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White Paper

The Touch-Me-Not Era Begins

Going Contactless in the New Normal – Tech Gets a New Job

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Preface

Everyone wants to forget 2020 as soon as it is possible. A lot of people, economies and businesses all across the world are drumming their fingers desperately so that they can turn the pages over to a new calendar.

But as much as we look down upon 2020, the year was a phenomenal catalyst of digital transformation all over the world. Enterprises across even the most hesitant and complacent of verticals stepped up to finally embrace the digital force of technology. As manufacturing plants, supply chains, marketing, customer experiences, and workforce got painted with new strokes of digital impact, we realized that technology has ceased to be a 'nice to have' option.

As we enter a new year, we also enter a new era where the hangover of the crisis would still trickle into some solid shifts. The post-pandemic decade would be one where social distancing and touchless processes would become the new reality. In every sphere or work, life, and business, caution and the "six feet rule" will prevail.

Interestingly, this is where artificial intelligence, image analytics, haptics, biometrics, sensors, IoT etc. would assume a stronger gravity and adoption. Get set for a contactless world and get ready to be amazed by the power of technology to keep the world spinning even as we stay safely distanced from each other. Welcome to 2021 BC. Beyond Contact.

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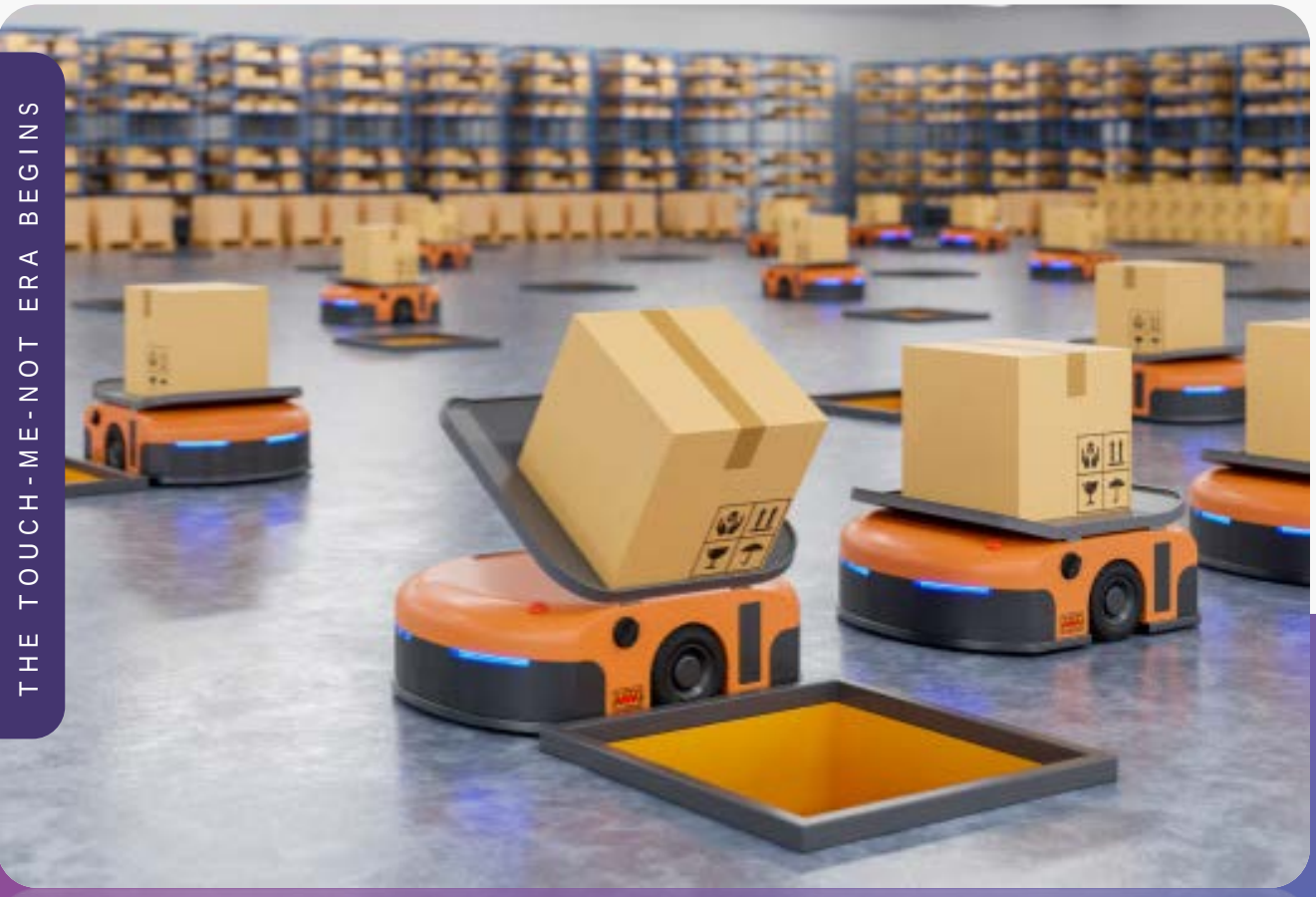
The Covid Trigger for a Touchless World

