COVID RESPONSE SOLUTION: STREAMLINING BUYER - SUPPLIER COLLABORATION IN A DISRUPTED SUPPLY CHAIN TO DRIVE BUSINESS RESILIENCE

Summary

COVID-19 has presented a serious and unprecedented challenge for supply chain and procurement organizations. This paper analyses current problems and outlines a solution using Pega's Intelligent Automation to drive tighter collaboration between buyers and suppliers for direct procurement. The solution also enables rapid onboarding of new suppliers to enable organizations access alternate supply sources.
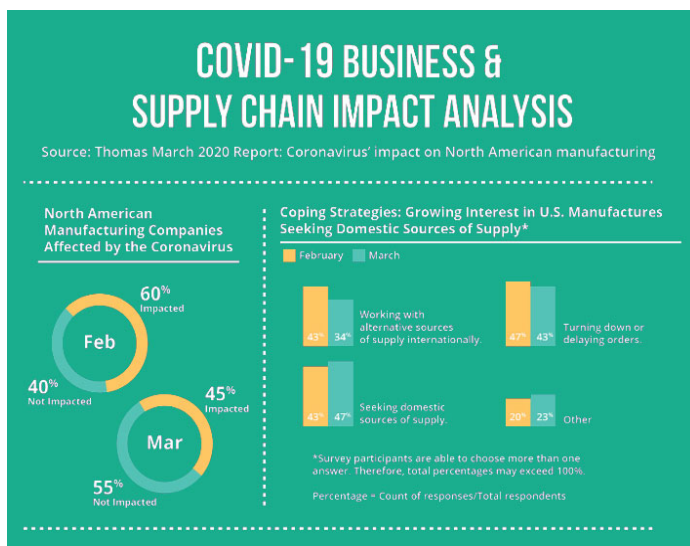
Infosys®
Navigate your next

Supplier Capacity & Critical Material Supply Disruptions: The Challenge for Buyers

COVID-19 and subsequent fallout due to constrained material supply with suppliers unable to keep plants operating at full capacity have led to an unprecedented impact on organizations' ability to meet delivery commitments. Changes in consumption behavior and demand patterns have led to Manufacturing and CPG organizations scrambling to assess Bill Of Materials and finished product substitutions. A case in point is the heavy demand for ventilators, PPE, masks, screens, and disinfecting products where manufacturers have had to retool assembly lines to come up with alternative products and quickly source alternate materials with modified BOMs.

This is a classic black swan event where these process/technology gaps that existed prior to COVID-19 are hitting us harder. In the past, manual processes and workarounds may have been sufficient.

These processes were instituted by buying organizations with some automation but a lot of manual follow-ups and tasks were needed to ensure delivery. COVID-19 has blown these gaps wide open where exceptions have now become the new normal. As global recovery is underway, it is becoming clear very quickly that it will be a saw-tooth or jagged edge recovery that will have to be closely monitored to be in line with the resurgence of infection rates as businesses look to restore operations. Current assessments point to a long tail in recovery going out 12-18 months or beyond. Even with these projected recovery paths, it is clear that the "new normal" will demand-supply chains to be more resilient, agile, and responsive to disruptive events. It requires buyers to be very closely connected to suppliers and get more granular visibility as well as a delivery commitment into multi-tier supply chains.

COVID-19 - the perfect storm disrupting traditional non-Digital Supply Chains

COVID-19 BUSINESS & SUPPLY CHAIN IMPACT ANALYSIS

Source: Thomas March 2020 Report: Coronavirus' impact on North American manufacturing

North American Manufacturing Companies Affected by the Coronavirus

Feb: 60% Impacted, 40% Not Impacted
Mar: 45% Impacted, 55% Not Impacted

Coping Strategies: Growing Interest in U.S. Manufactures Seeking Domestic Sources of Supply*

February / March

- Working with alternative sources of supply internationally: 43% / 34%
- Turning down or delaying orders: 47% / 43%
- Seeking domestic sources of supply: 43% / 47%
- Other: 20% / 23%

*Survey participants are able to choose more than one answer. Therefore, total percentages may exceed 100%.

Percentage = Count of responses/Total respondents

There are multiple immediate, end-to-end supply-chain actions to consider in response to COVID-19.

