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Digital Reinvention in consumer products

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Reimagining the enterprise

Digital technologies are altering how people and businesses interact. Digital forces are creating unprecedented levels of industry dislocation, fundamentally changing the economics of business. Consumer products businesses are at the vanguard of digital innovation. Faced with the threat of new market entrants with new business models, as well as dual imperatives to anticipate rapidly evolving consumer expectations and radically improve supply chain responsiveness and efficiency, consumer products firms are confronting a stark choice: Either digitally reinvent their enterprises or watch as consumers defect and business declines around them. By embracing Digital Reinvention™, organizations create an opportunity to fundamentally reimagine their operations and how they engage with consumers, suppliers and other stakeholders.

Everyone-to-everyone economy

The pace of change in the consumer products industry is accelerating. Markets have evolved from a state of organizational centricity, in which manufacturers and service providers largely define what to produce and market to consumers, to one of individual centricity, in which empowered consumers demand insight-driven, customized experiences. And these markets continue to evolve into new forms in which consumers, customers and partners become active participants rather than passive recipients.

This environment is best understood within what we call the everyone-to-everyone (E2E) economy. The E2E economy has four distinct elements: It is *orchestrated*, based on business ecosystems that are both collaborative and seamless. It is *contextual*, in that consumer and partner experiences are calibrated and relevant to their specific actions and needs. It is *symbiotic*, in that everyone and everything, including consumers and businesses, are interdependent. And it is cognitive, characterized by data-enabled self-supported learning and predictive capabilities (see Figure 1).

Consumer-focused sectors have been deeply impacted by the E2E revolution. Shifting demographics and new consumer requirements continue to raise expectations for personalized experiences and changing consumer relationships. Digital natives, shifting marketplaces, direct-to-consumer models and new economies – like the sharing and service economies – are disrupting traditional consumer value chains and accelerating product innovation through deep direct consumer insights. Digital technologies such as 3D printing, the Internet of Things (IoT) and adaptive robotics are fundamentally changing the economics

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46 percent of consumer products executives indicate that boundaries between their industry and others are blurring

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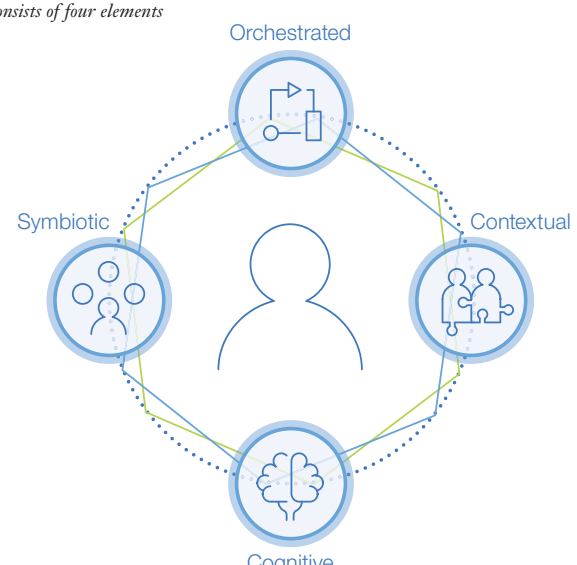
of consumer businesses. Connected devices are impacting consumers, employees, products and supply chains, with companies adapting more agile, efficient manufacturing and supply chains systems to meet rapidly changing demands. And new entrants with new business models are investing in next-generation operations, accelerating transition to as-a-service infrastructure and offering applications that motivate even greater agility and efficiency.

Figure 1

The E2E economy consists of four elements



Source: IBM Institute for Business Value analysis

Technological disruption and consumer products

Digital technologies with greater reliability and lower costs are changing the way consumer products organizations operate. And the disruption is emerging across the board. In the area of artificial intelligence (AI), for example, Procter & Gamble's Olay brand has introduced a mobile platform that uses AI to analyze a user's digital selfie and conduct an individualized skin analysis, which is used to provide personalized product recommendations.[1]

In addition, advanced technology has enabled increasingly sophisticated human-machine interfaces. For example, Wayfair, a U.S. online home goods retailer, allows consumers to use an augmented reality (AR) app to place full-scale 3-D virtual models of Wayfair products in real settings.[2] Consumer products organizations are also embracing technology for hyper personalization and hyper localization. Luxottica, a leading manufacturer and retailer of designer eyewear based in Italy, uses advanced analytics to identify its highest-value consumers and create personalized marketing campaigns.[3] And Campbell Soup has developed a speech-enabled interactive platform that offers new and personalized recipes based on a consumer's location, the weather in that location, the time of day and what ingredients are available.[4]

Over recent years, new entrants in the consumer products space have leveraged digital technologies to disintermediate traditional players by conceiving and realizing bold, new ideas and concepts. Many have succeeded in disrupting established processes and innovatively bridging offline-online divides. And this is only set to continue.

