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IDC's Digital Use Case Map for Consumer Products

A Three-Horizons Approach to Digital Innovation

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IDC's Digital Use Case Map for Consumer Products: A Three-Horizons Approach to Digital Innovation

Introduction

Digital transformation (DX) has evolved well beyond the hype and has become a strategic priority for many enterprises. We have seen industry leaders massively embracing the digital transformation journey and exploring revolutionary use cases that have the power to introduce new levels of productivity and new business models. However, we are at an inflection point as digital transformation efforts shift from isolated initiatives to strategic business imperatives.

Across all industries we are seeing that enterprises are striving to become "digital native" in the way their executives and employees think, what they produce, and how they operate. IDC research shows that 55% of European organizations that have embarked on a digital transformation journey get stuck. One of the major reasons for this is the lack of a digital road map that all key stakeholders align with and drive across the organization. The reality is that it is very difficult to put in place a long-term road map for digital transformation due to the accelerated innovation cycles.

This IDC Spotlight provides a framework that will allow consumer products (CP) companies to rethink how they approach the digital transformation journey. By studying how organizations are investing their transformation budgets, IDC has identified more than 450 independent use cases. Using IDC's adaptation of the "three-horizons" methodology, organizations can start converting their strategic priorities into short-term, mid-term, and long-term digital business use cases as part of a newly defined digital road map.

This document is directed to business executives that are looking to tailor their DX journey to the overall enterprise strategy and design an execution plan to achieve their digital vision.

Digital in Consumer Products: Intelligent, Innovative, and Network Driven

Over the past decade, the consumer products (CP) industry has undergone a huge transformation due to the adoption of technologies such as the Internet of Things, advanced robotics, analytics, and Big Data. Though the digital evolution has led to a major improvement in the operational performance of supply chains with advanced planning processes, CP organizations are under pressure to keep optimizing their logistics, as online channels enable full visibility into the price and quality of goods, and digital-savvy consumers are able to carry out accurate comparisons across brands. This in turn drives competition in the supply chains.

While consumer expectations continue to increase at a breath-taking pace, as they increasingly look for more personalization in the products they buy, CP organizations are looking to implement a flexible approach to product and process innovation. This means they need to proactively manage inventory, moving it closer to the demands of the retailers and consumers by integrating their supply chains end to end from suppliers through to consumers and transform them into supply chain networks. This comes with huge challenges,

however, and requires that the complete ecosystem be at a similar level of maturity, in both technology and business processes. As a result, cloud-based industry platforms are emerging as a solution to break internal and external silos and increase operational performance and embed digital into the business. These solutions provide a vendor-agnostic environment that allows several stakeholders to plug into the digital ecosystem. Additionally, cloud-based digital platforms would provide the capabilities to scale services across the network instantly, enabling alignment on industry API standards and encouraging collaborative industry innovation.

These market dynamics are driving CP companies to disrupt their existing supply chains and create a competitive advantage by enhancing their services. Several strategic priorities have surfaced on the board's agenda at CP organizations to respond to some of the dynamics described above. In this document we will address three core strategic priorities:

○ Intelligent planning
○ Innovation acceleration
○ Network-driven creation of value

As shown in Figure 1, the strategic priorities themselves contain separate digital programs, which usually consist of a collection of business objectives and use cases to ensure consistency across investments and alignment between those and the overall digital mission of the business.

FIGURE 1

Consumer Product Industry: Strategic Priorities and Digital Programs
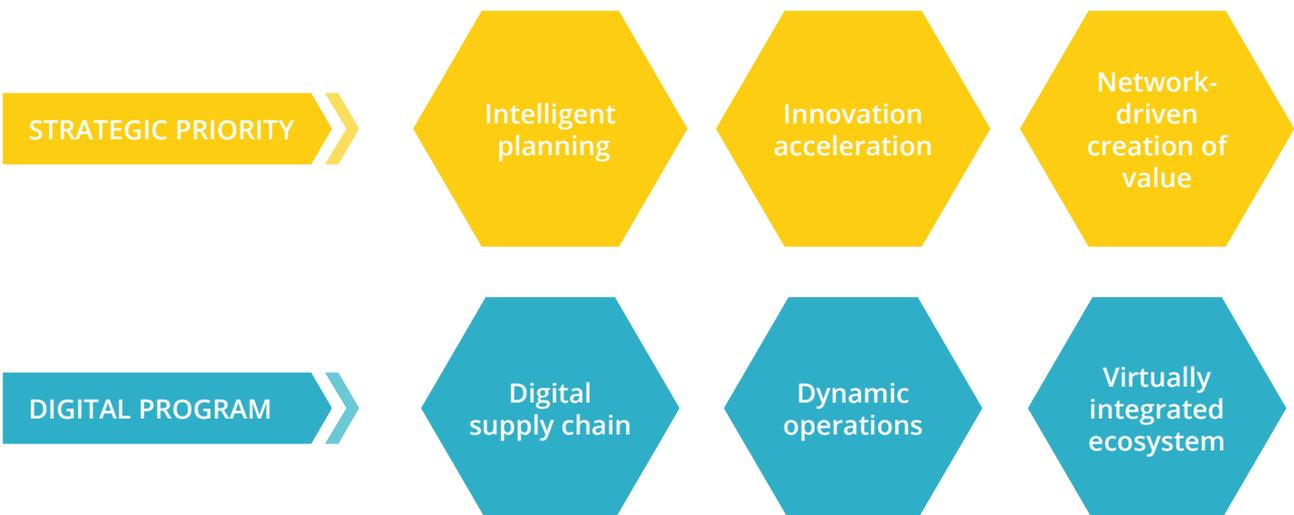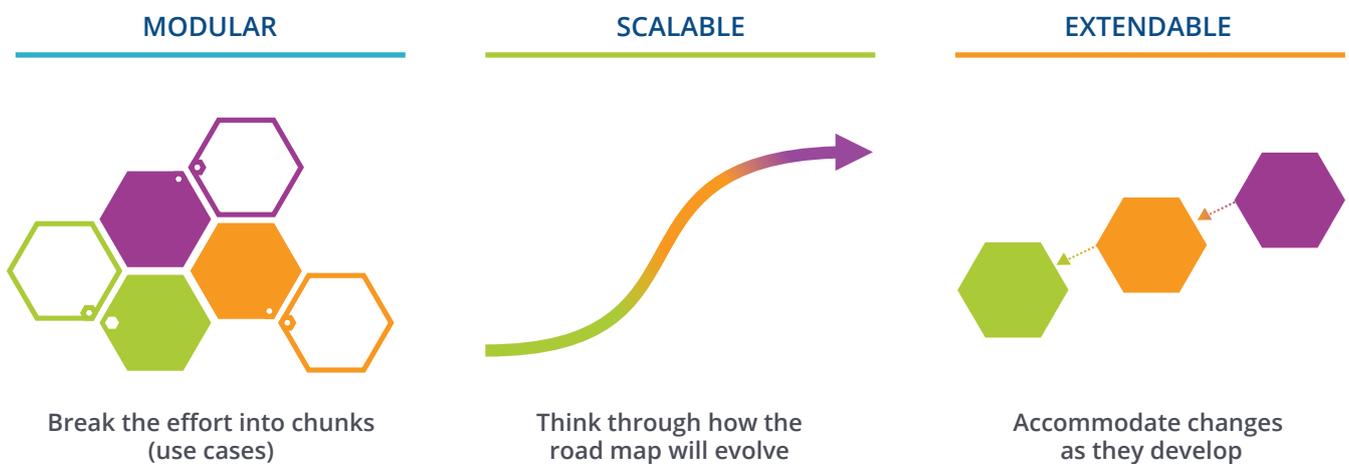

