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New rules for a new decade

A vision for smarter supply chain management

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By Karen Butner

The complexities of today's economic environment and ever-expanding global supply chains mandate new guidelines for peak performance. Volatile global market conditions and customer demand variability require optimal supply chain configurations to synchronize supply and demand. But lack of visibility into the myriad information sources inhibits supply chain response to these unpredictable swings. Those companies looking to outperform their peers in the hyper-competitive marketplace will need to adopt new guidelines to restore supply chain stability and create enterprise value.

Today's new economic environment is increasingly more volatile, complex and structurally different than in years past, and in few places is this more apparent than in the movement of goods and services.

To ascertain the depth to which today's uncertain environment impacts the global supply chain – what has been called the "lifeblood of economic and social progress" – the IBM Institute for Business Value surveyed 664 supply chain management executives in 29 countries around the world.[1] What we discovered is that complexity exacerbates the host of challenges these executives must manage on a daily basis. Our findings, in fact, mirror in large part those of the 2010 IBM Global CEO study, in which top executives identified complexity as among the top organizational challenges they will face in coming years.[2]

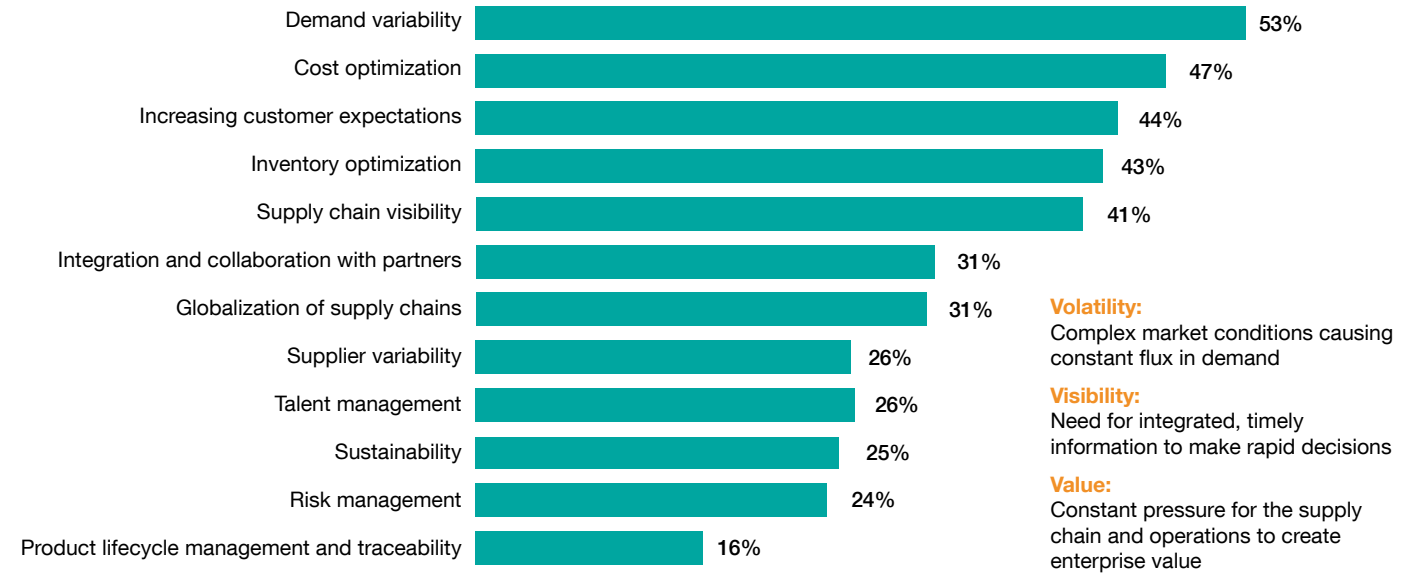
Global economic turmoil and uncertainty underlie the most significant challenges supply chain management executives identified in our study. Chief among these challenges are:

Volatility: Fluctuation in customer demand has been the leading challenge confronted by supply chain executives. Added to demand variances are increasing customer requirements for sustainable products and services, as well as heightened expectations for responsiveness, uncompromising quality and low cost.

At the same time, though, supply chain managers are encountering poor quality and reliability performance from suppliers, which, along with logistics constraints and bottlenecks, hampers delivery performance and customer service levels. And, as more companies continue to globalize their operations and enter emerging markets, these issues may have no quick solution, as operations will become increasingly dependent upon a growing number of customers, suppliers, regulators and markets.

Visibility: As the number of supply chain partners increases, the need for accurate, time-sensitive information becomes more acute. But lack of collaboration and integration between supply chain and product development partners continues to be a major concern. Product lifecycle traceability in consumer products, pharmaceuticals and other industries is a growing requirement. Yet, despite continued technological enhancements, lack of visibility to worldwide, timely information to make in-stream decisions remains a significant issue. The bottom line is that the requirements for increased visibility require the dexterity to make fast decisions in response to constantly changing market conditions.