For example, Impossible Foods, a California-based food startup business, is looking to revolutionize the industrial food system by replicating the sensory experience of meat consumption using plant-based alternatives.[5] And Arable Labs, an agricultural and crop business intelligence solution company, offers technology and tools that help farmers and agriculture companies make faster and more accurate data-driven decisions in agriculture and natural resource management.[6]

In yet another example, HowGood, a New York-based consumer data company, assesses food, personal care items and other household products and provides ratings based on environmental, health and trade impacts. The ratings can guide consumers interested in making more sustainable shopping choices, as well as provide companies with a clearer understanding of how sustainable their products are compared to the industry.[7] And Toronto-based Modiface creates AR technology for beauty brands that allows users to perform virtual makeovers, testing different makeup palettes and styles without actually applying any makeup.[8]

Industry leaders recognize the consequences of all this disruptive change. As many as 58 percent of consumer products executives who participated in our 2016 IBM Institute for Business Value Global Ecosystem Survey say that traditional value chains are being fragmented and replaced through the growing impact of disruptive technologies. Conducted in collaboration with the Economist Intelligence Unit, our survey of more than 2,000 global business leaders also revealed that 46 percent of consumer products executives believe that the boundaries between their industry and others are blurring. And more than half say that competition from new and unexpected sources is beginning to impact their businesses.[9]

Digital Reinvention in the age of E2E

The most successful consumer products businesses will embrace new and emerging technologies to create compelling consumer experiences and drive new efficiencies, opportunities and innovations. In the process of advancing their digital agendas, these businesses will develop new focus, build new expertise and devise new ways of working. In short, they will digitally reinvent their enterprises.

Defining Digital Reinvention

Digital Reinvention combines multiple digital technologies – including cloud, cognitive, blockchain, mobile and IoT – to reconceive consumer and partner relationships. It involves creation or orchestration of unique, compelling experiences for consumers and other stakeholders by way of emergent business ecosystems. The most successful digitally reinvented businesses establish a platform of engagement for their consumers, acting as enablers, conduits and partners.[10]

Digital Reinvention differs in concept from both digitization of individual capabilities or functions and the process of digitally transforming major business processes or activities (see Figure 2).

Figure 2

Digital Reinvention follows a path that starts with digitization and progresses through digital transformation

Source: IBM Institute for Business Value analysis

For consumer products organizations, digitization might involve automating internal processes such as order-to-pay. Digital transformation, however, ultimately involves integrating across multiple digital processes – for example, integrating deep consumer insights into the demand forecasting process that feeds the supply chain processes and distribution network.

Digital Reinvention, however, goes much further. It involves fundamentally reimagining the way a business operates and engages with its stakeholders. It relies on a range of digital applications and technologies supporting the construction of deep, collaborative relationships through a fully integrated ecosystem – one in which consumers and partners can participate at will. Within that context, Digital Reinvention is not fragmented or specific. It requires rethinking how a consumer products organization operates and how it engages with its partners, consumers and the marketplace as a whole.

The digital advantage

Digitally conceived organizations are often advantaged in the Digital Reinvention stakes. Untethered by a legacy organization, they frequently already possess Digital Reinvention attributes. And many digitally born startups are already establishing footholds in traditional markets, putting new competitive pressures on traditional industry leaders.

For example, Madison Reed, a U.S. online hair color and accessories company, offers a simple-to-use digital hair color quiz and a mobile app to provide consumers hands-free help for coloring hair at home. Consumers can also interact with an AI-enabled Chabot, Madi, for rapid assistance in selecting hair color based on analysis of a selfie photo, as well as personalized answers to questions about products. The data and photos amassed can also help the company continuously tweak formulas and identify new development opportunities.[11]

Convoy, a Seattle-based startup, has developed an Uber-like app interface to give local truckers a more efficient way to connect with individuals and businesses that want to ship goods. By matching truck drivers with clients directly, Convoy disintermediates traditional brokers. The company and other entrants such as Los Angeles-based Cargomatic intend to reduce average transportation prices and delivery times while increasing average loads and trucker income.[12]

