OpsVeda

Competitive Advantage with Smart & Agile Supply Chains

Contents

Supply Chain Challenges in the Post-COVID Era

For supply-chain managers, 2020 has been the year of Murphy's Law. Anything that could possibly go wrong, has gone wrong. At the start of the year, few of us imagined that we would be facing such unprecedented disruption on a global scale. Virtually overnight, nearly every aspect of our lives was turned upside-down.

Supply-chain managers were faced with massive and immediate shifts in demand. Sales of jewelry and other luxury goods and automobiles plummeted. Hand sanitizer, freezers, and gardening supplies were suddenly in high demand — and of course, toilet paper.

As consumers rushed to stock up on groceries, the demand curve changed for many of the items on store shelves. Nonperishable items such as pasta and dried beans were in high demand. Staple items such as eggs, milk, and meat were likewise in short supply; while sales of higher-cost discretionary food items declined.

As factory production slowed and border closures became a concern, we heard stories about auto companies shipping parts out of China in suitcases.[1] Several countries reportedly placed export restrictions on pharmaceutical ingredients. Large segments of the workforce were told to stay home. Stresses on the supply-chain had never been this high.

1. Financial Times 2020 https://www.ft.com/content/c68b80d8-5266-11ea-90ad-25e377c0ee1f

The COVID crisis has been a wake-up call; a kind of all-hands-on-deck emergency that calls our attention to the weak points in our supply chains. It has revealed leakages in the value chain. It has also revealed opportunities to detect inefficiencies, identify solutions, and take corrective action.

Old Problems, Magnified

In most respects, the problems that have arisen as a result of the COVID crisis are not new. When demand shifts abruptly, value is usually lost somewhere along the way. You end up with excess inventory, or not enough. You miss opportunities to fill orders, resulting in lost revenue and lower customer satisfaction. The earlier that you have visibility to supply-chain issues, the sooner you can react, and the more value you can preserve in the process.

That's where real-time end-to-end (E2E) monitoring of the supply chain pays for itself. If you are only looking at sales orders, inventory on hand, and outstanding purchase orders; then you have a limited view of reality. By adding more dimensions to that picture, such as IoT sensors, supplier capacity, weighted sales pipeline, or third-party data; you get a far more complete picture of our supply-chain universe. You can see problems earlier and respond faster. In a competitive environment, you emerge as the winner.

Some Bigger Questions

Through all of this, a common theme for most businesses has been cash flow — or the potential lack of it. Governments around the world have stepped in with stimulus money, providing a lifeline for many businesses; but the effects of such programs are not permanent, and in the medium-term many small manufacturers may be at risk of insolvency. Vendor viability has always been on the radar screen for supply-chain managers; but never more so than now.

Supplier insolvency is not the only threat, though. The threat of increased protectionism looms large, and concerns about longer-term supply-chain disruption remain. These forces will combine to prompt many supply-chain managers to consider a more diversified sourcing strategy.

70%

higher performance achieved by companies that acknowledge supply chain as a strategic asset

Source: PwC 2013

57%

of chief executives ranked supply chain optimization and traceability as a first priority for technology investment

Source: Gartner 2014

51%

of companies ranked forecast accuracy and demand variability as the top obstacles to achieving supply chain goals

