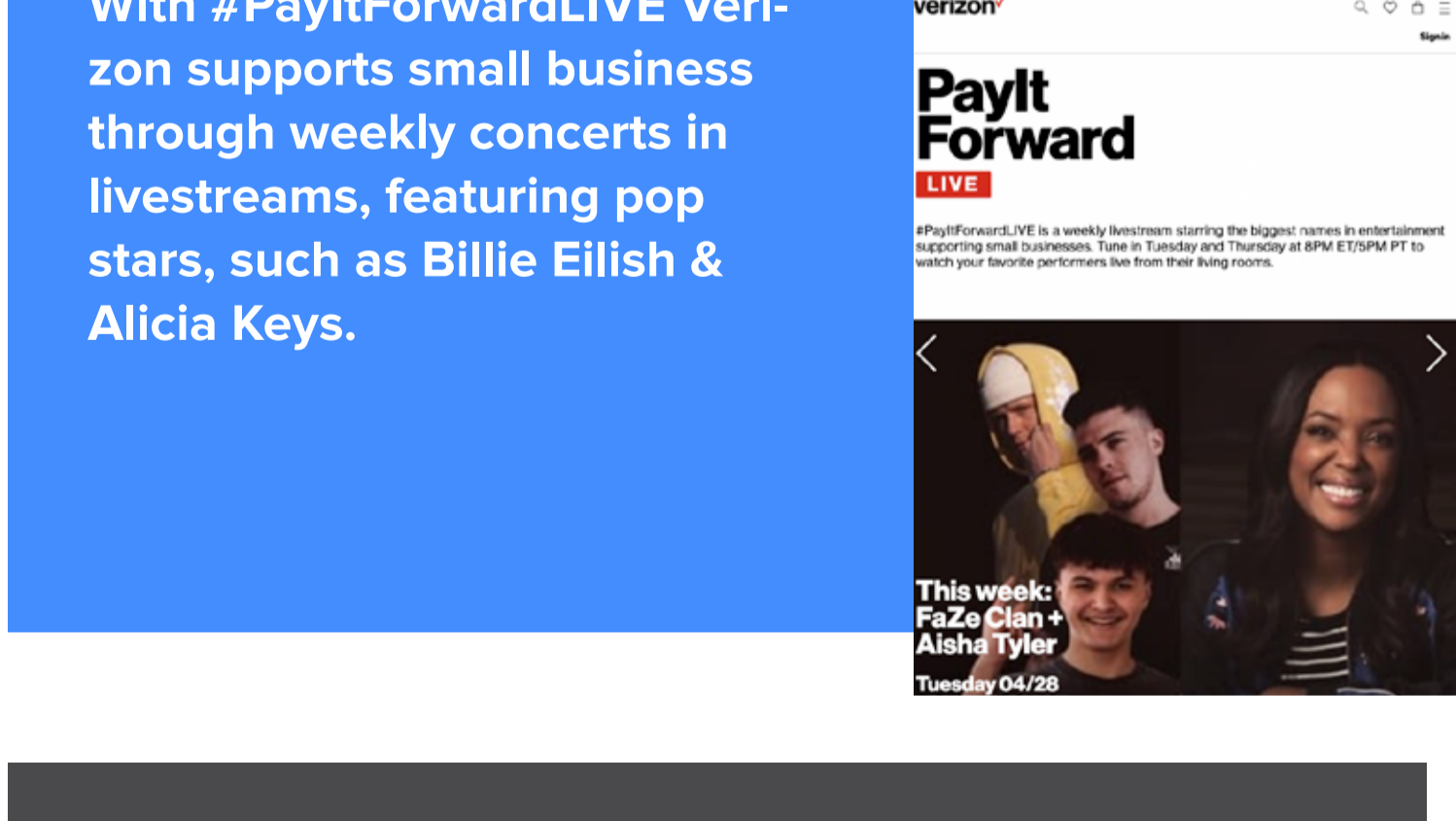
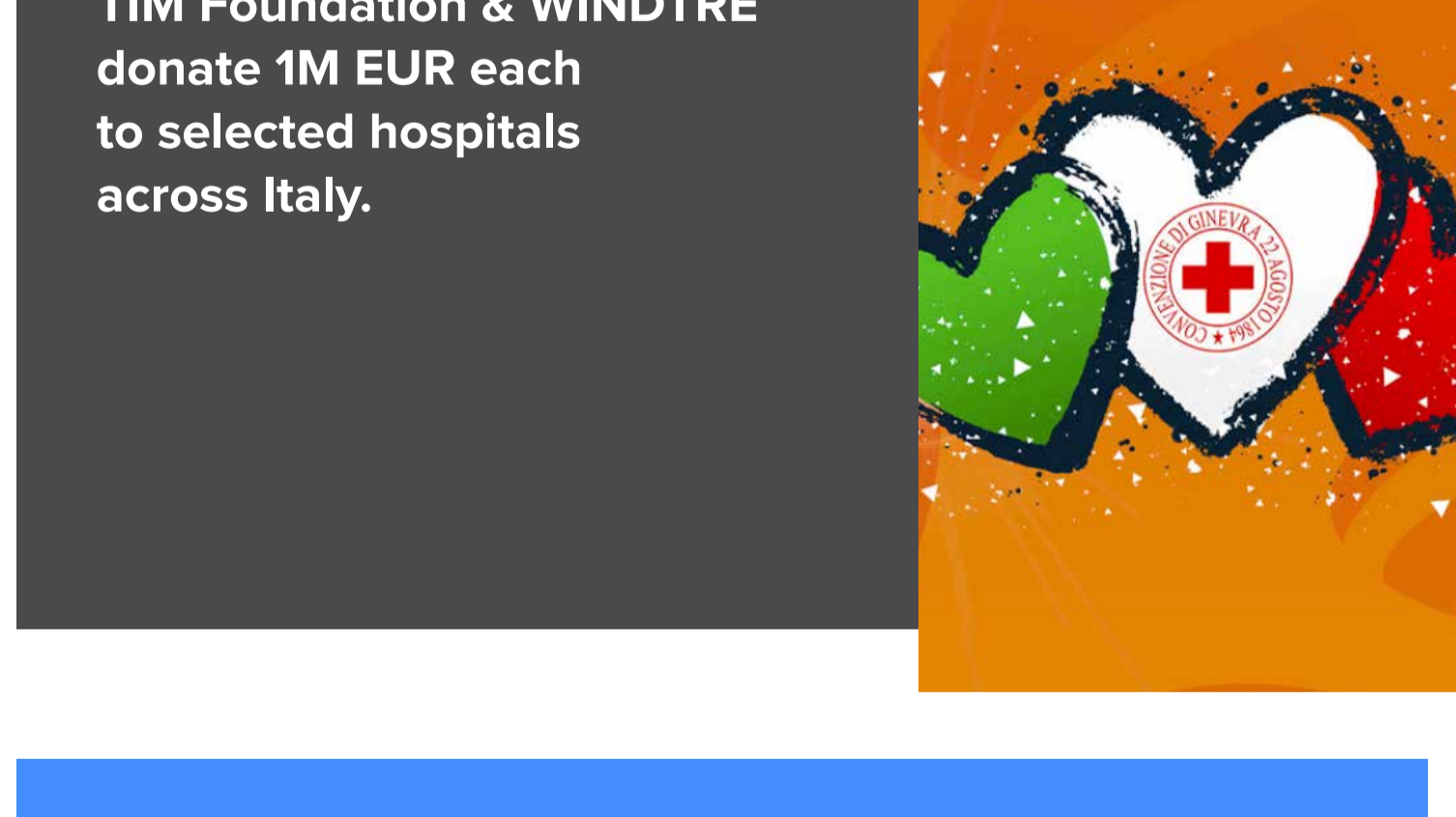
TELCO PROVIDERS (ESPECIALLY IN ITALY & US) LAUNCH INITIATIVES TO SUPPORT SOCIETY,
GOING BEYOND THEIR CONSUMERS' NEEDS