These and many other businesses are advancing their Digital Reinvention journeys. Consider global sporting goods brand Adidas, which already allowed consumers to customize the color and pattern of shoes ordered online. The company has now launched a new sneaker with a 3D-printed sole that it plans to mass-produce. In the future, new 3D printing methods could make small production runs, limited edition shoes and even soles designed for an individual's weight and gait economical.[13]

Another example is global beverage titan Coca Cola, which uses the IoT to bring its loyalty program to mobile apps and connected vending machines. Customers can earn points and use their phones to make cashless purchases on the machines, enabling the brand to identify the customer, type of drink and purchase location.[14] And global cosmetics brand Estee Lauder offers a unique consumer experience by bringing AR to both the digital and in-store experience. Through an app that uses AR and facial mapping technology, consumers can experiment with products and perform virtual makeovers. In addition, at select stores, beauty advisors can show consumers how to use the app to try on lipsticks, extending the mobile experience into the store.[15]

Readying for reinvention

Digital Reinvention supports innovative experiences through a new focus, new expertise and new ways of working in the "next-gen" supply chain. Cognitive, autonomous supply chains can help provide transparency, mitigate risks and disruption, and accelerate decision making using real-time advanced analytics.

Rethinking the digital platform – or digital core – is a critical element of Digital Reinvention. A flexible, responsive and agile platform based on a data lake supports data ingestion, curation, processing and enrichment of massive amounts of data. The digital core enables applications and processes to employ deep learning and other capabilities, accelerating and sustaining competitive advantage.

In addition, digital and "born in the cloud" ubiquity help create contextual communications across both the demand and supply chains to optimize inventory utilization and fulfillment in real time. And consumers and business partners can engage in co-creation, sourcing and procurement where continuous protected data can be captured and analyzed to help ensure collaborations are frictionless, productive, scalable and compliant.

In the case of manufacturing, digitally reinvented factories can use IoT technology to monitor the condition of assets and equipment in real time, helping optimize performance and improve reliability. In a digitally reinvented world, factories, suppliers and other stakeholders combine, ingest and integrate different forms of data from a variety of locations to optimize resource deployment such as labor and energy. And smart operations enabled by contextual data from cloud applications, workflow, processes and the environment can help improve quality, efficiency and decision making.

For consumer products brands, digitally enabled authentic brand experiences will no longer be a single thread through specific products or services. Rather, they will become fluid, more comprehensive experiences orchestrated across multiple brands and platforms. Enabled by

cognitive computing, AI, robotics and other technologies, brands can continuously learn and refine consumer engagement. Global brands can create contextual "local" content that complements diverse consumer lifestyle choices. And interactions can be 360 degrees with continuous engagement and input.

For successful Digital Reinvention, organizations need to pursue a new strategic focus, build new expertise and establish new ways of working (see Figure 3).

Figure 3

The Digital Reinvention operating environment revolves around new experiences

Source: IBM Institute for Business Value analysis

Pursue a new focus

Consumer products businesses need to develop new ways of realizing and monetizing value. Initiatives might include spawning new business models; tapping new forms of financing; and developing better, more holistic ways of conducting risk assessments. Organizations will also need to create strategies and execution plans to deliver deep, contextual experiences, treating B2B clients and end consumers in similar ways.

Build new expertise

Consumer products businesses need to digitize products, services and processes that help redefine consumer experiences. They should augment these steps with predictive analytics and cognitive computing, along with IoT and automation, to create fully integrated, flexible and agile operating environments.

Establish new ways of working

Consumer products businesses need to identify, retain and build the necessary talent to create and sustain a digital organization. The most successful will create and perpetuate innovation-infused cultures incorporating design thinking, agile working and fearless experimentation. They also will need to contextualize organizational priorities within business ecosystems, seeking new forms of partnering and new ways to build value within overarching systems of engagement.

Adopt a self-funding approach

Consumer products businesses need to deploy technology to drive optimization and support scalable growth and market share. They need to use digital enhancers to optimize existing operations and processes, thereby increasing earnings before interest, tax, depreciation and amortization (EBITDA). Some have termed this approach "radical cost reduction and efficiency." Leaders will pursue a growth agenda of revenue enhancement and market penetration through product extensions and new market opportunities enabled by digital capabilities.