Source: Gartner 2014

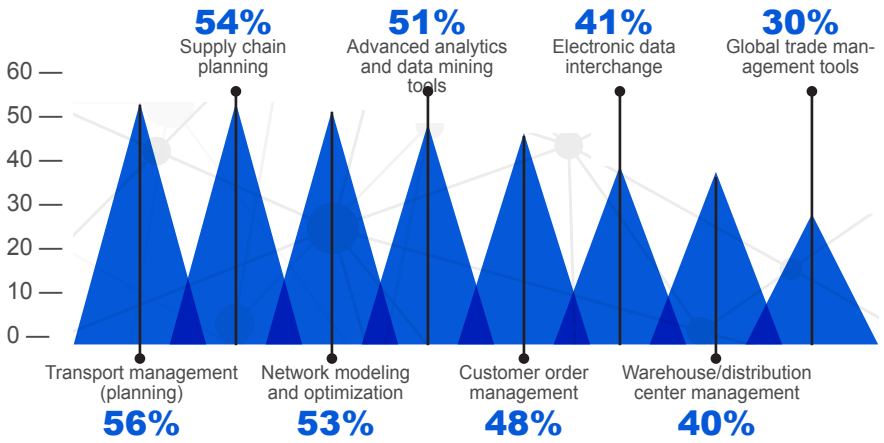
Supply-Chains, Made More Intelligent

Throughout this crisis, business leaders have heard the call for greater agility and resiliency. In some respects, that means taking a fresh look at the environment and asking "What has changed?" In other words, what do we need to do differently than we have done in the past?

In other ways, though, this crisis has reinforced many of the things we have known all along. The best decisions are informed by up-to-the-minute information from a variety of different sources. Rapid response often makes the difference between success and failure. And more than ever before, technology is a competitive advantage.

For supply-chain managers, true end-to-end visibility in real-time, combined with visibility to external events such as border closures and weather incidents, provides a clear basis for sound decision-making. By adding an intelligence layer on top of that, smart business leaders can bring a spirit of continuous improvement to their supply chain practices.

Technologies for big data supply chain initiatives



Source: Capgemini 2014

Renewed focus on Agility

Disruption is nothing new; it's just happening a lot faster and more impactfully than ever before. It is perhaps a little more unsettling because of unprecedented challenges in the environment. The good news, though, is that it's not only possible to survive under such circumstances, but also succeed and prosper — if you are an agile organization.

Nearly a decade ago, author Nassim Nicholas Taleb released a book called *Antifragile: Things That Gain from Disorder* (2014). The basic premise was that certain systems actually *benefit* from volatility and uncertainty. In other words, the opposite of fragility is not sturdiness; it is something else. Taleb calls it "antifragility".

Antifragility means that when disruptive things happen, you gain market share. You win new customers. You operate more efficiently than your competition. You win.

For companies facing unprecedented disruption in 2020 (and that includes just about everyone), ***agility*** is the key to that kind of success. But agility does not happen by accident; it is woven into an organization's DNA. It must be created on purpose.

In nearly every case we could cite today, agility is characterized by processes that are nimble and capable of scaling rapidly to address evolving business demands. This, in turn, is often an outcome of applying technology appropriately. Companies that understand the value of technology as a strategic asset will inevitably be better positioned to pivot when there is a shock to the system.

An Antifragile Example

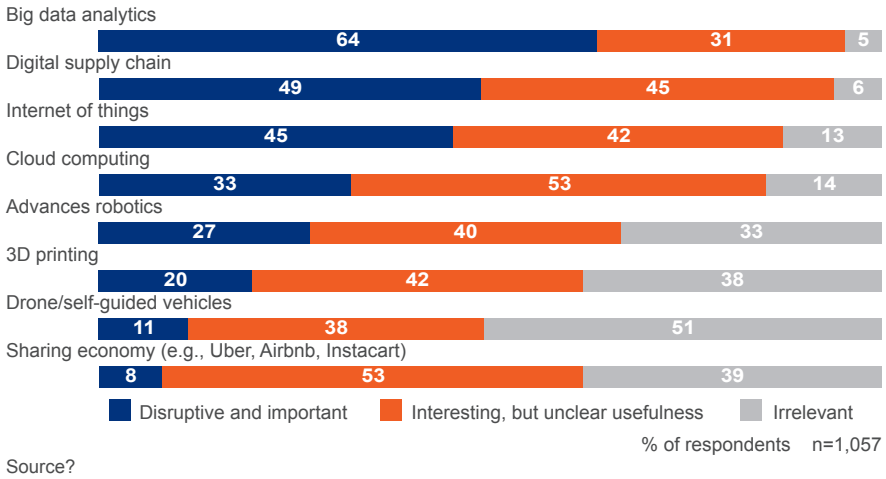
Let's consider an example: Back in 2013, L'Oreal embarked on an effort to build its e-commerce sales channel to 20% of total revenue by 2020. They recognized that they needed to make technology investments in order to diversify their sales channels.

