

Dynamic Segmentation for a Dynamic World

Master demand complexity
via machine learning



Demand is a moving target. Your segmentation strategy needs to reflect that.

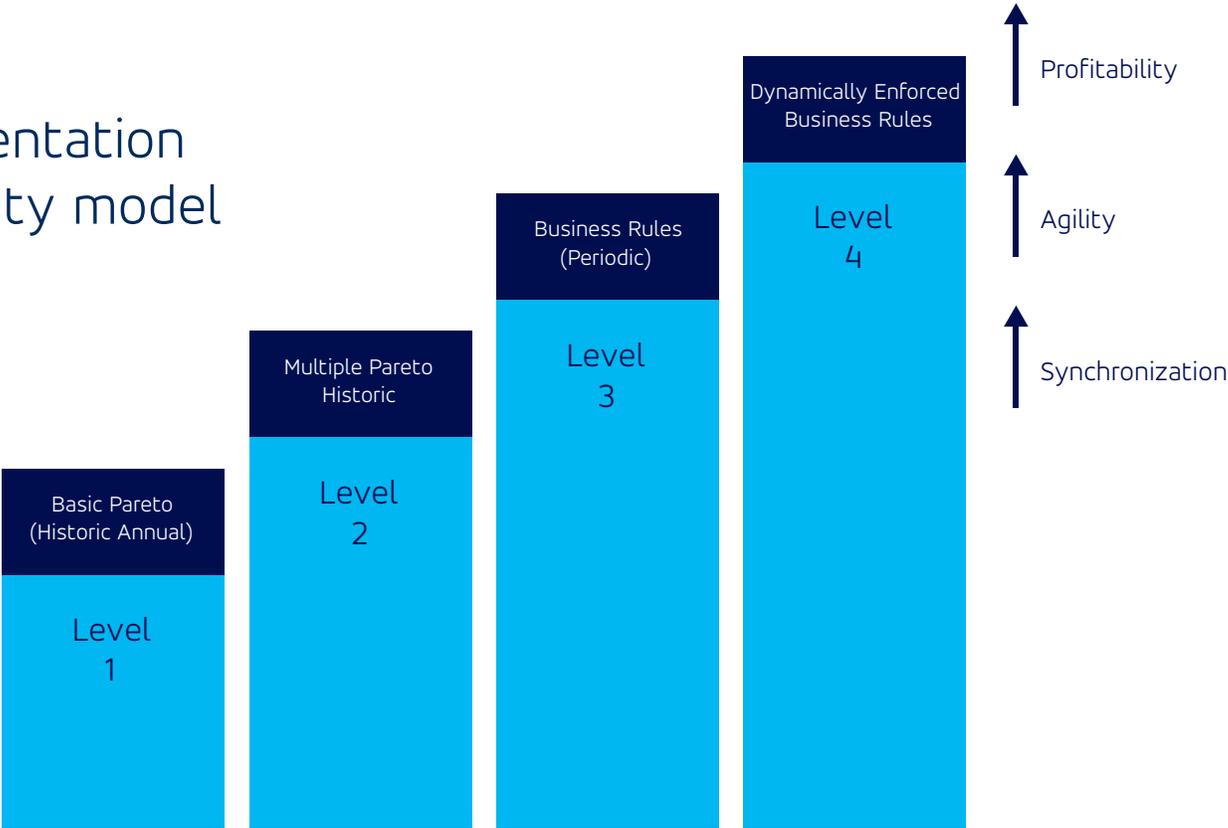
Market conditions have never been more volatile, making accurate and fast segmentation a key competitive differentiator. Now an advanced method of dynamic segmentation can help you master changing conditions via a fluid, autonomous segmentation capability that's based on machine learning (ML). The new age of dynamic segmentation is relevant to all manufacturing verticals, including industrial, automotive, high-tech and consumer packaged goods (CPG). In today's uncertain world, dynamic segmentation significantly contributes to bottom-line profitability and service differentiation.

If your business is operating at the lower levels of the Segmentation Maturity Model, then your supply chain is not driving maximum profitability. Chances

are, it is operating on a basic set of rules based on historic data, and even those business rules often give way to expediency at the expense of margin and higher-level business goals.

Segmentation has always had the potential to make a huge impact on an organization's profitability and agility. However, traditional segmentation strategies lacked the ability to change dynamically, because the underlying technology was lacking. That is no longer the case. With the emergence of Blue Yonder's ML-Powered Digital Fulfillment Platform, dynamic segmentation has come of age.

Segmentation maturity model



What is dynamic supply chain segmentation?

Supply chain segments are composed of a combination of channels, customers and products with similar demand and service-level characteristics. Profitably serving these segments means understanding the cost-to-serve and the customer value proposition, then configuring the supply chain optimally.

What's changed today is the dynamic nature of the marketplace, which means that segmentation strategies must be equally dynamic. The new age of segmentation is driven by fast-moving, intelligent business strategies that are aligned with both top-level corporate goals and the real-time realities of demand. Fueled by the powerful capabilities of machine learning to fast cloud computing, dynamic segmentation is the pivot point in the supply chain that enforces end-to-end policies, driving greater profitability, higher service levels and outstanding customer loyalty.

Now is the time to capitalize on the new age of dynamic segmentation!

There are powerful reasons why these enhanced capabilities are particularly relevant today.