Supply-chain actions

**Create transparency on multitier supply chain**
- Determine critical components and determine origin of supply
- Assess interruption risk and identify likely tier-2 and onward risk
- Look to alternative sources if suppliers are in severely affected regions

Optimize production and distribution capacity
- Assess impact on operations and available resource capacity (mainly workforce)
- Ensure employee safety and clearly communicate with employees
- Conduct scenario planning and assess impact on operations, based on available capacity
- Optimize limited production, according to human-health impact, margin, and opportunity cost/penalty

Assess realistic final-customer demand
- Work with sales and operations planning to get demand signal to determine required supply
- Leverage direct-to-consumer channels of communication
- Use market insights/external databases to estimate for customer's customers

Tier-2 supplier → Tier-1 supplier → Plant → Distribution center → Customer → Customer's customer
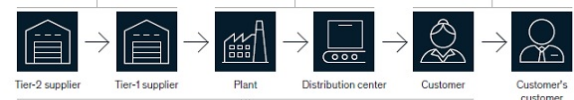
Estimate available inventory
- Estimate inventory along the value chain, including spare parts/remanufactured stock
- Use after-sales stock as bridge to keep production running

Identify and secure logistics capacity
- Estimate available logistics capacity
- Accelerate customs clearance
- Change mode of transport and prebook air/rail capacity, given current exposure
- Collaborate with all parties to leverage freight capacity jointly

Manage cash and net working capital
- Run supply-chain stress tests vs major suppliers' balance sheets to understand when supply issues will start to stress financial or liquidity issues

Supply-chain recovery in coronavirus times—plan for now and the future – McKinsey Insights April 2020

From smart products to a superior customer experience.

COVID-19 has brought a sharp focus on multiple dimensions of risk in the supply chain. Some of these risks are as follows:

- **Material Risk:** Material supply risk assessment requires buyers to review all BOMs for supply risk, identify viable material substitution where possible, and come up with a risk index identifying critical materials that cannot be substituted easily putting finished goods delivery at risk. Critical materials need a deeper dive into securing supply including building geographical flexibility into the supply chain with alternate suppliers who can fulfill from regional plants not subject to containment zones.

- **Supplier Risk:** Whereas earlier, it might have been sufficient for buyers to work closely with their Tier 1 Suppliers, it is mission-critical for them to now have full visibility into a multi-tier supply chain in order to secure a delivery commitment from Tier 2-4 suppliers as well. Buyers now need to take a more proactive approach to supply planning working directly with suppliers and instituting more comprehensive supplier risk or third-party risk management processes and technology platforms in place. The

current Hyperautomation technologies combining case management, Robotics, Event Processing, Analytics, Artificial Intelligence/Machine Learning and API/Micro-services integration provide a strong foundation to build robust supplier risk management solutions with near-real-time ability to process events and quickly assess supplier risk impacts with recommendations for corrective actions.

- **Inventory visibility/control risk:** A fractured view of material inventory requires buyers to get a better view of stored and in-transit inventory. Fallback options to pull back critical material inventory from services/after sales stock might need to be exercised as well to meet the delivery commitment for critical orders and customers.

- **Production capacity, logistics & shipping risk:** Apart from supplier risks, an organization itself might find plants hit by operations restrictions, cross-border travel restrictions due to various governmental regulations to contain viral infection, or diminished port/airport capacity that could all lead to an inability to ship finished products to customers. Supply Chain planners need to secure logistics, distribution, and

shipping capacity on an urgent priority to ensure impacts can be minimized.

- **Revenue & Reputational Risk:** Delayed shipments, canceled orders, inability to take orders due to diminished fulfillment capacity all lead to revenue risk. A rapid shift in consumption and demand patterns can cause shortages resulting in a missed revenue realization opportunity and hurt brand reputation as end-customers look for alternate sources of supply and other sellers.

While there is no silver bullet to meet all these challenges, existing/legacy ERP and Supply Chain systems were not designed for the agility needs mandated by the ongoing challenges. They worked well for predictable material requirements planning, production scheduling, and shipment but the current technical capability is very fragmented when it comes to customer experience, collaborative features, and change agility in a dynamic business environment. Organizations need to look beyond the constraints of their current systems to not rip and replace but wrap and renew them instead to maximize their investments in existing technology while leveraging the latest digital Hyperautomation technologies available.

So how can Manufacturing/CPG organizations thrive in the new normal and become resilient?