Although the idea of being touchless was both plausible and feasible even before 2020, the pandemic acted as a big catalyst in making organizations seriously rethink and invest in this possibility.

As an EY survey tells, the pressure to survive pushed enterprises into being brave and creative with new technology. About 49 percent global businesses were seen reporting profit margins that were either the same or lower than two years ago before COVID-19 hit the world.

And almost half of the organizations expressed that they were looking to change the way they are set up. That's where 41 percent told they were investing in accelerating automation. A lot of businesses - almost 72 percent of organizations already had major transformation initiatives underway. The smart ones are not just reassessing supply chains and looking at both direct-plus-indirect models of selling, but they are expanding their ambit of technology. Gartner has, also, pointed out that Chief Supply Chain Officers (CSCOs) need to explore opportunities to create strategic value and that's why some pandemic-driven agile processes created in supply chains will continue ahead. Forrester, too, has said that automation has been a major force that is reshaping work but it has now assumed a new urgency as enterprises confront risk and resiliency.

All that is already visible when we think of ourselves as customers, employees, and even as citizens/users of various products, services and even essential processes. The pandemic has made sure that we travel, commute, converse, and work with a safe distance. As customers, we would definitely put a heavy emphasis on safety and hygiene. At the same time, we would want our 'experiences' to be smooth and swift.



That explains why businesses are now investing heavily in contactless service and operations. In 2021 and the years ahead, a key competitive differentiator for both business and citizen-service organizations would be the ability to create safe and human-centric experiences.

Contactless Models gain force during 2020

Industries and applications where ‘distance’ is normalizing

From 2020 onwards, the word ‘distance’ has taken a new and serious connotation. The number of feet between an employee and another employee matter a lot now. So do the inches between the employee and the document for hand-off, between one plant operator and the next, between one customer and the next, between the customer and the product/point of service, and so on.

These interaction maps would majorly redefine the operation charts, employee productivity routes, and customer journeys. Businesses are scrambling to find/invent ways to keep their workforce systems well-oiled but without the risk of the new world order. Consider this - Europe alone shows as many as 54.8 million workers falling in high-risk occupations due to the close proximity needs and public-exposure areas of their jobs. Given such estimations on national and global levels, businesses will have to find ways to keep their employees safe while also serving their users/customers with high-experience, but low-touch service options.

Here are some industries that have begun that process:

Airports:

From contactless parking-to-boarding assurance, to self-service options at even the most human-dominant parts – the aviation industry has been at the forefront of embracing contactless technologies. Here are some ways that prove the simplicity, beauty, and intent of this industry as it normalizes 'distance'.

1. The Chhatrapati Shivaji Maharaj International Airport began an ID check free entry at the terminal to the Bureau of Civil Aviation Security (BCAS). It also rolled out thermal-screenings at the entry gates, web check-ins, and several other innovations.

2. Etihad Airways started trials for many contactless, self-service technologies for virtual health screenings at airport kiosks and bag drops.