L'Oreal achieved that goal in March 2020, just as the coronavirus crisis was becoming a reality. But those numbers are only part of the picture. The bigger story is that in the weeks following the onset of the crisis, the cosmetics company was preparing to shift from having 20% of revenue come from e-commerce to as much as 80%, or potentially even more.

That's a company that understands the value of agility. L'Oreal's shares are trading at a forward PE ratio of over 40, and their stock evaluation has not been this high since 2003.[2]

2. Financial Times 2014 https://www.ft.com/content/ab917d5d-e601-44ba-9a2c-53dbb2146dc7

Disruptive technologies for supply chain



Source?

Supply-Chain Agility

So how do we build agility in the supply-chain? The answer is in using technology that helps companies work smarter and more efficiently.

In many respects, the COVID crisis has not created new problems, so much as it has exposed existing problems and made them worse. When slow-moving inventory starts to pile up, for example, agile companies will recognize the problem early and proactively reduce inventory before it becomes more difficult to do so.

That's what Global Brands Group (GBG) is able to do, employing OpsVeda's **Available To Sell Visibility** solution. GBG uses this solution to identify potential customers based on previous buying patterns so that they can disposition merchandise earlier, and at a higher margin.

And then there is the opposite problem; when a company is unable to fulfill orders. Spikes in demand, as well as upstream supply-chain disruption, may result in unfilled orders, lost revenue, and unhappy customers. Worse yet, those customers might go to your competition and you could lose their business permanently.

Rodan + Fields (R+F) uses Fulfillment Visibility from OpsVeda to address such situations. The company is able to identify potential problems as soon as they happen, and can take corrective action early enough to fend off potential problems.

GraceKennedy (GK), a food and beverage company that manufactures and distributes Caribbean specialty foods, provides its sales representatives with OpsVeda's **Mobile Field Sales** solution, with up-to-the-minute information that enables reps to better serve their customers.

These companies understand that their supply chain processes need to be able to respond quickly and have equipped themselves with the right technology prowess to make that happen.

Real-Time End-To-End Visibility

Visibility is essential. End-to-end (E2E) monitoring of all available inputs from the supply-chain, in real time, means that information flows faster and can inform good business decisions sooner than it otherwise would.

The velocity of data has increased rapidly in recent years. The growing adoption of IoT devices, combined with improved integration to trading partners, means that data from across the supply chain can be available in real-time or very near real-time. Faster access to that information means rapid response, which means greater agility.

Automation Is Key To Scaling Operations

On his popular TV show “The Profit,” entrepreneur Marcus Lemonis repeats this mantra frequently: successful businesses are built on the three P’s; people, product, and process. The concept has its origins in lean manufacturing, but it has since taken hold across a broader spectrum of industries.

Each of the three P’s is important, and if any one of them is missing, it’s hard to produce consistently good results. When process is missing, quality suffers and results can be unreliable. Innovation lags. Scalability is virtually impossible.

Process yields efficiency, quality, and consistency. Process is the keystone for companies that wish to scale up.