Source: IDC, 2018

IDC believes that industry cloud platforms will significantly redefine value chains over the next decade due to vast disintermediation and increased digital innovation within vertical markets.

Creating a Digital Road Map

IDC has adapted the "three horizons of innovation" framework, originally featured in the book The Alchemy of Growth by Baghai, Coley, and White (April 1999), to help organizations translate their strategic priorities into digital programs comprising use cases that are modular, scalable, and extendable (see Figure 2).

FIGURE 2

Creating a Digital Road Map

MODULAR	SCALABLE	EXTENDABLE
Break the effort into chunks (use cases)	Think through how the road map will evolve	Accommodate changes as they develop

Source: IDC, 2018

- **Modular** to break digital efforts into use cases that are focused on measurable business outcomes and deliver immediate value to the organization.

- **Scalable** to help organizations think about the underlying relationship between use cases and the development of digital capabilities (i.e., the combination of talent, technology, data, process, and governance) from one use case to the other to support strategic objectives.

- **Extendable** to enable organizations to "fail fast" and accommodate changes to their digital road maps — by adding, removing, or replacing use cases — as digital priorities evolve or as they mature their digital operations.

IDC believes the "three-horizons" framework is an excellent model to guide organizations when transforming their business models. IDC believes this framework can be adapted to reverse engineer digital objectives to create a journey of use cases (see Figure 3).

FIGURE 3

Digital Road Maps in Slices: Reverse Engineering the Future
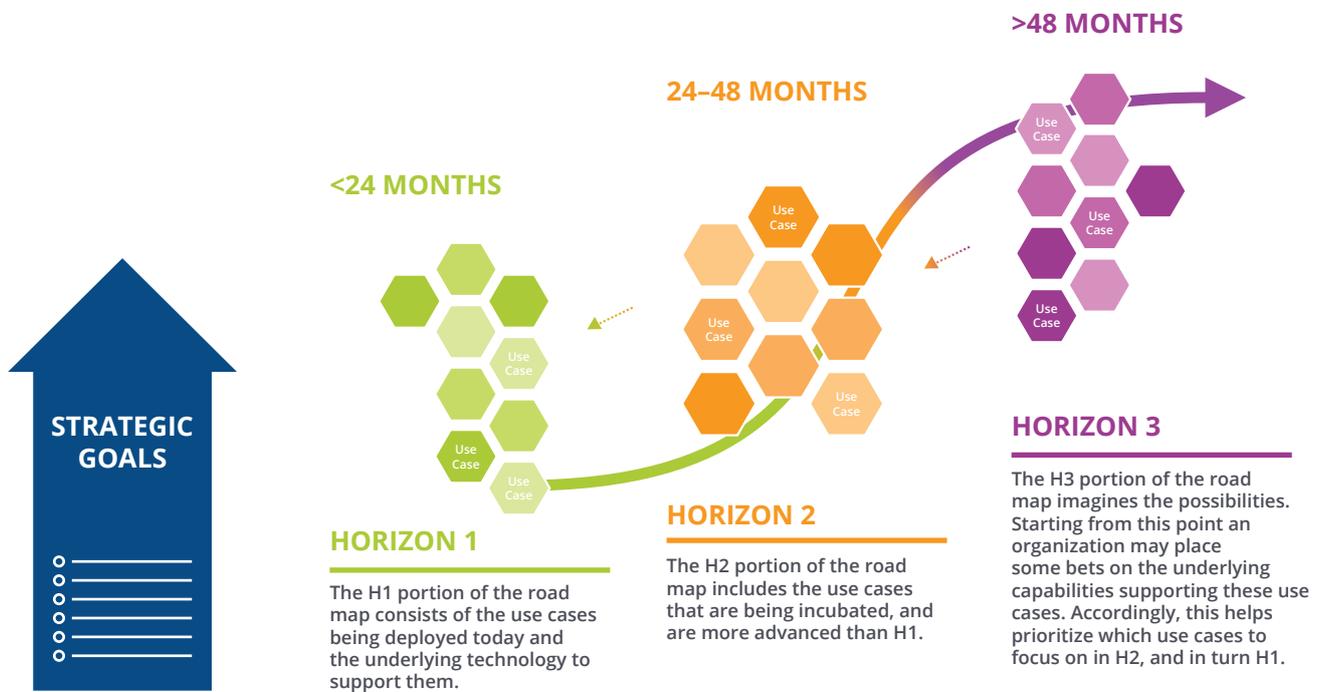
Source: IDC, 2018

Starting With the End Goal in Mind — Reverse Engineering the Horizons

- **Horizon 3 imagines the possibilities.** The strategic priorities of an organization need to be translated into one or more "future" digital-business use case that underpins its digital competitiveness. Starting from this point, an organization may place some bets on the underlying digital capabilities supporting these use cases. Accordingly, this helps prioritize which use cases to focus on in Horizon 2, and in turn Horizon 1. IDC's view is that it would usually take organizations more than 48 months to launch a Horizon 3 use case.

- **Horizon 2 scales digital capabilities.** By extending and augmenting use cases with advanced digital capabilities, organizations prepare themselves for Horizon 3 use case requirements, while searching for radical improvements to existing operations. Organizations committed to its digital road map would be able to start incubating Horizon 2 use cases while completing the Horizon 1 phase. However, the full deployment of Horizon 2 use cases would usually require 24–48 months.

