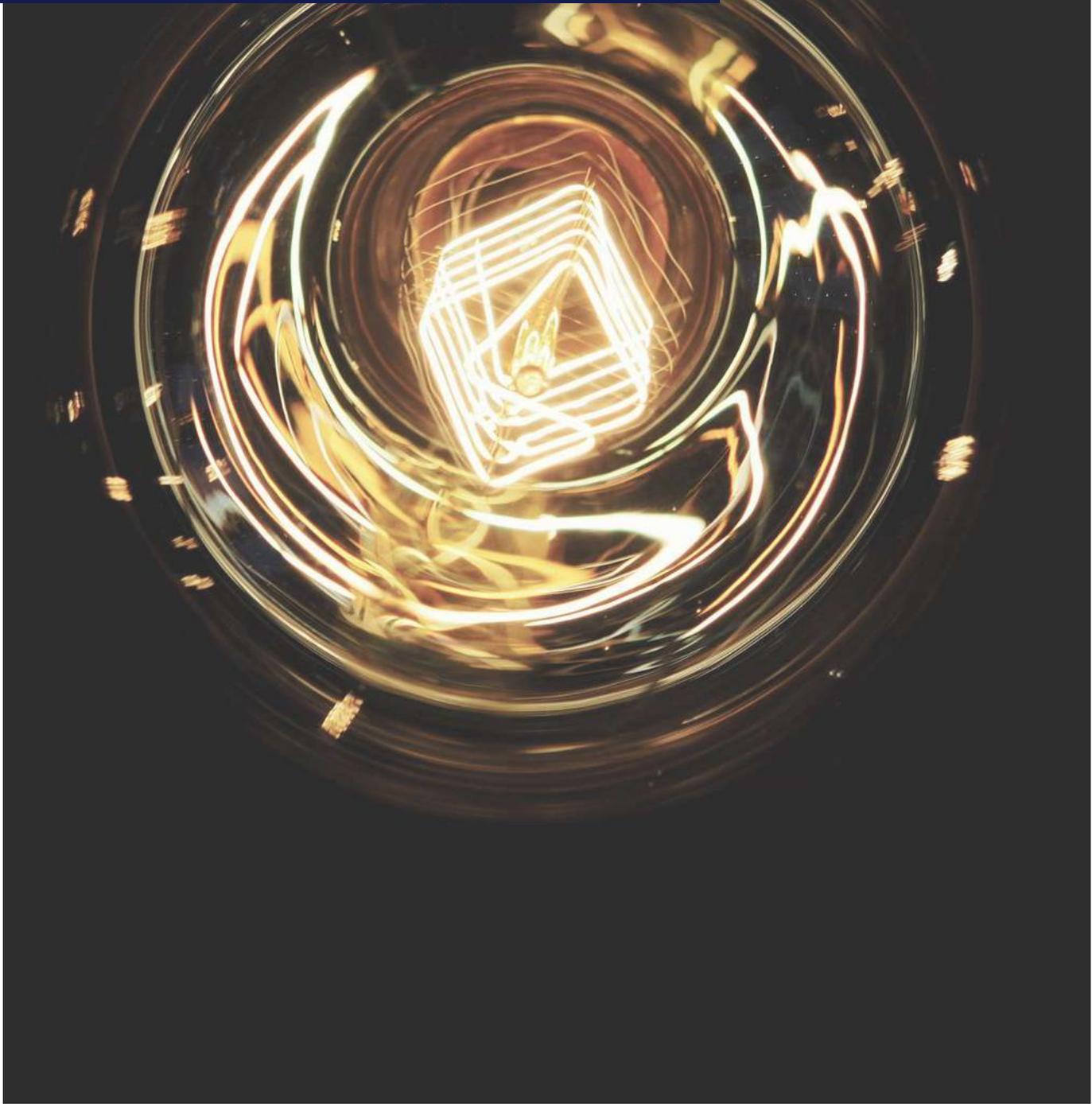


GMIS

Global Manufacturing &
Industrialisation Summit



**DIGITISING PRODUCTION AND
DIGITALISING DELIVERY**

AUGUST 2020

The background features a dark blue vertical bar on the left and a white area on the right with diagonal grey lines. Several triangles are scattered: a lime green one at the top left, a dark blue one at the top right, a lime green one on the right side, and a dark blue one at the bottom right. A lime green triangle is also partially visible at the bottom left.