	LIFE AT HOME Initives to ensure broadband as well as access to streaming contents	HOME SCHOOLING/ REMOTE WORK Initiatives to support parenting, learning and working from home	FUNDRAISING TO SUPPORT SOCIETY Initiatives to give financial aid to hospitals, small businesses & families in need	WORD FROM CEO Public presence and taking action, corporate influencers
FRANCE	XXX	X	X	
GERMANY	XXX	X		X
ITALY	XXX	X	XXX	X
SPAIN	XXX	X	XX	X
UK	XXX	X		
US	XXX	XX	XXX	X

Evaluation based on identified initiatives and volume of fundraising across telco providers per market. XXX means that in this market many initiatives and/or with high fundraising volume have been launched by the top telco providers.

TELCO PROVIDERS ACT SOCIAL

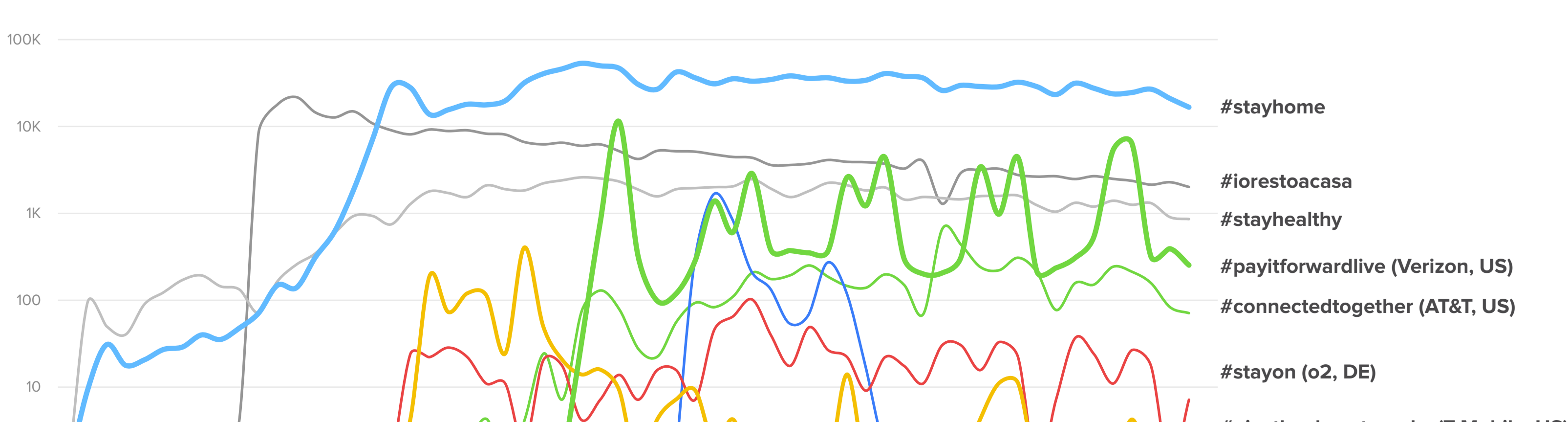
SELECTED EXAMPLES OF FUNDRAISING



TELCO'S HASHTAGS DURING COVID-19

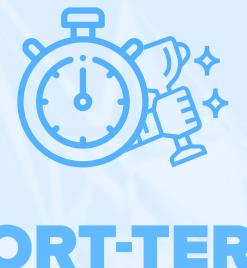
VERIZON (US) & O2 (DE) CREATE FREQUENTLY LIVESTREAMED AWARENESS OF INITIATIVES
THROUGH FREQUENTLY LIVESTREAMED CONCERNS

With the global lockdown end of February 2020, quickly iconic hashtags (#stayhome, #stayhealthy, #iorestoacasa) were established which are still widely in use, only showing little tendency of decline. Providers around the world started launching programs with dedicated hashtags shortly after. Verizon (US) and o2 (DE) are good examples how to constantly raise awareness by frequently publishing new contents, e.g. with live streamed concerts, generating new peeks every weekend.



Data retrieved from Brandwatch across 6 markets (DE, ES, IT, FR, UK, US).