- **Horizon 1 constitutes the digital foundation.** Use cases in Horizon 1 represent initial capabilities that provide a foundation for the strategic priorities of an organization. There are many industry references, case studies, and point solutions available on the market that help an organization build its initial business case to launch Horizon 1 use cases. In addition, the underlying technologies required for these use cases are generally mature. It is important to assess and prioritize Horizon 1 use cases with "scale" in mind (i.e., how this will link back to Horizon 2 and Horizon 3).

IDC recommends organizations assess which Horizon 3 use cases best underpin the digital vision of the organization (which may involve new business models) and reverse engineer this to eventually identify the Horizon 1 use cases that are executable today. Over time, an organization may choose to set new priorities for its Horizon 3 goals. However, the use cases developed in Horizon 1 and Horizon 2 should be extendable to the rest of the organization and provide a relevant foundation of digital capabilities to the business.

Digital programs help identify which Horizon 3 use cases the organization is trying to realize. Having a clear view of what the organization is striving to achieve helps identify which Horizon 1 and Horizon 2 use cases should be prioritized.

After analyzing the main themes that are driving innovation in the CP industry, IDC's research team has outlined the Horizon 3 use cases that are in line with the main strategic priorities and digital programs in the industry. In this document, we reverse engineer these aspirational use cases to provide guidance on what use cases need to be deployed in the mid term and short term to successfully implement each of the three Horizon 3 use cases.

FIGURE 4

Consumer Product Industry: Strategic Priorities, Digital Programs, and Horizon 3 Use Cases

STRATEGIC PRIORITY	Intelligent planning	Innovation acceleration	Network-driven creation of value
DIGITAL PROGRAM	Digital supply chain	Dynamic operations	Virtually integrated ecosystem
HORIZON 3 USE CASE	Cognitive supply chain	Near-real-time personalized outcomes	Supply base digital platform

Source: IDC, 2018

Cognitive Supply Network Use Case Journey: Digital Supply Network

Many organizations in the CP industry are investing heavily to support the move to the supply network of the future, which is connected, smart, and highly automated. To achieve this, they are adopting technologies that enable real-time data capture across the operational process. The sensor and IoT data goes through analysis functions that help cognitive systems determine the "next best action" — part of the transition to the "sense, analyze, and respond" paradigm.
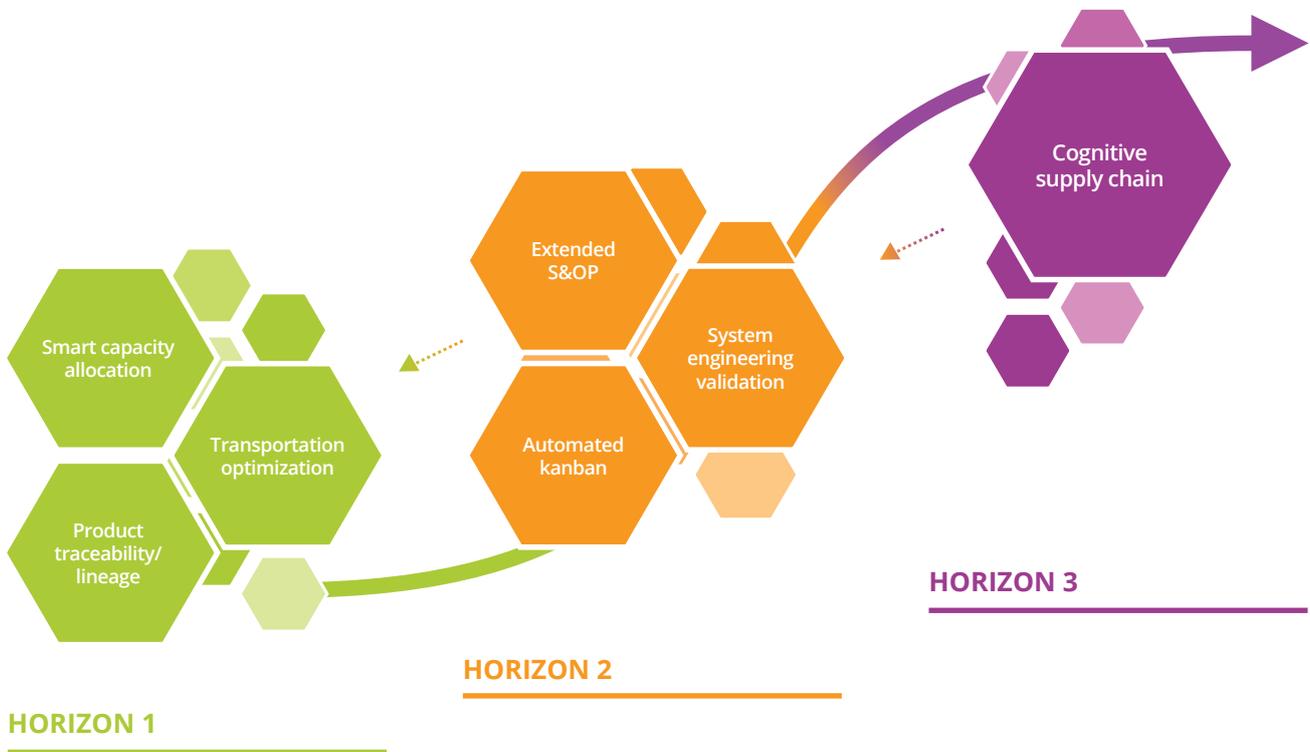
FIGURE 5

Sense, Analyze, Respond Paradigm

SENSE
Connected with IoT

ANALYZE
Comprehensive analytics

RESPOND
Cognitively enabled

What's happening?

Where is it happening?

Who is doing what?

Why is it happening?

What does it mean?

What is the business impact?

Next best action?

Exception based?

Learning system?

Source: IDC FutureScape Worldwide Supply Chain, 2018

Given the competitive nature of the CP industry and the focus on operational efficiency, organizations need to respond flexibly to changes in demand and supply. Logistics and planning must dynamically adapt to the ever-changing external environment, which creates challenges for the overall operations. The data strategy therefore must integrate information obtained from internal sources — such as logistic operational systems, warehouse management systems, shipping manifests from OEMs, dealer management systems, and POS devices — as well as data from external sources that provides a picture of environmental, seasonal, and economic factors. Investing in the analytical capabilities needed to successfully combine structured and unstructured data from internal as well as external sources is critical to proactively manage inventory and accurately predict demand.
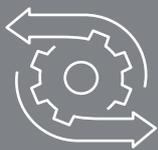
This journey toward the creation of a cognitive supply network that can ultimately reduce the overall cost of operations and increase the service levels requires a transition from operational silos to an ecosystem approach. In this approach, decisions are based on the impact across the entire value chain with an end-to-end view rather than from the perspective of each function.