Value: There is, and seemingly always has been, constant pressure for supply chain management and operations to create enterprise value. End-to-end supply chain cost and pipeline inventory optimization are predominant challenges, as well as the means for protecting margin and decreasing working capital. Securing and deploying the right talent and skills for global operations remains a critical concern. The talent vacuum is most acutely felt in emerging markets, with nearly nine out of ten executives citing this as a challenge. The business risks associated with insufficient leadership talent is exposed in decreased cost efficiencies, inventory deployment, and in managing regional and local operations with partners. Managing risks and disruptions with global partners at each node is increasingly important. As supply chains become more complex and interdependent, managers must find a way to offset growing complexity with increased flexibility.



Source: IBM Institute for Business Value.

Figure 1: **Supply chain challenges expose volatility, driving a need for visibility to create value.**

New rules to optimize supply chain performance

Overcoming the often-daunting obstacles that complexity and uncertainly introduce into the constant and seemingly relentless challenges of managing the supply chain will require three new rules:

1. ***Know the customer as well as yourself. Smooth volatility with predictive demand.***
   Predict demand and be in a position to react to demand variability with rapid response and allocation of all global resources.
2. ***See what others do not. Unveil visibility with collaborative insight.***
   Collaborate with visibility to events, with suppliers, service providers and customers in an open, action-oriented environment.
3. ***Exploit global efficiencies. Enhance value with dynamic optimization.***
   Optimize pipeline inventory, the global supply chain network and cost structures. Create cost-efficient sustainable products and practices while hedging risks with partners.

Visionaries employ enhanced supply chain visibility, collaboration and analytics to manage increased variability in demand.

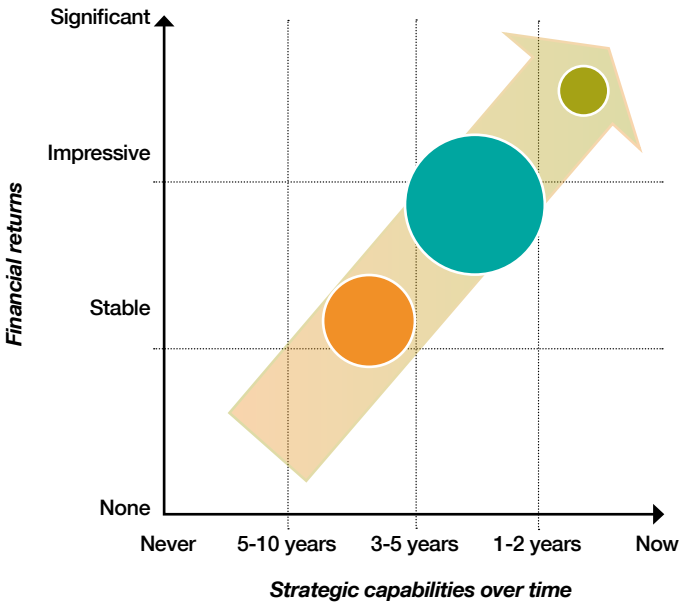
Investment in new rules varies according to strategy

Depending upon the strategic initiatives they have in place to build the capabilities outlined by our "new rules," as well as their timetables for implementing them, we've segmented the 664 supply chain organizations that participated in our survey into three categories: Operators, Planners and Visionaries (see Figure 2).

Operators: Representing 187 companies, Operators' strategies reflect "back to the basics" with investments in warehouse management, transportation management, manufacturing execution systems and data management. They concentrate on cost reduction initiatives, process improvements and information linkages with key suppliers and logistics providers.

Planners: Planners represented the largest group, 417, across a wide range of industries, geographies and company sizes. Their strategies and initiatives characterize planning (network analysis, enterprise sales and operations planning (S&OP), partner integration, performance scorecards) and operational efficiencies (outsourcing non-core functions, cost containment/reduction programs and inventory optimization at critical control points).

Visionaries: Only 60 companies fall into this elite group, representing high technology/electronics, telecommunications, consumer products, life sciences/pharmaceuticals, retail and industrial manufacturing. These enterprises operate in multiple regions of the world, with well over half having sales of more than US$10 billion. Their focused strategies and initiatives include supply chain visibility with partner collaboration, business intelligence and analytics, risk management, optimization of networks, cost structures and inventory, and customer demand management with networked S&OP.



Visionaries
- Predict demand and immediately respond across their networks
- Use business intelligence and analytics
- Collaborate with supply chain partners
- Optimize inventory, cost and their global network
- Utilize variable cost structures

Planners
- Employ enterprise S&OP
- Focus on cost reduction/containment
- Enhance visibility to key partners with dashboards
- Use network distribution planning

Operators
- Use rudimentary planning
- Emphasize cost reduction/containment
- Employ fixed structures/processes
- Focus on product flow with little integration

Source: IBM Institute for Business Value.

Figure 2: **Visionaries and planners are building strategic, smarter supply chain capabilities.**

Visionaries also enjoy enhanced return on their efforts and investments. Based on our analysis, these enterprises experience higher return on invested capital and higher revenue growth performance than the others (see page 13).

New rule #1: Know the customer as well as yourself. Smooth volatility with predictive demand.

From interviews conducted in our CEO study, we learned that 69 percent of top executives view volatility in the new economic environment as their largest concern.[3] When CEOs speak of volatility they refer to deeper/faster processing cycles, such as order to cash and procure to pay. Volatility has been a serious challenge in the past several years for supply chain executives, as well.