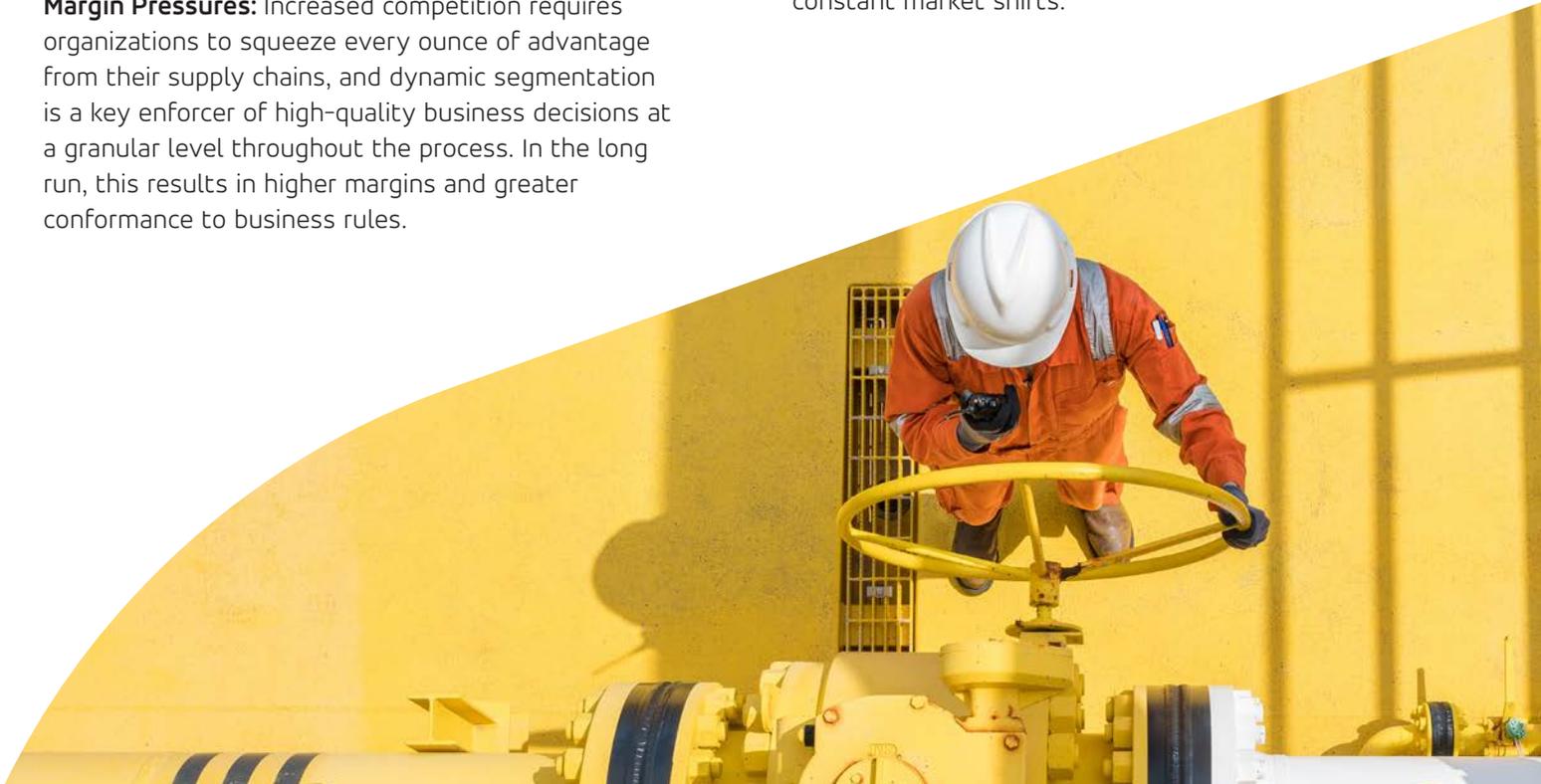
Margin Pressures: Increased competition requires organizations to squeeze every ounce of advantage from their supply chains, and dynamic segmentation is a key enforcer of high-quality business decisions at a granular level throughout the process. In the long run, this results in higher margins and greater conformance to business rules.

Demand Visibility: Globalization and demand uncertainty lead to unpredictability and supply chain complexity. By ensuring consistent business decision making while aligning the execution model to the needs of the segments, the overall supply chain is more adaptable and resilient.

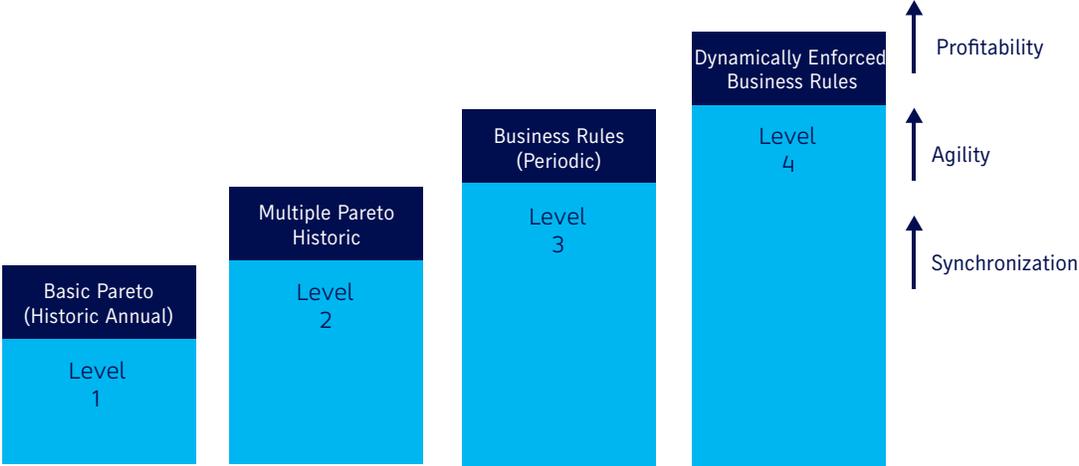
Rapid Product Introductions and Lifecycles: Today, a “star” product may reach end-of-life status within months. Commodity pricing or sourcing issues may also radically change the economics of a product. This means that segmentation can no longer be driven by periodic analysis, but instead must be driven by dynamic business policies to ensure profitable agility.