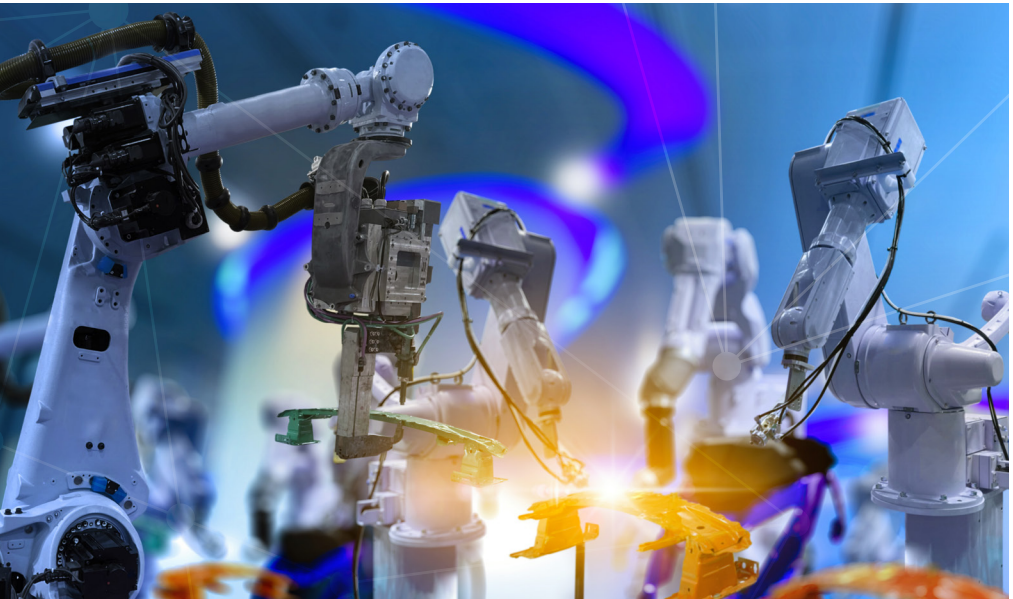
McDonald’s was built on process. French fries should be fried for exactly three minutes and 10 seconds. They should be served within seven minutes after they come out of the fryer. And there is a proper sequence for building a McDonald’s cheeseburger: bun, mustard, ketchup, onion, pickle, cheese, burger, bun. When I place an order at the McDonald’s drive-through, I know exactly what I’ll be getting.

In the world of supply-chain management, Wal-Mart is often cited as a pioneer of innovative processes. Early in the company's history, managers made a commitment to improving efficiency in supply-chain and driving costs down while keeping shelves fully stocked. Wal-Mart pioneered the distribution center model and was able to replenish products faster than their competitors. They were among the first to invest heavily in technology to connect warehouses, distribution centers, and retail stores. The end result was a more responsive supply chain, which drove higher sales and increased profits.

Process + Automation = Scale

In our world today, in order to scale in a timely fashion it is equally important to leverage the power of automation.

We have heard a lot in recent years about automation. In fact, the term "robotic process automation" has become something of a buzz phrase, as the term "robotic" is now being widely applied to information technology, and is no longer limited to describing physical robots on the assembly line or in the warehouse.



As integration tools have become more powerful and flexible, and as RESTful APIs have become the norm; the potential for increased automation has exploded. Smart companies are investing in automation because it yields efficiency and supports consistent processes.

Automation in a Post-COVID World

With the onset of the coronavirus crisis, automation has taken on even greater significance. When disruption happens, good processes ensure continuity. As COVID shutdowns and remote work became the norm, companies with existing automation tools in place fared better than their counterparts.

In the accounting department, for example, companies with existing software for automating account reconciliation, sign-offs, and other period-end closing tasks were better positioned to deliver quarterly results on schedule. Companies with centrally-managed systems for generating and sharing reports were better positioned to get information to decision-makers quickly, when it counted most.

In many respects, the COVID crisis didn't create new problems so much as it shined a spotlight on existing problems. As global supply chains were facing wild fluctuations in demand, potential order closures, and factory shutdowns; the inherent challenges of supply-chain management were magnified.

Automation removes friction from processes, ensures consistency, and improves responsiveness. When slow-moving inventory is growing more stale by the minute, it's losing value. Responsiveness matters.

When a customer is ready to buy, but you don't have the inventory to sell them, you lose the sale. Or worse — you lose your customer to the competition.

Management by Exception

Even with the best process in the world, situations still arise in which someone has to make a decision. By flagging problems and recommending corrective action, smart automation enables management by exception. It's a far more efficient use of human resources.

After all, technology scales easily. People don't.

McKinsey & Company describes five core components of automation: robotic process automation (RPA), smart workflow, machine learning/ advanced analytics, natural language generation, and cognitive agents.[3]

OpsVeda is doing all five of these.

OpsVeda provides leading companies with supply-chain automation powered by machine learning. Smart workflows, natural language agents, and advanced analytics monitor your supply-chain in real-time and provide recommended actions that increase agility and create value.