#GMIS2020 DIGITAL SERIES

“Our highest priority has always been to arrive at the safest and most practical outcome in light of the current situation while staying true to the vision and mission of the Global Manufacturing and Industrialisation Summit. The #GMIS2020 Digital Series takes a transformational approach towards ensuring a risk-free environment for participants to engage in shaping the future of manufacturing. As the pandemic sweeps across the world, paralysing many aspects of normal life, attention must now turn to how the Fourth Industrial Revolution can be leveraged to restore our economies and our society, taking us from an era of ‘digital disruption’ to an era of ‘digital restoration’.”

BADR AL-OLAMA, HEAD OF THE ORGANISING COMMITTEE FOR GMIS

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DIGITISING PRODUCTION

Many organisations have reacted to digitise their operations, protect employees and provide consumers with the option to stay at home as a result of the COVID-19 health emergency. Retail outlets have shifted their primary business model to ordering online, schools have pivoted to 100% digital and online learning while health professionals have begun shifting towards telemedicine, supported by more flexible regulations

OVERVIEW

DIGITISING PRODUCTION & DELIVERY

INDIVIDUALS AND COMPANIES ARE EMBRACING
DIGITAL TRANSFORMATION AND PURSUING
CREATIVE APPROACHES IN REACTION TO THIS
UNPREDICTABLE AND UNCERTAIN SITUATION

Digitisation also holds the power to transform the DNA of manufacturing. Today, digitally savvy manufacturers benefit from the flexibility of a variety of advanced technologies and developments such as digital twinning, predictive maintenance, and modular design. Manufacturers are currently designing digitised plans for plants and supply chains in order to make them more resilient to future disruptions.^[3] Through digitisation, supply chains can be significantly enhanced and inefficiencies eliminated. The situation also presents a clear case for diversification of supply chains in order to add reliability to the system.

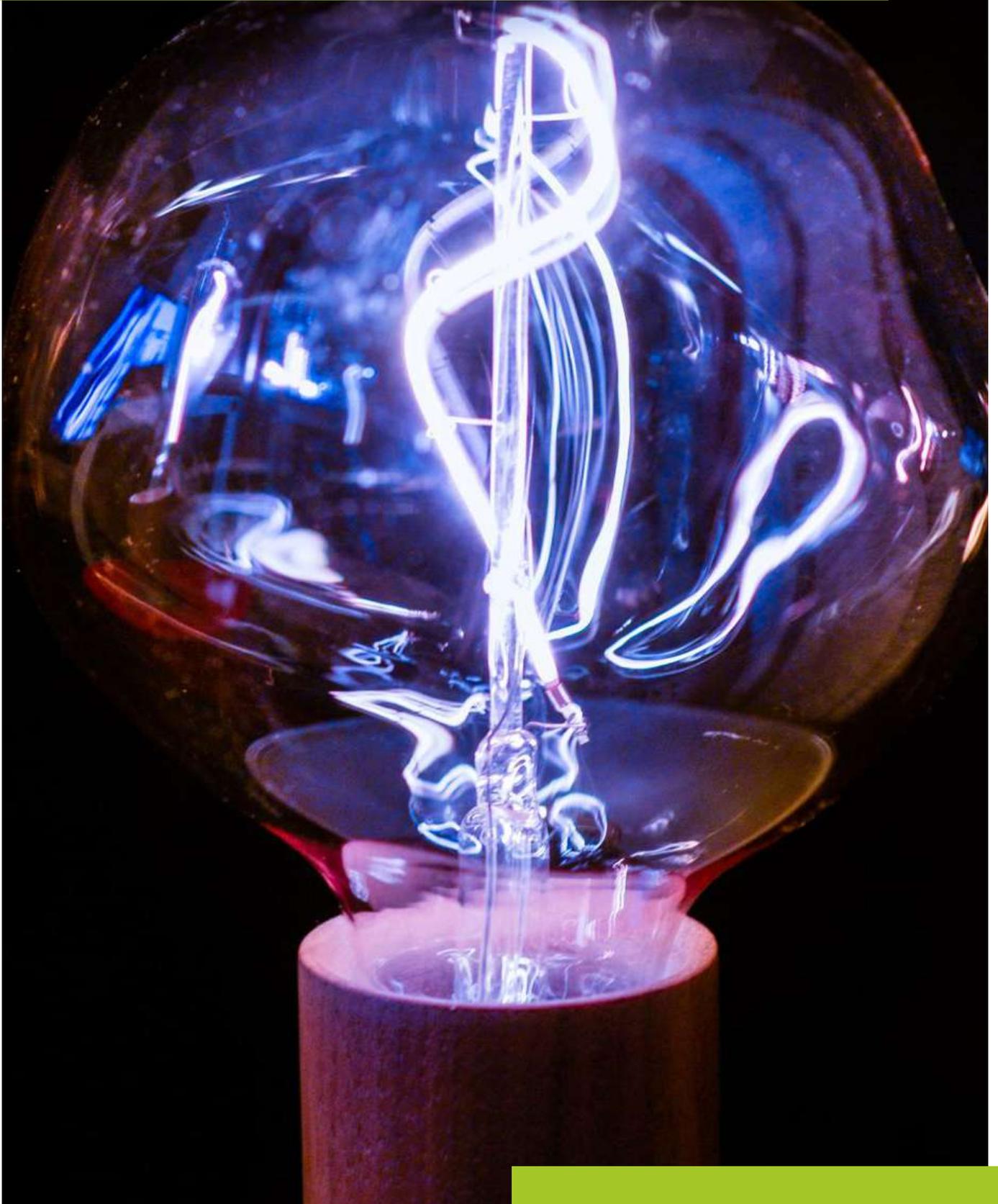
Enterprises must regain customer confidence by turning to innovative solutions such as electronic onboarding, transparency and significantly higher hygiene and safety standards where customers interact. There is a clear need for innovative digital solutions in a socially distant society. Individuals and companies are embracing digital transformation and pursuing creative approaches in reaction to this unpredictable and uncertain situation.

