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Winning with IT in consumer packaged goods:

Seven trends transforming the role of the CIO

Technology is increasingly fundamental to competitive advantage in the consumer-packaged-goods industry. IT leaders are stepping up to the challenge.

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Consumer-packaged-goods (CPG) companies have traditionally viewed technology as a necessary business expense to be managed in the most efficient way possible. As IT spending increased over the past two decades, managers concentrated on standardizing IT systems across the company and reducing costs. Technology programs delivered on consolidating and integrating systems following mergers and acquisitions. Productivity flowed from improved supply-chain processes and from warehouse and plant-floor automation. But growing and differentiating the business through IT-enabled innovation was not a top priority for leadership teams.

However, during the past few years, CPG companies have grasped the commercial potential of the burgeoning supply of infor-

mation about customers' behaviors, needs, and wants. The volume of data emanating from point of sale, in-store engagement, mobile platforms, and social media is exploding and unleashing value from technology in ways that go beyond operational efficiency. This is leading to a fundamental change in what businesses expect from technology. Senior executives across all functions now realize that IT is capable of game-changing innovation and business transformation that can spur revenue growth, get products to market faster, and sometimes generate entirely new business models.

As information intensity grows, world-class IT in CPG companies requires more than just cost-effective service provision. Companies seeking to seize the commercial potential of

Takeaways

Historically, consumer-packaged-goods companies looked to IT for little more than operational efficiency, but the burgeoning volume of data is driving a shift in what businesses expect from technology.

Technology is now being used to enable new capabilities in response to key trends such as predictive analytics and sustainability.

To fully exploit the commercial and operational potential of IT-driven innovation, CPG CIOs must transform their organizations by sharpening the strategic focus and piloting new systems, among other efforts.

technology will need to invest in key areas to keep pace not just with their competition but also with the expectations of their retail customers and information-savvy consumers. The possibilities created by technology should spark innovation in business processes and product offerings, and data-driven insights should help shape business strategies.

IT teams now have the opportunity to rise to the role of strategic enabler and differentiator. This will often require transforming the IT organization to bring new skills, new operating models, and new ways of engaging with the business.

Seven technology-driven trends

We see seven key areas in which leading CPG companies are addressing a changing business environment by using IT to enable new commercial and operational capabilities (Exhibit 1).

Direct consumer relationships

CPG companies are increasingly using technology to create direct relationships with consumers. The popularity of private labels has been slowly eating into revenue, with consumers increasingly more conscious of price than brand. Indeed, the proportion of consumers who have returned to branded goods since 2008 has been lower than after previous recessions. Engaging directly with consumers can counteract this development by increasing loyalty and by improving insights on individual consumer needs, which can in turn lead to more accurate targeting of products and promotions.

Many companies have found ways of going directly to consumers by offering them online services rather than just products. Kraft, for example, created a service available through a Web site and an app, much like a social network, where consumers share recipes. Johnson & Johnson's BabyCenter provides an online community where parents share advice and product recommendations.

Most CPG companies now engage with consumers on external social-media sites. McKinsey's research across 40 companies found ten distinct methods to interact with consumers on social media throughout the product decision-making process.¹ These range from passive techniques, such as monitoring blogs and social networks for references about brands, to direct engagement in the form of targeted marketing, new-product introductions, or consumer outreach during public-relations crises. Coca-Cola, for example, monitors what consumers are saying about its products in real time. Coke was the first brand in the world to reach 50 million Facebook "likes," while Diet Coke had 225,000 Twitter followers as of the end of 2012.