Increasingly it is clear that businesses would be well-advised to invest in smart automation capabilities as these will be the key to scaling rapidly.

3. Intelligent process automation: The engine at the core of the next-generation operating model March 14, 2017 | By Federico Berruti, Graeme Nixon, Giambattista Taglioni, and Rob Whiteman

The Data-Driven Organization

In recent years, a new saying has grown popular among many business leaders: “Data is the new oil.” With the advent of IoT, mobile devices, and web services; the volume of data available has increased exponentially. Forward-thinking companies are realizing that there are hidden riches locked inside their information systems; and with the right data strategy, there is even more value to be found.

Many companies have begun to exploit that underutilized resource. The ones with the most effective strategies to do so will undoubtedly gain a strategic advantage over their competitors.

Just like oil, though, data is of little use if it cannot be extracted, refined, and ultimately delivered to someone who can create value from it. Data is driving breakthrough insights that help companies better understand their customers, market trends, and risks. Many of those insights have an impact at the strategic level; but the benefits of such insights may be difficult to measure, especially in the short-term.

Fortunately, there are some excellent examples of data-driven decision processes that can produce far more tangible and immediate results. For companies that deal in physical products, supply-chain decisions should claim the number one spot on that list.

It is indisputable that supply-chain decisions can produce immediate, measurable value. When information flows freely, with little or no friction, those decisions happen faster and therefore produce better results. When slow-moving inventory sits on the shelf, it is (at best) tying up resources that could be deployed elsewhere. More importantly, it could be losing value with every day that passes. When it comes to supply-chain decisions, speed matters.

But speed is not the only important factor. Supply-chain decisions must be informed by data that is accurate, up-to-date, and as complete as possible. With end-to-end (E2E) monitoring of the supply-chain, including shipment status, demand factors, external events, and more; managers have richer input and are therefore capable of driving better decisions.

The AI Advantage

With all that data, decision-making has the potential to grow in complexity.

Fortunately, AI and machine learning have advanced considerably in recent years. When these technologies are applied to a specific domain – such as supply-chain management – they empower managers to make smarter decisions on a consistent basis.

Machine learning analyzes past decisions and results to provide a basis for constant improvement over time. The net result is the simplification of a very complex domain.

OpsVeda's machine learning algorithms are built around the philosophy of management by exception. If the situation falls within acceptable parameters; for example, if demand is stable, supply is predictable, and shipments are expected to arrive on time, then no additional action is required. But when there are exceptional circumstances, such as spikes (or lags) in demand or delayed shipments from suppliers; OpsVeda raises an exception and makes recommendations based on previous outcomes.

The OpsVeda Product Suite

The OpsVeda product suite is built on a state-of-the-art platform comprising end-to-end monitoring of supply-chain conditions, a sophisticated decision engine built on artificial intelligence and machine-learning technology, with end-user applications designed for ease-of-use.

The OpsVeda Platform provides the foundation upon which all of our products are built.

Our **Opportunity Apps** identify potential value leaks in the supply-chain, flag exceptions, raise alerts to appropriate personnel, and provide recommended solutions. These apps are all about preserving value and saving money. These apps are made available by OpsVeda via an unique benefits-sharing model.

The OpsVeda **Mobile App** provides visibility to business users, wherever they may be. We know that optimal supply-chain execution relies on up to date information and the ability to respond quickly. Our Mobile Platform makes that possible.

