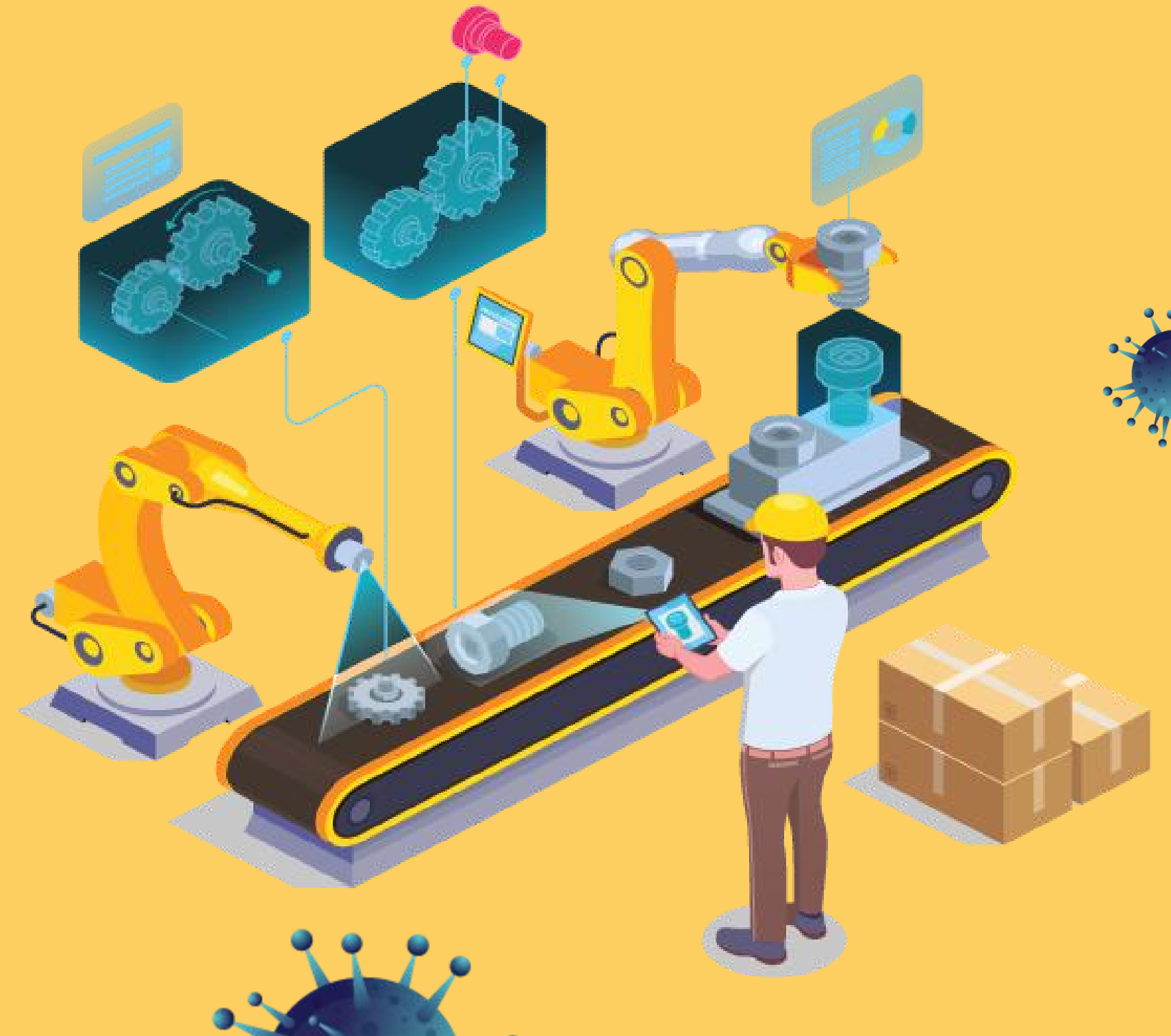
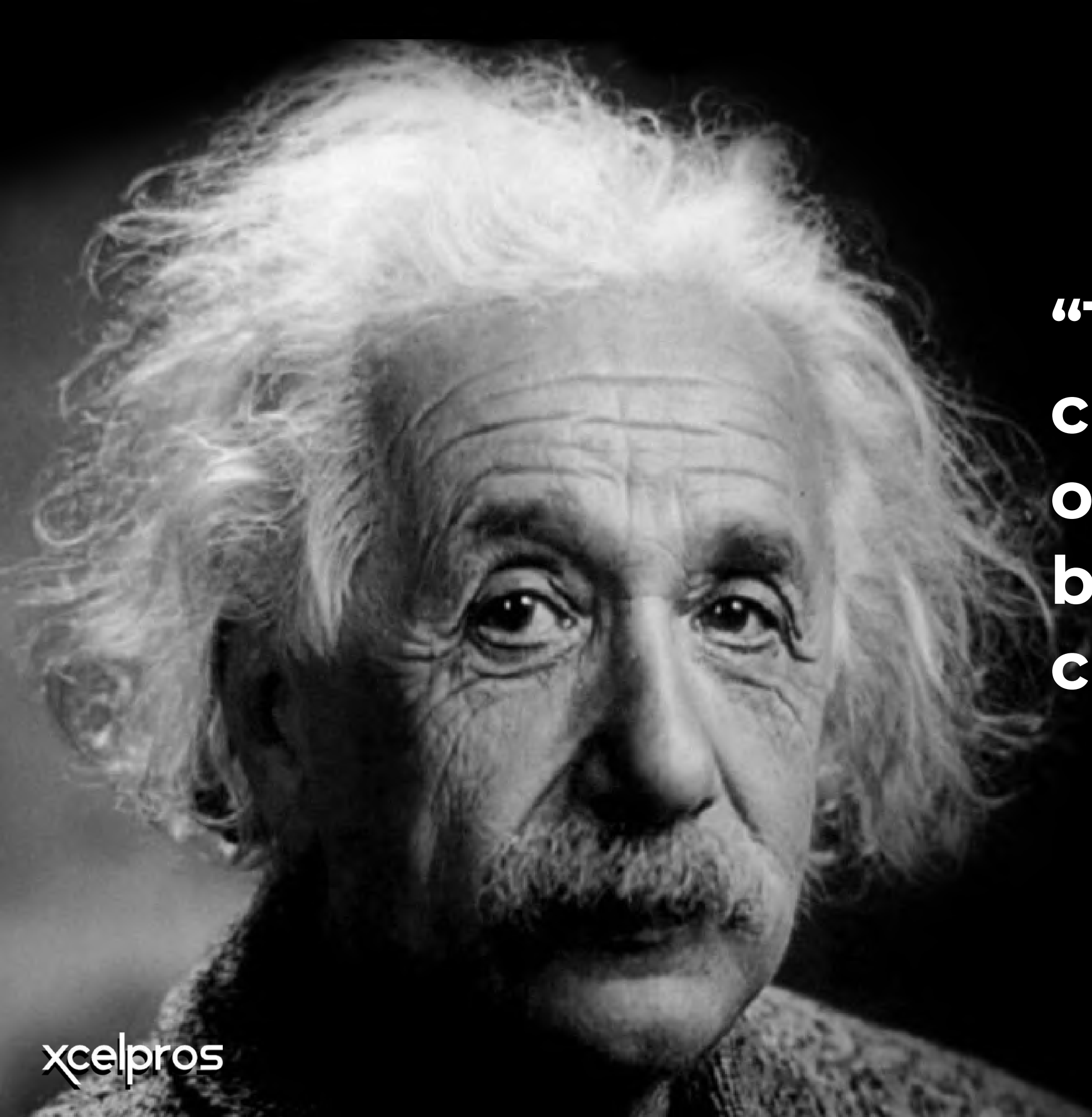