FIGURE 6

Cognitive Supply Chain Use Case Road Map

Smart capacity allocation

Transportation optimization

Product traceability/ lineage

Extended S&OP

Automated kanban

System engineering validation

Cognitive supply chain

HORIZON 3

HORIZON 2

HORIZON 1

Source: IDC, 2018

CP companies that strive to deploy a cognitive supply network that operates according to the "sense, analyze, and respond" paradigm (Horizon 3) need to gain access to real-time data from the ecosystem (including suppliers, retailers, and consumers) to feed into their deep-learning modules (Horizon 2). In the short term, they must start optimizing operational and planning techniques to orchestrate the efforts of the different elements of the supply network (Horizon 1).

By the end of 2020, a third of all manufacturing supply chains will be using analytics-driven cognitive capabilities — increasing cost efficiency by 10% and service performance by 5%.

Horizon 1: Planning and Operations Optimization

The first step in this journey is the generation of consistent processes to decrease waste and inventory costs while reducing latency at key points to near zero. To achieve that, CP companies need enhanced visibility into their suppliers' operations and be able to track elements across the entire supply network.

SMART CAPACITY ALLOCATION

DESCRIPTION

Currently most CP companies have a general, but not specific, sense of available capacity at any point in time. Therefore, the ability to adjust capacity utilization in real time is a guess at best. Adopting this use case will enable near-real-time capacity monitoring at the machine level that enables optimization calculations across facilities in order to better utilize the overall capacity.

BUSINESS VALUE

Reduced losses due to stock-out

Increased profitability through improved operational efficiency

Reduced overall production costs through improved machine capacity allocation

LOT LINEAGE/PRODUCT TRACEABILITY

DESCRIPTION

Ensure that items, lots, and shipments can be tracked from raw goods all the way to the consumer through connected intelligent systems that store and collaboratively share chain-of-custody information. This provides the ability to trace backwards and forwards (at least two steps) in the chain of custody of goods to facilitate supply chain management records keeping, which is often required for audits, recalls, and compliance processes.

BUSINESS VALUE

Increased supply chain security and accuracy of reporting processes

Increased consumer confidence by proving authenticity of goods

Reduced time of recall processes when needed

TRANSPORT OPTIMIZATION

DESCRIPTION

Load tendering is automated today and spend optimization tools are used, but no real-time contextual management is used. This real-time contextual model balances long-term cost optimization with near-term service levels. Freight costs will be reduced, including expedited freight. The main objective is on-time delivery of inbound material. The delivery of outbound finished goods will also be improved.

BUSINESS VALUE

Reduced freight costs

Reduced delivery time of inbound material

Increased service levels

Horizon 2: Real-Time Data Integration

Once CP organizations have optimized their operations, they need to leverage the power of data from internal and external sources by feeding it into intelligent systems to find new ways to improve efficiency or tackle challenges, and then react in an agile way. At this point, planning processes can also be contrasted with real-time data to predict the future and assess if the current plans are the best available option.

AUTOMATED KANBAN

DESCRIPTION	BUSINESS VALUE
To achieve greater flexibility in planning, CP companies are developing an automated, near-real-time connection to suppliers that triggers replenishment of raw material when needed. This use case is an evolution from the prevalent lean practices by fully automating the replenishment process and integrating it to procurement systems. This just-in-time (JIT) approach will enable them to lower inventories while increasing demand satisfaction.	Reduced replenishment costs
	Reduced losses due to stock-out
	Reduced inventory costs

SYSTEM ENGINEERING VALIDATION

DESCRIPTION	BUSINESS VALUE
Simulation and validation are currently done in batches with no evaluation of engineering efficacy. In this use case, cognitive tools are connected to the digital twin to provide immediate feedback on the efficacy of engineering choices in the context of full systems engineering. The objectives are higher levels of design effectiveness, faster time to market, and effective software regression testing.	Reduced engineering change costs
	Reduced time to market for new products
	Reduced waste

EXTENDED S&OP — INTEGRATED SUPPLY CHAIN

DESCRIPTION	BUSINESS VALUE
Modern, cloud-based extended S&OP tools are integrated to instrumented inputs across a broad and diverse set of planning constituents both inside and outside the enterprise to provide rapid iteration of plans and scenarios with next-gen optimization capabilities. The main objective is to connect the constituents in a timely and productive way to ensure that existing plans are viable and to understand future opportunities so that plans can be recalibrated when needed.	Reduced losses due to stock-out through a granular understanding of demand
	Increased retailer and consumer satisfaction
	Increased revenue through demand and supply balancing

Did you know that digital twins, or virtual representations, can be used to manage multiple aspects of a CP organization, including highly complex, customized products, and connected assets, such as manufacturing plants or facilities and the assets within.

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Horizon 3: Digital Supply Network

IDC defines the concept of digitally enhanced supply networks as something that would leverage the Internet of Things (IoT) and sensor data to provide real-time data insights that can essentially serve as inputs to build a cognitive model. Comprehensive analytic systems examine the data captured across the operational process and provide inputs on the potential causes and consequences of different events that take place across the supply network. Cognitive systems also evaluate the next best action and trigger a response.

COGNITIVE SUPPLY NETWORK	
DESCRIPTION	**BUSINESS VALUE**
A number of analytic models support different planning stages today, but the models are loosely integrated. The cognitive supply chain is a closed-loop analytic model that connects portfolio, scenario, value, and situational analysis to drive supply chain performance and innovation. The main objective is to improve the supply chain through extreme automation to achieve better allocation of resources and better next-best-action determination.	Reduced operational risk
	Increased accuracy of planning
	Increased operational performance

IDC predicts that by the end of 2021, 25% of global manufacturers will apply machine learning to data across product development, supply chain, manufacturing, and service for more rapid decision support, improved quality, differentiated products, and innovative business models.