Digital Markets: Omni-channel challenges existing business models, requiring businesses to reconfigure their responses to meet these new market needs. Meanwhile, intelligent fulfillment capabilities connect demand with execution, all the way through the warehouse and transportation, and for some segments, through the process of managing returns. This end-to-end orchestration is the objective of today's profitable customer commerce.

Market Volatility: From natural disasters and geopolitical uncertainties to global pandemics, the past several years have delivered an unprecedented level of uncertainty. Enabled by artificial intelligence (AI), dynamic segmentation helps organizations recognize and react quickly to these constant market shifts.



Segmentation maturity model



	Level 1	Level 2	Level 3	Level 4
Dimensions	Single, e.g. revenue by customer	Double, e.g. customers vs. products	Multiple, including PLM information & margin	Dynamic, including PLM information & margin
Performance time horizon	Past	Past & present	Present & future	Present & future
Definition	Static	Static	Business rule based	Fully dynamic
Methods	Pareto charts, ABC analysis	2x2 grids, trend analysis	Multi-grid	Multi-grid, adjust automatically on the fly
Purpose/objective	Who are my customers?	Which are my stars, cash cows, and dog products? To whom do we sell these?	To identify where we do play vs. want to play. Define go-to-market strategy.	To take segmentation strategy into execution, steer the company on where we want to do business. Via machine learning, incorporate top-level goals with real-time demand data to define and autonomously execute a fluid, dynamic segmentation strategy.
Example	Defined by key accounts	Based on analysis of revenues and volumes by customer group	Strategy defined to gain market share, enter new markets or exit based on product lifecycle	Not everyone is the same; priority is protecting supply for key accounts while considering market strategy for each segment. Focus is on overall profitability. Dynamic segmentation enables supply chain strategies and operations to balance cost-to-serve with each segment's business value. To reflect today's volatile markets, this segmentation occurs continuously and automatically via machine learning.

Taking segmentation to the next level

Traditional segmentation is based on a simple Pareto analysis of a single or limited number of dimensions, often product or customer revenue. The analysis is typically made annually based on historic data; therefore, these business rules are usually out of date as soon as they are in operation. In fact, when it comes to deciding what orders to process next, even these business rules are often ignored in lieu of short-term expediency. The result is lower profitability over the long term, divergence from strategic goals and an inefficient imbalance in the supply chain.

In the new age of segmentation, multiple dimensions are necessary to model the complexities of the digital world. These dimensions may include margin, lifecycle stage from product lifecycle management (PLM) strategy, as well as product, production processes, revenue and channel; the exact configuration will depend on the business design.

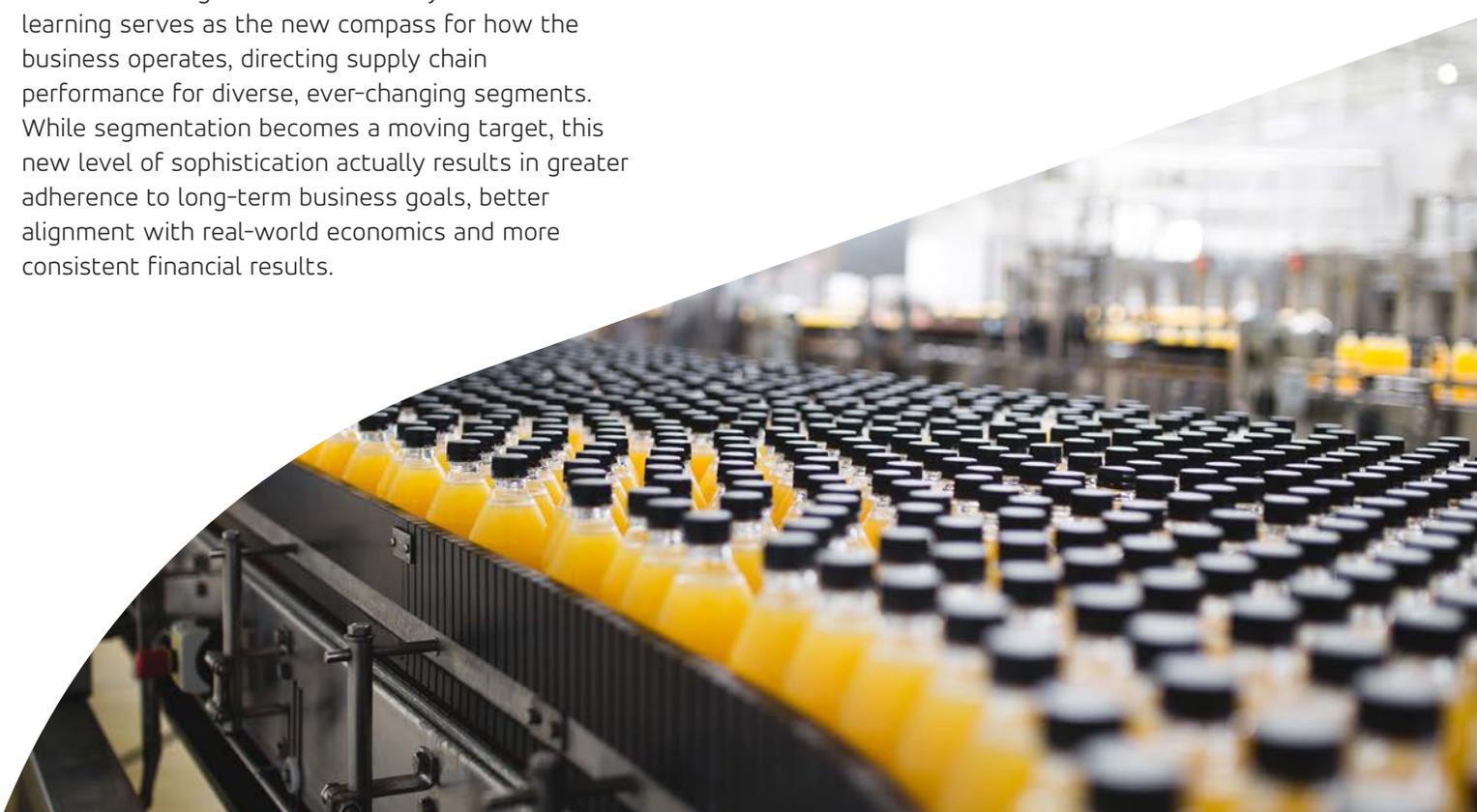
In addition, today's volatile business environment means that these characteristics are always changing. Because human cognition is insufficient to monitor all these dimensions in real-time and adjust the segmentation strategy, machine learning and autonomy are now competitive imperatives. Dynamic, autonomous segmentation driven by machine learning serves as the new compass for how the business operates, directing supply chain performance for diverse, ever-changing segments. While segmentation becomes a moving target, this new level of sophistication actually results in greater adherence to long-term business goals, better alignment with real-world economics and more consistent financial results.