Responding to volatility in market conditions, and the resulting customer demand patterns, has proved to be the biggest challenge for supply chain executives and, not surprisingly, a key investment area. Still feeling the repercussions of the worst economic downturn in decades, many companies are currently focused on stabilizing their businesses against this volatility.

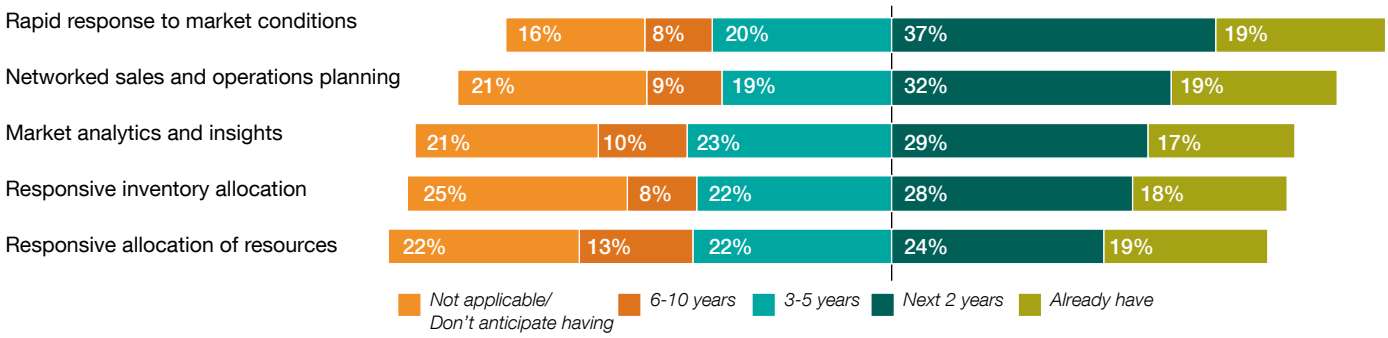
Even though surveyed executives rated demand variability and changing customer expectations as their two biggest challenges – ahead of even cost containment – they are responding to these impediments in different ways. Some, such as operators, are hunkered down, focused on operational improvement and a return to "business as usual." Operators are doing rudimentary

planning (sales forecast, production and supply plans), but with little-to-no consensus planning. A consensus plan is a single agreed-upon operational plan, which is developed by product development, sales and marketing, finance and supply chain executives.

Planners, on the other hand, realize the primary objective of the S&OP process is to create a single consensus plan, translated into financial objectives, that is executed across the entire organization. They are setting up and positioning for growth through globalization and customer alignment in international and emerging markets and are fine-tuning their distribution networks and enterprise S&OP processes.

Visionaries focus on intelligent network planning.

Visionaries carry these practices even further. They are moving beyond enterprise planning and are focusing on intelligent network planning. Visionaries are attacking marketing volatility with analytical intelligence for supply/demand synchronization and resource allocation (see Figure 3).



Source: IBM Institute for Business Value.

Figure 3: **Predictive demand intelligence can enable rapid response to constantly changing market conditions.**

Top strategic capabilities for visionaries include:

- Rapid response to changes in market conditions and demand variability. Networked Sales & Operations Planning linked to actual demand signals (point-of-sale [POS], orders, continuous replenishment).
- Use of market analytics and customer collaboration to predict demand.
- In-process or in-stream reallocation of inventory in response to demand variation: resupply, redistribute, reroute.
- Responsive allocation of all resources: human, assets, supply.

Visionaries are designing strategies that enable them to rapidly respond to constant changes in market conditions and demand variability. In this quest, Visionary leaders are directing their investments toward demand management/forecasting, business intelligence and analytics, S&OP planning and customer collaboration.

To better synchronize supply and demand actions, notifications and signals, Visionaries are improving demand management and forecasting by taking S&OP beyond the "four walls" of the enterprise. Not only are they building consensus from sales and marketing through operations, integrating sales statistics with operational planning, but they are moving toward networked S&OP. They are sharing forecasts, production, supply and replenishment plans with key suppliers and service providers to help make sure that all are on the same page. They have increased their emphasis on getting customer and channel input into the S&OP process, reinvigorating their efforts to refine and align plan versus actual with market analytics and insights and actual customer demand information.

This intricate synchronization of supply and demand requires intelligence across all of the supply chain functions and partners to bring products to market – while, at the same time, meeting more demanding customer requirements. Visionary leaders are investing significantly more in advanced analytics and market intelligence to support customer collaboration (76 percent) than other companies (52 percent). Visionaries are collaborating with customers for true demand-driven S&OP, while making adjustments based upon real-time signals for synchronization. They are using market intelligence, advanced analytics and varied customer communications tactics to better predict demand.

Then, based upon this predictive demand, they are making in-stream corrective actions, reallocating inventories, making supply and resource decisions mid-stream and even redistributing in-transit products. For example, a shipment may be rerouted because a store is nearing stock-out levels of an advertised promotion. Customer replenishment, vendor-managed inventory and other tactics ensure that the right products are where they should be, when they should be. Those who are following a predictive and demand-driven model include customer considerations, interaction and performance criteria in all of their supply chain activities.