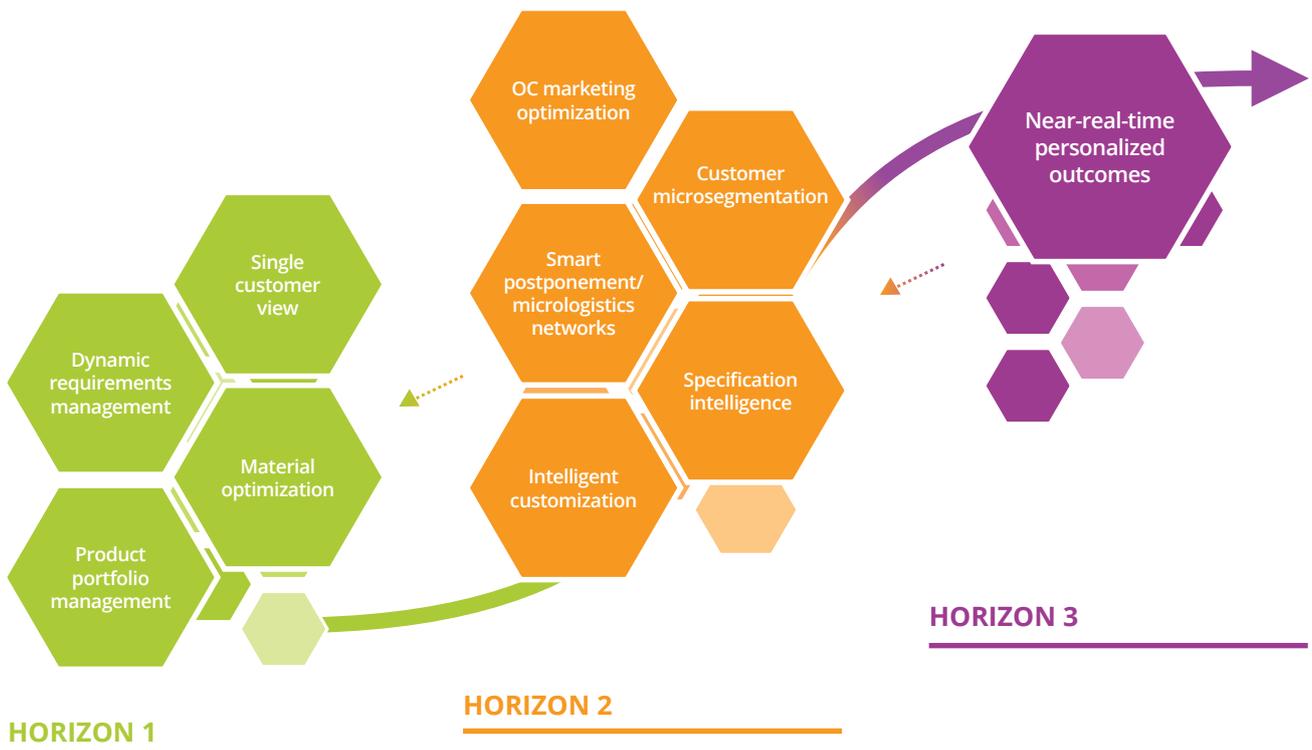## Near-Real-Time Personalized Outcomes Use Case Road Map: Dynamic Operations

Complexity increases for CP organizations as the trend toward further individualization and customization of products continues at the same time that consumers' expectations on the quality of service also rise. These market dynamics put huge pressure on CP organizations to transform their processes to become highly flexible, scalable, automated, and smart. Organizations are therefore experimenting with ways to leverage modern technology to accelerate speed in logistics while reducing waste and managing costs.

Those organizations that can meet the market need for speed by delivering their orders even faster than today, and at the same time satisfying consumers' appetite for highly customized goods, will take the biggest share of the digital opportunity. This means that companies need to adopt techniques such as microsegmentation to manage detailed orders at a much more granular level. In parallel, they must explore innovative distribution models to reduce delivery times.

Meeting increasingly complex retailer and consumer demands is critical to remaining competitive and driving profit and growth. To navigate this journey we provide a set of use cases to help companies generate near-real-time personalized outcomes at scale.

FIGURE 7

Near-Real-Time Personalized Outcomes Use Case Road Map

OC marketing optimization

Customer microsegmentation

Single customer view

Smart postponement/ micrologistics networks

Near-real-time personalized outcomes

Dynamic requirements management

Material optimization

Specification intelligence

Intelligent customization

Product portfolio management

HORIZON 1

HORIZON 2

HORIZON 3

Source: IDC, 2018

Being able to deliver near-real-time personalized outcomes at scale (Horizon 3) requires companies to develop an agile supply chain that is able to deliver more specific orders based on a deeper understanding of consumers (Horizon 2). The first step in that direction is adapting to a broader menu of options (Horizon 1).

IDC believes that by 2020, many categories will earn as much as 70% of revenue from products less than three years old. In the digitally enabled marketplace, the ability to source new ideas from all quarters will be essential, and the old ways of understanding appeal and purchase intent will become archaic and ineffective.

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Horizon 1: Adaptation to Broader Menu of Options

The first step toward the delivery of near-real-time personalized outcomes is the creation of an optimal product portfolio and the achievement of higher levels of design effectiveness. This is only possible by understanding what consumers really want, and proactively adapting the range of offerings to satisfy their needs.

DYNAMIC REQUIREMENTS MANAGEMENT

DESCRIPTION

There will be a dynamic capture of requirements from external and internal sources with integration to spiral or iterative R&D processes, similar to agile software development. The objectives are higher levels of chemical design effectiveness and lower development costs. This use case also includes the adoption of tools that support collaboration between the retailer, the consumer, and CP manufacturers during the R&D process.

BUSINESS VALUE

Improved effectiveness of R&D processes

Greater consumer and retailer satisfaction by integrating their feedback early in the design process

Reduced R&D failure costs

PRODUCT PORTFOLIO MANAGEMENT (PPM)

DESCRIPTION

With this use case, CP organizations will move away from the current approach where product portfolios are generally micromanaged by product managers without a great deal of holistic oversight. We propose the adoption of tools informed by material and supplier costing information, as well as real-time sales and consumption, to evaluate and select the optimal product portfolio as the market moves toward personalization. Ideation is connected to PPM to improve profitability.

BUSINESS VALUE

Increased SKU gross margin by balancing the portfolio

Increased visibility into new market trends

Reduced losses due to stock-out

MATERIAL OPTIMIZATION

DESCRIPTION

Optimization is currently usually done in the engineering stage prior to first production, not necessarily across the entire production process. In this use case, new processes adapt to include 3D printing (additive rather than reductive) and intelligent machine tools (robots) that can continuously optimize material usage based on current context.

BUSINESS VALUE

Reduced material costs

Reduced waste throughout the production process

Increased ability to meet sustainability goals

Horizon 2: Agile Supply Chain

At this stage, CP companies should focus on making their operations agile, lean, and efficient enough to cope with consumer requirements for more customization. In this horizon there is a major shift toward enabling quick and effective adaption to changes in design and demand.

