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IS YOUR SUPPLY CHAIN PLANNING READY FOR DIGITAL?

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INVESTING IN NEW DIGITAL technologies to fix a broken supply chain is like buying expensive new golf clubs to fix a poor swing. Instead of taking the game to the next level, it's more likely to take an errant shot ten yards farther into the woods.

While digitization can undoubtedly help by improving the supply-chain-planning process, it is naïve to think that it will help the business if the basics are not in place; instead, it may only speed up bad decision making, worsening existing issues.

Organizations that want to improve their supply chain planning should instead move quickly to identify their capability gaps and then fill them using a series of no-regrets moves. In parallel, they can work to understand where selective investments in new planning technologies make the most sense.

The Promise of the Digital Supply Chain

Businesses rely on supply chain planning to steer the movement of goods, services, and information throughout the value

chain in an optimal way. Done well, it can also bring dramatic supply-side and demand-side benefits, including improved capacity utilization and superior customer service. (See Exhibit 1.)

Not surprisingly, many senior executives today are looking at new digital technologies to bolster their supply-chain-planning efforts and repair any problems in the supply chain. As most are undoubtedly aware, a variety of new digital solutions are making companies more responsive, reducing waste, and strengthening business results. Some of the latest technologies perform tasks such as aggregating internal and external data in real time—improving data availability and creating end-to-end transparency along the supply chain. Digital technologies will soon enable a truly dynamic planning process, utilizing algorithms, machine learning, and AI to balance supply with demand; automating demand forecasting, inventory management, and production scheduling; and running scenario modeling—all through a digital control tower.

EXHIBIT 1 | Superior Supply Chain Planning Brings Dramatic Benefits



SUPPLIER COLLABORATION

Supply-side benefits:

- More agile responses to changes in demand
- Improved capacity utilization
- Less need to expedite production to support new market plans
- Fewer write-offs of raw materials



CUSTOMER COLLABORATION

Demand-side benefits:

- Improved customer service
- Fewer discounts necessary
- Optimized finished-goods inventory, maximizing availability
- Improved response to market opportunities
- Improved availability of materials

Source: BCG analysis.

Back to Basics

As promising as they are, however, digital technologies will do little to improve supply chain planning if the fundamentals are not in place—whether in processes, organization, governance, data quality, performance metrics, or employee engagement. Whatever progress organizations may have made to date along the digitization path, therefore, we recommend they step back to evaluate the end-to-end maturity of their supply chain planning in all its relevant dimensions, uncover the gaps, and fill them before they make a bold move toward digital transformation. At the same time, they should consider implementing targeted digital solutions that deliver quick wins, balancing this short-term focus with their long-term focus on building the right foundations. (See the sidebar.)

Evaluating Maturity

Immature supply chain planning will reveal itself in a number of ways. Even when documented, the planning process may be ignored—or may vary widely among locations and business units. Planning meetings may be poorly attended and agree-

ments not considered binding. Worse, the process may not support the company's business activities, resulting in constant fire fighting as employees deal with one issue after another.

Companies may also discover general dissatisfaction among important commercial and supply chain stakeholders—including a feeling that time in planning sessions is wasted, no one owns the process, or the process doesn't provide enough of a window into decision making. Alternatively, companies may find a siloed mentality, with little coordination across functions. Functional staff may meet their performance targets, for example, but give little consideration to overall company performance or the impact of their work on the supply chain.

Running an end-to-end diagnostic will allow companies to assess the maturity of their supply chain planning, as well as its governance and organization, employee engagement, and metrics. As a result, they can determine exactly which elements are working well and which are underdeveloped—or out of sync. For example, even

INVESTING IN THE BASICS

A global specialty-food business was convinced that it had an effective supply-chain-planning process because it maintained good service levels and kept its customers happy. The company wanted to apply ERP-based digital technologies along the supply chain in order to grow the business without adding more employees. However, when it began to analyze the supply chain in preparation for its expansion, it soon discovered the only real reason its customer performance was strong: its employees were in constant crisis mode, performing heroics to get everything done. Not surprisingly, attendance at planning meetings was minimal and no one was working on the fundamentals. Worse, the employees were at the point of exhaustion and morale was declining.

Had the company attempted to introduce a new digital planning system, it might have made this situation even worse: with automated systems running on poorly defined business rules or inconsistent data, these systems would have recommended actions that might not make sense. People would have lost trust in the system's recommendations and fallen back into their old work-arounds or, worse, followed system outputs blindly, putting entire supply chains at risk.

In this case, investing in the basics—while selectively piloting digital tools and technologies—had to come first.