Under Armour reinvents its business and consumer engagement model

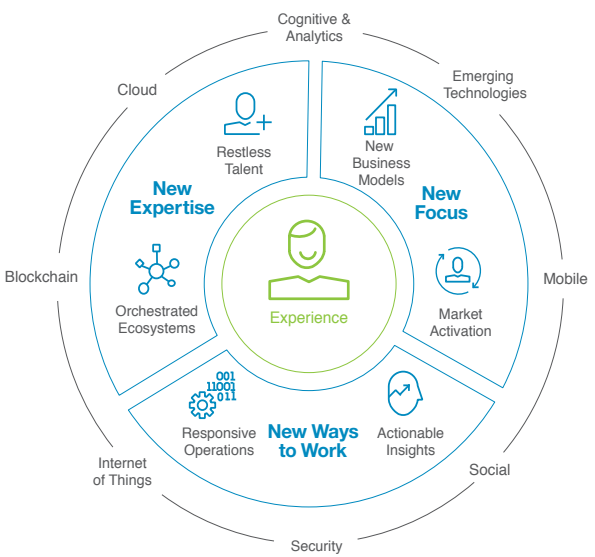
Under Armour Inc. is reinventing its business, expanding from traditional sportswear manufacturing to digitally enabled fitness products and services. Under Armour is building new capabilities that support Connected Fitness, which helps consumers track, analyze and share their fitness activities using connected devices and various apps.[16] The company has plans to further expand its capabilities through a cognitive coaching system that could serve as an interactive personal consultant, trainer and coach, providing timely, evidence-based research, interaction and advice.[17]

Embrace digital drivers

Consumer products businesses must become proficient in digital technologies. Technologies can underpin creation of new organizations that can build the deep experiences consumers desire. Rather than incrementalism, Digital Reinvention provides a path for visionary organizations to adopt an experience-first approach to planning, employing the strengths of ecosystem partners to create truly unique experiences (see Figure 4).

Figure 4

The Digital Reinvention framework combines the strengths of ecosystem partners



Source: IBM Institute for Business Value analysis

Surfing the digital wave

To help guide consumer products organizations on the path toward Digital Reinvention, we recommend four initial steps: Envision possibilities, create pilots, deepen capabilities and orchestrate environments.

Step 1: Envision possibilities
Conduct envisioning sessions based on design thinking to produce a definitive reinvention blueprint. For example, through deep conversations and in-depth marketing analysis, develop a better understanding of consumer needs, aspirations and desires; brainstorm new ideas to enhance engagement; and visualize unexpected consumer scenarios. Incorporate external stakeholders in these sessions, including consumers, to encourage thinking that goes beyond business-as-usual.

Step 2: Create pilots
Develop prototypes using agile development, test them with consumers and get them to market quickly to promote feedback and iteration. Establish communities of interest to create safe environments to beta test innovations, and incorporate them as a central part of design and development processes.

Reimagine Food embraces cognitive computing to boost food industry innovation

Reimagine Food aims to rethink the world of food by promoting food innovation. As part of this mission, the company developed SmartfoodS, a cognitive computing discovery tool. SmartfoodS uses cognitive and AI technologies to help food producers, retailers, chefs and food services companies discover information on trends, news, studies, startups and new products centered around innovation in food and technology. By connecting startups, entrepreneurs, investors and chefs with technologies transforming how food is selected, purchased and consumed, Reimagine Food hopes to improve food production, management and transparency, while helping members reimagine the gastronomic world.[18]

Step 3: Deepen capabilities

Augment digital capabilities with strategic initiatives, and continue to build and deploy necessary applications aligned to the target Digital Reinvention operating model and ecosystem strategy. As pilots evolve, impediments around development will emerge, highlighting limitations in existing capabilities. Adopt a continuous, iterative strategy to address these limitations by building new or extending existing capabilities.

Step 4: Orchestrate ecosystems

Embrace a strategy based on holistic reinvention rather than a series of point solutions, maintaining a clear focus on deep needs, aspirations or desires of consumers, clients (such as partners) and colleagues (such as service providers). Focus on ecosystems to expand and align a broader set of capabilities and help create and deliver on consumer promises.

Key questions

- What can your organization do to make your digital strategy ambitious enough to deal with disruption?
- How can your organization become more agile, so it is better equipped to respond to unexpected challenges and opportunities as they occur?
- How can you make your workforce open and flexible enough to quickly embrace new ways of working and new strategic priorities?
- What actions can your leaders take to help them become more visionary in conceiving what consumers want before they know it themselves?
- How will you use technologies, such as AI, cognitive computing, advanced analytics, IoT and robotics, to differentiate and achieve advanced operational efficiencies?

For more information

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