Introduction

The COVID-19 pandemic is reshaping the global business landscape, with the economic uncertainty it has sparked likely to cost the global economy \$1 trillion in 2020, according to the UN's trade and development agency (UNCTAD).^[1] The disruption of daily routines has triggered a long-term shift in both customer and business behaviour, all of which are now more strongly inclined in favour of digital growth and an internet-enabled ecosystem.^[2]

Many organisations have reacted to digitise their operations, protect employees and provide consumers with the option to stay at home as a result of the COVID-19 health emergency. Retail outlets have shifted their primary business model to ordering online. Schools in many countries have pivoted to 100% digital and online learning. Health professionals have begun shifting towards telemedicine, supported by more flexible regulations.

DIGITISING PROCESSES





4 TECHNOLOGY AREAS EXPECTED TO THRIVE POST EPIDEMIC

Digital transformation means devoting more time and budget to automating the customer experience. The human factor is still present for verification, but the digital process ensures that users have all the information they need through virtual showrooms, information hubs or individual FAQ areas, instead of depending on assistance from one person.

While these solutions are not new on the market, the lockdowns brought about by the pandemic have accelerated the uptake among companies as customers turned online for their basic needs. During this period of instability, technology has been the catalyst to keep businesses operational and companies now taking the digital path are laying the groundwork for long-term growth and consumer engagement.

1) Advancement of E-commerce

Consumers are increasingly shopping online due to self-isolation, resulting in booming trade on e-commerce platforms. The growth in e-commerce is likely to become sustainable in the long-term if customers remain cautious and change their habits so that online shopping becomes routine. Supply chain management models are adapting to suit customer preferences, enabling them to conveniently order online and these advances are expected to continue.^[4]

2) Real-time Data

With people focusing ever more on their health, monitoring becomes a routine activity, whether it's COVID-19 testing or customers wanting to test themselves for other medical conditions. The resulting massive growth in healthcare data, with reasonable privacy restrictions, offers many data and IT specialists the possibility of designing strategies that reduce the risk of infection or reduce customer anxiety.^[5]

3) Scalable Digital Business Models

With COVID-19 disrupting global supply chains ^[6], companies will gradually begin improving resilience in their business models by introducing flexible and reliable digital alternatives to product-focused models. It is also expected to speed up a transition to B2B as companies search for ways to cut costs and monetise existing assets.