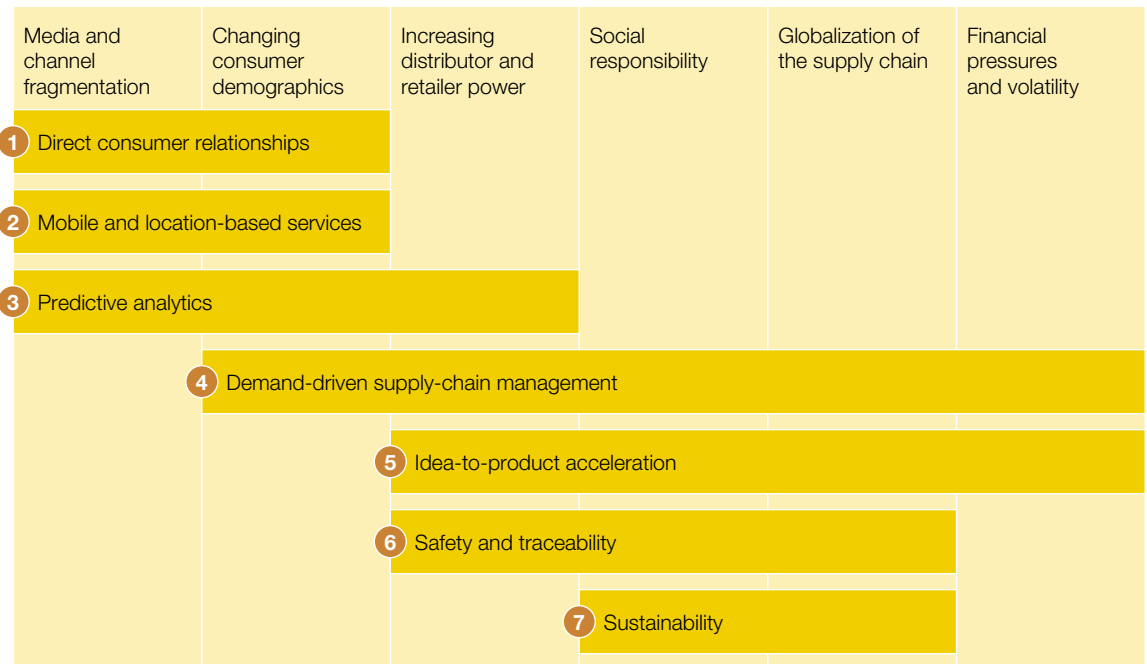
Weaving together the ability to maintain social brand presence, monitor consumer conversations, and respond in real time requires a complex and evolving set of technology solutions that look very different from traditional transactional CPG IT.

Mobile and location-based services

As smartphones and tablets proliferate in consumers' pockets, in retail stores, and in the hands of the sales and service workforce, CPG companies are leveraging these new interaction models and connecting with retailers and

¹See Roxane Divol, David Edelman, and Hugo Sarrazin, "Demystifying social media," mckinseyquarterly.com, April 2012.

Exhibit 1 Leading consumer-packaged-goods companies are addressing the changing business landscape.



individual consumers wherever they are and whenever they want. Mobile amplifies the impact of direct-to-consumer marketing. Levi Strauss, for example, uses social media to offer location-specific deals. In one instance, direct interactions with just 400 consumers led 1,600 people to turn up at the company's stores—an example of social media's word-of-mouth effect. When emerging technology capabilities make the mobile device the primary personal shopping tool, with which consumers discover, try, buy, and share experiences with new products, the cost of product launches will decrease and their impact will increase.

Richer information will come from using the camera and scanning capabilities of smartphones and tablets. By scanning codes on the

product, consumers can get further information, such as advice on how best to use a product, recipes, complementary products to buy, and data on safety and sustainability. Known as "augmented reality," these capabilities are undergoing trials today and could soon reach wider audiences.

Mobile solutions are also increasingly important within the enterprise itself. One CPG manufacturer, for example, equipped its merchandisers with tablet apps that use pictures and data entry to track on a daily basis how much shelf space it was allocated in comparison with the competition and whether retailers were complying with promotion agreements. By measuring and acting on this data, the company doubled its

shelf space within a single region and increased retailer pricing and promotion compliance.

Predictive analytics

Consumer-goods companies have traditionally used historical performance, channel demands, and gut feel to determine price, promotions, assortment, and replenishment. Now companies are starting to turn to predictive analytics to refine this decision making. One CPG company mines a massive database of historical point-of-sale and promotions data, integrated with real-time data from social media and weather forecasts, to predict daily demand by store and optimize assortments and promotions in order to maximize sales and profitability.

Tesco systematically integrates analytics and consumer insights to build a sustainable competitive advantage. By analyzing data from its Clubcard loyalty program (which comprises more than 1.6 billion data points, ten million customers, 50,000 SKUs, and 700 stores), the retailer can better segment and target customer occasions.

P&G recently announced that it is increasing its analytics workforce fourfold. The company clearly believes that the way information is used in the business world is fundamentally changing and sees analytics as a core source of competitive advantage in the coming years. We expect many other CPG players to follow suit.

Demand-driven supply-chain management

Consumer-goods manufacturers are increasingly moving toward demand-driven supply-chain systems in order to minimize inventory levels, improve service performance, and

reduce stock-outs. Adopting this approach has required companies to develop new algorithms to integrate near-real-time demand data with traditional forecasts and develop new IT systems to facilitate data sharing with customers and distributors.