THE NEW WORLD REALITY POST COVID-19

—
How Manufacturing Companies
are Pivoting Operations?



A black and white portrait of Albert Einstein, showing his characteristic wild, white hair and mustache. He is looking directly at the camera with a serious expression. The background is dark and out of focus.

“The world as we have created it is a process of our thinking. It cannot be changed without changing our thinking.”

ALBERT EINSTEIN

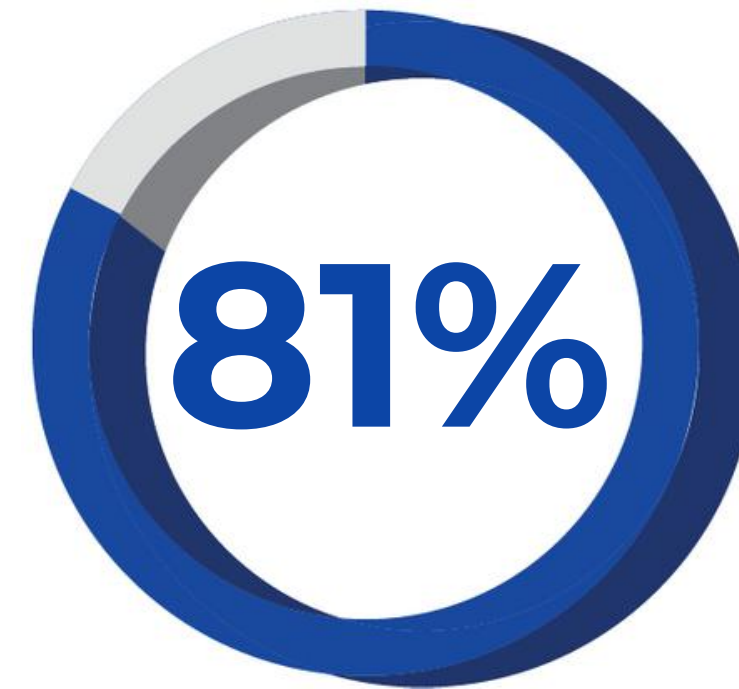
EXECUTIVE SUMMARY

Massive changes are currently underway in the global supply chain due to COVID-19. Companies are pivoting operations in order to cater to end user needs and help the economy through these difficult times. Read on to learn more about how companies are shifting their business strategies and filling process voids hindering progress.



INTRODUCTION

Process Manufacturing companies are adapting to the sudden changes in the economic landscape due to COVID-19. Dependency on China for raw material and supplies has hindered the local US market forcing manufacturing companies to pivot operations and meet consumer needs. Starting late January, China's industrial production came to a standstill as companies suspended their operations completely amid the lockdown. Though China is getting back on its feet now, the whole world had to take its heat as the event disrupted the global supply chain massively. In 2020, China contributes nearly 20% to the global GDP. You can now imagine the losses businesses will suffer all over the world and how long it will take to recover and ramp up operations fully.



"A survey by the German company Kloeppel Consulting states that every third company has Chinese customers in a higher number, and on top of it nearly 81% of them are dependent on Chinese suppliers to run their operations."