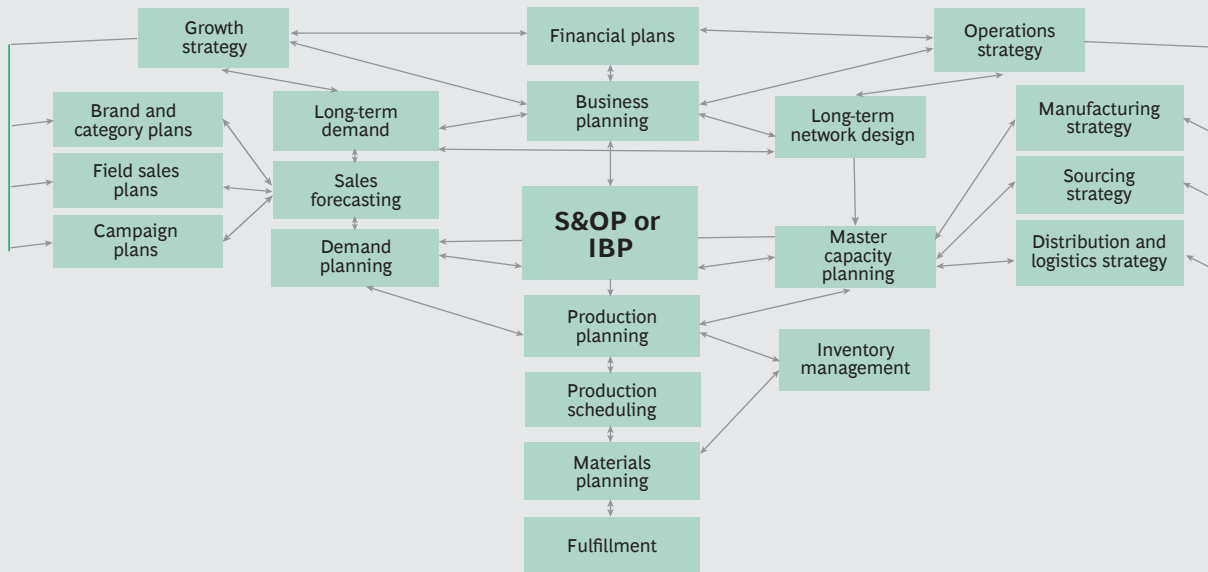
world-class demand planning will struggle to deliver results if paired with dysfunctional inventory management. (See Exhibit 2.)

Eight No-Regrets Moves

As a next step, companies should develop a detailed plan for raising any lagging elements to the appropriate level. They can't afford to stand still or hope for a digital solution to their problems. Instead, our experience tells us there are typically eight no-regrets moves on which companies should focus.

- **Obtain senior leadership commitment.** It is vital to build a common level of understanding on the executive team about the most important commercial and supply chain issues, their root causes, and the available—and appropriate—planning solutions. All too often, the sales and supply-chain-planning organizations pursue what they believe to be the right actions but don't coordinate those actions with the leadership. As a result, the business doesn't deliver the desired performance. Companies must therefore
- **ensure that senior management—including the CEO, country or divisional managers, and the heads of sales, finance, and the supply chain—is clearly committed to excellence in the supply-chain-planning process.**
- **Instill process discipline.** Companies must consistently adhere to their planning process, even if that process is imperfect, with employees recognizing its importance and working to iron out any defects. They must also invest adequate time in explaining the value the process delivers and the contribution required of each employee. They should clearly define roles and responsibilities and set expectations. For example, attendance at review meetings should be mandatory for all levels of staff, and participants should come prepared. In addition, attendees must focus on decisions being made during meetings and help to move the process forward. By enforcing these requirements, the business will develop individuals who trust the process, believe that it will deliver results, and are willing to work within it, rather

EXHIBIT 2 | An End-to-End Diagnostic Pinpoints Gaps in Supply Chain Planning



Stages of supply-chain-planning maturity

- Reactionary fire-fighting activities focused on preventing shortages
- A rudimentary process to balance demand and supply, with little consideration for profitability
- A single plan used by the business to balance demand and supply across the supply chain
- A demand-driven supply response, aligned with strategic priorities
- An end-to-end process that maximizes value across the enterprise and network through conscious organizational trade-offs

Source: BCG analysis.

Note: S&OP = sales and operations planning; IBP = integrated business planning.

than around it. Supply-chain-planning organizations will require strong leaders who can orchestrate the process from end to end and ensure robust, transparent decision making.

