



WHITE PAPER

# DIGITAL TRANSFORMATION IN A COVID-19 WORLD

Post-Pandemic Management Series



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## Overview

The Covid-19 crisis has laid bare the need to incorporate digital strategies across all facets of an organization. Many companies have been thinking about digitally transforming their environments, yet the pandemic has either thrown a wrench into these plans or conversely accelerated them. Remote work, touchless solutions, 5G infrastructure planning – some people feel these solutions are out of reach in the current climate. This whitepaper explores the main issues regarding digital transformation in today’s world and some of the challenges and choices administrators should take into account.



## Post-Pandemic Digital Transformation Trends

Since the spread of Covid-19, many businesses and organizations have been looking to digital technologies as a way to maintain operations and keep their workforce connected. If anything, the pandemic has accelerated the need for greater tech infrastructure and support.<sup>1</sup> While some organizations were caught off guard and are scrambling to upgrade, others have had to accelerate their digital roadmaps. These are the main areas where digital transformation is occurring:

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<sup>1</sup> <https://www.zdnet.com/article/is-the-covid-19-crisis-spurring-faster-digital-transformation-or-short-term-it-fixes/>

## Higher-Connectivity



More companies and their workers are digitally connected through numerous means: accessing cloud service providers for storage and apps or remote working through VPNs—all the while investment in 5G infrastructure is on the rise.

## Edge Computing and Artificial Intelligence



An increasing number of organizations are looking to smart environments, machine-to-person technology and autonomous systems to help maintain their business into the future.

## Remote Workflow



Streaming and videoconferencing has increased tenfold. Most businesses are planning to include remote work as a future work model. But HR monitoring of working hours and maintaining IT, network and data security are key.

## Data Stream Processing and Analysis



With less face-to-face interactions, more data-driven content is being generated by companies than ever before. The need to correlate this data and have a high degree of data security is paramount.

# 5G Acceleration

The implementation of 5G infrastructure is a major factor in digital transformation, promising near realtime speeds and greater connectivity. While Covid-19 has pushed back some of the construction of physical networks, the massive push for online services has increased calls for its implementation.<sup>2</sup> Either way, 5G will play a major role in driving companies' digital growth.

<sup>2</sup> <https://www.helpnetsecurity.com/2020/06/29/5g-progress-in-connections-and-deployments/>

## Industry-Wide Obstacles

Depending on which sector you're in, there might be specific needs to be considered when opening to digital transformation.

### Retail



The retail sector saw a massive push to migrate all their operations online with greater data protection. Yet brick and mortar shops need to reconfigure the store design to

- a) include self-service kiosks and
- b) provide touchless services.<sup>3</sup>

- How to secure customer's data?
- How to monitor consumer behaviors?
- How do you analyze the sales data from your services?

### Enterprise



Mid- to large-size companies have seen unique challenges themselves. The majority of their workforce has shifted online while they work from home.<sup>4</sup> This puts major strains on shared networks and IT personnel.

- How to work remotely and securely?
- How to ensure equipment is up to par?
- How to ensure data access and analysis?

<sup>3</sup> <https://www.cnet.com/personal-finance/coronavirus-is-making-touch-free-shopping-a-necessity/>

<sup>4</sup> <https://www.weforum.org/agenda/2020/04/10-technology-trends-coronavirus-covid19-pandemic-robotics-telehealth>

## Government Agencies and Smart Cities



Public institutions are prone to issues with their data during the pandemic. Data sharing amongst agencies is difficult considering most of your staff might be working from home. Government-run Smart Cities also have a need for cameras and devices to monitor contact tracing, criminal activity and city management.

- How do agencies safely share data while on lockdown?
- How to ensure public safety remotely?

## Digital Transformation Myths

The pandemic and the varied government health regulations that followed have blindsided both small businesses and large corporations. Many are aware of the incentives for digitizing their workflow, yet were not expecting to implement such technologies so quickly.

Moreover, edge AI and big data solutions are developing key technologies in the fight against the pandemic.<sup>5</sup> As such, there are a number of perceived roadblocks to making this a reality in the current climate:

- **Upgrading Technology and/or Old Infrastructure:** Many people are convinced that digital transformation requires costly upgrades to ubiquitous company-wide systems.
- **Data Incompatibility:** Due to isolation, different departments and agencies might have a hard time accessing or sharing data.
- **Remote Work Authentication:** With remote work being the new norm, how do managers and HR staff maintain and monitor staff hours correctly?