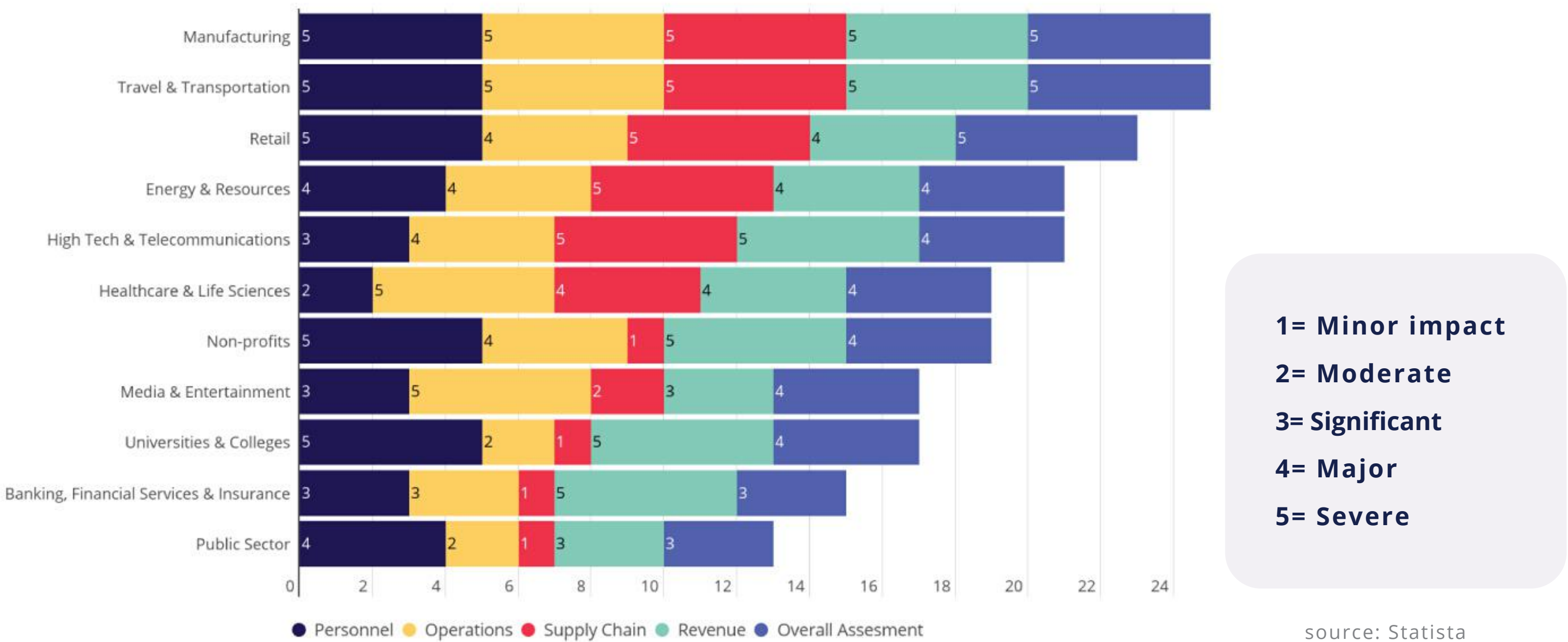
WHAT ARE WE WITNESSING?

From the facts it can be anticipated that a major supply chain restructuring is coming on your way. This will be an opportunity for many to create blue oceans and venture into newer lines of businesses for a long lasting economic upheaval. Now, more than ever, integrated technology is imperative to streamline and automate the lines of business, people and processes.

This article offers insights on how manufacturing industries can be prepared to pivot operations. Read on to know how manufacturing companies are affected by the current situation and what they can do to pivot operations quickly in order to meet requirements of consumers during this unprecedented time.



FIGURE 1: Industry-wise Projected Covid-19 Impact from Minor to Severe




The graph shows the massive impact of Covid-19 Pandemic on the operations of Manufacturing Industry, leading it to almost enter a hibernation.

WHAT IS THE NEW WORLD REALITY IN MANUFACTURING?

The World Health Organization (WHO) has declared COVID-19 as a public health emergency which led to a seismic shift in the life of manufacturing and distribution companies. The industry is now experiencing a new reality in running operations while they continue to produce finished goods to meet customer demand. Of course, remote tools and collaboration softwares are helping certain departments within these companies to manage work remotely. However, full quarantine is not a viable alternative for certain sections of the industry that require an actively engaged workforce in manufacturing and supply chain operations.

Honeywell's move of 'coming to aid' at this time is commendable and is paving the path to other enterprises from the same industry. Current day consumers' needs have shifted to safety and hygiene which in turn has become one of their business objectives.

THE NEW WORLD REALITY POST COVID-19



“Honeywell now plans to start making over **20 million** face masks a month to help healthcare workers battle the coronavirus.”

DO COMPANIES NEED TO CHANGE?

Conventional manufacturing and distribution organizations have always been apprehensive in making any process or technology advancements. With the sudden change in market dynamics, these businesses are realizing the need for an enhanced technology they wished they had adapted earlier. This thought process has created a forced awareness which is now their 'new reality' and there is no going back after that.

The so-called 'old school' business leaders are scouting the internet to evaluate tools that could help them continue shop without panicking-a-shutdown or causing delays in shipping essentials to the end customer. Workforce restrictions due to social distancing has led to a reduced throughput, especially in industries like food manufacturing, pharmaceutical manufacturing and other highly regulated industries.

Manufacturing companies that have been historically change-averse, are now forced into a new way of working.

“Louis Vuitton owner LVMH will use its perfume production lines to start making hand sanitiser to protect people against the coronavirus outbreak.”