4) Upsurge of Digital collaboration

Shifting rapidly – and in some cases indefinitely – towards remote service, is likely to result in a fast market growth for digital platforms such as Microsoft Teams, Google Hangouts, and Zoom. Moreover, the tendency to stay at home is resulting in a shift towards online 'virtual' experiences of concerts, museums and tourist attractions, enabled by AR and VR technology. There is also a concurrent rise in demand for digital media and home entertainment, including social networking, gaming, news, video sharing and books, in order to alleviate boredom and invest the time previously spent on trips and socialising face to face.^[7]



**ENSURING
SUCCESS THROUGH
DIGITAL CULTURE**

COVID-19 crisis results in different challenges for different business sectors. For example, airline companies and travel firms may fail to restructure their business models fast enough to mitigate significant harm.

In areas less affected by the pandemic, businesses need to focus on what is important right now and in the future, and what role digital innovation should play in bringing about necessary change.

Companies that remain human and client-centred and are able to rapidly introduce digital solutions that address issues resulting from the drastically changed landscape will be in a strong position to take advantage of any emerging opportunities.

The development and maintenance of a powerful and cohesive digital culture is important for companies to achieve this goal. In tough times, embedding a culture of innovation will ensure that businesses maintain their operations and continue to thrive.

An unintended consequence of the COVID-19 outbreak is that it will contribute to building more modern, flexible, robust and humane business practices that will allow businesses to face multiple challenges, both foreseen and unforeseen.^[8]

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**IN TOUGH TIMES, EMBEDDING A CULTURE
OF INNOVATION WILL ENSURE THAT
BUSINESSES MAINTAIN THEIR OPERATIONS
AND CONTINUE TO THRIVE**
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DIGITISING SME'S POST-PANDEMIC





In recent years, digital transformation has been taking place to varying degrees in all fields and industries. Adoption of digitised business models are more likely to increase in areas where the public are less reluctant to use digital technologies or industrial remote applications. However, there is a risk that businesses will delay the investment required for digital transformation projects.

Small and medium-sized enterprises (SMEs) are the backbone of Europe's economy. They represent 99% of all businesses in the European Union (EU). In the past five years, they have created around 85% of new jobs and provided two-thirds of the total private sector employment in the EU. The European Commission considers SMEs and entrepreneurship as key to ensuring economic growth, innovation, job creation, and social integration in the EU.[9] It is therefore critical that SMEs are not left behind when it comes to digital transformation

E-commerce bringing opportunities to SMEs

The disruption caused by the pandemic in recent months inevitably resulted in a surge in online business activity. According to Statista, the world's leading supermarket chains and online media were the outlets that benefited most from the spike in demand.[10] E-commerce markets and software distributors have seen double-digit growth, while other sectors, including tourism and event channels, have declined dramatically or even collapsed. This situation is considered an opportunity for agile entrepreneurs and SMEs.

1) Payment without contact

The World Health Organization (WHO) has advised people to use contactless cards or electronic payments as much as possible in order to help minimise the risk of spreading the coronavirus.[11] Consumers are increasingly prepared to adopt contactless payments and digital wallets because the technology has become more convenient and secure.

2) Restoring inventory and supply chain management

Industries are seeing a radical transformation of the supply chain structure through which e-commerce works. Enterprises have responded to this phenomenon and are diversifying their supply chains and inventory management in an effort to preserve a level of normal activity at this time.[12] Although some organisations have had significant problems with the absence of vital products, businesses constantly re-evaluate their supply chains, redefine their suppliers' network and adapt their supply chain strategies to build resilience.

3) Contactless Shopping Experience

The growth of the digital economy creates new contact points that allow shoppers to connect with companies across a complex network of platforms and categories. Savvy entrepreneurs concentrate on assisting customers in finding, shopping and after-shopping while providing excellent web features, concise product pages and outstanding customer service to demonstrate their ability to succeed.

4) Constantly innovating and experimenting

Entrepreneurs consistently prove to be adept at pivoting and adapting changing environments. Whether they have the most sophisticated technology or not, they constantly experiment and innovate[13] with new strategies to accommodate the modern shopper who is more demanding and impulsive than ever before. Business owners have an opportunity to refurbish their business and change their operating model in order to emerge more strongly from the seismic effect of COVID-19. Companies that link to customers digitally by means of authenticity, simplicity and common values in a competitive and confused market will create trust, sustain customer loyalty and flourish in the new normal.

A futuristic, glowing blue hand with a black sleeve against a teal background. The hand is illuminated with a bright blue light, giving it a digital or artificial appearance. The fingers are slightly spread, and the palm is visible. The sleeve is black and appears to be made of a textured material, possibly fabric or a different type of plastic. The background is a solid, vibrant teal color. A horizontal green bar is positioned across the middle of the image, containing the text "EMPLOYING AI IN AN ALTERED WORLD".