INTELLIGENT CUSTOMIZATION

DESCRIPTION	BUSINESS VALUE
Current specification capabilities are manual and lack the ability to make suggestions based on application, consumer history, or other such inputs. The adoption of intelligent customization consists of leveraging analytics and machine learning to identify new custom products and formulations based on consumer needs, new materials, and new processes.	Decreased product faliure rate
	Improved consumer satisfaction
	Increased revenue through upsell of custom specifications

SMART POSTPONEMENT/MICROLOGISTICS NETWORKS

DESCRIPTION	BUSINESS VALUE
Smart postponement techniques lead to tight integration of the process workflow with demand and consumption insights that inform physical automation tools to provide augmented and autonomous execution in the warehouse. The ability to manage product personalization and delivery efficiency will improve through automation, freeze-point delay, and network diversification.	Increased retailer satisfaction through an improved ability to meet diverse consumer requirements
	Increased SKU gross margin through customization of products
	Reduced losses due to delivery latency by automating warehouse management processes

OC MARKETING OPTIMIZATION

DESCRIPTION	BUSINESS VALUE
Connecting marketing mix modeling to one-to-one consumer journey marketing to generate orchestration of personalized promotions/communications and public campaigns for a balanced impact on consumer lifetime value. The goal is the unification of the marketing mix and personalized (microsegment) consumer journey strategy to provide rapid refresh of programmatic rules and closed-loop retargeting.	Increased offer/promotion conversion rate through optimized promotion orchestration
	Increased revenue from personalization of messaging, products, and services
	Increased consumer lifetime value

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SPECIFICATION INTELLIGENCE

DESCRIPTION

Engineering functions usually maintain a repository of specifications including quality standards, but the efficacy of these specifications is rarely evaluated. Specification intelligence provides better alignment of quality standards to consumer expectations, as there is ongoing case-based learning of the efficacy of quality specifications in meeting consumer requirements. This use case consists of an integrated specification repository connected to quality metrology.

BUSINESS VALUE

Increased consumer satisfaction through an improvement in quality

Reduced cost of adverse quality

Reduced product recall cost

IDC believes that by 2020, smart postponement techniques and additive (3D) manufacturing will have been deployed by a third of manufacturers — reducing delivery latency by up to 50%.

Horizon 3: Dynamic Operations

The concept of dynamic operations refers to an ecosystem of several manufacturing partners that respond to ever-changing consumer expectations and market events in an agile fashion. They do this by quickly reorienting their processes to take advantage of market opportunities and tackle operational disruptions.

NEAR-REAL-TIME PERSONALIZED OUTCOMES

DESCRIPTION

The final step in this journey consists of leveraging the previous efforts to generate flexible, scalable, automated, and smart operations to build a product portfolio through a broad menu of options. This will enable CP organizations to seamlessly offer both analog and digital products that can be personalized by the consumer and delivered quickly. The objectives are market share and revenue growth with higher consumer satisfaction driven by truly personalized product and service offerings.

BUSINESS VALUE

Increased consumer satisfaction through product personalization

Increased revenue through upsell of personalized specifications

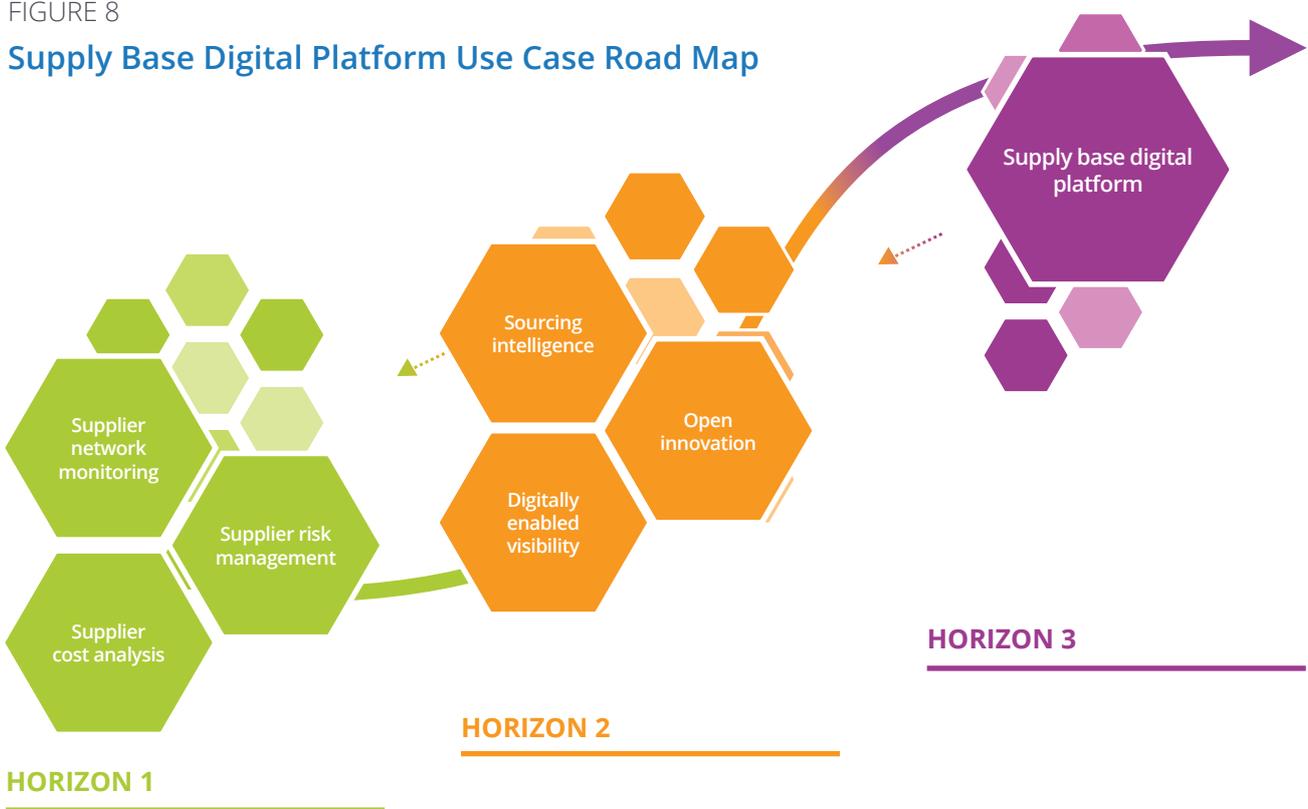Reduced delivery time of personalized products

Supply Base Digital Platform Use Case Journey: Virtually Integrated Ecosystem

As end-to-end visibility is the backbone of agile supply chains, a deeper relationship with suppliers is a must for the CP companies of the future. Therefore they are looking at tools to enable more effective collaboration and coordination of processes. This requires the elimination of some internal and external silos to move toward a connected supply network that consists of an integrated system in which every piece actively contributes to value and data. The main objective is to improve retailer and consumer satisfaction levels.
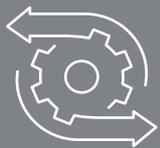
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In this environment, cloud-based ecosystems are a key solution, as they provide a unified view of the entire value by integrating data from the company and its suppliers, providing an infrastructure for joint planning solutions. The platform facilitates information exchange and processes, at scale, simplifying connectivity and ensuring a level of security and trusted business interactions. These industry networks will also enable participants to close analytic gaps in their businesses, improving the decision-making process by revealing the inherent risks and potential advantages of the different choices.