<sup>5</sup> <https://www.weforum.org/agenda/2020/04/10-technology-trends-coronavirus-covid19-pandemic-robotics-telehealth>

# Digital Transformation Realities

Nowadays, digital transformation is far more accessible than ever before. New Edge AI and Big Data solutions can help overcome barriers to adopting new systems.<sup>6</sup>

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## Scalability



- Large-scale enterprises need to deploy solutions across platforms to isolated users.
  - Some Edge AI and IoT solutions relieve the processing burden on the CPU and GPU making using them a real advantage in the existing hardware.
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## Data Cohesion



- With an increase of dataflow and video streaming, companies can take advantage of readymade solutions that have built-in analytics for reporting or live tracking of results.
  - Big Data platforms can aid in connecting agencies and performing complex search functions.<sup>7</sup>
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## Authentication



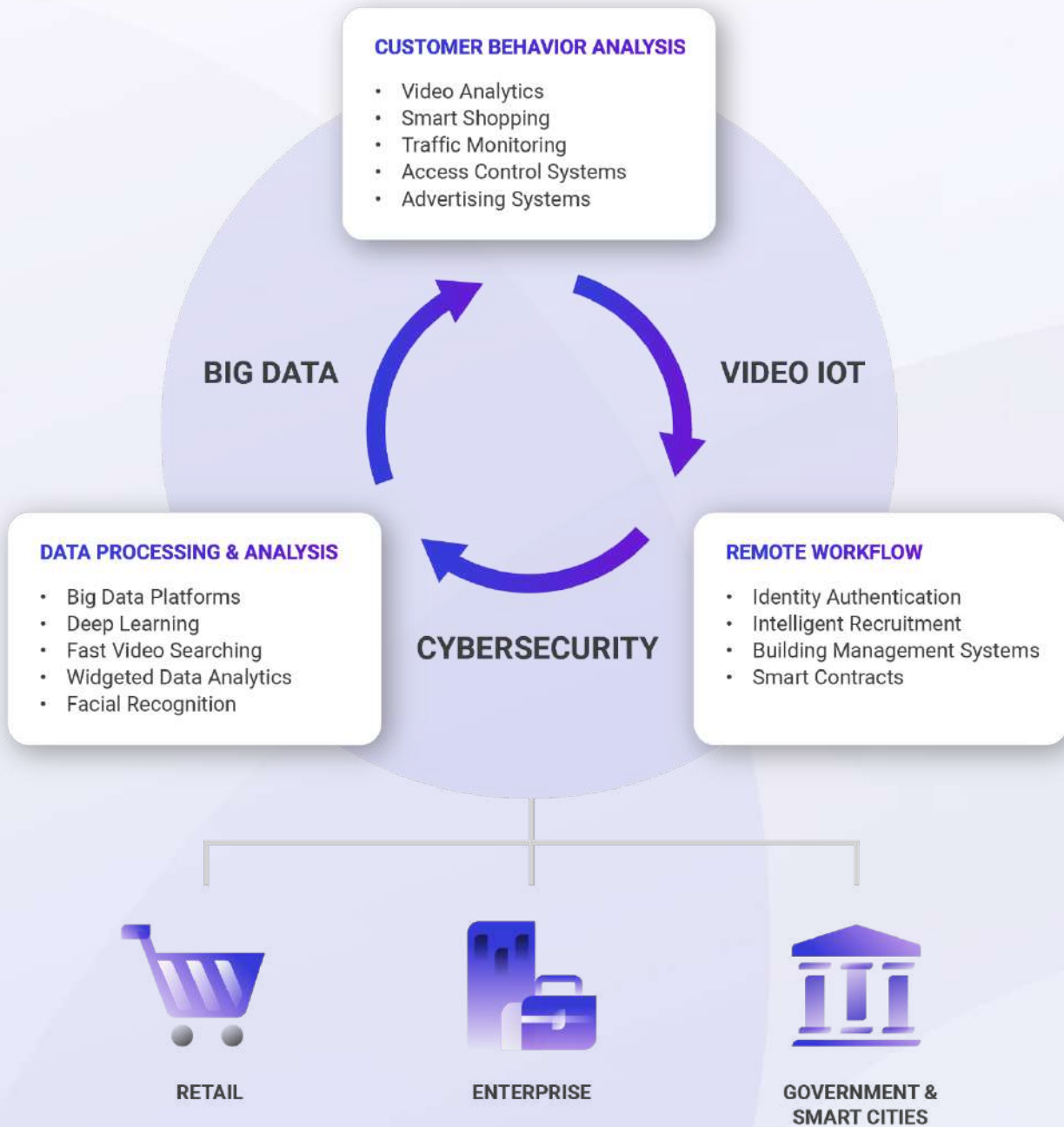
- Facial Recognition usage for accessing devices and control systems are commonplace.
  - Mobile apps that staff can use to clock in/out for work can be a valuable HR tool.
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<sup>6</sup> <https://www.globenewswire.com/news-release/2020/06/16/2048522/0/en/Internet-of-Things-IOT-in-ManufacturingMarket-to-Reach-USD-136-83-Billion-by-2026-Ability-to-Develop-Real-time-Adjustments-will-Favor-Growth.html>

<sup>7</sup> <https://iot-analytics.com/the-impact-of-covid-19-on-the-internet-of-things/>

# Benefits Across Industries

The wide array of digital transformation tools allows different industries to pick and choose the best fit for their business. Such technologies are extremely pliable and much easier to implement as previously stated.



## Future Considerations

Organizations need not be afraid of digitally transforming during such tumultuous times. Edge AI solutions can offer real help during this transition – keeping staff connected while working from home, or deploying touchless systems to keep clients and guests safe.

With an increased reliance on edge devices during digital transformation, the next question that needs to be asked is:

**How do I keep all my users and their data safe with all these networked devices?**

Check out our additional whitepapers to find out more on this as well as on other topics about how edge AI is working during the pandemic.

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