Today's buyers are used to superlative Omnichannel experiences pioneered by online retailers and travel booking sites, and they have come to expect a similar level of capability in an enterprise procurement context. No longer is it acceptable to work with stale data over dated web applications going back to a mainframe/client-server form-based user experience. Buyers today have come to expect seamless channel-less experiences with support for web, mobile, chat/chatbots, email, and phone interactions. Currently available technology with industry-leading Hyperautomation products like Pega provide such technical capability out-of-the-box which can help deliver a consumer-grade customer experience for B2B procurement. With the proliferation of social media, users have come to expect similar experiences in the technology platforms they interact with for their day-to-day work. Collaboration between buyers and suppliers can be taken to the next level with social feeds for back

and forth interaction, automated email notifications, and email bots with text analytics automatically processing inbound emails to deduce intent, and create/route cases appropriately. Mobile responsive UI and text alerts drive a richer, compelling experience. All unstructured interactions can be tracked and captured on a Buyer-Supplier Collaboration platform with audit trails for all significant case status changes and traceability for email communication as well as tight Service Level Agreement tracking with escalation workflows.

The need for tight collaboration and shorter SLAs exist both across organizations and partners for a streamlined buying experience as well as within an organization across departments to onboard alternate/new suppliers. One important aspect of Supply Chain agility is the ability to quickly onboard new suppliers as buyers explore alternate supply sources. Traditional sourcing and ERP systems address this as a standard

sequential workflow-driven process where each department involved (Finance, Logistics, Quality, Compliance, Legal, Risk, Procurement, etc.) work on their assignments based on their standard SLAs with a waterfall handoff process. Any deviations, data quality errors, or exceptions can cause the clock to be reset resulting in multi-week or months-long approval processes to onboard new suppliers. In the new normal, these timeframes are unacceptable and there is a hard need for rules-driven dynamic case management capability that can run departmental approvals in parallel allowing for enough time for each department to operate within their SLA yet reduce the overall onboarding timeframe. At any point in time, there is clear visibility driven by case status and completed vs. in-process approvals that eliminate the need for manual follow up and the frustration driven by a lack of visibility into onboarding request approvals.

What if you could rapidly get ahead …

Digital Supply Chain Collaboration and Communication Solution

Get better visibility into order fulfillment from your suppliers
- **Intuitive web portals** to improve the buyer/ seller experience with tighter collaboration
- **Email bots** with text analytics to process emails with order details from the ERP system and fulfillment commitment from the supplier
- Clear flagging of **quantity/price variances on BOMs** with order commitment from suppliers
- Quickly identify and drill down on delayed or at-risk orders through **dashboard reports**

Move unstructured, ad-hoc interactions and tasks to an agile business applications layer
- Dynamic **case management** features with support for ad-hoc tasks & attachments
- **Workforce management** features with queues for buyer/supplier personas, workbaskets for teams and easy delegation, skill/rules based case routing

Rapidly onboard new suppliers to de-risk your supply chain
- **Cloud-based process orchestration** solution needing minimal IT changes
- **New supplier onboarding** micro-journey enabled across different departments (Finance, Legal, Supply Chain etc.) with associated personas
- **Streamlined supplier experience** and simple data capture process for suppliers
- Enhanced supplier performance visibility with order data driven **intuitive reports**

Achieve better auditability, traceability, SLA adherence and business controls
- Clear traceability with **audit trails** out of the box, all buyer-supplier communication recorded in the solution
- **SLA management** & **automated email** notifications

A digital agility platform with the capabilities mentioned above is the perfect launch-pad for transforming legacy ERP, supply chain and procurement systems that inherently have a number of process gaps/white spaces that need either humans to plug them or various custom bolt-on technology solutions. It is hardly surprising that large digital initiatives get stymied – failing to take off or delivering a very diluted value proposition due to a brittle underlying technical stack with a number of such bolt-on solutions that implement hardcoded pieces of workflow to fill gaps in the ERP footprint. Adopting a platform based approach to surround and renew existing ERP and Supply Chain systems helps rationalize the bolt-on application ecosystem leading to a more cohesive, maintainable, agile technology stack that can flex easily with similar disruptive events and has the capability to rapidly deploy digital automation to production as a response. It drastically lowers the risk of complex ERP upgrades providing a viable alternative to ERP customizations with such needs taken out of the ERP footprint and implemented on this digital business agility layer that complements the ERP solution. It enables business-technology teams to implement an effective application portfolio rationalization strategy as well in addition to addressing immediate capability gaps.

Here is a reference conceptual architecture that can be implemented with out-of-the-box capability provided by the Pega platform. Our Buyer-Supplier Collaboration and Supplier Onboarding solutions are built on this technology stack to deliver rapid value for our customers.