A predictive, demand-driven supply chain model smoothes volatility with optimal product positioning.

Case Study avarto:
Predictive demand and replenishment for entertainment media

The fast-moving entertainment media market requires a responsive supply chain – capable of capturing all movement of goods while automatically maintaining appropriate replenishment levels. avarto digital services is challenged to have more timely, accurate information on its global flow of goods for efficiency, risk reduction and rapid reaction to changing demands and market requirements. avarto digital services, a division of Bertelsmann AG, handles all inventory management flows on behalf of its customers, from order management and procurement, to distribution and finance. The entertainment services division manages the distribution of entertainment media.

So how does avarto overcome these challenges? The company has implemented retail inventory management (r.i.m.), which responds rapidly, automatically and according to demand signals, managing replenishments based on sales variations in stores. Top media titles and promotions are identified and sufficient stocks ensured to meet demand, while a lower priority is placed on slower moving titles. The system integrates financial considerations (retail outlet credit), marketing campaign data and predictive product lifecycle sales. Business intelligence, with advanced analytics consolidated across different data sources, provides a wide range of analysis and evaluation capabilities.

Business benefits include lower inventory costs, rapid availability of reliable and detailed POS data, fast response to shifts in market demand, and flexible analyses for tactical and strategic decision making. But the bottom line is: retail vendor inventory management with predictive demand enabled by business intelligence equates to no more empty shelves and missed sales.

"Our leading position in the logistics services market is based to a great extent on the retail inventory management capabilities." [4]

Jochen Bremshey,
Vice President
Entertainment Services

New rule #2:
See what others don't. Unveil visibility with collaborative insight.

Supply chain visibility was the leading challenge identified in the 2009 IBM Chief Supply Chain Officer Study and continues to be a major concern today, as companies seek agility and responsiveness in their global operations.[5] Although supplanted by demand variability in our latest survey, visibility, integration and collaboration with network partners still demand the attention of supply chain executives.

At a time when the free flow of information is readily available to most of the world through the Internet, supply chain managers still struggle with getting accurate and timely information to run their global operations. Effectively capturing, managing, and analyzing information – and collaborating with global partners to make real-time decisions – are major concerns and require substantial effort.

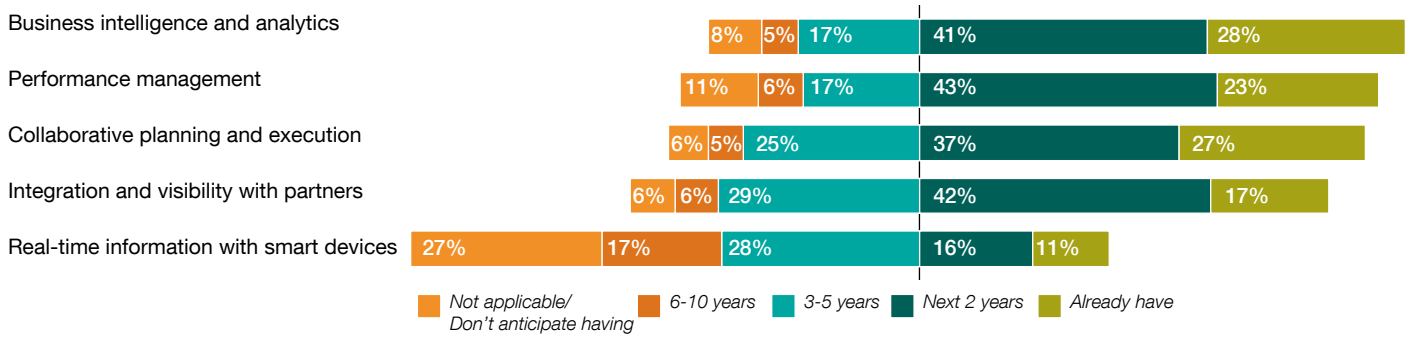
Executives are at different points in building smarter collaborative visibility capabilities (see Figure 4). Operators are still struggling with transactional level exchanges and breaking down the silos among supply chain functions within the enterprise. In sharing information with their supply chain partners, they rely primarily on electronic data interchange (EDI) and are working through standardization and data management approaches to make sense of the information. Planners have taken things a step forward with integration. They are integrating their strategies, plans and operational capabilities with visibility, both across functions and business units within the enterprise. They are building more integrated visibility capabilities with key partners (suppliers, service providers, contract manufacturers and customers) that are focused primarily on supply chain planning and logistics functions. They are implementing dashboards and scorecards to better monitor on-going performance against targets and manage exceptions and disruptions.

But once again, the Visionary leaders are pushing ahead (see Figure 4). They are using collaboration among their network partners with business intelligence to make collective and fast decisions.

Their top strategic capabilities include:

- Use of business intelligence and analytics on key control point indicators (forecasts versus orders, schedules versus production capability, inventory in transit, shipment status).
- Performance management, dashboards and alert notification for exception management.
- Collaborative planning and execution with partners
- Resourceful integration and visibility across the supply chain (internal & external)
- Real-time information generated by "smart" devices and objects (RFID, sensors, actuators).