One CPG company was able to capture more than £250 million (\$377 million) in benefits and improve on-time delivery from 97 percent to 99.5 percent over three to four years by adopting customer-driven demand planning as well as integrating its manufacturing and logistics systems with best-of-breed customer-integration solutions.

Another example: a large grocery retailer led a predictive-ordering pilot with a CPG manufacturer that drove 15 percent growth in same-store sales for a flat category by improving assortment and eliminating stock-outs.

Initiatives like these reflect a broader trend among retailers who have invested in technology initiatives ahead of their CPG counterparts. When the retailer owns the algorithm and the data, it has more negotiating leverage over its suppliers. Furthermore, maintaining systems links with numerous retailer platforms could become highly complex and costly for CPG companies to manage and hinder the development of their own solutions. Unless CPG manufacturers begin to shape their own solutions, they will continue to be saddled with an increasing number of reactive and expensive one-off customer IT requirements just to keep up. Analytics and data aggregation can tip the balance of power back in their favor, however. While many functions may build analytics teams, IT must enhance its role in delivering the data and tools to enable these teams to execute efficiently.

CIOs who seek to lead the business on a journey to capture value from strategic technology-enabled opportunities should be ready to push through a transformation spanning several areas.

Idea-to-product acceleration

For most consumer-goods companies, introducing new products faster, at lower cost, and with greater likelihood of market success is the constant but elusive goal. P&G has been a trailblazer in the use of technology for this purpose. It has adopted design tools to create realistic virtual prototypes, thus saving time in design iterations. Additionally, it has leveraged virtual-reality techniques to develop studios that simulate new products sitting on shelves in order to test design effects internally and with consumers. After an initial period of testing and refinement, such techniques are now being used in the development of more than 80 percent of P&G's new products.

These kinds of tools can create value across the industry, and it is clear that the mainstream of the market has only scratched the surface of the potential.

Safety and traceability

With the increasing consumer and regulatory focus on safety and the resulting greater likelihood of product recalls, the ability to trace a product through the supply chain from the raw-goods supplier into the store has become more important. To accomplish this task in the most effective way, companies need to ensure they have good master data on products, as well as the right tools to tag and scan items in collaboration with their suppliers as products progress through the supply chain.

Companies also need tracing functionality linked to product databases. One consumer health care company has integrated serialization-management software, data-carrier technology such as radio-frequency identification and bar codes, and additional authentication such as holograms and nanotags to trace its products through the various stages of the supply chain.

Sustainability

There is increasing consumer demand for transparency on how companies perform when it comes to sustainability and corporate social responsibility. One start-up, GoodGuide, allows consumers to browse safety, health, and sustainability ratings for more than 70,000 products.

Today, only 10 percent of public companies voluntarily publish their carbon-emission data, but that number is growing. One CPG manufacturer has differentiated its products by printing carbon-footprint information directly on product labels. Companies interested in adopting similar methods must first be able to track, manage, and analyze a tremendous amount of data throughout the supply-chain process.

Getting ready to win with IT

Exploiting the commercial and operational potential of technology-driven trends in

consumer packaged goods will require the close cooperation of IT and business leaders, a sharp strategic focus, a fast and nimble way of working, and, often, new strategic and technical talent.

Integrating technology and business strategies entails a constant conversation in the context of a multiyear road map rather than the typical annual budgeting process.² To truly shape the direction of the business in these technology-enabled domains, executives must engage in an ongoing dialogue to ensure that their technology strategy continually evolves and that they make the appropriate investments in advance of business demand. We believe that this dialogue should start with these critical questions:

- Given our own business priorities and challenges, what are the two or three technology trends on which we want to focus?
- For these chosen priorities, how do our current commercial and IT capabilities compare with best-in-class examples among competitors? How will they create value in the short and long term?
- Precisely who in our organization is responsible for working on a technology-enablement strategy and ensuring its adoption? To what extent do business leaders take personal responsibility for the success of this strategy?
- What capabilities must we have in-house to win, and where do we leverage the market? For example, should we seek help from “analytics as a service” providers to accelerate insights, or is this such a strategic capability that we must build it in-house?

- How can we resource proof-of-concept efforts to show early impact and demonstrate potential to fellow business leaders?

Transforming IT

CIOs who seek to lead the business on a journey to capture value from these strategic technology-enabled opportunities should be ready to push through a wide-ranging transformation spanning several areas.

Aligning the leadership team

Senior executives should act as role models for the IT organization as a whole. Bringing in new blood can help by introducing experienced practitioners who can provide credibility in areas such as analytics.