COVID-19 IMPACT ON TELCOS SHORT- AND MID-/LONG-TERM IMPLICATIONS



SHORT-TERM IMPACT

Economic impact
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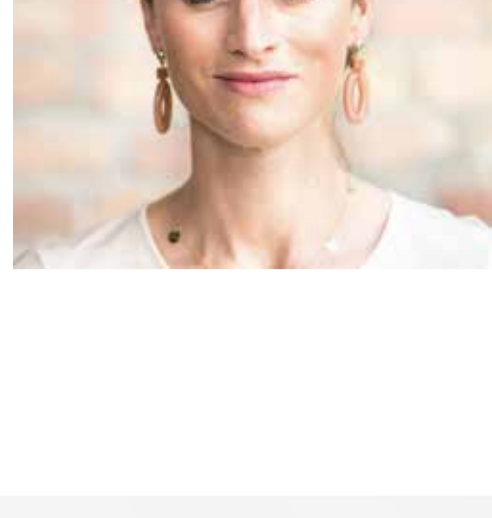


MID- TO LONG-TERM IMPACT

Acceleration of digitization
Critical infrastructure
Economic growth opportunities

THE DIGITIZATION OF SOCIETY IS ACCELERATING

QUICKER THAN EXPECTED ENFORCED BY SOCIAL DISTANCING
TO CONTAIN THE SPREAD OF THE CORONAVIRUS



VERENA PAUSDER

entrepreneur and investor, expert in digital education

"A few weeks ago, nothing would have been more radical than implementing a nationwide home-schooling system in Germany. [...]

The coronavirus turned out to be an unwanted, yet effective teacher of digitalization."

Mediapioneer podcast: <https://verenapausder.de>

FORCED LOCKDOWN IS PUSHING PREFERENCES FOR REMOTE ACTIVITIES



SCHOOLS

RECEIVE INVESTMENTS FOR
DIGITALIZATION

- € 85 Million invested into distance learning by the Italian government.

- 40 UK state teachers create online teaching platform: the national academy.

- € 500 Million to be invested by the German government to support digital learning and subsidize technical equipment for pupils in need.



EMPLOYEES

HOPE TO CONTINUE REMOTE
WORKING POST COVID-19

- 82% would like to work remotely 1 day a week or more after COVID-19 crisis is over.

- 77% think productivity has not changed or has improved working remotely.

- 55% are able to perform individual, focused work better from home than the office.



COMPANIES

INVEST IN DIGITAL INFRASTRUCTURE
TO KEEP THE BUSINESS RUNNING

- Worldwide searches for „online shop“ have **increased by 77%** since March 14th, suggesting that stationary retailers are eager to setup online e-commerce capabilities in response to the crisis.

- Companies invest in their **IT Infrastructure** to support remote work. As such, VPN providers experience sales requests **4-times** than usual (Source); worldwide searches for "Microsoft Teams" have increased by **650%** since March 14th .

THE NET IS OF CRITICAL INFRASTRUCTURE

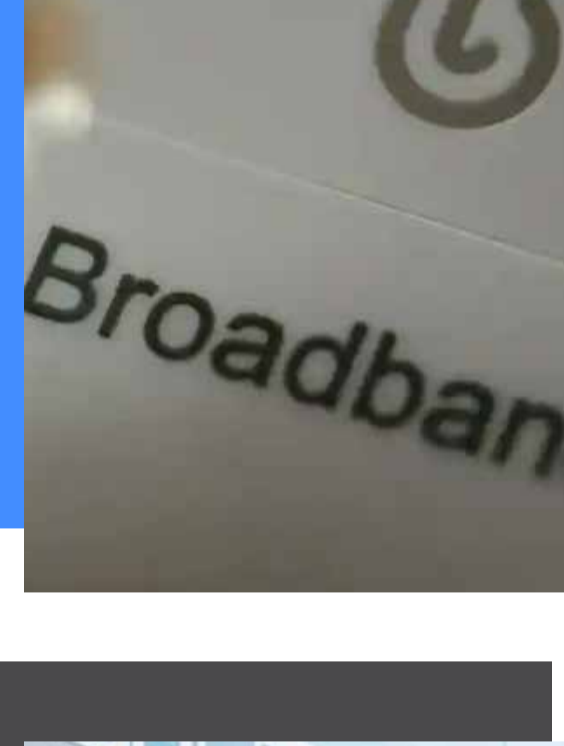
IMAGINE, IN TIMES OF LOCKDOWN AND SOCIAL DISTANCING, THERE WAS NO
NETWORK, NO INTERNET, NO FACE-TO-FACE COMMUNICATION,
WHAT WOULD BE LEFT? NOT MUCH.