Visionary leaders are using business intelligence and advanced analytics to analyze, monitor and detect changes, from the highest priority events to the most minute transaction, that influence customer service. From adjustments in forecasts due to real-time point-of-sales or actual orders, to production schedule adjustments from a supplier, to in-transit shipment status from a carrier, they are aware and reacting quickly.



Source: IBM Institute for Business Value.

Figure 4: **Visionary leaders use business intelligence, performance management and open collaboration to unveil visibility.**

Performance management and event monitoring includes evaluating thresholds of tolerance, responding to business rules with either corrective actions automatically or with alerts for human intervention. Visionary leaders are integrating and synchronizing end-to-end information among all parties, bringing together pertinent data on events to monitor activities and performance to plan. They are implementing dashboards, in multi-media, on multi-devices, to proactively manage their supply chains. They are taking "sense and respond" to greater levels of "predict and act." For example, an automated replenishment signal from a store shelf predicts a potential out-of-stock situation. Inventory balances are automatically checked, as are the business rules associated with this product for this customer. An automated transaction is generated and transmitted to the distribution center to ship product immediately. No human intervention is required.

Visionaries are creating "virtual command centers" to fuse real-time information, event processing and advanced analytic technologies. Their extensive connectivity enables the entirety of their supply chain network to plan and execute decisions collaboratively. They are aggregating or segmenting information for trend analysis, automating business rules and recommending actions based on performance criteria.

And finally, they are capturing real-time information to proactively monitor product and service flows using smart devices (RFID, GPS, sensors and actuators). Although this capability may be later on their list of priorities, those endeavoring to use objects, versus labor-based tracking and monitoring, are realizing the benefits. As product lifecycle traceability in many industries is becoming a major concern, the use of smart devices is likely to become more prevalent for tagging products wherever they are, as well as the containers and modes that are transporting them.

Case Study: BMW Group:

Effective inventory management has become critical to many companies as they strive to improve their customer service, cash flow and profit margins – while meeting the challenges of global competition, product proliferation, shorter lifecycles and demand uncertainty. Despite the growing integration of enterprise resource planning (ERP) systems, just-in-time supply and other forecasting techniques, many companies do not have visibility, and continue to carry too much inventory while never achieving their desired service levels.

BMW's central logistics operation in Dingolfing, Germany, is responsible for the inbound and outbound control of materials, quality management and overall logistical and commercial control for the company. Around 1,200 employees handle approximately 45,000 order lines daily, are responsible for 1,900 suppliers and 270,000 parts. BMW sought a standardized solution for inventory optimization of spare parts. Goals included standardization of business processes, higher visibility of the order and inventory situation across all distribution stages, and optimization of the distribution network.

The solution –- an advanced inventory optimization capability for the entire BMW parts sales organization. BMW implemented SAP software components (R/3, APO and EWM) augmented with DIOS, an advanced inventory optimization engine. Data from multiple sources is analyzed using advanced mathematics, enabling dynamic inventory planning using highly complex, individually configurable algorithms. A powerful "what if" analyzer allows quick and easy determination of the impact that changes to service levels, supplier lead-times or lot sizes, for example, might have on costs, budget and inventory levels.[6]

New rule #3:
Exploit global efficiencies. Enhance value with dynamic optimization.

Supply chain management isn't just about aligning supply and demand. In the end, it has to be about developing and executing the strategies to achieve the company's financial objectives. Executives are under constant pressure for supply chain operations to create enterprise value. Each interaction in the supply chain network represents an opportunity to perform more efficiently and more productively.

From our study, we learned that, overall, companies are focused on bringing value through using enabling technologies to manage costs, inventory, risks and talent. Operators tend to have fixed cost structures and focus primarily on the core supply chain functions of manufacturing, transportation and distribution. As their category name implies, they are operationally (versus planning) oriented, seeking cost efficiencies by enabling and fine-tuning these core processes.

Planners are developing more variable cost structures. They outsource their non-core functions to take advantage of logistics service providers' and contract manufacturers' assets, skills, technologies and global footprint capabilities. With outsourcing, they are distributing or sharing the inherent risk of market volatility and demand variability by being in a better position to ramp up or down according to current conditions. They routinely evaluate their distribution network for efficiencies in outbound distribution and transportation flows. Also, they optimize pipeline inventory at critical points, such as inbound supply logistics.

Creating enterprise value is an increasingly important focus of smarter supply chain management.

But the visionaries continue to lead the charge (see Figure 5). Visionary leaders' top strategic and smarter capabilities include:

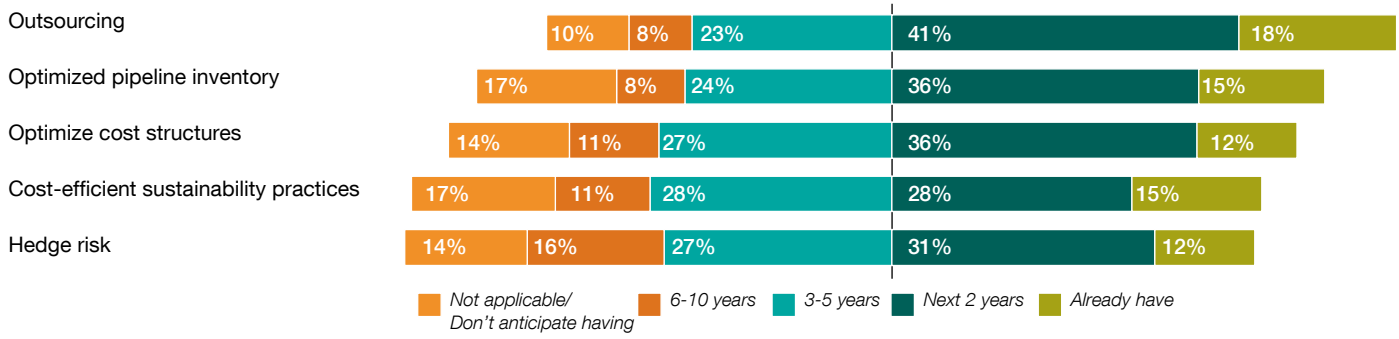
- Extensive outsourcing of non-differentiated functions. Visionaries take advantage of global capabilities, skills and cost structures and share risks across the extended network.
- Optimized pipeline inventory. Inventory is kept at ideal levels throughout the supply chain.
- Efficient cost structures. Visionaries employ variable costs structures that fluctuate in direct synchronization with demand variability. Integrated, balanced, evaluation of constraints helps reduce/contain costs while maintaining customer service levels.
- Cost-efficient sustainability practices. They use models, analyzers and optimizers of cost and service levels, while evaluating the trade-offs of the carbon footprint, energy, water usage. Product design includes environmental considerations such as recycling and after-life disposal.
- Hedged risks. Visionaries use inclusive risk management policies and programs that are adjusted for the probability of an event occurring. To facilitate immediate response, mitigation strategies are in place and known by all.

Visionary leaders are investing significantly to optimize their global networks, inventory positioning, and overall cost structures and processes. Like Planners, they are replacing fixed cost structures with variable cost structures, partnering and outsourcing to benefit from flexibility, scale, skills and expertise outside the organization. They are using everything from simulation models to test-market new product introductions, to scenario planning and modeling to evaluate the trade-offs of cost with other constraints.

Inventory and network optimization are the next categories of strategic capabilities they are building and investing in. Inventories are being evaluated aggressively at all phases, from earth (raw material), to consumption, to afterlife. They are using analytics and modeling to incessantly perfect inventory position and levels. Network optimization is taking on a new dimension in several ways. Historically concentrated on the distribution network, now many are including strategic sourcing considerations in their network designs.

Visionaries are also modeling their networks with sustainability in mind, including carbon management, water management, energy usage and waste management. They are doing so to create more cost-efficient sustainable practices.

And lastly they are hedging risk. They are developing optimal networks in consideration of compliance strategies and practices with suppliers, service providers and other stakeholders (regulatory and financial). They are incorporating risk strategies and mitigation practices end-to-end across all supply chain functions with an emphasis on logistics. The most advanced are using probability-adjusted risk assessments, modeling and scenario simulations to adjust and optimize inventory for risk avoidance considerations.



Source: IBM Institute for Business Value.

Figure 5: **Visionary leaders use variable cost structures and optimized processes to enhance value.**

From our analysis, we learned that visionary leaders are enhancing value through dynamic optimization. Dynamic optimization is the notion of pervasive evaluation, continuous modeling and refinement to achieve the best possible outcome of the full network. It's applying optimization modeling techniques to all flows – product, information, decision and financial – continuously and simultaneously. Some companies, like COSCO (see case study), are also adding sustainability practices to this equation.

Visionaries enjoy peak performance

As we reviewed the new rules for this new decade, we evidenced that the elite group of visionary leaders are building advanced capabilities. They are – and have been – investing in developing these capabilities and are looking to deliver results in the short-term. Planners are close behind and investing in similar, though perhaps not so far-reaching, visions and strategies.

Case Study:
COSCO leverages supply chain insights to keep its network in balance.

Shipping giant China Ocean Shipping Company (COSCO) needed a way to optimize the deployment of its sprawling distribution resources, while maintaining high service levels. COSCO had acquired other logistics service providers to strengthen its market position to manage the flow of goods from suppliers through its vast distribution network to end-points such as retailers. As profitability of logistics services is driven by efficiency, COSCO's transformation required configuring and optimizing the distribution network and shipping routes to reduce supply chain costs while still meeting customer service levels.

COSCO's ambitions were high. In addition to evaluating, cost, service, assets, schedules and other constraints, it decided to also include sustainability practices for carbon emissions.

The company used an analytical framework of advanced algorithms and business modeling techniques to provide data-driven guidance on all facets of its supply chain strategy. With integrated real-time data from COSCO's entire network, the modeling tools employed advanced algorithms to determine the location, flow of products and customer alignment within the company's complex network.

The results? With a reduction in distribution center facilities from 100 to 40 with no impact on service quality, COSCO significantly reduced its fixed asset and cost structure. Additionally, COSCO slashed logistics costs by 23 percent and achieved a 15 percent reduction in CO_2 emissions, preventing 100,000 tons of emissions each year.