In turn, this implies the need for process automation at this higher level of granularity.

Segmentation criteria is not updated annually, but instead is adjusted "automatically, at any time." Dynamic segmentation involves working with much higher granularity of time horizons; therefore, the supply chain reflects the world as it is today and be closer to the optimal state. When combined with profitability rules, this results in significantly improved margins.

All of this should ideally be managed in an in-memory architecture. This means that, should the unexpected happen, business-rules-oriented scenarios can be run ad hoc, and even contingencies can be optimized for margin.

In a seamless digital fulfillment platform, the entire journey is connected from end to end. This integrated approach, combined with machine learning and low latency feedback, results in high levels of agility and resilience, while driving the supply chain to support strategic business goals.



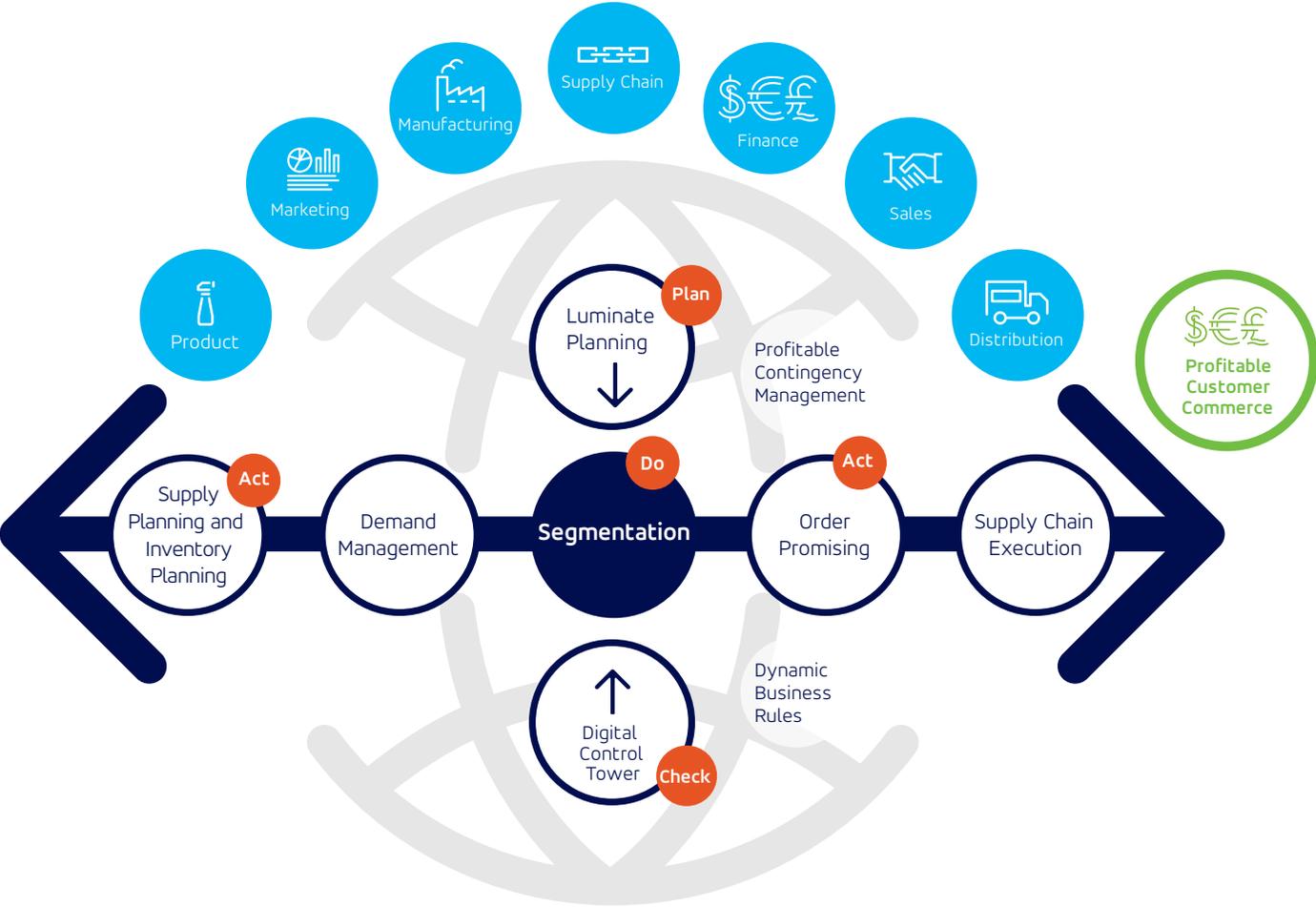
The enhanced role of dynamic segmentation

In a seamless supply chain, segmentation reflects and implements business policy, but it is not acting in isolation. Instead, it is driven from the top down, starting with corporate strategy, and bottom up, with criteria ripped straight from the market and enforced from end to end.