Our Reference Architecture for Digital Transformation using Automation ties together capabilities across DPA, BPM, OCR, AI, Machine Learning, Cloud & ECM to help define target state blueprint
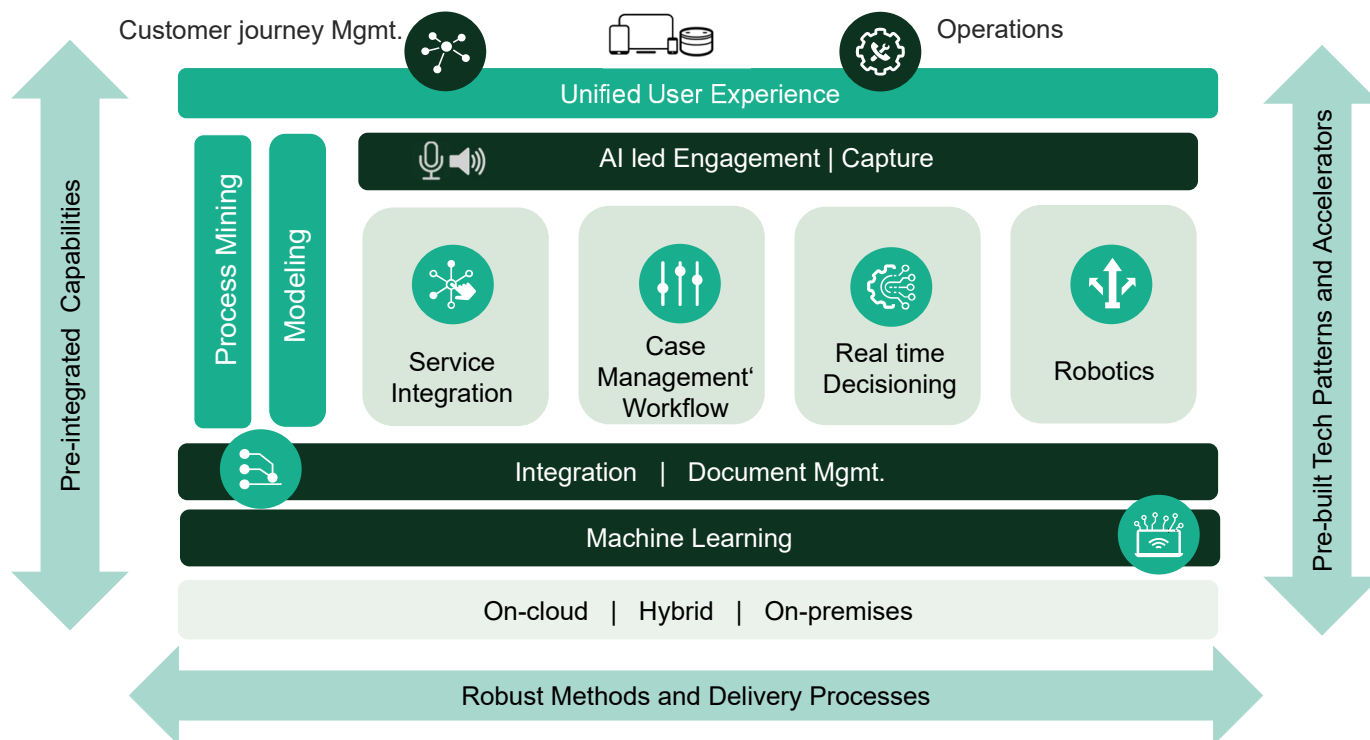
Supply Chain predictability does not have to be a guessing game or a best-effort outcome heavily dependent on the effectiveness of manual orchestration between buyers and suppliers. Today's Hyperautomation technology delivered through solutions built on Pega's industry-leading platform provides the alternative for organizations looking for a better business outcome.

For over 15 years, the Digital Process Automation Practice at Infosys with a focus on Pega Solution implementation has been helping our global clients achieve business agility, digital transformation, cost savings, and superlative results.

About the Author

Anupam Vachaspati,

Senior Principal, Enterprise Applications - DPA – Manufacturing, Retail, CPG & Logistics, Infosys Limited

Anupam is a Senior Principal with the Digital Process Automation Practice at Infosys. In his role as a Market Leader for Americas, he leads services delivery for MRCL (Manufacturing, Retail, CPG & Logistics) and CMT (Communications, Media & Technology). He has 24 years of experience delivering technology solutions for Fortune 500 enterprises with a focus on digital transformation across Banking/Financial Services, Manufacturing, CPG, Hi-tech and Telecom industries.

Related Reading & Webinar Links

https://www.pega.com/insights/resources/future-proof-your-supply-chain-against-disruption
https://www.infosys.com/services/digital-process-automation.html
https://www.pega.com/industries/manufacturing

For more information, contact askus@infosys.com

Infosys
Navigate your next

Infosys.com | NYSE: INFY

Stay Connected