3. Airports have started putting tunnels with technologies for quick and assured disinfection of people, baggage, and airport trolleys.

4. Self-service bag-drops and boarding-kiosks are now becoming a familiar sight – here the passengers can scan their barcode/QR code and use biometric capture for bag-tags and acknowledgment with an automated Baggage Handling System (BHS).

5. High-grade body scanners are in vogue now for touchless frisking with intelligence embedded for quick profiling with advanced facial recognition.

6. Virtual service and contactless delivery are gaining ground in retail, merchandise, and airport shopping areas now.

7. Many airports have introduced cleaning robots, automated customs, contactless payments and border patrol screenings.

8. AI-backed border security is leading to a faster and better process of clearing immigration checks while also arresting human error and fatigue.

9. The Changi Airport Terminal 4 has installed a facial recognition system to capture a passenger's photo at different

stations, and has led to 20 percent savings in workforce and efficiency. It has also introduced proximity touch screens at some terminal kiosks, infrared sensors for tracking finger movements, automated and sensor-driven elevators, and the use of ultraviolet-C light technology for disinfecting handrails on escalators and travelators.

10. The Immigration & Checkpoints Authority (ICA) has also introduced iris and facial recognition as the primary biometric identifier; this has been piloted at Changi Airport Terminal 4, Tanah Merah Ferry Terminal, and the Tuas and Woodlands checkpoints (Malaysia). This iris scan provides as many as 250 feature points for matching than 100 points for a fingerprint. They serve as a "second check" for the person's identity.

11. Singapore intends to fully implement iris and facial recognition as part of its New Clearance Concept at all checkpoints – that's by 2022

12. Staff at Doha International Airport are using thermal screening helmets – fitted with infrared thermal imaging, artificial intelligence, and AR (augmented reality) display

13. JFK has introduced an artificial intelligence platform for monitoring congestion via cameras

14. Star Alliance was developing biometrics application even before 2020 for allowing travelers to register their digital identity for paperless boarding passes and authentication

The Six Feet Office, Factory, and Shopping Store

By now, a lot of people have heard and chewed upon the concept of 'Six Feet Office' that Cushman & Wakefield is advocating. This workspace is built on some distance-enabled characteristics – like the 6-Feet Quick Scan, clear workable agreements and rules of conduct that put the safety of everyone first, 6-Feet Routing (that make people and work traffic safe and smooth), the 6-Feet Workstation, the 6-Feet Facility, and adequate training to employees to work in these new environments.

A Cushman & Wakefield survey also shows that 70 percent people are not concerned about returning to shopping establishments in the neighborhood. It reminds that customers will try to avoid crowds and would be cautious in visiting shopping malls and retail parks. Also safety and hygiene have become very important (87 percent participants).

No wonder businesses will have to consider AI, IoT, virtual reality-enhancements and remote-work tools at a greater level now if they want their factories and stores to be as productive as before – but also safe and hygiene-assured.

Hotels – Safety is the Seventh Star?

The hospitality industry was among the worst-hit sectors after COVID-19. But the determination to survive and bounce back - that is enabling many hotels to underline 'safety' as the new luxury.

Here are some examples of how hotels are attracting guests again without compromising on the 'distance'.

1. Digital concierge systems that help hotels to receive and respond to any sort of question or request from guests.
2. Bots that guests can use on mobiles or with QR-code scans, or NFC tags to help with on-call service needs. For example, luxury hotel Pan Pacific Singapore introduced a self-reporting "health declaration" to its bot for tracking guests who were not feeling well. But there was no need to add any extra staff for that.
3. Contactless temperature-check kiosks.
4. QR code solutions for tracking and scheduling when high-touch surfaces and locations with high foot traffic get cleaned.

The Payments industry

If we look at the Harris Poll-Fiserv – May 2020, we will see that 42 percent of consumers have reckoned tap-and-pay credit cards to be the safest in preventing spread of the virus. They found cash (6 percent) and checks (4 percent respectively) as the least safe in preventing spread of COVID-19.