Manufacturing and distribution companies face an ever-widening range of customer demands. Market dynamics are changing faster than most organizations' ability to adjust segments and execute.

Understanding these changing customer demands and crafting attractive value propositions to serve them is becoming increasingly critical. Previous one-size-fits-all supply chain strategies cannot adequately or profitably achieve this goal.

Just as data changes every planning cycle and long-term configured segments become redundant, so too must segmentation adapt from a one-time activity. But traditional segmentation processes and tools require continuous monitoring, leading to inefficient allocation of inventory and less than optimal service levels.



To maintain an edge, companies must dynamically segment their supply chain strategies and operations to balance cost-to-serve with the value to the business for each segment. That is the recipe for today's high-performing supply chains.

Clearly, a significant challenge to consistently implementing business rules is the degree of uncertainty to which a supply chain is subject and the complexity that it must manage. This is why leading organizations are driving toward integrated business planning (IBP, or the most mature levels of the sales and operations planning, or S&OP process) to orchestrate their supply chains while creating collaborative environments.

S&OP and IBP

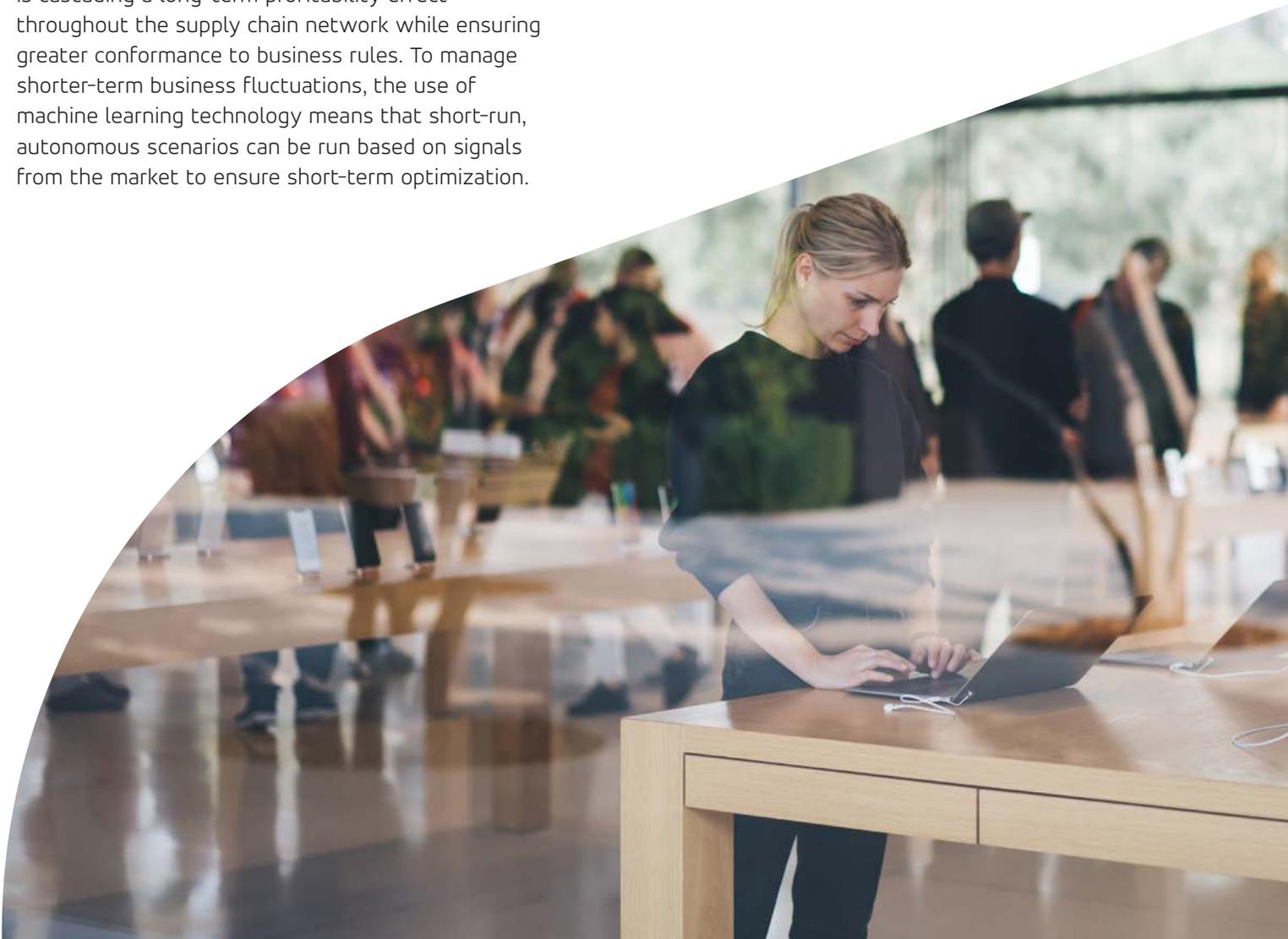
At the top level, segmentation is informed by business rules from IBP. In this respect the system is adding stability based on the long-term planning horizon of IBP. In turn, this means that segmentation is cascading a long-term profitability effect throughout the supply chain network while ensuring greater conformance to business rules. To manage shorter-term business fluctuations, the use of machine learning technology means that short-run, autonomous scenarios can be run based on signals from the market to ensure short-term optimization.

Control towers

Fueled by artificial intelligence and machine learning, Blue Yonder's market-leading control tower functionality comes in to play sharing the same in-memory technology as IBP. It is able to run scenarios and can automatically adjust the supply chain response to account for unforeseen issues and incidents.