BBC WORLD



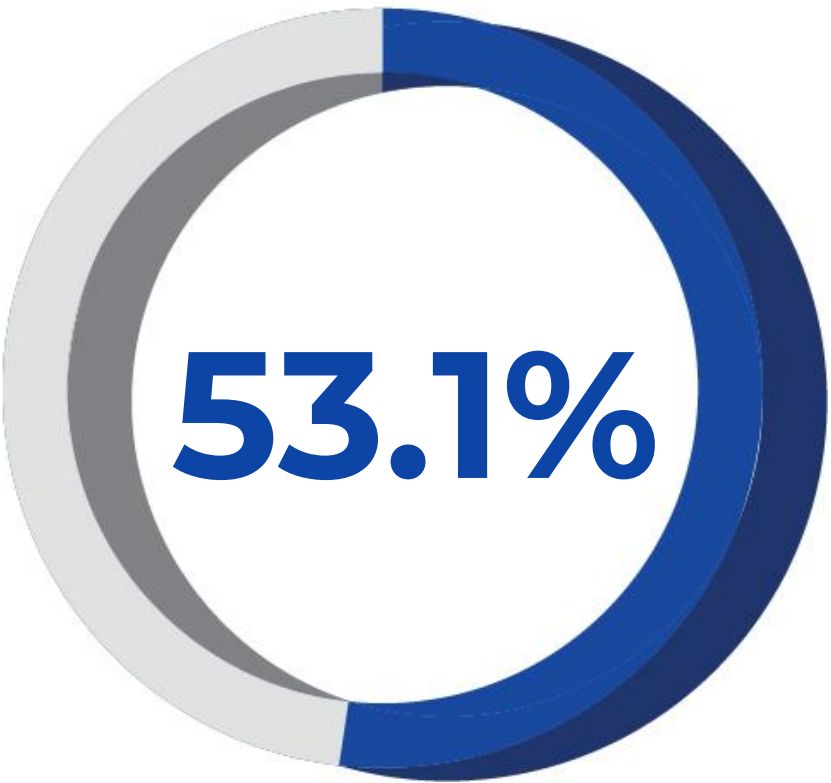
HOW ARE BUSINESSES PIVOTING OPERATIONS?

The French fashion house and luxury retail company has stepped forward to help the market recover from the extreme shortage of hand sanitizers in the market. Any company making these massive leaps into other lines-of-businesses are usually well equipped with machinery, people and technological tools to streamline their processes with ease. Other manufacturing organizations are also currently pivoting operations to accommodate the shortage in essentials or hygiene based products such as hand sanitizers, cleaning supplies, and masks currently needed to prevent further spread of coronavirus.

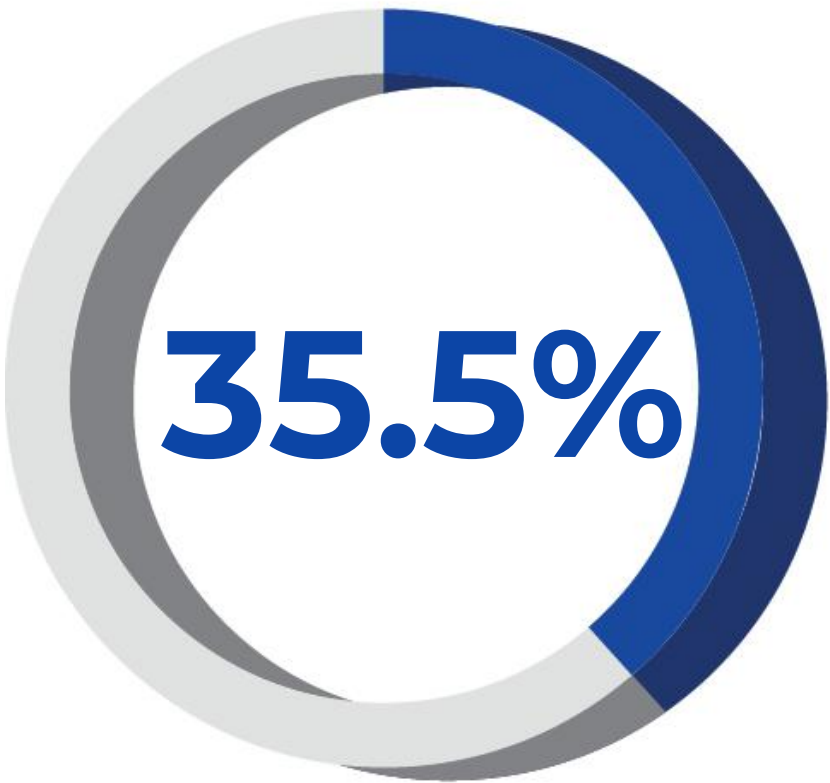
Manufacturing facilities that are already suitable to create products requiring batch processing, are taking a leap into newer areas of production in an agile mode. These companies have the facilities to accommodate materials and processes. They are familiar with proper quality testing standards and potency detection methods for batches. Quite a few companies have already pivoted to help out in every way possible. But only companies that are well automated, are the ones that can move quickly in such emergencies.



Corona Virus Pandemic is hurting the bottom line of Manufacturing Industry globally. You need to find an effective alternative sourcing strategy to survive through this massive supply-chain disruption.



of manufacturers are anticipating a change in their operations in the coming months



of manufacturers say that they are already facing supply chain disruptions.

