

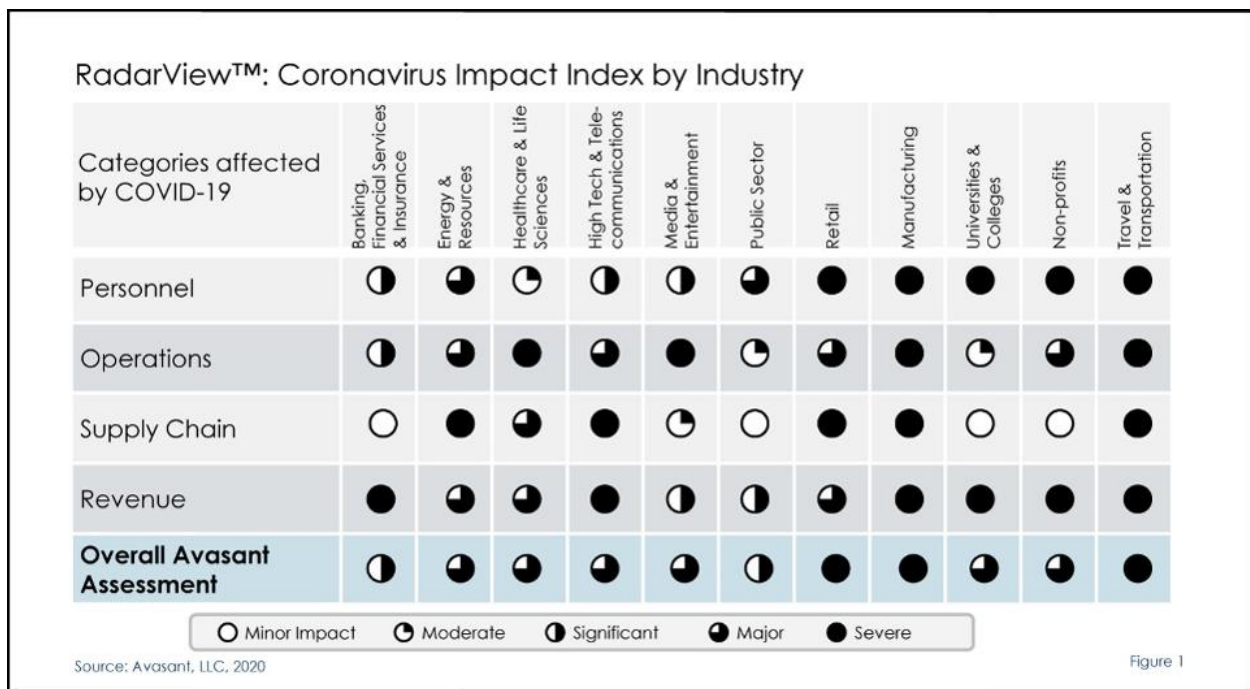
The Day After – Post Covid-19 IT Future

Where will we be in six months, a year, ten years from now?

As the ripple of COVID-19 propagates around the globe, it is forcing humankind to innovate and change the way we work and live. What could be the impact of this pandemic on information technology? What could be the future of IT and its impact on business? Where are we heading to in this industry?

This paper tries to predict what may happen, by consolidating several articles, thoughts and ideas.

The below figure shows the estimated impact of COVID-19 on different sectors.



How many time did we hear lately this statement : “I have tried to convince my boss to shift to online tools (rely on smartphone chats, online video conferencing, remote access, work from home,...) for months, but, cynically, COVID-19 forced them to make use of such technology.” The virus gave a kick in the pants they need to speed up their pace of digital transformation.

Definitely, a deeper digital transformation will be noted. The trend has started and may not stop when the fight against the virus will be over.

1. Investment in Information Technology

While overall IT spending may be stable in 2020 compared to previous year, due to the virus pandemic, it is expected to grow in the coming years.

The two main areas projected to see positive growth are infrastructure spending and software investments. Demand for solutions supporting remote work and collaboration will drive this growth.