Order promising

How often are orders taken and schedules re-arranged based on expediency rather than efficiency and profitability? Blue Yonder supply chains are engineered in a robust and repeatable process to ensure that the exception is not the everyday operating principle. Allocated available-to-promise technology will protect supply for an organization's most important customers/channels/markets while maintaining its flexibility to serve others as well.



Profitable, customized commerce

These charts illustrate a variety of issues that can be resolved and managed via a dynamic, autonomous supply chain segmentation process. In the past, analysts needed to manually capture and address these factors, but today customized segments are defined and executed by ML continuously and without human intervention.

Customer value proposition

A key part of the segmentation process is determining the customer value proposition. For example, an original equipment manufacturer (OEM) with a high downstream value-add will be less concerned with price, compared to lead time and availability, when satisfying a customer order. Alternatively, distributors have low differentiation and will need to focus on price and volume to support their low-cost models. Retailers (and manufacturers selling direct) are more likely to value flexibility in today's digital economy.

Strategic considerations

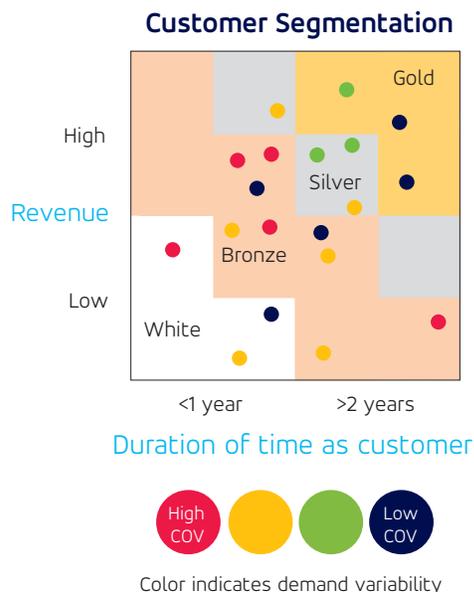
In the cost-to-serve model, the business is targeting market growth through the distributor channel, and so a high-volume/low-margin configuration will be prioritized. Conversely, the OEMs will face longer lead times, and the order promise to OEMs should reflect this.

Customer segmentation

Not all customers are created equal. In the diagram below, the "gold" category clients are established customers with high volumes. The color of the dot represents their demand variability.

Product dimension

The product dimension accounts for physical, financial and strategic product considerations. With today's accelerated product lifecycles, products can move from a "star" to a "dog" in short order (see Boston Box), making it important to employ segmentation policies that are open, dynamic and self-adjusting where needed.



Customer value proposition: Why do consumers buy from us?

Priority

■ High ■ Medium ■ Low



Factor	Distributors	OEM	Panel Builders	Retail
Lead time	Medium	High	Medium	Low
Availability	Medium	High	High	Medium
Flexibility	Low	Medium	Medium	High
Price	High	Low	Medium	Medium
Customization	Medium	Medium	High	Medium
Volume	High	Medium	Low	Medium

Cost to serve: What does it cost to deliver value to consumers?

Priority

■ High ■ Medium ■ Low



Factor	Distributors	OEM	Panel Builders	Retail
Strategic importance	High	Low	Medium	Medium
Margin realized	Low	High	High	Medium
Order lead time	High	Low	Medium	High
Forecast variability	Low	Medium	Medium	High
Sales volume	High	Low	Low	Low
Strategy	Grow	Retain	Profit	Exit

Product Dimension

Priority

■ High ■ Medium ■ Low



Factor	Line 1	Line 2	Line 3	Line 4
Volume	High	Low	Low	Medium
Revenue contribution	Low	High	Medium	Medium
Margin contribution	Low	Medium	Medium	Medium
Configuration	Medium	High	Medium	High
Lifecycle stage	Decline	Mature	Grow	New
Weight/size	Medium	Medium	Medium	High
Variety in product line	High	Low	Medium	Medium