NAM News Room Survey Feb 28th - Mar 9 2020

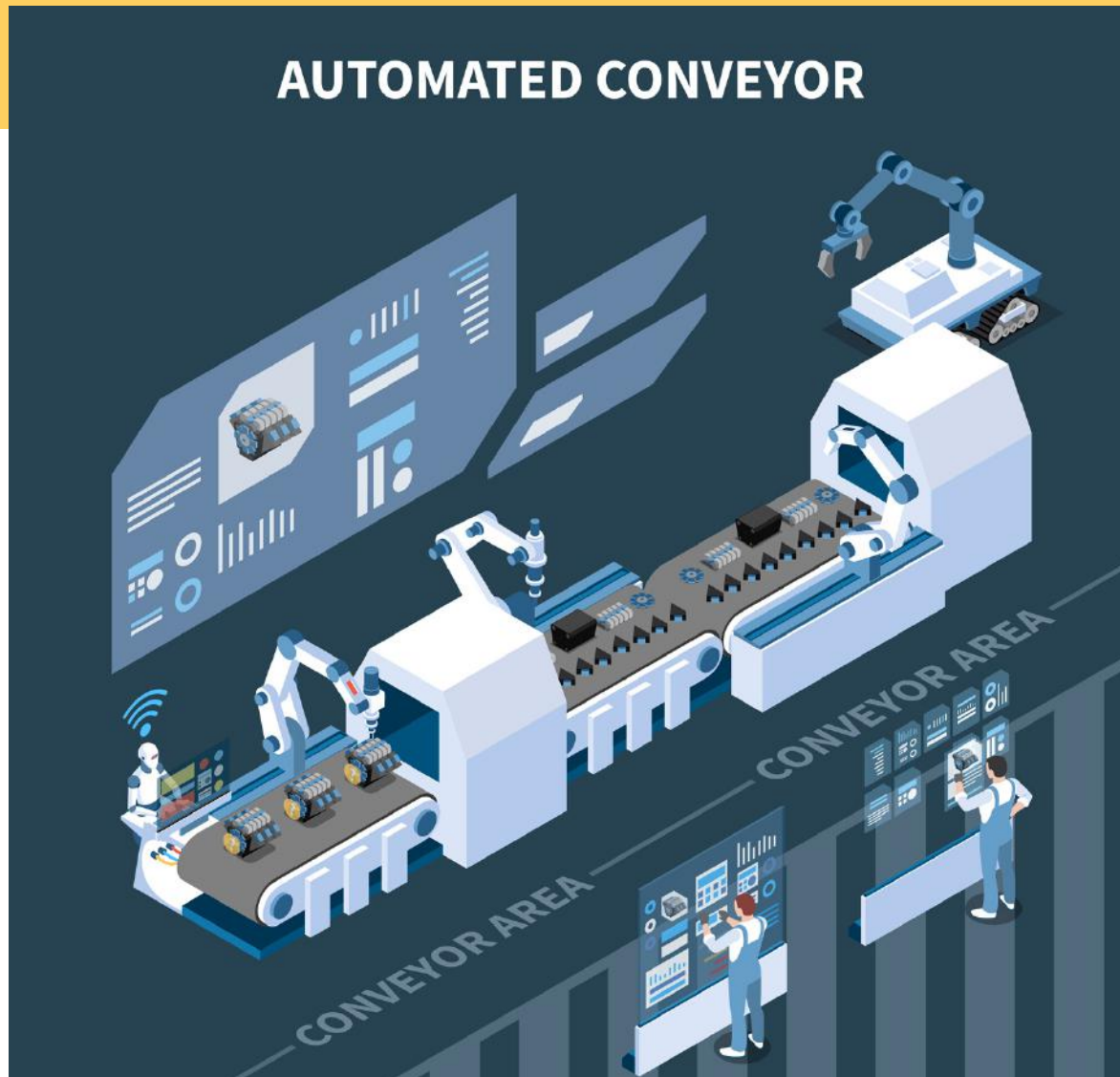
COMPANY AND USER ADAPTION

In this 'new normal', companies that can pivot quickly to accommodate consumer needs will become the front runners and market leaders of the future.

— A company that manufactures soda and beverages, may need to produce other products to cover essentials during the pandemic. If businesses are not ready for the pivot, they may struggle to cope with the change and become targets of bad press for no real fault of their own. Or the fault may be that they were 'not proactive enough to embrace the latest technologies, and address an unknown crisis'. Despite their intention to rapidly adapt to market conditions, their archaic systems and processes are a major hindrance in moving them forward.

COMPANY AND USER ADAPTION (CONTINUED...)

AUTOMATED CONVEYOR



Business users adapt quickly 'only' if they are ahead in process automation and optimization. The benefit is leveraged by using the right kind of technology that can effectively handle various processes and procedures. New-age technology is instrumental in simplifying work and transforming business users into advanced users, especially to streamline HR processes that enable users to be ready for any changes. With newer skills, users can easily adapt to sudden changes and disruptions caused due to a pandemic like COVID-19. It is amazing how an eminent business leader Bill Gates was able to prophesize this situation a few years ago on exactly the way events are surfacing today.