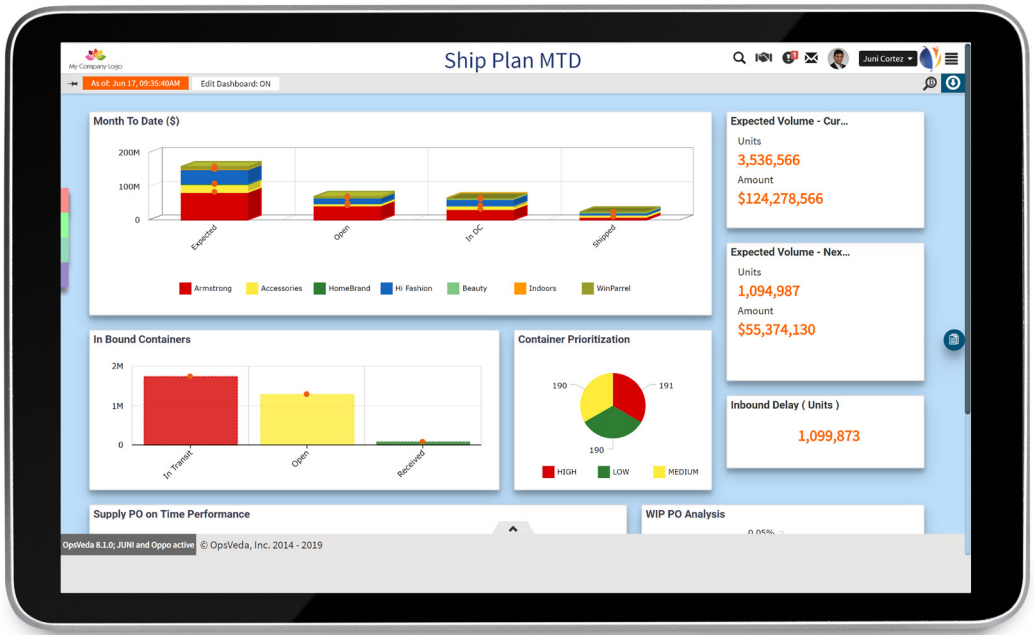
JUNI is OpsVeda's intelligent AI-powered assistant. JUNI understands natural language and domain-aware queries, it continuously finds answers using dynamically generated data and domain-aware queries to continuously find answers to users' everyday questions. JUNI continuously benefits from the data that is captured from the universe of systems & data sources connected to OpsVeda, and from user activities on the OpsVeda platform. Its dynamic nature makes it a critical aspect of the OpsVeda platform.

Our Products

OpsVeda offers a suite of products that enables enterprises to focus on the areas with the greatest potential for optimization and value creation. Our apps include:

End to End Monitor enables a business team to start with a complete view of the supply chain and drill-down to the details needed to address problems. The monitor covers every plant, warehouse, supplier, customer, other locations of interest, and overlays any execution issues (including disruptions such as natural disasters). The user can review the supply/ demand situation at each Inventory Planning Point (IPP), through the lens of inbound shipments, outbound shipments, process/exceptions insights, and even capture decisions, or corrective actions, as needed.

OpsVeda's **Order Fulfillment** app helps Customer Service and Sales Operations teams to address sales exceptions in a highly proactive, efficient, and scalable manner. The solution provides real-time visibility across



process steps, leading to reduced cycle times, higher revenue and improved customer satisfaction.

Track the end-to-end procure-to-pay process easily with OpsVeda's **Supply Management** apps. Find out what is impacting supply and how it is in turn impacting subsequent operations. Use threshold driven alerts and trend trackers to proactively manage delays and simplify decision making.

Keep track of your inventory on the move with OpsVeda's **Logistics & In-Transit** apps. Receive inputs on rerouting based on changing demand patterns and get alerted to delays and their downstream impact.

Inventory Optimization continuously assesses alignment of inventory positions to demand and supply information from internal and external sources. Managers are pro-actively alerted to potential excesses and shortages with recommendations to restore the balance between inventory, shelf life, supply and demand.

Manufacturing Intelligence brings together data from diverse sources to provide real-time intelligent visibility into manufacturing, quality and lot traceability processes. The system alerts managers to likely disruptions on the shop-floor. This results in timely preventive actions that keeps production schedules aligned to demand patterns.

Revenue Risk Management enables managers to proactively identify and mitigate risks. It gives Them visibility to various demand elements that are at risk, the source and nature of risk. Maximize revenue and margins, powered by real-time operational intelligence.

Channel/Retail Intelligence tracks demand signals from internal data, partner systems, on hand/ on shelf inventory, and supply situations to assess sales, inventory and coverage levels at various locations. Any excess or shortage is instantly flagged and action for maximizing revenue/profits is prescribed.