EMPLOYING AI IN AN ALTERED WORLD



A growing number of businesses have turned their attention to technology to help them survive by integrating artificial intelligence and machine learning with e-commerce platforms to provide user experience that is substantially more personalised.[14]

Chatbots are becoming an ever more popular way of expanding the experience of the customised shopping assistant. Marketers can create a program that automatically recognises the underlying meaning of most chats/texts with Natural Language Processing (NLP) and analysis.[15] If potential clients ask questions about e-commerce items, AI can be used to identify keywords and then automatically submit a script which answers the query.

An alternative way to use the AI is to classify objects in real time through Image Recognition Classifiers. Consumers today have a limited attention span and demand much more than they did in the past from brands and experiences.

AI helps to classify the product specifically in a particular image or video file, scan the catalogue and provide the relevant items on the basis of computer vision tests. AI for computer vision can have a huge return on investment for companies prepared to invest a portion of their marketing budget and have a large number of products to offer.

Algorithms for machine learning have reached a point where they can predict the behaviour of a certain person based on past activity, allowing brands to tailor various communications to specific segments in their target audience. The use of profound learning in e-commerce marketing has contributed to an improved ad creation and dramatically increased ROI.[16]

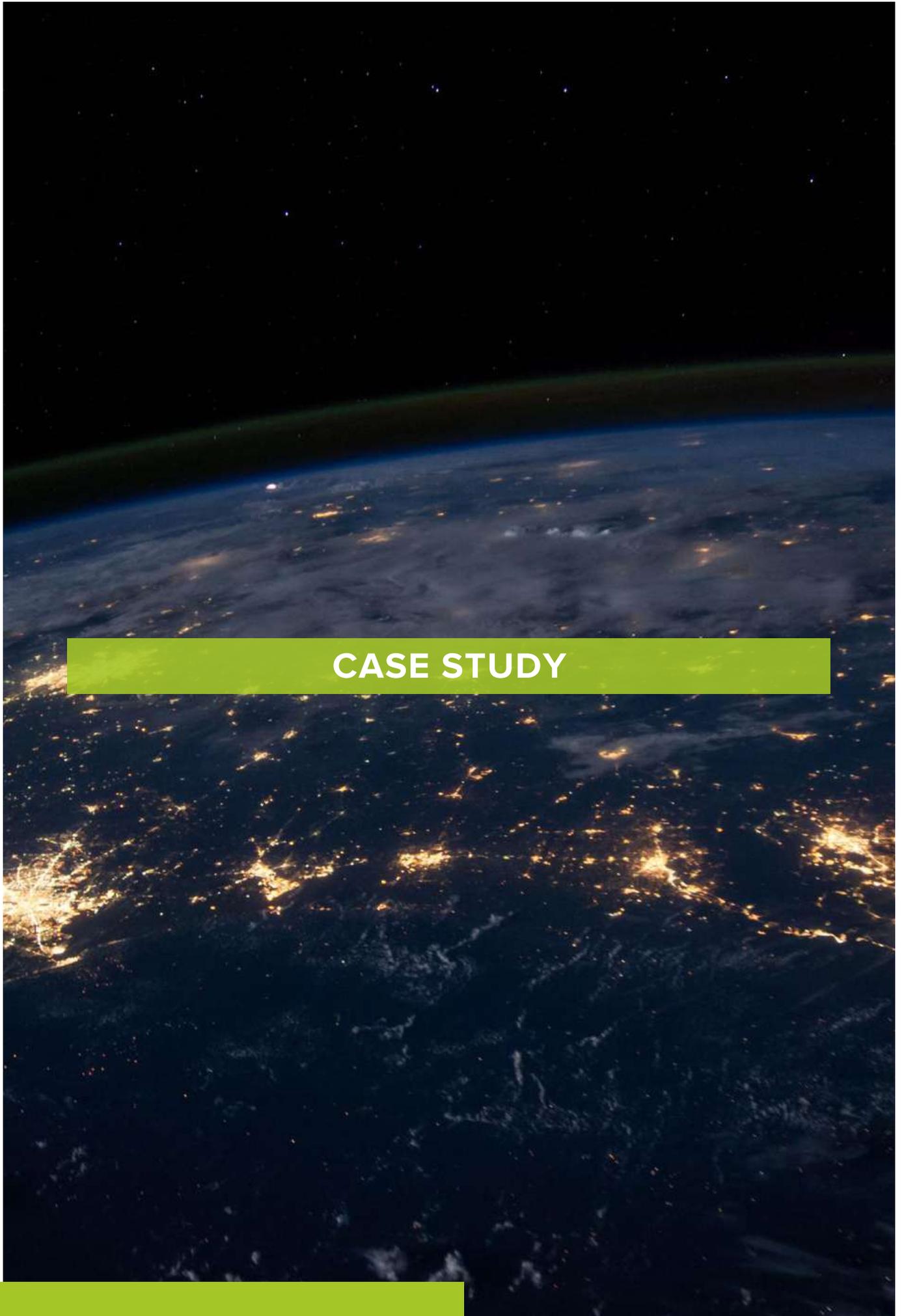
Combining artificial intelligence and e-commerce, IoT apps like [Alexa](#) and [Google Home](#) play an increasingly important role. Although it is not new, you can directly order items with your voice using this technology.