Also, in India, online commerce and mobile PoS transactions are projected to grow to USD 134.5 billion with 657.77 million users by 2023. Contactless payments had a nice ring to it before 2020 but it is hard to imagine the door-step groceries we buy, the quick bills we pay, and the socially-distanced evenings we enjoy, without the power of contactless finance.

The Technologies Make It All Possible

Think of what NASSCOM found in a research on the impact of COVID-19 on the adoption of automation technologies. There is an unmistakable shift from cost-efficiency to supply-chain security as a key driver for automation. It also underlined that the lockdown has acted as a catalyst for consideration and testing of automation technologies.

A lot of technologies have found their unexpected tipping points in the pandemic-driven chaos. The global Facial Recognition Market is estimated to grow by USD 3.35 billion during 2020-2024, (as per Technavio research). MarketsandMarkets also says that the global facial recognition market will climb from USD 3.8 billion in 2020 to USD 4.5 billion by 2021 - this is due to a rise in government spending on security and public safety, and the uptick in demand for contactless identity verification systems.

Even the chatbot market has been estimated (Technavio) to grow USD1.11 billion during 2020-2024. If we take a look at the Global Biometric Systems Market – that, too, will grow well and touch USD 57.7 billion by 2025. Again the drivers are not hard to guess – jump in security concerns, increasing government initiatives to adopt biometrics, higher use of biometrics in smartphones for access of other important applications, and secure identity management.

Interestingly, the Fingerprint recognition systems find the largest share in the Global Biometric System Market by Technology – due to cost and ease of installation factors. There is a rise in demand from banking & finance and travel & immigration.

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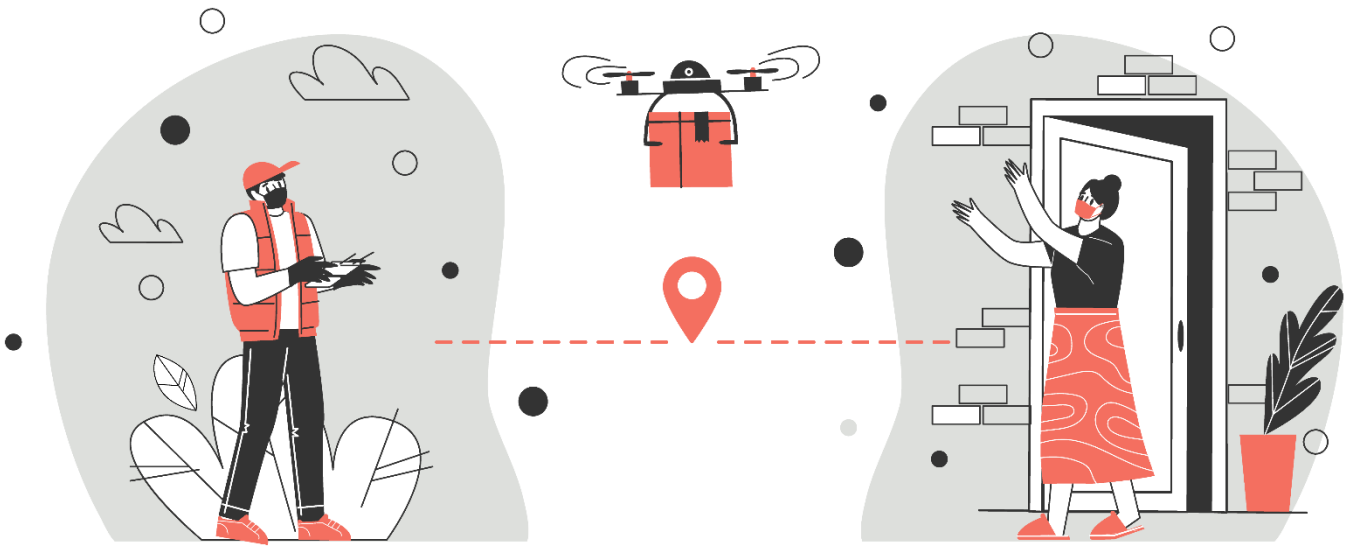
The penetration of technology is not limited to desks and stores and hotels. The investment towards *AI in the manufacturing market is also pegged at USD 1.1 billion in 2020 and likely to reach USD 16.7 billion by 2026* – thanks to the rise in the number of large and complex datasets (often known as big data), evolving industrial IoT and automation, improving computing power. Machine learning, Industrial sensors, real-time speech translation, robotics, and facial analysis are adding to this velocity. Get ready to see an expansive level of predictive maintenance and machinery inspection. This area already held the largest share of the AI in the manufacturing market in 2019. There is an extensive use of computer vision cameras in machinery inspection, adoption of the Industrial Internet of Things (IIoT), and use of big data in the manufacturing industry. It is helping businesses in reduction of the operational costs and machine downtime. The supply chain disruptions that companies faced during the pandemic have made them rethink their chains and factories in a big way.