Our Customers

OpsVeda was founded by veterans of the enterprise software space. Our leadership team has decades of experience at SAP, Microsoft, Tata Technologies, and other leading technology companies. We are proud to serve many of the customers that trust their critical business operations to SAP, including Siemens, Western Digital, SanDisk, Genentech, GraceKennedy, Epson, LeviStrauss, Juniper Networks, Global Brands Group, and more.

Gartner analyst Amber Sally said of OpsVeda:

> In recent years supply chains have become more complex, and risk has increased. This has led to a situation where disruptions are much harder to foresee, making the case stronger for real-time supply chain visibility solutions like OpsVeda.
>
> Early analysis and exception based alerting can help supply chain managers take preventive action. Organizations planning to implement such sense and respond systems should evaluate OpsVeda, especially if they run their business on SAP.

Top Priorities for 2020 and Beyond

In the weeks following the onset of the COVID shutdowns, most organizations were in crisis-response mode. But as things return to a normal (or semi-normal) state, business leaders should pause, take some time to assess the efficacy of their actions, and internalize the lessons learned.

What does that mean for supply-chain managers? In many respects, the COVID crisis has exposed and magnified some of the problems that have always existed in the supply-chain. This is an opportunity to re-examine some of those weak points and take corrective action that will serve your organization well over the long-term.

Let's look at some of the top priorities for supply-chain managers in the post-COVID era:

Accelerate the Flow of Information

Businesses should aim to identify value leaks in the supply-chain and to minimize or eliminate those leaks. We are all familiar with these scenarios: You lose a sale because you can't deliver the merchandise when the customer needs it. Your sales manager spends extra money to expedite a shipment of product that arrived at your warehouse later than expected. You got stuck with a truckload of slow-moving inventory that is losing more and more value every day.

There is a common theme through all of these situations: if you had known about it earlier, you could have prevented part or all of that loss.

IoT devices and integrated cloud technologies are making it possible to monitor the location and environmental conditions of your shipments in real time. When that data is available alongside up-to-the-minute information about external conditions (such as extreme weather events), you can more accurately predict adverse events and respond earlier. You can plug the value-leaks.

End-to-end (E2E) real-time monitoring is a key building block for a highly responsive supply chain, and it needs to be on the roadmap for any company that wants to optimize its supply chain.

Invest in Automation

For companies that wish to operate at scale, automation is a non-negotiable requirement. When the COVID crisis hit, businesses around the world scrambled to adjust, as many people in the workforce shifted to remote work. Others were unable to work at full capacity while they tended to children at home, or dealt with other challenges of daily life in the "new normal".

Companies that already had automation in place were quicker to adjust. Technology scales easily. People do not. When you invest in hiring good people, and provide them with automation tools, you create more value from the knowledge and effort that each of those employees provides.

The combination of good processes and automation results in a scalable and resilient business.

Create Your Game Plan for AI

Artificial intelligence (AI) has been on the radar screen for years. It has finally become a reality. With the volume of data that is now available, and the power of systems to store, retrieve, and analyze that data; businesses have more power than ever before to gain useful insights from their data.

Companies that understand the value of data as a strategic asset will ultimately build long-term competitive advantage over those that do not. AI is a critical component of turning that vision into a reality. If AI is not already part of your strategic IT roadmap, now is the time to add it.