COVID-19 HAS PUSHED GOVERNMENTS TO PUT INTERNET ACCESS AT THE TOP OF THE AGENDA

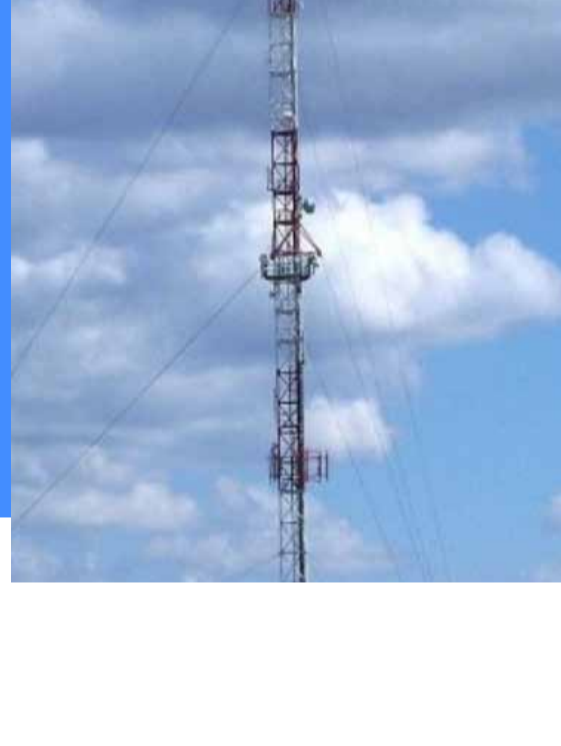
In response to COVID lockdown the EU commission plans to ensure all member states post-COVID have 5G spectrum frequencies by end 2020. Furthermore, e-Health, digital education, e-Government, data sharing, and broadband connectivity should receive attention following the crisis.



UK government agrees deal with internet providers to offer generous data packages and free calls to help support vulnerable people during lockdown.



The French government installed more antennas during the COVID-19 lockdown. This ensures wider coverage of phone lines, Bluetooth, WIFI and 3G/4G for citizens stuck at home.



TIM & google cloud are pushing cloud and edge computing across Italy in order to deploy 5G & AI. This is to help Italian businesses take advantage of this technology sooner, offering quicker recovery post COVID-19.



AN ACCELERATING DIGITALIZATION OF SOCIETY GIVES GREATER RESPONSIBILITY FOR TELCOS

If internet and connectivity is a necessity for the post-COVID world, there is a shared responsibility of telcos and governments need to ensure that the most vulnerable people have the tools that they need.



FREE BROADBAND TO ENABLE EDUCATION

New Zealand's largest Telco Chorus provides 50,000 homes with free broadband to continue education at home during the COVID19-lockdown. This initiative was supported by the Ministry of Education.



FREE HOTSPOTS & LATE FEES WAIVED

14.1% of US school children do not have access to sufficient internet connections for online learning. AT&T, Verizon and Century link signed onto the "keep America connected" pledge, opening up free WIFI hotspots and waiving late fees for customers. Longer term this pledge aims to bring 5G to rural areas across the US.



LAPTOPS & TABLETS FOR VULNERABLE CHILDREN

SFA is one of the largest telcos in France. Their foundation is driving donations of laptops & tablets to disadvantaged children in order to help them connect to their classes online during and post –COVID19.

ECONOMIC GROWTH OPPORTUNITIES

GROWTH NEEDS INNOVATION. POTENTIAL PATHS FOR COUNTRIES AND COMPANIES
OUT OF CRISIS ARE PAVED WITH TECHNOLOGIES THAT RELY ON HYPER FAST
BROADBAND CONNECTIONS.

