POST-COVID-19,
REIMAGINING A NEW ERA OF WORK

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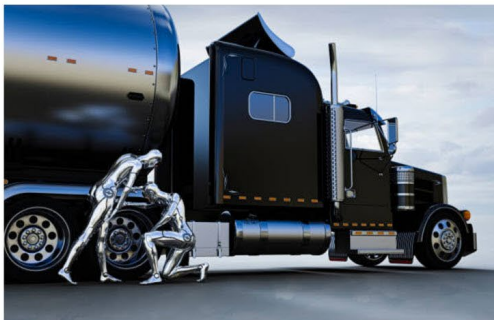

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By Amit Patel

ABSTRACT

The COVID-19 pandemic has turned the world upside down. Not only has it created a global humanitarian and economic crisis for this generation, but it is forcing us to completely rethink the way our world is structured and how we operate within it. For businesses, leaders are faced with a situation few could have foreseen – a balancing act of managing through uncertainty while ensuring employees are safe, happy, mentally, and physically healthy, and yet remain productive. Not one single country has been spared the impact of the pandemic so leaders everywhere have no choice but to adapt, overcome, and improvise.

Over the past decade, business leaders and organizations have been dabbling in many of the new and emerging technologies that have the potential to massively transform their business. But the pandemic changes the paradigm. Suddenly, businesses need to fast-track their plans – and in some cases, completely start from scratch – in order to cope with today's reality.

This article examines how new and emergent technologies, such as Artificial Intelligence (AI), Robotics, Smart Factories, 3D Printing, Drones, Autonomous Driving, and more have now become an immediate necessity, rather than a future 'nice-to-have'. We are moving rapidly beyond the Information Age. Welcome to a new era of work!

"Reimagination is the new execution."

Terence Mauri

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INTRODUCTION

Today's workforce is almost unrecognizable from what it was 200 or even 30 years ago – and it's on the precipice of another violent change. After centuries of a mostly agricultural-based economy dominated by physical work, the introduction of the Industrial Age in the late 18th century completely revolutionized the labor force, impacted public policy, and changed the global economy. Fueled by the invention of the steam engine, the rise of coal and iron, along with the use of machinery to dramatically increase production, the nature of work and the workforce were permanently altered. Without these changes, we'd be without modern medicine, mass production, running water, and most of the necessities we take for granted today.

Similarly, the rise of transistors and the silicon chip in the mid-20th century heralded the introduction of the Information Age and once again, transformed our daily lives and upturned the workforce, particularly manufacturing. For example, in the United States, the number of people employed in manufacturing jobs from January 1972 to August 2010 fell from 17.5 million to 11.5 million.[1] But as manufacturing jobs declined, the new knowledge worker emerged, as did the growth of electronics, microcomputers, satellites, advanced communications, and digital devices.

The Digital Revolution kicked into high gear with the emergence of the internet, breaking down the geographic barriers for businesses and individuals. Companies could sell their products to anyone, anywhere; workers began to compete in a global job market; and consumers immediately had more choice than ever before. The workforce was changed forever.

Consider the jobs from 50 years ago that no longer exist: photo lab technicians, stenographers, switchboard operators, movie projectionists, radio repairers… the list goes on. Conversely, technology has also *created* jobs that we couldn't even imagine 50 years ago: web designers, CGI animators, social media managers, video producers, drone operators, software engineers, app developers.

Usher the dawn of what's been called the 4th Industrial Revolution – the continued automation of what we have today and turbocharging it using even smarter technology. Say hello to cognitive computing, next-generation communication, artificial intelligence (AI), robotics, 3D printing, the Internet of Things (IoT), machine-to-machine communications, virtual reality, machines that get even better at producing, analyzing, and diagnosing without the need of humans, and so much more.

All these changes will bring a new way of working and indeed, an entirely new workforce. A report by the Institute for the Future (IFTF) estimates that 85% of the jobs that will exist in 2030 haven't even been invented yet.[2]

The COVID-19 pandemic dramatically accelerates the move to the new era of work where every aspect of business and personal life is likely to be flipped on its head. Leaders have no choice but to embrace the changes, identifying opportunities to adjust their business, processes, and workforce to meet the reality which will be vastly different than today.

In this article, we look at seven technologies that will likely have the most dramatic impact on businesses and how they will put them on the path to becoming more competitive, agile, and profitable.

1. Artificial Intelligence
2. Robotics and Automation
3. Smart Factories
4. 3D Printing
5. Autonomous Driving
6. Drones
7. The Human Machine Connection

"At least 40% of all businesses will die in the next 10 years … if they don't figure out how to change their entire company to accommodate new technologies."

John Chambers, Cisco

1. ARTIFICIAL INTELLIGENCE

Of all the technologies emerging today, Artificial Intelligence (AI) is likely to have the biggest impact on our daily lives, whether it's at work, school, home, in the car, hospitals, or at play. In reality, AI in some form has been around us for decades. Already AI is in many cars – or at least many have AI-ready applications – and is part of manufacturing, the medical field, finance, mobility, and more. AI is not going away and for that matter, neither are pandemics like COVID-19, which is why leaders need to think about their business will be affected and how they can use this time of change to look at how AI can put them on a path for success.

The impact of AI – machines that mimic the cognitive functions of humans like learning and problem-solving – can't be ignored. We started to see AI creep into the collective consciousness in 1997 when IBM's Deep Blue computer played chess world champion, Gary Kasparov, and won. Less than 15 years later, IBM's Watson soundly defeated Jeopardy champions Ken Jennings and Brad Rutter. The difference between the two is that while Big Blue could calculate moves, Watson was capable of answering questions posed in natural language.

Since then, IBM announced that Watson would be used to help make utilization management decisions in lung cancer treatment at Memorial Sloan Kettering Cancer Center in New York City. According to IBM, 90% of nurses in the field who use Watson, now follow its guidance. It has certainly come a long way from a few moves on a chessboard.[3]