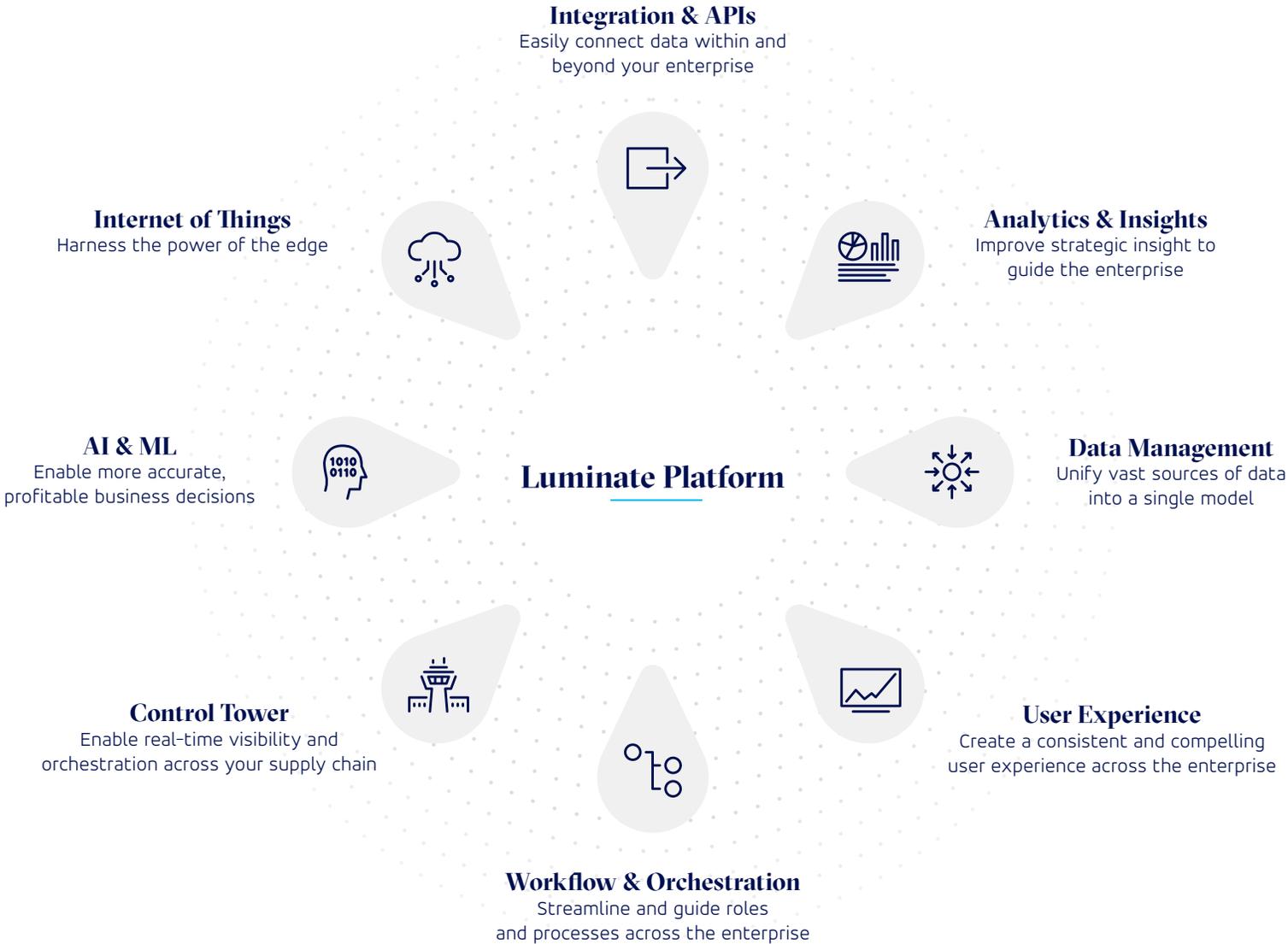
A seamless end-to-end digital commerce experience

Blue Yonder empowers world-leading companies through a seamless end-to-end commerce experience enabled through AI and ML, providing companies with the ability to predict, plan and fulfill demand through a modern, responsive and synchronized supply chain.

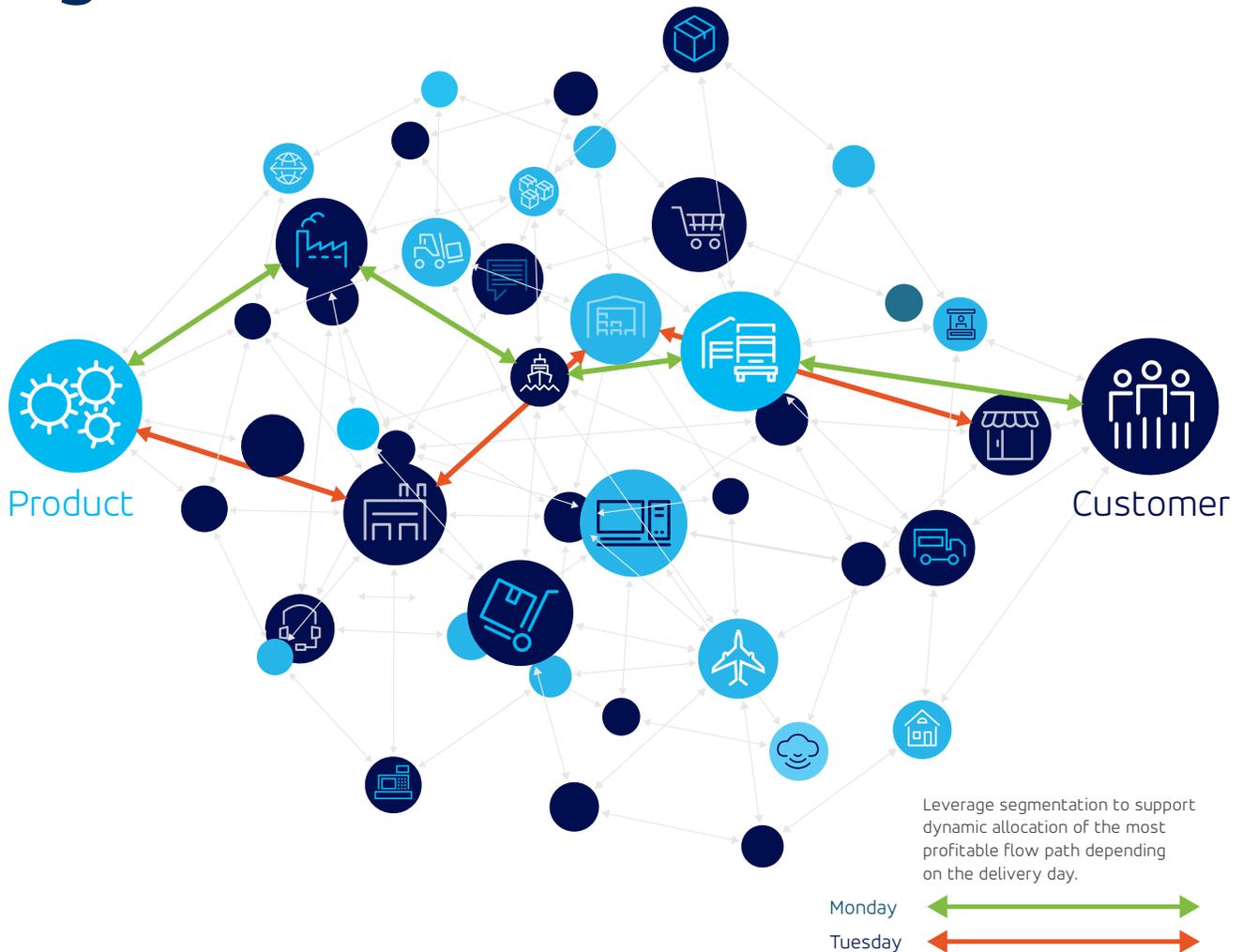
Disruption and market volatility are forcing manufacturers to look for opportunities to continue being leaders in their domain. With the Luminate Platform, they can optimize and automate business decisions, creating a more profitable supply chain while delivering seamless and superior customer

experiences. Dynamic segmentation is a critical component of this effort to drive customized supply chains, powered by ML and other advanced technologies.