The supply base digital platform use case journey is vital for CP companies striving to reduce administrative and operational costs by moving to a real-time supplier engagement model that enables them to distribute various tasks among different stakeholders in the supply network.

FIGURE 8

Supply Base Digital Platform Use Case Road Map

Supply base digital platform

Sourcing intelligence

Open innovation

Digitally enabled visibility

Supplier network monitoring

Supplier risk management

Supplier cost analysis

HORIZON 3

HORIZON 2

HORIZON 1

Source: IDC, 2018

IDC believes there is a huge opportunity to deliver value to the ecosystem by creating a supply base digital platform (Horizon 3), which requires the free flow of data across every point of the value chain (Horizon 2). Initially, CP companies need to analyze their entire supply network to determine the most strategic stakeholders and then develop a partnership with them.

IDC's research confirms that 40% of new products fail in the marketplace.

Horizon 1: Granular Supply Base Evaluation

To ensure that their supply network is fit to transform and take advantage of the digital evolution, CP organizations must evaluate the performance of their supply base. In Horizon 1 of this journey, companies invest to generate a digital model of their supply base by capturing and analyzing data that enables them to compare their suppliers and set clear performance expectations and KPIs when appointing new suppliers.

SUPPLIER COST ANALYSIS

DESCRIPTION

Analytical tools perform a top-down analysis of supplier prices to provide real-time economic evaluation of engineering decisions. Supplier cost analysis also predicts future prices based on historical trend modeling of the changes in the costing inputs. The objective is to generate an integrated view of the supplier cost to support the engineering decision-making process.

BUSINESS VALUE

- Increased levels of design effectiveness
- Reduced product cost
- Reduced engineering change costs

SUPPLIER RISK MANAGEMENT

DESCRIPTION

Create virtual representations of suppliers' facilities that are constantly fed data from the operating environment to ensure the most up-to-date view of the past, current, and future performance and condition of products, assets, facilities, and plants. Analytical tools take inputs from the digital twins to generate real-time risk reports of potential supply disruptions, observing incident probability of occurrence as well as potential incident severity.

BUSINESS VALUE

- Reduced operational risks
- Reduced time to reaction in case of supply disruption
- Reduced losses due to stock-out of materials

SUPPLIER NETWORK MONITORING

DESCRIPTION

Currently, the supply position is based on very little data, and best practice is based on batch processing such as EDI. Supplier network monitoring capabilities consist of instrumenting supplier production and warehousing facilities to create a fully informed digital twin that provides near-real-time awareness of the supply position. This will enable CP companies to adapt to external events and support enterprise quality, as well as monitor supplier health.

BUSINESS VALUE

- Reduced transportation costs
- Reduced time to delivery of finished goods
- Reduced losses due to stock-out of materials

Horizon 2: Real-Time Supplier Data Integration

In the second horizon, CP companies leverage the realistic digital model of their supply base created in the previous stage to support process engineering and logistics requirements and source new ideas from the ecosystem.

SOURCING INTELLIGENCE

DESCRIPTION

The current best practice looks at aggregate buying volumes with vendors for negotiation. Sourcing intelligence will provide an understanding of supplier capacities at a deeper level such as machine capabilities, certifications, capacity, and company demand for those items. The outcome is a continuous rebalancing of the supply of critical items based on capabilities rather than units and quantity, which is beneficial for both the supplier and the CP company.

BUSINESS VALUE

- Increased visibility across the entire supply network
- Increased order effectiveness through better visibility into suppliers' capabilities
- Reduced inventory costs

DIGITALLY ENABLED VISIBILITY

DESCRIPTION

Currently some visibility into research efforts and data exists internally, but there is very limited visibility throughout the entire value chain. Digitally enabled visibility into current and historical experimentation is achieved through a collaboration network inclusive of internal efforts and visibility of strategic suppliers.

BUSINESS VALUE

- Increased levels of R&D effectiveness
- Reduced time to market of new products
- Increased product profitability through lower R&D failure costs

OPEN INNOVATION

DESCRIPTION

The vast majority of CP companies believe their innovation funnel is under populated. This use case consists of enabling connectivity to social communities as "digital focus groups" to enable input (direct or indirect) from consumers and direct connectivity to suppliers to participate in innovation ideation. This includes social communities of consumers with affinity to the brand with connectivity to broader social platforms.

BUSINESS VALUE

- Increased revenue by improving the success rate of new products
- Increased product profitability through lower R&D failure costs
- Increased speed of product innovation

IDC predicts that by 2019 50% of manufacturers will be collaborating directly with customers and consumers regarding new and improved product designs through cloud-based crowdsourcing, virtual reality, and product virtualization — realizing up to a 5% year-over-year increase in revenue.

Horizon 3: Supply Base Digital Platform

At this point, CP companies strive to generate an ecosystem of suppliers that provides in-depth visibility of the operational capabilities that will enable right sourcing, opening up opportunities to increase the speed of innovation of product and service offerings. The enhanced visibility into suppliers will enable CP companies to design a partnering strategy to continuously improve the development cycles.

SUPPLY BASE DIGITAL PLATFORM

DESCRIPTION	BUSINESS VALUE
The supply base digital platform leverages real-time analytics to provide a real-time supplier benchmark against specific requirements to drive supply base performance improvements. This cloud-based platform enables real-time synchronization of processes and capabilities of several players to enable the entire supply network to instantly adapt to satisfy complex order demands.	Increased speed of product innovation through leveraging the capabilities of the ecosystem
	Increased order effectiveness through granular visibility into suppliers' capabilities
	Reduced time to delivery of finished goods

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Recommendations

The three-horizon adaptation provided in this document should help organizations think about the digital future in a more schematic way. Knowing that over half of organizations get stuck on their digital journey due to a lack of focus means that organizations struggle to step away from existing short-term goals or find it difficult to translate strategic priorities into areas of interest today. To successfully deploy the use case journey framework, IDC offers the following recommendations:

- **Expand Your Horizon.** Digital transformation is about digital business optimization as well as innovation. Defining a strategic priority focused on only one of these areas will not be enough to compete in the digital economy. Ensure that the business has a clear vision in terms of what it is looking to achieve for its existing operations and how it sees the ecosystem — and therefore the business model — evolving. Develop digital programs that are designed to execute on the strategic priority and use the horizon thinking framework to reverse engineer the use case journey.