TECHNOLOGY TRENDS

HOW TELCOS ENABLE OTHER INDUSTRIES TO GROW BY PROVIDING STATE
OF THE ART NETWORK INFRASTRUCTURE, SUCH AS 5G BROADBAND

INTERNET OF THINGS /
INTERNET
OF EVERYTHING

DISTRIBUTED CLOUD

EDGE AI /
EDGE COMPUTING

SECURITY AND
SURVEILLANCE
SOLUTIONS

EXTENDED REALITY /
VIRTUAL AND AUGMENTED
REALITY /
IMMERSIVE EXPERIENCES

AFFECTIVE COMPUTING /
EMOTION AI

ARTIFICIAL INTELLIGENCE /
MACHINE LEARNING

BLOCKCHAIN
TECHNOLOGY

COMPUTER VISION

AUTONOMOUS DRIVING

SMART SPACES /
SMART CITY

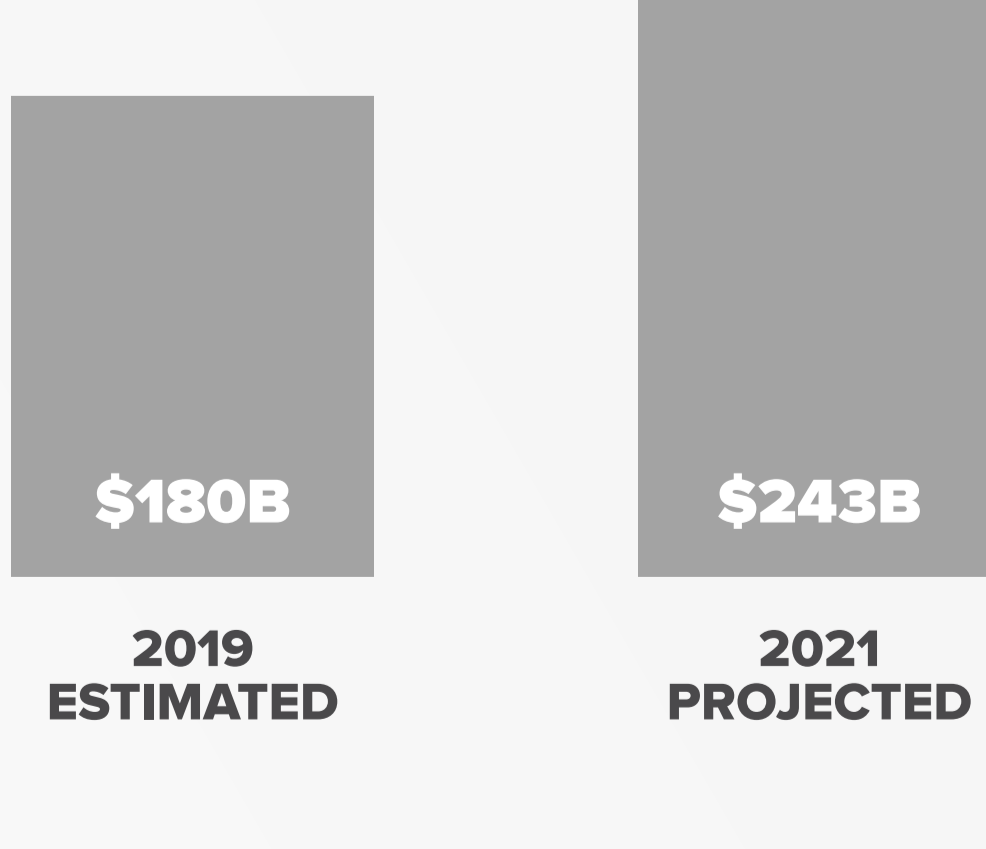
VIDEO CONFERENCING /
CROWD COMPUTING

IN RESPONSE TO COVID-19, IOT IS ASSUMED TO ACCELERATE

IMPACT OF COVID-19 ON IOT MARKET

- Increasing focus on remote monitoring.
- Increasing adoption smart payment solutions.
- Increasing investments into smart healthcare.
- Increasing need of industry 4.0 solutions.

■ Market Potential



SMART HEALTHCARE

COVID is pushing the development of health monitoring wearables to track early symptoms in the population. These technologies will be further boosted with the roll-out of 5G bringing in a new age of IOMT

INDUSTRY 4.0

With global supply chains and manufacturing shut down due to social distancing rules, Industry 4.0 and robotic process automation could be a lucrative investment for businesses – ensuring not all production needs to come to a halt through automation, with monitoring taking place remotely

Covid-19 Impact on Internet of Things (IoT) Market from www.marketsandmarkets.com.

ALL EYES ON TELCO PROVIDERS, NOW IS THE TIME TO COMMUNICATE THE VALUE THAT **YOUR BRAND** BRINGS TO CONSUMERS



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