Backed by Blue Yonder's artificial intelligence, machine learning and the world's #1 digital supply chain platform, Luminate, manufacturers can implement dynamic segmentation and other advanced practices that allow them to combine high service levels with high profitability.



Dynamic segmentation



Luminate Planning

Like today's markets, today's supply chains are highly diversified, with multiple inputs, outputs and connection points. The necessity to manage complexity and uncertainty in a digital environment requires a new approach. Luminate Planning from Blue Yonder turns your supply chain into a powerful, boundaryless closed loop that is more intelligent, responsive and agile to changing business conditions. Part of the Luminate Planning solution suite, Dynamic Segmentation provides differentiated service levels based on customer values and business parameters, while also developing distinct supply chain operations to meet specific market segments.

Luminate Logistics

Segmentation also has a key role to play across an integrated fulfillment process. Luminate Logistics helps manufacturers develop segmented logistics capabilities that are defined by multiple parameters and informed by top-level strategy. Blue Yonder helps each customer define and execute a roadmap for inventory optimization and effective time-phased replenishment that reflect the dynamic segmentation strategy.



“Dynamic segmentation is the cornerstone of M&M’s spare parts strategy, integrating demand, inventory and replenishment strategies within a unified planning framework. M&M is now able to augment its planners’ skills and capabilities with an autonomous set of capabilities, ensuring greater consistency and more time for strategic tasks.”

Head of Demand and Supply Planning
Spares Division
Mahindra & Mahindra



Mahindra & Mahindra

Mahindra & Mahindra turned to Blue Yonder's demand segmentation capabilities. Now the company is strategically and automatically grouping customers with similar fulfillment or procurement needs and then developing distinct supply chain operations to meet those specific requirements. Results include:

- Reduced inventory value by 6%
- Reduced inventory quantity by 4%



Intel

Intel adopted a segmentation strategy, enabled by Blue Yonder Luminare Planning, to tailor its supply chain model. As a result, the company developed unique forecasting techniques and safety-stock policies that are tailored to its different customer segments. The company, for instance, developed a collaborative process for its OEMs since they purchase in large volumes. Results include:

- Increased responsiveness based on demonstrated customer needs
- Improved overall supply chain flexibility
- Matched lead times to different customers and products
- Customized inventory and safety-stock levels to minimize risk



ScottsMiracle-Gro

ScottsMiracle-Gro practices supply chain segmentation to drive and enhance customer service while simultaneously reducing costs. Depending on the type of product, the company goes to market differently with its customers. To this end, it has defined multiple supply chains tailored to maximize efficiency in shipping different products to the individual needs of its retail accounts. Results include:

- Improved customer service rates from 92% to 99%
- Achieved average annual supply chain savings of 2-3%
- Realized complete value chain synchronization, from shelf to supplier, for rapid response to dynamic market conditions

Western Digital

Western Digital

Western Digital Corporation (WDC) addresses ever-changing market needs by providing a full portfolio of storage solutions. However, market volatility demanded that WDC change its one-size-fits-all, single-mode supply chain with a segmented approach to increase flexibility and responsiveness. Recognizing that different customers and products needed different supply chains, WDC partnered with Blue Yonder to implement a dynamically segmented, multimodal approach. Results include:

- Improved safety-stock inventory and on-time-delivery performance metrics by more than 10 points
- Increased "good" inventory (desired inventory to meet demand) by over 35%
- Enhanced decision making as a result of improved plan quality and alignment

Blue Yonder: The world's #1 digital fulfillment platform

Empowering real-time insight and orchestration across the extended network

Blue Yonder's Luminate™ Platform provides synchronized business planning, execution, delivery and labor solutions that optimize your business and people from end-to-end. Luminate leverages industry-leading artificial intelligence and machine learning capabilities and workflow-driven user experiences to help you better predict, prevent and resolve disruptions across your entire business.

With the Luminate Platform you can optimize and automate business decisions, creating a more profitable supply chain while delivering seamless and superior customer experiences. Luminate runs on Microsoft Azure Cloud and delivers seamless integration via our partnership with MuleSoft, enabling us to extend and scale with you as your business grows.



Why Blue Yonder?

With more than 30 years of supply chain expertise, Blue Yonder is the leading provider of end-to-end, integrated supply chain planning and execution solutions for more than 4,000 customers worldwide.

And, with more than 400 patents granted and pending, Blue Yonder is invested in keeping its customers at the forefront of supply technology and best practices such as dynamic segmentation.

21/25

of the top
Gartner Supply Chains
use Blue Yonder

73/100

of the top retailers
use Blue Yonder

77/100

of the top manufacturers
use Blue Yonder

Leader in all Four Gartner Supply Chain Magic Quadrants



Consistent leader in all 4 quadrants since 2012/2015

Gartner, Magic Quadrant for Transportation Management Systems, Bart De Muijnck, Brock Johns, Oscar Sanchez Duran, March 25, 2020; Gartner, Magic Quadrant for Warehouse Management Systems, C. Dwight Klappich, Simon Tunstall, May 8, 2020; Gartner, Magic Quadrant for Supply Chain Planning System of Record, Amber Salley, August 23, 2018; Gartner, Magic Quadrant for Sales and Operations Planning Systems of Differentiation, Tim Payne, May 7, 2019.



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