Attitudes and actions need to change as much as personnel. It will take time to root out “order taker” attitudes and instead instill the mind-set that IT is going to bring ideas and challenge business and functional leaders on whether they are getting the most from their information assets and technology capabilities. Leaders will need to spot and celebrate examples of the right approaches. IT teams cannot simply assert they are now enabling the strategy; they must show how they’re doing it.

To help facilitate this process, leaders may need to revisit governance that is designed for budgetary control rather than building strategic capabilities. Investments in foundational capabilities in analytics and management of big data will drive benefits across functions but will remain hard to fund if every stakeholder is just looking at his or her slice of the budget pie.

²See Adrian Booth, Roger Roberts, and Johnson Sikes, “How strong is your IT strategy?,” *ft.com*, March 21, 2011.

Sharpening the strategic focus

Leaders are unlikely to be able to devote the necessary attention (and talent) to all seven trends at the same time, and they should apply a granular approach to any trend they do select. An opportunity heat map can help to identify the areas to invest in based on the value at stake and the time available to act ahead of the competition (Exhibit 2). Ultimately, the strategy that emerges from this opportunity assessment should be an integrated plan that shows how the business will beat the competition using information over a multiyear horizon, not simply a revised annual IT budget. With the right agreement on the scale and scope of the opportunity, the level of investment in IT becomes an outcome rather than a constraint.

Building a nimble operating model

This kind of review will almost certainly identify and unlock demand for investing in a wide range of valuable opportunities—more than the organization may have historically pursued. The operating model in IT needs to be prepared to handle that demand growth and deliver value at the pace that increasingly fast-moving markets demand.

CPG IT needs more agility in order to achieve the shortest possible time lags between concept and deployment. A strong “test and learn” culture, with a laser focus on business outcomes, is essential. This shift in operating model can be likened to the difference between the methodical plan, build, and deploy cycle

Exhibit 2 An example heat map from the consumer-packaged-goods industry highlights areas of potential impact.

Action	Data	Analytics	Software	People	Process	Strategy
Insight foundation	4	3	4	3	4	4
New-product development	3	2	2	3	1	2
Planning (supply and demand)	3	3	2	1	1	1
Sourcing (direct and indirect)	4	4	3	3	3	4
Manufacturing and quality	2	3	3	4	3	4
Distribution	4	3	2	3	2	2
Marketing mix	3	4	3	4	3	3
Pricing	2	3	3	2	3	4
Trade	5	4	4	4	4	4

Legend: Poor (0), 1, 2, 3, 4, 5 (Best practice)

Source: Expert interviews; McKinsey analysis

of enterprise-resource-planning (ERP) system development and the daily production batches of a Web-services company. This change cannot happen overnight, but we've found that productivity improvements of 30 percent or more can be unlocked from traditional development organizations. Flexibility in sourcing, vendor management, and talent management will support this. However, outsourcing relationships designed for a more stable world can at times be a constraint rather than an enabler.

Recruiting relevant technology and strategic talent

Carrying out the necessary IT transition will not be possible without the right people in technical and strategic roles. In general, today's CPG IT organizations often lack resources with the requisite technical skills in analytics, mobile technology, programming, and user-interface design. While some may have a few team members who are gaining deep expertise, they lack the capacity to deliver at scale. This will require the development of new centers of excellence and new sources of talent.

Most CPG players will need to up their game in data architecture, governance, and management. With a move away from multiyear ERP programs toward projects with shorter cycles, it will be increasingly important to have a solid data foundation that can be reused to avoid unnecessary complexity and achieve scale benefits. Some companies are considering creating a chief-technology-officer or

chief-data-officer role to indicate the importance of these areas in the consumer business.

Piloting new systems

New systems and tools can help build a learning and innovation culture. These might include platforms for social monitoring and insight, such as Buddy Media, NM Incite, and Radian6, or tools for managing big data, such as Cloudera and DataStax.

Leveraging such tools early in the adoption cycle will require openness to working with beta products and start-ups as a complement to the established technology partners most IT organizations depend on today. Additionally, IT organizations will need to devote time to scan for emerging solutions and develop new engagement models to conduct pilot programs and bring solutions to market. This means setting aside valuable funding and talent for innovation projects that IT will govern, which is not something easily achieved in most technology organizations today.



Information is becoming the lifeblood of the CPG industry. The demand for technology solutions to enable data-driven decision making will only increase. This is a historic opportunity for IT leaders to drive a true step change in creating value for the business. But staying ahead of the game will require nothing less than a transformation of the IT organization's mind-set and operating model. ○