The sudden push to accelerate digital transformation may also be driving targeted investment over the coming weeks, months and years. IT leaders are and will be focusing on investing in keeping business operations running smoothly during massive remote work scenarios. As such, performance monitoring is a top priority.

Importantly, financial accountability is key in setting today's IT spending priorities. Technology chiefs will need to work with their finance counterparts to align IT spending with organizational priorities and ensure they have the right benchmarks in place to measure the business impact of IT investments. At the same time, they caution against taking an ax to IT budgets. Freezing critical IT spending might put you out of business.

All analysts do not agree on the IT investment in the future. Some analysts estimate that IT investment will slow down.

Let us take the 5G example. For the slow-down advocates, possibly, the 5G network will be on pause. The 4G infrastructure was approaching its limits in its ability to handle increased capacity and the demands of modern mobile applications. However, whatever grand plans were thought for rolling out 5G infrastructures, it is almost certainly now on indefinite hold given the substantial economic slowdown that is going to occur. It is also unlikely emergency funds from governments will be used to pay for network expansion when other needs are pressing, with potentially up to 30% of the population facing unemployment. With so many people in self-isolation for what could be as long as 18 months under some estimates, and with a possible long-term shift towards home-based work for a large segment of the population, large-scale deployment of public 5G access points is likely to be curtailed. Strange enough, for the increase-in-budget advocates, they see the need for ever-faster access to data and automation will enhance the focus on network equipment and communications as never before, speeding up 5G network deployments and adoption of 5G equipment.

While factories in Asia are reopening, companies are experiencing challenges getting production fully running. The short, and potential long-term, impact could be significant.

In contrast to the parts shortage and unpredictability of supply chains dragging down the industry for all hardware related items (servers, memory, chips, mobile phones, hard disks, miscellaneous components,...), software is a growth catalyst. As software can be worked out from anywhere.

Companies with remote-working technologies are already seeing increased demand as businesses increase their remote-working capabilities.

Security software will see benefits from a growing remote workforce. IT spending on security software will increase as organizations race to secure endpoints, particularly cloud-based tools, log management, and VPNs.

Hardware companies may see major demand coming from enterprises, who are placing large orders for laptops and mobility devices to support employees now working from home.

2. *More Contactless Interfaces and Interactions*

There was a time not too long ago when we were impressed by touch screens and all they enabled us to do. COVID-19 has made most of us hyper-aware of every touchable surface that could transmit the disease, so in a post-COVID-19 world, it is expected that we will have fewer touch screens and more voice interfaces and machine vision interfaces.

Prior to the pandemic, we saw the rollout of contactless payment options through mobile devices. However, with the increase in people wanting to limit what they touch, an option to pay for goods and services that does not require any physical contact is likely to gain traction.

Machine vision interfaces are already used today to apply social media filters and to offer autonomous checkout at some stores. Expect there to be an expansion of voice and machine vision interfaces that recognize faces and gestures throughout several industries to limit the amount of physical contact.

Social media traffic will soar. An interesting side effect, though, may be the deceleration of the so-called “open offices” that have become widespread and a return to cubicles—for the sake of hygiene and limiting the spread of pathogens throughout the workplace.

3. Strengthened Digital Infrastructure

COVID-19 caused people to adapt to working from home and in isolation. By forcing our collective hand to find digital solutions to keep meetings, lessons, workouts, and more going when sheltering in our homes, it allowed many of us to see the possibilities for continuing some of these practices in a post-COVID-19 world.

We all realized that traveling to other countries just for a meeting is not always essential, and video calls for all kinds of meetings (even board meetings) can be equally effective.

Our children had their first lessons (school, music, sport...) over a video call thanks to the social distancing requirements, and it went surprisingly well.

4. Better Monitoring Using IoT (Internet of Things) and Big Data

We see the power of data in a pandemic in real-time. The lessons we are receiving from this experience will inform how we monitor future pandemics by using IoT technology and big data.

National or global apps could result in better early warning systems because they could report and track who is showing symptoms of an outbreak.