"We see the work we've done to optimize our supply chain as a 'win-win' proposition. . . We are now stronger competitively and even better able to meet our goal of corporate social responsibility as we grow as a business."[7]

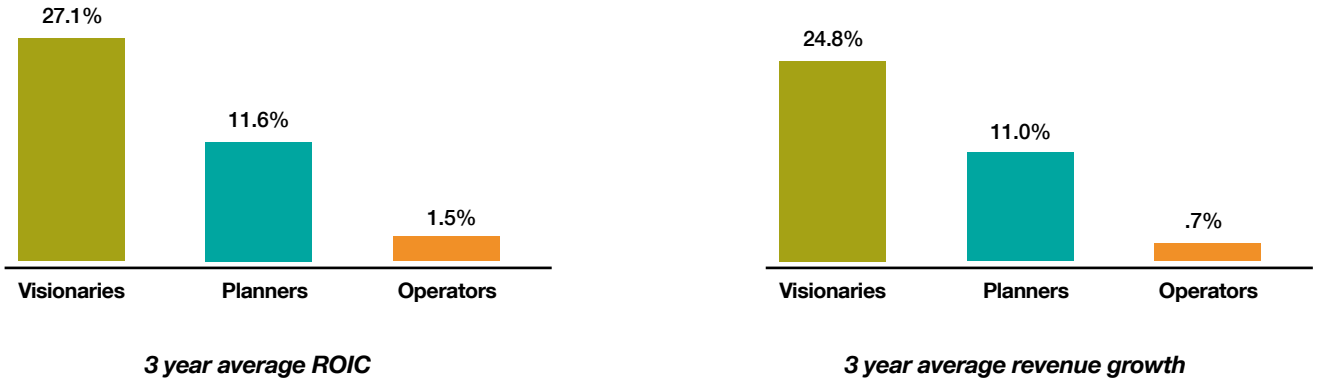
Dalei Huang,
Chief Supply Chain Officer, COSCO e-Logistics

The return on investment is substantial. Visionaries, by themselves, have set a lofty bar of performance for others to emulate. Three-year average return on invested capital (ROIC) for this leadership population averaged 27 percent.[8] But what is also astounding is the three-year average revenue growth rate of nearly 25 percent. Despite the struggles and pressures most have felt during the past several years of global economic recession, this elite group of companies continues to enjoy healthy growth rates as they build smarter supply chain capabilities. Although we realize that these companies represent different industries, product/service families and even geographies, what is consistent is that visionaries continue to substantially outperform others.

Visionaries have several characteristics in common:

- Tight integration across the entire business from customers, partners, suppliers and service providers
- Flexible, sustainable supply chain practices that optimally and strategically drive growth
- High-performing, globally integrated supply chains that return real value to the enterprise and investors.

They stress global integration as an important organizational capability – creating globally integrated operations, with access to global teams and talent, while recognizing the need to be intensively local when it comes to customer focus and local market requirements. One size does not fit all. They know that success on a global scale depends on serving distinct global markets with differentiated capabilities, regionally and locally.



Source: IBM Institute for Business Value analysis based on publicly-available data from Thomson Financial.

Figure 6: Visionaries outperform with outstanding return on invested capital and revenue growth.[9]

To achieve flexibility and speed, these companies are more likely to replace fixed cost with variable cost – partnering and outsourcing to benefit from flexibility, scale, skills and expertise outside the organization.

Visionaries use optimization, collaboration, integration and business insights significantly more than other companies. They are truly globally integrated. They apply mathematics and performance criteria to managing the functions surrounding product/service flows: planning, sourcing, procurement, logistics, distribution, transportation, product lifecycle management, asset management and, even, sustainable product design. This provides these organizations with the flexibility to scale up or down depending on the market environment – and global integration provides the platform to be able to quickly pursue new growth opportunities as they arise. Growth, we found, was at the heart for the need to drive increased operating flexibility.

Strategic direction for the new decade

Based on input from executives around the world, this research demonstrates the value of building smarter supply chains. We learned from the leaders that the motivation behind smarter operational practices is not just for efficiency, but also growth – having the foresight to generate innovative capabilities in the midst of extreme periods of volatility and complexities.

The performance of visionaries serves as a guideline for how and when to build smarter supply chains. They are following a planned and phased course of direction. They are investing in strategic initiatives to achieve business value (see Figure 7).

Smarter supply chain practices can drive both efficiency and growth.

By their example, they have revealed the three top strategies that must be continuously advanced to counter demand variability, increase supply chain visibility and enhance enterprise value:

1. Analytics applied to demand management with networked sales and operations planning
2. Collaborative network visibility with intelligent performance management
3. Variable and optimized cost structures, modeling inventory and talent deployment, adjusted for risk.