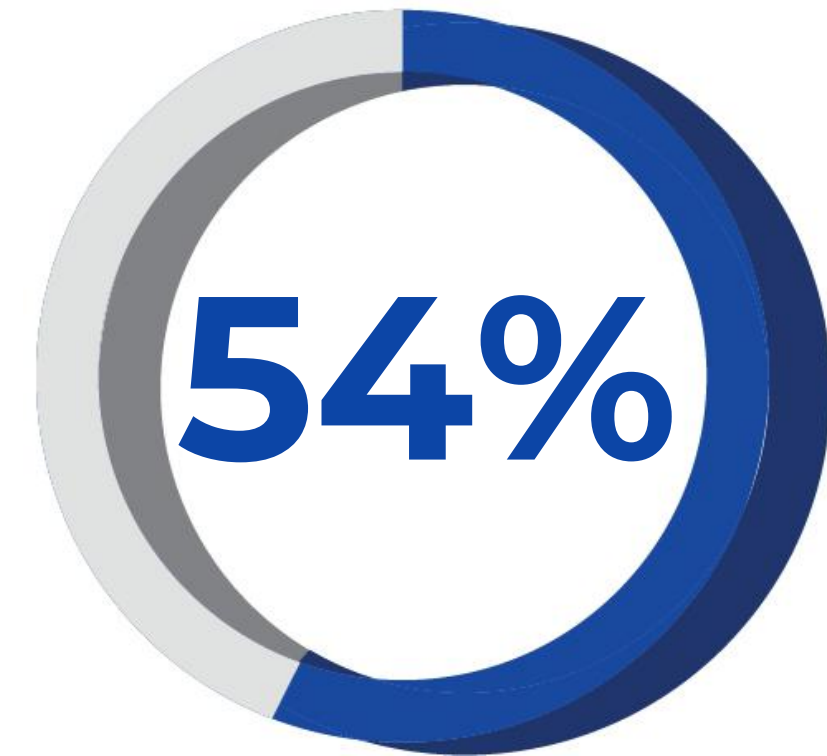
SPECIAL BULLETIN

"The impact of a huge epidemic, like a flu epidemic, would be phenomenal because all the supply chains would break down. There'd be a lot of panic. Many of our systems would be overloaded," Gates told CBS News from the 2017 World Economic Forum in Davos, Switzerland. "But being ready for epidemics of different sizes, there's a lot more we should do."



HOW DO OPERATORS ADJUST TO THE CHANGE?

A well streamlined workflow can help the workforce fall into the rhythm. Especially workforce with native knowledge of their regular operations, need to rapidly adapt to the change in functioning. It is not always easy to handle the new set of production lines that are abruptly put in place. Operators would require a detailed understanding of the new product batch records in order to adapt to the change. If companies are unprepared, they may go through a chaos during manufacturing execution. Production managers and supervisors who have also been used to familiar batch records with specific yield expectations, are now adapting to the 'new thing' that they need to produce. Alerts on each operation would immensely help them be aware of how the overall production job is progressing.

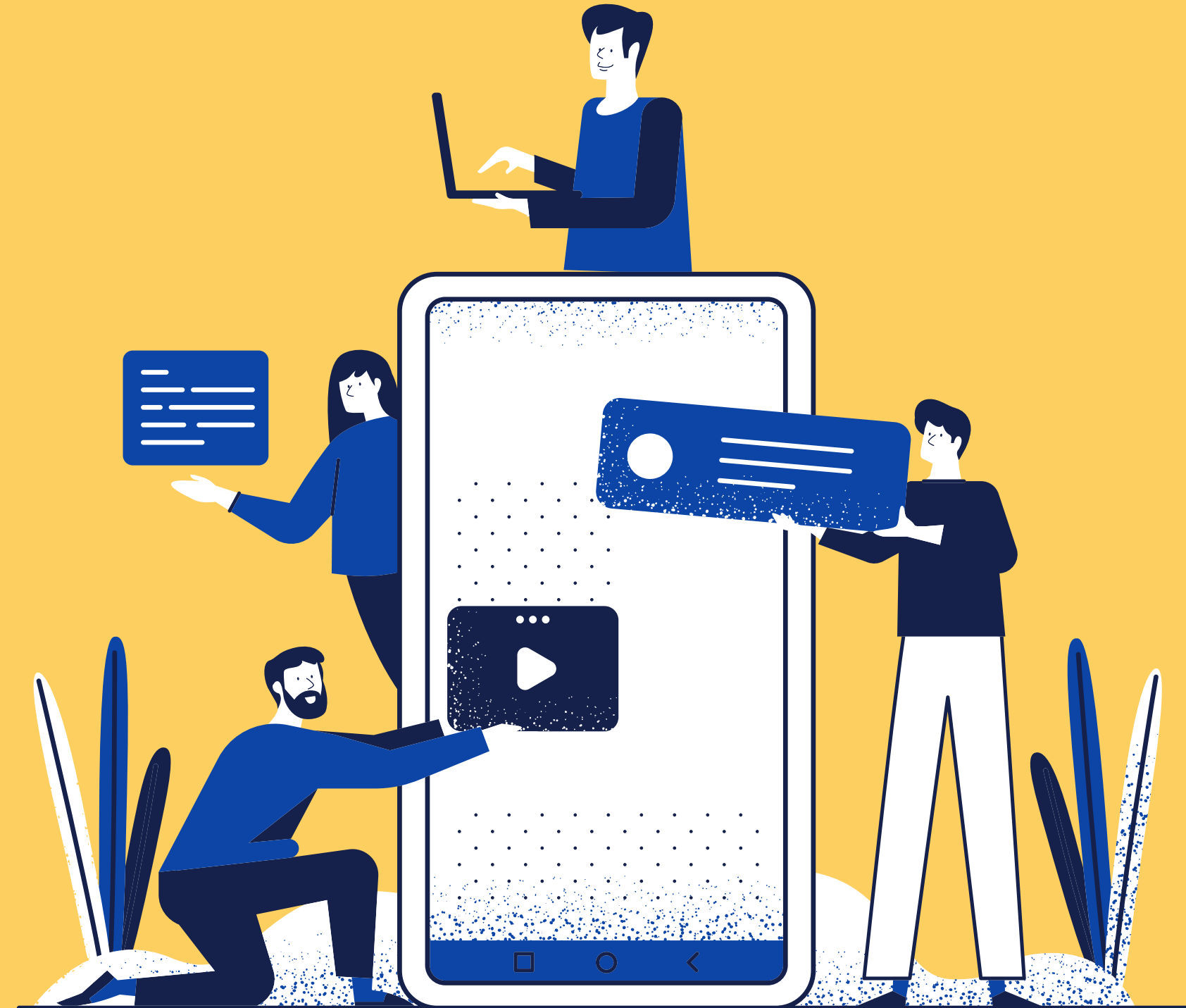


of respondents believe that coronavirus could have a significant impact on their business operations

DO WE NEED TO REVISIT OPERATOR WORKFLOW?