- **Break down silos.** Cross-functional engagement is essential, especially among the commercial, finance, and supply chain teams. Each function must contribute to and be engaged in the process, adjusting its own actions to the agreed-upon goals. In addition to defining all roles and responsibilities, therefore, companies should align functional metrics with overall process outcomes—ultimately linking individual pay to supply chain performance. They should also establish transparency across systems and locations by, for example, providing access to data on plant performance, line-level product assignments, the availability of materials, inventory levels, and other KPIs.
- **Make high-quality data available.** A robust planning process requires access to accurate, consistent, and timely data. While cleaning up master data is hardly a new topic, ways to approach this cleanup have changed over the past few years. Instead of manually going through thousands of data points, for example, companies can use automated data-cleaning tools that speed up the process significantly. They should combine their chosen approaches with a clearly defined master-data governance plan to ensure data consistency and quality. As the supply-chain-planning process matures, we expect more and more real-time data exchanges with customers and suppliers. In addition, companies won't just need to know their demand, supply, and inventory; they'll also need to closely link this information to their financial and marketing plans in order to align business targets and operational capabilities.

- **Engage with IT.** Companies should carefully review the way the supply chain and corporate IT work together, from both a business and a technology perspective. While IT objectives typically focus on maintaining cost-effective operations and managing system complexity, many of today's digital supply-chain-planning technologies require specific solutions that lie outside companies' more traditional enterprise resource planning systems. As a result, these technologies require a more open and flexible IT architecture—one that allows new software tools to connect to existing ERP systems in a simple and flexible way. In addition, transforming IT architecture is often a yearlong process; this means that future requirements must be addressed sooner, rather than later, if digital deployments are to be ramped up quickly once they become relevant.

The two functions must therefore come together to decide how they will orchestrate future requirements, from both the business and the technology perspective, if the company is to eventually feed novel business requirements into IT pipelines and architectures.

- **Thoughtfully select and implement digital tools.** Digital can bring tremendous opportunities, but only when the right tools are applied and in the right way. Companies should therefore focus on digital tools that will address obvious gaps in the current setup; in addition, they should be conscious of any existing prerequisites to success. For example, deploying an enhanced forecasting tool can improve both the accuracy of demand planning and the efficiency of supply planning. But if using the tool requires sales representatives to change the way they interact with supply change planners, this issue must be addressed beforehand.

Timing is also important. Selectively implementing digital tools early, when they can help the company learn about the

opportunities and requirements of these new technologies, can bring clear benefits. However, implementing full-scale digital solutions too quickly, without the basics in place, can be a risky move.

- **Establish a talent pipeline.** Looking to the future, high-functioning—and, eventually, digital—supply chain planning will require a new kind of talent. These employees will be familiar with new ways of working, including agile development processes and the need to be adaptable and analytical. Companies should therefore begin thinking as soon as possible about what it will mean to recruit, train, and retain this talent.

As a first step, they should start to identify capable internal talent. These employees will have the primary advantage of understanding the business, which can allow them to translate the company's business requirements into the necessary technology—and digital technologies into action.

Where there are gaps in expertise or capabilities, companies should begin to broaden their sources of future talent and the options for accessing it. The initial focus should be on attaining certain core capabilities, such as an understanding of advanced statistical approaches, rather than on finding specific solutions to, say, inventory optimization or transport-planning issues. Recruiting from innovative technology startups or partnering with universities can bring rigor and leading-edge technologies into the business and help it gain traction.

- **Prepare for a new way of working.** Before considering the implementation of any new digital technologies, companies should prepare the organization. For example, creating a pilot-refine-repeat approach to change will generate a good understanding of how well each solution is going to work and allow companies to get a rapid understanding of where the digital payoffs lie. In addition, successful pilots will be highly

beneficial for gaining traction and buy-in across the rest of the company. All too often, companies fail to achieve the full benefits of digital planning because employees remain entrenched in old ways of working. They should therefore pilot each change and roll it out in a thoughtful way. It's not just about saying, "Here's the new process binder; go do it." Management will need to break ingrained habits and reinforce new behaviors—despite the time and effort required. For example, if a company implements a new planning process and runs it monthly, it will probably take at least six months for

employees to become comfortable with the process and follow it instinctively.

DIGITAL TECHNOLOGIES ARE not a silver bullet for enhancing a company's supply-chain-planning capabilities. If the company understands its capabilities and gaps, however, piloting select digital technologies can be a way to help close those gaps before going all-in on new systems and processes. Doing so will help ensure that the potential impact of future technology investments is fully realized—and underpinned by robust, scalable, and adhered-to processes and capabilities.

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