AI alone is a technology area that is going to bloom like never before. It was estimated that worldwide revenues for AI - software, hardware, and services – will hit USD156.5 billion in 2020 – that's a jump of 12.3 percent over 2019 (IDC reports). It is augured that this number will touch USD300 billion in 2024. A lot of the software revenue is set to come from *AI Applications (USD120.4 billion in 2020) and AI Software Platforms (USD4.3 billion).* Also CRM AI Applications and ERM AI Applications are large segments too - with 20 percent and 17 percent share of the AI Applications market. AI applications will gain a lot of traction due to digital transformation (DX) initiatives.

Also note that *the touchless sensing market is growing fast enough to touch USD 15.3 billion in 2025 – it was USD 6.8 billion in 2020*. The reason here is the rise in demand for contact-free sensing at back of COVID-19. In an assessment by Deloitte, the percentage of shared services leaders who planned to accelerate digital capabilities in their global business services (GBS) organizations, had gone up by 10 percentage points between April and July 2020. It indicates the significance of digital in GBS operations as the pandemic went on. The pandemic has put the spotlight on cost reduction and location diversification, and has accelerated the desire to strengthen digital capabilities the most.

A 2020 Deloitte webcast survey shows that the order to cash/procure to pay was significantly affected by COVID-19 due to the prevalent use of manual check payments to vendors. It was seen that payments via physical checks led to delays and halted overall manual activities in certain circumstances. Its 2019 Global Shared Services had noted that 80 percent of shared services leaders surveyed expected to implement or increase their use of robotics and heighten their focus on digital experience over the next three to five years.

Yes, businesses are not maintaining any distance from bots, sensors, AI, biometrics and smart things anymore. In short, technology is going to trickle in the farthest of cracks and really command a new role in the way businesses work, serve their customers, and earn profits.



Caution Areas - and the need for expertise

As exciting as it sounds, and as necessary as it becomes, the shift to explosive technologies cannot be done in a reckless and short-sighted way.

There are a lot of issues that envelope these technologies

1. Some of them are still prohibitively-expensive
2. Some are great at being ‘contactless’ but they shrink the ‘human’ factor so much that the experience gets shallow and unsatisfactory
3. Integration with existing processes and systems is a tough nut to crack
4. Many contactless innovations are still figuring out how to maintain respect for user-privacy and data-sovereignty
5. Management of identities and third-party data usage is a new terrain that many organizations are still not conversant with
6. Removing friction while keeping safety and experience intact
7. Managing self-service without security and fraud risks

As overwhelming and unfamiliar these challenges may seem, there is a way to navigate them. The choice of the right partner allows an enterprise to go forth with the new models of business and customer processes in a way that the final impact is realized. Experts like Staqo bring in their R&D muscles, their hands-on project experiences, and their diverse vertical exposure so that when you apply the ’contactless’ elements anywhere – be it your employees, your suppliers, your plants, or your customers – you do so at minimum cost and few integration hassles. But you still realize the maximum ROI, customer loyalty, and overall impact on safety.

Whether you like it or not, whether it is easy or thorny, the ‘new normal’ is going to be about how well you can pull off the move, as an organization, in this touchless world. The objective is to make a smooth transition that ensure safety and efficiency for everyone.

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