Workflow for warehouse operators should be streamlined to

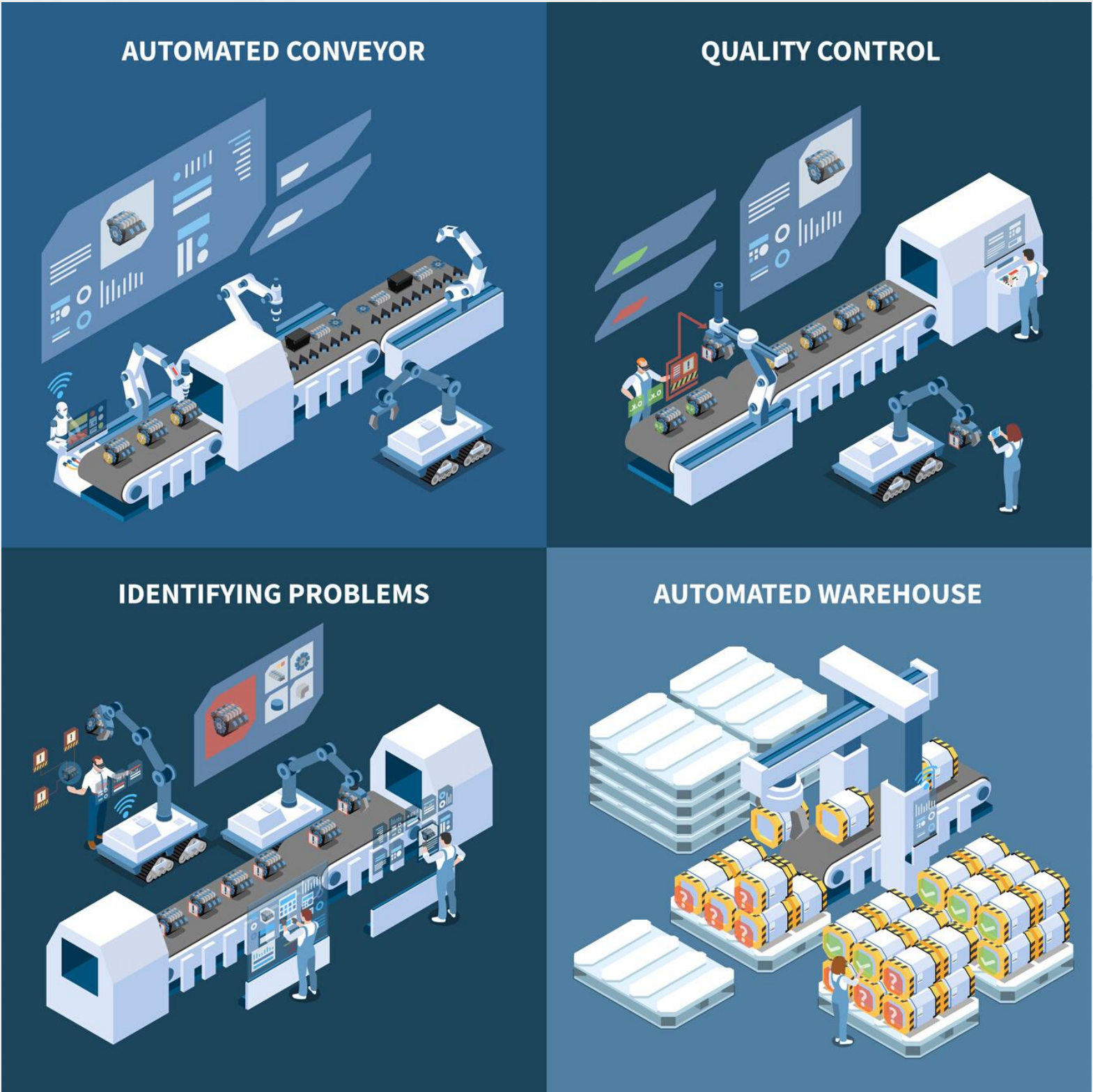
- Guide them while using mobile devices
- Help them progress through each step
- Hand hold them during unknown situations
- Allow them to record inline deviations



TRACKING PRODUCTION

When it comes to the regular production operations, Production supervisors or Plant managers are used to seeing both the norms and deviations in the process. Without an internal view of the new product history, they will need to be extra aware of test results and yield quantities of each production job to quickly analyze and extrapolate how to adjust batch formulas, and rapidly incorporate the learnings of each production run. A rules-based algorithm that can look at the last 'n' batch runs and automatically suggest changes for 'approval and instant adoption' will be crucial to keep the process optimized in an agile manufacturing environment.

FIGURE 2: Supply chain within manufacturing with the ability to pivot operations



CLOSING THE LOOP ON OPERATIONS

Companies that are taking up these initiatives are also required to understand how the end consumer is reacting to the new products released in the market. An easy way would be to label their products with proper QR codes that can be scanned to quickly send an end-user survey back to the manufacturer about their new product. These quick surveys help the manufacturers understand consumer feedback about the product. The feedback can be incorporated into their testing methods to make on-the-fly decisions and corrections of their manufacturing execution.