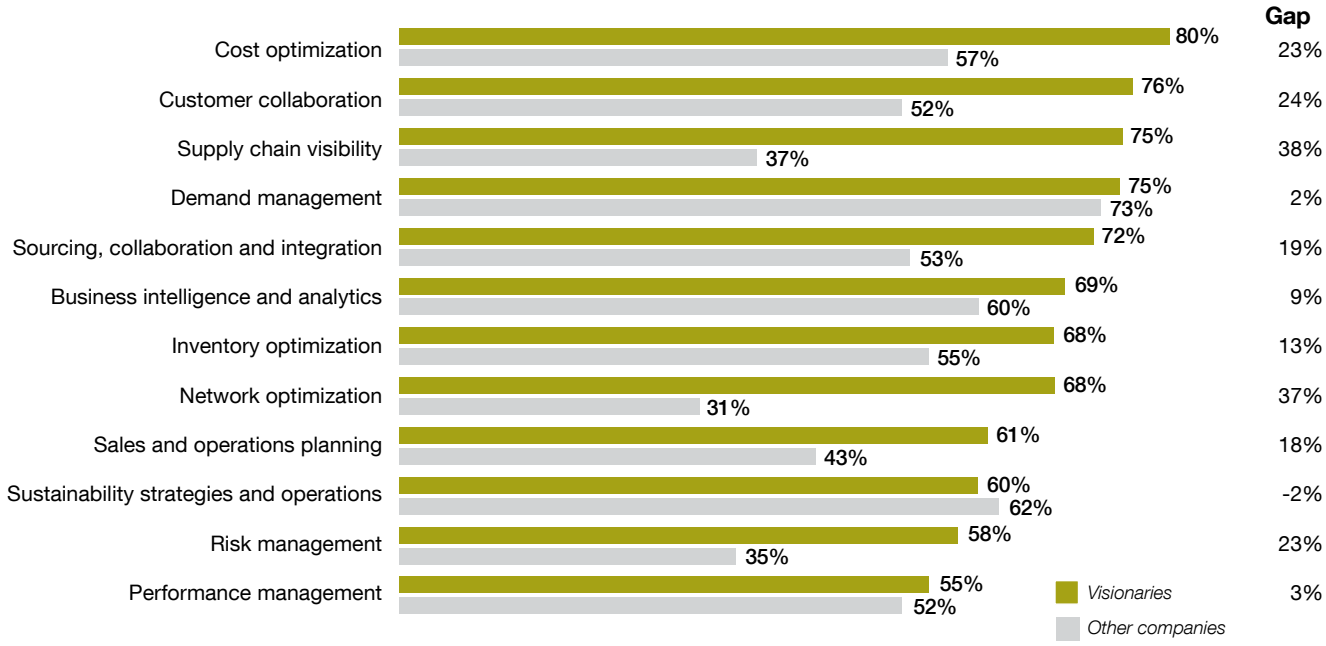
As supply chain executives plot their course for this next decade, they have much to consider. But most important, their strategies must not just be closely aligned with the enterprise strategies and objectives, but in lock step. As you plot your course, a few questions to consider include:

Smooth volatility with predictive demand

- With volatility and variability rising, do you have the analytical capabilities to determine the optimal global configuration for your supply chain?
- Are you using market intelligence and your customers' data to predict buying patterns with real-time adjustments to demand planning and execution?
- Are your customer relationships as strong as your supplier relationships? Which parts of your supply chain lack participation?

Unveil visibility with collaborative insight

- Do you have real-time visibility on key control point indicators, i.e., forecasts versus orders, schedules versus production capacity, inventory in transit, shipment status, etc.?
- Do you have integrated performance management of all events with real-time dashboards, key performance indicators (KPI's), event alerts, and performance thresholds? Do you closely collaborate with your supply chain partners?
- Is your performance measurement system centered on customer goal achievement? Is that aligned to global versus regional versus local strategies and tactics?



Source: IBM Institute for Business Value.

Figure 7: **The top 12 supply chain investment areas over the next three years.**

Enhance value with dynamic optimization

- What is your cost containment strategy? Do you have flexibility in your processes to match your current revenue and demand streams? Is your cost structure fixed or variable?
- Are you focusing on core capabilities? Are you outsourcing the right functions? Are you taking advantage of the global cost, capabilities, local regulatory knowledge and skills of partner companies?
- Do you dynamically allocate all of your resources: human, assets, supply, production?
- How is risk factored into your operational decision making and contingency planning? How do you measure the effectiveness of your risk management strategy?
- Do you have a sustainable strategy, reflected in product design and packaging, collaboration with customer initiatives and supplier compliance programs?

Today's global marketplace is going to become, if anything, even more competitive over the next few years. As enterprises seek to optimize their supply chains and respond to constant demand variance, adopting new rules to restore stability to supply chain operations is critical. Visionaries are already reaping the benefits of the new rules for the new decade. Are you prepared to join them?

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Study methodology

Our sample included 664 respondents who play significant supply chain leadership roles within their organizations. They represent 31 industries, 35 percent in the Americas, with 28 percent located in Asia Pacific and 30 percent in Europe, the Middle East and Africa.

In analyzing the viewpoints, we examined the differences between Visionaries – those whose companies are outperforming their industry peers in building smarter capabilities now (9 percent of the total sample), Planners – those who are building capabilities in the next two-to-four years, and Operators – those who are lagging behind. In particular, we looked at the response patterns of the most predictive, collaborative and dynamic companies – those that reported extensive implementations of smarter supply chain practices. We then used publicly available information to evaluate their key performance indicators.

To complement our survey analysis, we interviewed leaders of organizations that have already put smarter supply chain practices in place. A sample of their insights and experiences are reflected in the case studies that appear throughout this report.

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