Marketing departments are gradually realising that AI can revolutionise traditional activities. Advanced technologies such as content exchange and video shopping can serve to reduce friction in online shopping. [17]

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COMBINING ARTIFICIAL INTELLIGENCE AND E-COMMERCE, IOT APPS LIKE ALEXA AND GOOGLE HOME PLAY AN INCREASINGLY IMPORTANT ROLE

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CASE STUDY



Enhanced E-Commerce Growth in the UAE

While COVID-19's rapid spread has caused huge disruption across all industries and sectors, an impact on physical retail space is among the most visible effects of the crisis worldwide. According to an [Adobe](#) report, COVID-19 has massively accelerated the growth of e-commerce. Consumers spent over \$153 billion online in the last two months (\$70.2 billion in April and \$82.5 billion in May), which is 7% higher than the \$142.5 billion spent online during November and December 2019.^[18] In the UAE, Carrefour saw a rise of 300% in online orders, with buyers, order volume and basket size rising by up to 500% in the UAE.^[19]

In the same way that shoppers go to malls for entertainment, a new e-commerce environment needs to be developed, with that rich content inevitably involved. This may be the beginning of "e-tail first" markets that focus customers on their online shopping journeys and provide them with knowledge, experience and motivation for informed purchasing decisions. Countries, organisations and business leaders face difficult and unparalleled choices during this unprecedented time. While it is important to concentrate on the short term, it has become increasingly apparent, as with other historical crises, that the pandemic is permanently defining the social and economic order of the future.

Although a quick reaction is important for survival, companies to emerge as 'winners' would be those that take a long-term view. Firms that make courageous and expeditious investments in transforming companies will have the opportunity to gain market share and become post-pandemic market leaders. Now is the time for companies to start their digital marketplace and acquire the digital talent to ensure readiness for the future.

The pandemic has contributed to a dramatic shift in market conditions, for B2B and B2C businesses alike, which is leading to extraordinary internet demand for products and entertainment. In China, nation-wide efforts to contain the spread of the pandemic have changed everyday habits, consumption patterns and the mindset of customers, which have resulted in a rise in the "home economy" and a further boost in world-leading online services. COVID-19 has changed the shopping patterns of the world dramatically. However, more firms need to concentrate on e-commerce and come up with new, innovative ways of increasing long-lasting consumer engagement.



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**THE PANDEMIC HAS CONTRIBUTED TO A
DRAMATIC SHIFT IN MARKET CONDITIONS, FOR
B2B AND B2C BUSINESSES ALIKE, WHICH IS
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Uniting the world in shaping the future of manufacturing is the goal of the Global Manufacturing & Industrialisation Summit (GMIS). A unique and unprecedented cross-industry forum, we bring together governments, the business world, and civil society to create a roadmap of the development of a sector that accounts for million jobs, 17% of global GDP, and 84% of world trade exports – ensuring its evolution mirrors the way the world is changing and supports progress toward the UN Sustainable Development Goals.

A joint initiative by the United Arab Emirates and the United Nations Industrial Development Organization, GMIS – as a platform for leaders to transform manufacturing, a builder of cross-sectoral partnerships, and a knowledge-base that identifies opportunities for the sector to generate universal benefit – is committed to placing manufacturing at the heart of economic regeneration, policymaking, international collaboration, and contribution to global good. Should you wish to participate or share any of your papers or reports, please drop us a note on research@gmisummit.com

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