A question that every manufacturing company is asking to understand how they can simplify and streamline their processes further to keep the momentum in the operations going. A few technical elements are depicted in Figure 2.

What are the few technological elements companies wished they had within operations during the Covid-19 pandemic?

FIGURE 3: FUNCTIONS NEEDED FOR SIMPLIFYING BATCH MANUFACTURING



1

Process Automation.

Helps streamline manufacturing processes with workflow based controls to effectively handle a series of operations instead of recording steps manually.

2

IOT integration.

Connecting devices to the manufacturing execution and Quality control systems by recording data straight from machines or test instruments.

3

AI and ML integration.

Integrating AI-ML elements to manufacturing system helping with user-behavior in the warehouse and ensuring operations to meet required compliance and standards.

4

Collaborate.

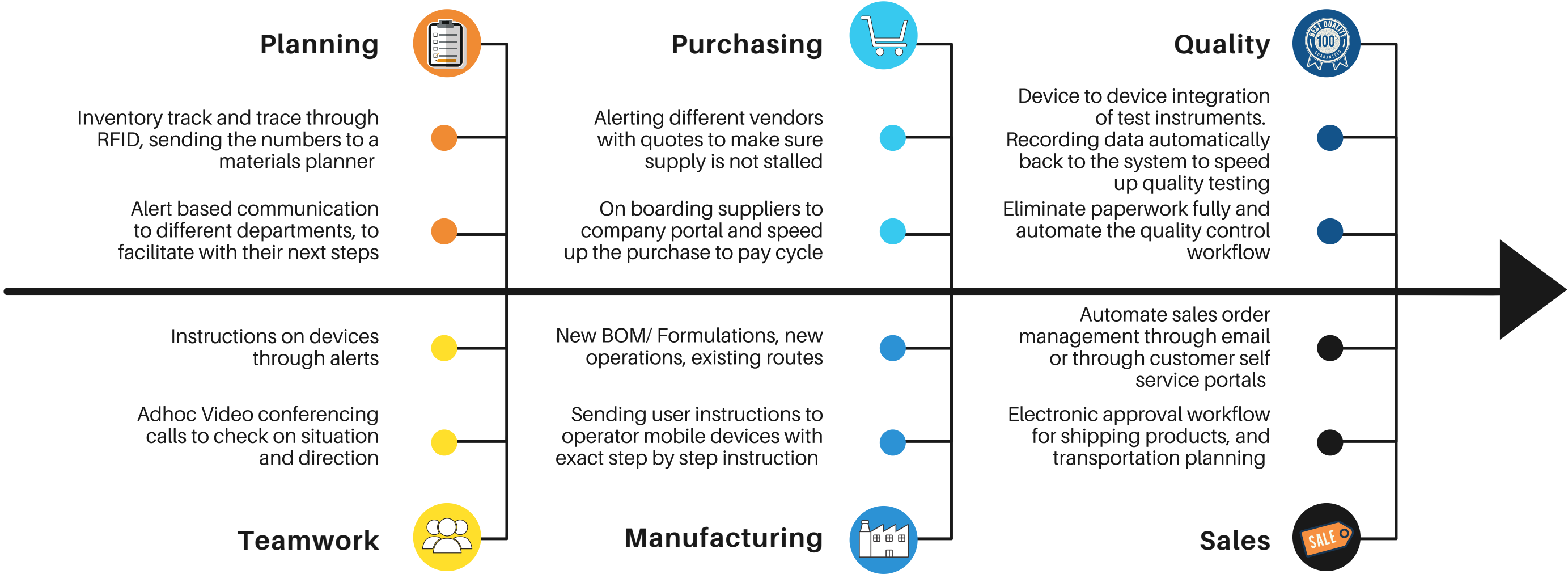
Handle workload through remote collaboration and team management to ensure tasks are being completed

BEING 'AGILE' AS A BUSINESS

Companies have asked us how all of this is different from what was recommended in the past year? It isn't, but the need is more real now and is no more a nice-to-have. These technological advancements have become an 'essential-to-must-have' if businesses want to survive the current condition. Post COVID-19 the realization of all the required automation tools is catching up in the manufacturing world. Especially pharmaceutical companies, that are typically slow-moving and conservative in comparison to other process manufacturing industries such as food & beverage or chemical, are also changing their mindset to be more agile, automated and technologically advanced. How do we get the required automation? Unless we see what the business is at its core, it may not be possible to provide a specific view of what all changes would be needed. However, going by some assumptions there are a few business solutions that can be drawn out to help businesses to become more agile in their operations.



FIGURE 4: MANUFACTURING FACILITY AGILE AND OPTIMIZED
DEPARTMENTS AND FUNCTIONS



All of the different ways to speed up, simplify and automate overall operations can propel companies to function a lot more efficiently and be agile to changes that are thrown at them while they are still dealing with a limited workforce.

KEY TAKEAWAYS

- There is never an individual contribution that can move a huge ship forward during difficult times. It is always the collaboration and synchrony of an entire workforce that really pushes the throttle. The trick is in how well you are able to keep your people aligned with all the technologies you invest in.
- Technology centric Manufacturing organizations are already ahead of the market curve and when sudden changes occur, a well defined HR department of a company that has agile training plans in place helps with the changes that are thrown at them.
- Finally, it is important to understand that even though temporarily it may feel as though companies need to bear the cost of advancement and changes, in a bigger schema a good technology stack like Microsoft is essential for the overall success of any organization.



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For more information or a demonstration of the subject-matter covered above, feel free to send me an email at bindu.chunduru@xcelpros.com.

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