Sell the Vision Internally

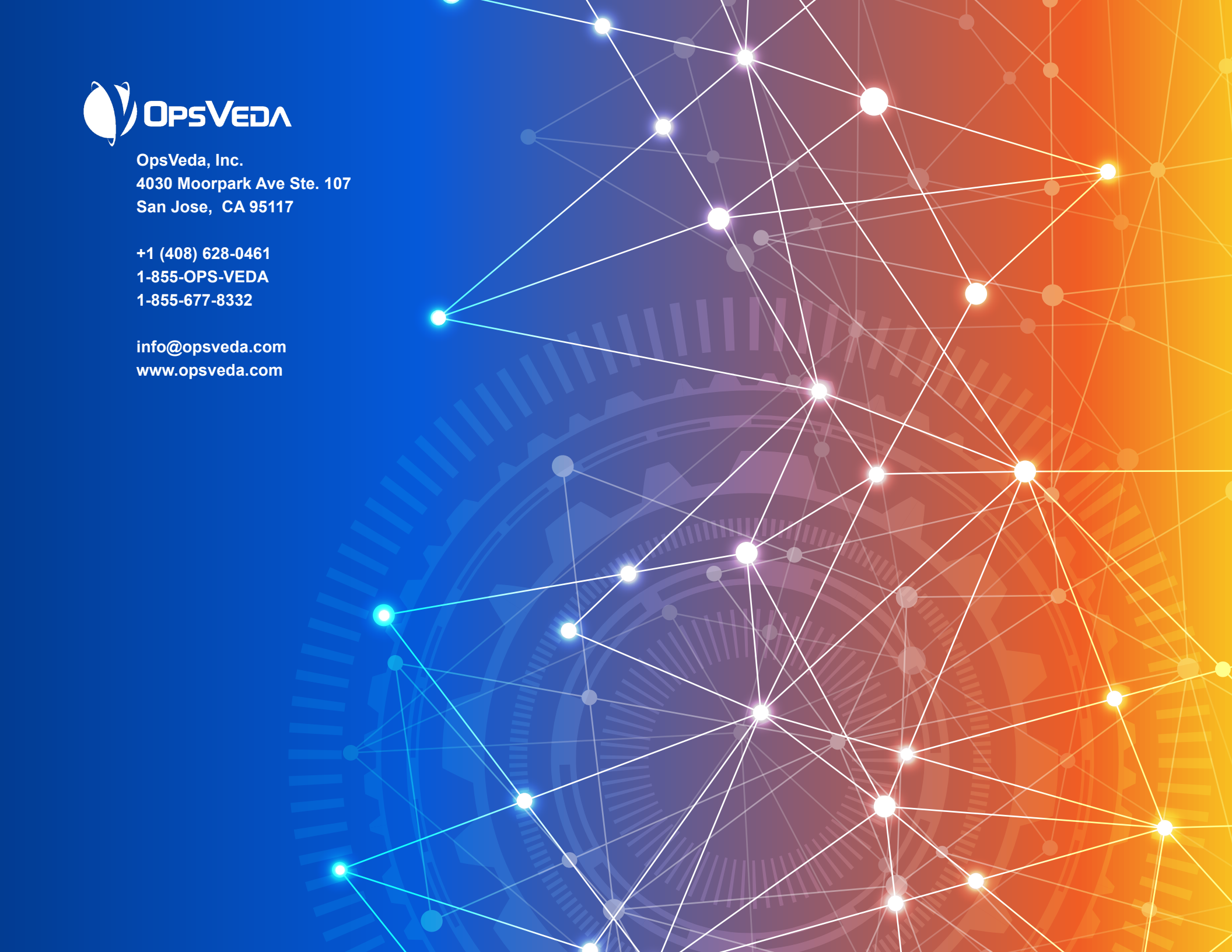
More than ever before, winning companies are defined by their ability to recognize the strategic value of technology and their willingness to invest in that vision.

When an organization has end-to-end visibility of supply-chain events in real time, when decision-makers are proactively notified of incidents that require their attention and when data-driven insights are available to support sound decisions, then supply chains operate more efficiently.

If the C-suite is not aligned around that potential, then it's time to make that case. The COVID crisis has made it abundantly clear that efficient and resilient supply chains matter.

Companies need partners to help with appropriate technology that can inject new energy within the working of their supply-chains -- partners who can architect the vision, help make the case, and deliver an outcome-oriented solution. OpsVeda can be that partner for you.

OpsVeda leverages machine learning and other advanced analytic techniques to monitor your supply-chain in real-time, and provides specific quantity and value assessments relating to such events. If the COVID crisis has prompted you to take a fresh look at your supply-chain practices, we would like to talk to you about how we can help. Visit us at https://opsveda.com or contact us at info@opsveda.com to learn more.



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