- **Tailor the Journey to Your Own Organization.** What is described in this document is not an exhaustive list of use cases. The digital leadership team should use it as a reference point to map out the journey for their own organizations. They may find that there are other Horizon 1, 2, or 3 use cases that align better with their own strategic priorities. It is possible to draw inspiration from some of the primary use cases in other industries too. More use case examples can be found in the appendix.

- **Internal Alignment Is Critical to Success.** IDC research shows that one of the key critical success factors for digital transformation is the alignment of internal stakeholders. Use this document as a source of alignment because the goal is to ensure the leadership team collectively agrees on where the organization should be heading as it accelerates its digital maturity.

Learn More

In the Execution Guide for Consumer Products we go into the technology requirements for one of the use case journeys, elaborate on innovation process, and provide step-by-step instructions on how to get started.

Further Reading:

- Execution Guide: Launching Industry Use Cases for Consumer Products

- SAP Information:
    - Enabling Consumer Outcomes: Unlocking New Business Value with Digital Technologies
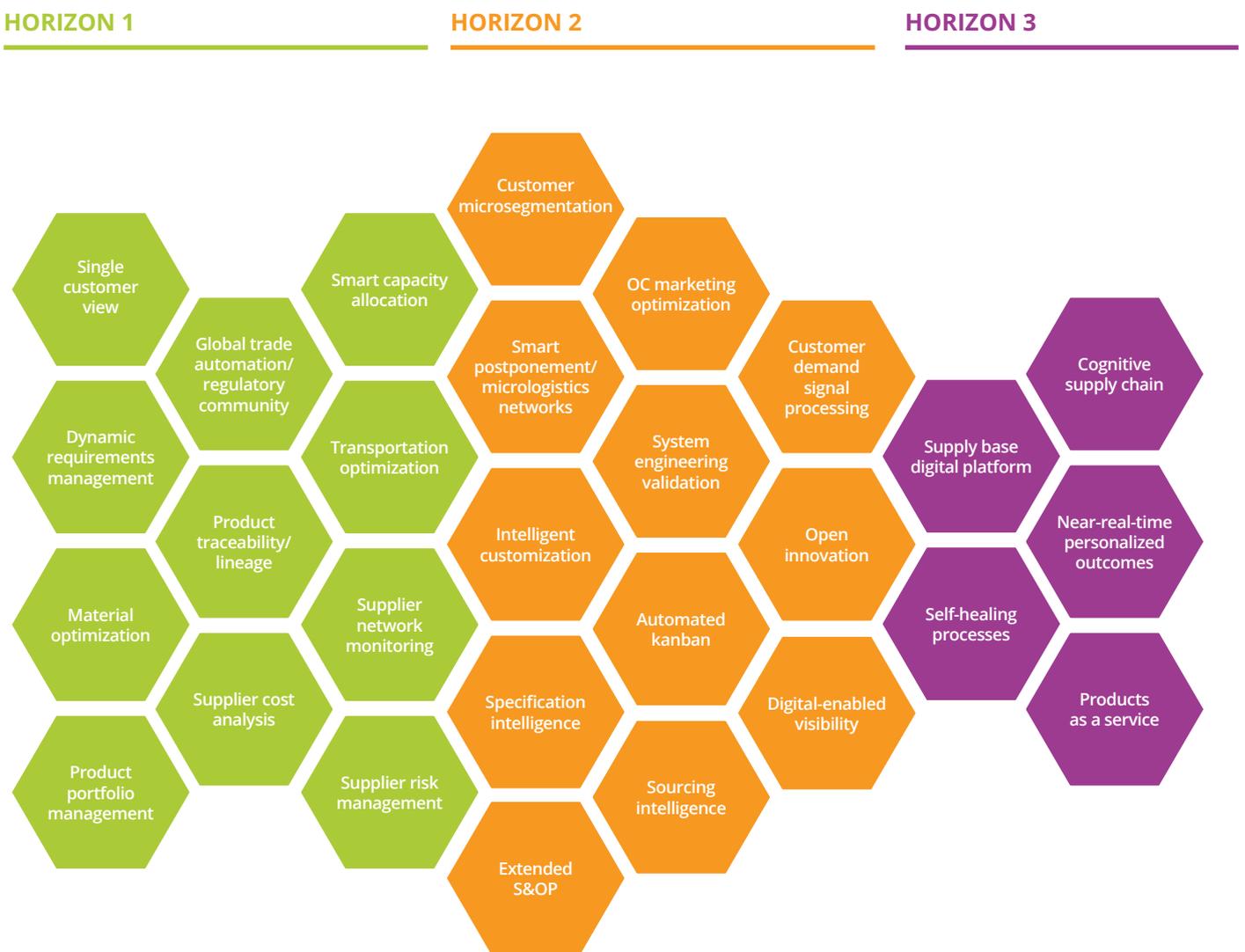   - The Path to Digital Innovation

Appendix

Use Case Maps for Consumer Products

There are many more use cases than the ones presented in the three journeys above. Figure 9 includes additional use cases that an organization can choose to explore as part of its digital transformation journey. IDC recommends that an organization starts converting its strategic priority into tactical plans and identifying use cases that can deliver immediate value to the organization.

FIGURE 9

Consumer Product Use Case Map

HORIZON 1   **HORIZON 2**   **HORIZON 3**

Single customer view

Global trade automation/ regulatory community

Smart capacity allocation

Customer microsegmentation

OC marketing optimization

Customer demand signal processing

Cognitive supply chain

Dynamic requirements management

Transportation optimization

Smart postponement/ micrologistics networks

System engineering validation

Supply base digital platform

Near-real-time personalized outcomes

Product traceability/ lineage

Intelligent customization

Open innovation

Material optimization

Supplier network monitoring

Automated kanban

Self-healing processes

Supplier cost analysis

Specification intelligence

Digital-enabled visibility

Products as a service

Product portfolio management

Supplier risk management

Sourcing intelligence

Extended S&OP

Source: IDC, 2018

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