GPS data could then be used to track where exposed people have been and who they have interacted with to show contagion.

Any of these efforts require careful implementation to safeguard an individual’s privacy and to prevent the abuse of the data but offer huge benefits to more effectively monitor and tackle future pandemics.

5. AI (Artificial Intelligence) - Enabled Drug Development

The faster an effective and safe drug to treat and a vaccine to prevent COVID-19 and future viruses is created and deployed, the faster it will be contained.

Artificial intelligence is an ideal partner in drug development because it can accelerate and complement human endeavors.

The current reality will inform future efforts to deploy AI in drug development.

6. Cloud Computing

The virus will accelerate the need for organizations to adopt the cloud computing.

Employees, as well as customers are all over the place right now—they’re working from home, shopping from home, selling online, etc.

To handle these fluctuations in traffic, organizations need the most flexible infrastructure they can find.

Work from home in a cloud infrastructure is much easier than in an on-premise model.

7. Telemedicine

To curb traffic at hospitals and other healthcare practitioners' offices, many doctors are implementing or reminding their patients that consultations can be done through video. Rather than rush to the doctor or healthcare center, remote care enables clinical services without an in-person visit.

Some healthcare providers had dabbled in this before COVID-19, but the interest has increased now that social distancing is mandated in many areas.

Better-at-home testing and diagnostics products will be available.

Adoption of wearables that monitor for symptoms will increase.

An increase in funding for telemedicine, research, biotech and healthcare will be noted. Remote healthcare will be the default.

8. More Online Shopping and E-Commerce

Although there were many businesses that felt they had already cracked the online shopping code, COVID-19 taxed the systems like never before as the majority of shopping moved online.

Businesses who didn't have an online option faced financial ruin, and those who had some capabilities tried to ramp up offerings.

After COVID-19, businesses that want to remain competitive will figure out ways to have online services even if they maintain a brick-and-mortar location, and there will be enhancements to the logistics and delivery systems to accommodate surges in demand whether that's from shopper preference or a future pandemic.

Contact-less goods and services providers, e-commerce platforms, food delivery services, logistic companies will be major gainers.

9. Increased Reliance on Robots

Robots are not susceptible to viruses. Whether they are used to deliver groceries or to take vitals in a healthcare system or to keep a factory running, companies realize how robots could support us today and play an important role in a post-COVID-19 world or during a future pandemic.

Job automation and remote working will be the new normal.

Many functions will be automated and labor force participation will suffer

10. More Digital Events

Organizers and participants of in-person events that were forced to switch to digital realize there are pros and cons of both. Capacity issues in digital events will not be experienced as in-person events, plus attendees can log on from all around the world.

In-person events will be replaced entirely after COVID-19, but organizers will figure out ways the digital aspects can complement in-person events.

A steep rise in hybrid events where parts of the event take place in person, and others are delivered digitally could be observed.

11. Greater Surveillance and Restrictions

Governments have adopted emergency powers to manage the crisis and police their borders. High-tech has been used to contain the virus spreading through monitoring the persons, their mobile phones, their contacts, their movements. Once the threat recedes, will these powers be easily relinquished?

More widespread and intrusive monitoring surveillance can still be used. Checkpoints at national and regional borders will use biometric screening.

Continuous controls over the persons can continue under a lot of reasons.

Liberty and privacy may be at risk for a lot of reasons that can be invoked. Information technology will be used for bad reasons.

This will certainly raise a lot of big brother privacy questions.

As a conclusion, COVID-19 might be taxing our systems and patience, but it is also building humanity resilience and allowing it to develop new and innovative solutions out of necessity.

In a post-COVID-19 world, hopefully, we will take the lessons handed to us by our time dealing with the virus and make our world a better place.

There are a number of possible futures, all dependent on how governments and society respond to coronavirus and its economic aftermath. Hopefully we will use this crisis to rebuild, produce something better and more humane. But we may slide into something worse.

What do you see in the future, in the day after Corona / COVID-19 virus ?

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Source : Forbes, ZDNet, InformationAge, Business to Community