

# CPG firms see AI as response to changing consumer





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## Introduction

The 'consumer packaged goods (CPG)' industry is undergoing substantial disruption. Business models are expected to change significantly, with changing consumer demographics, increasing competition and the evolution of new distribution models.

In response, artificial intelligence is seen as a key tool for success in the next two years. Half of CPG firms rate AI for supply chain and inventory management as more influential in the near future than any other technology. It's clear that CPG firms that want to stay on top of this intensely competitive and rapidly evolving market are looking toward automation and AI to build what Infosys describes as a 'Live Enterprise': an organization

that senses and responds to the continuously changing environment in an automated manner.

To understand the perspectives of CPG firms at this transformative stage, Infosys conducted a global study of CPG firms by soliciting views from 502 business as well as IT users. The objective of this study was to understand the factors influencing the business strategies of CPG firms, the solutions they see, the challenges they expect and their strategies to navigate through the rapidly evolving environment. This research report is a guide for CPG companies trying to gauge the factors influencing the market, understand the challenges and equip themselves to lead in this constantly changing environment.

## Executive summary

This research shows that CPG companies expect significant change to their business models in the next two years, with distribution models and channels facing significant upheaval in response to changing consumer demographics, brand propositions and increased competition.

CPG firms expect technology, particularly AI and digital technologies, to offer the best solutions to help them grow in these rapidly changing times. This is reflected in their business objectives, with 32% of respondents saying that use of technology for competitive advantage is their top business objective. Emerging technologies will help them to manage supply chain management intelligently and engage digitally with consumers to deliver a personalized experience.

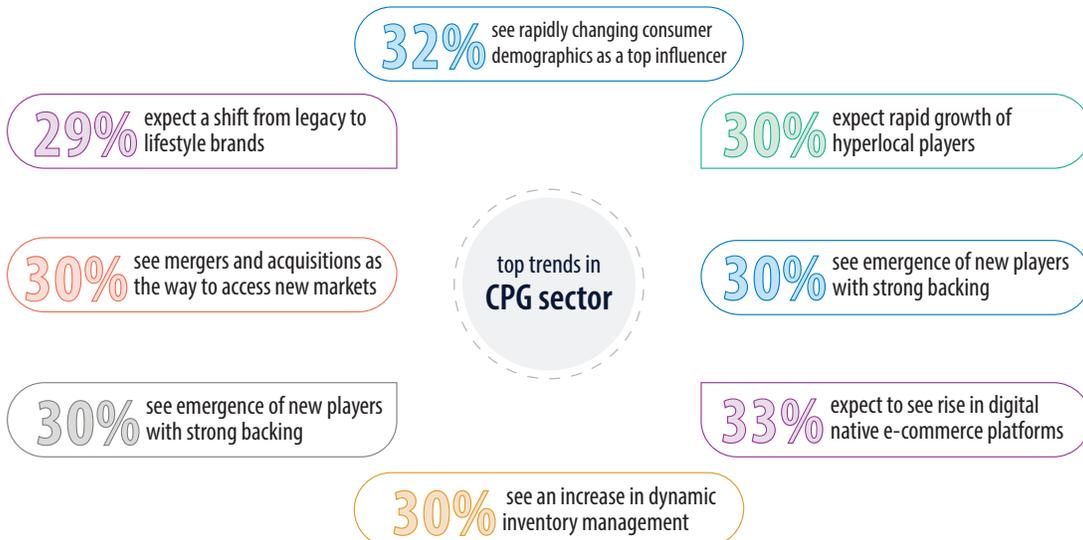
More than 50% of CPG firms expect AI to play a significant part in process automation, helping to automate and manage supply chains. AI is also expected to help automate customer service and develop personalized marketing campaigns, along with data analytics. Mobile commerce tools and social media/digital marketing tools will help them with business strategies to gain market share.

However, this shift to technology will not be easy. Almost half of firms see the pace of technology change as a top challenge. Around 60% of CPG firms see data and system integration, availability of technology skills, need for continuous updates and maintenance, as well as the cultural shift required for technology adoption as challenging aspects of their technology road map.

There is a discrepancy around how CPG firms will tackle these challenges. Most IT executives in CPG firms would prefer to invest internally to build their technology or acquire technology firms directly to augment their capabilities. The majority see working with external technology providers as a secondary or tertiary option. Yet when questioned on the perceived effectiveness of these strategies, only a third feel that investing internally is a very effective solution, with 40% considering external service providers to be the most effective option.

### Top trends that will influence the CPG sector in the next two years

Base: 233



Source: Infosys



## Changing business models

CPG firms globally are undergoing rapid transformation as they contend with an informed and tech-savvy consumer, the entry of new kinds of competitors who offer niche and specialized products, and an expanding product portfolio to cater to diverse demands and rapidly evolving technology (Figure 1).

We invited our respondents to rank the influence of these trends on the CPG industry and examined the factors that would have the highest impact on CPG business strategies in the next two years. Thirty-two percent of the respondents identify changing consumer demographics, including the rise of millennial shoppers, an aging population, urbanization and a growing global middle class, as the trend that will have a significant influence over their business models in the next two years. We discuss this in detail in the next section.

Thirty percent expect growth in direct-to-consumer strategies. CPG businesses are exploring new channels such as D2C and subscription models to counter

competition from new entrants, as well as to serve the younger consumer segment in more meaningful ways.

Adoption of dynamic inventory management systems across channels to manage constantly changing demands will strongly influence business strategies in the next two years (29%), while 23% of respondents see it as a high-impact factor now.

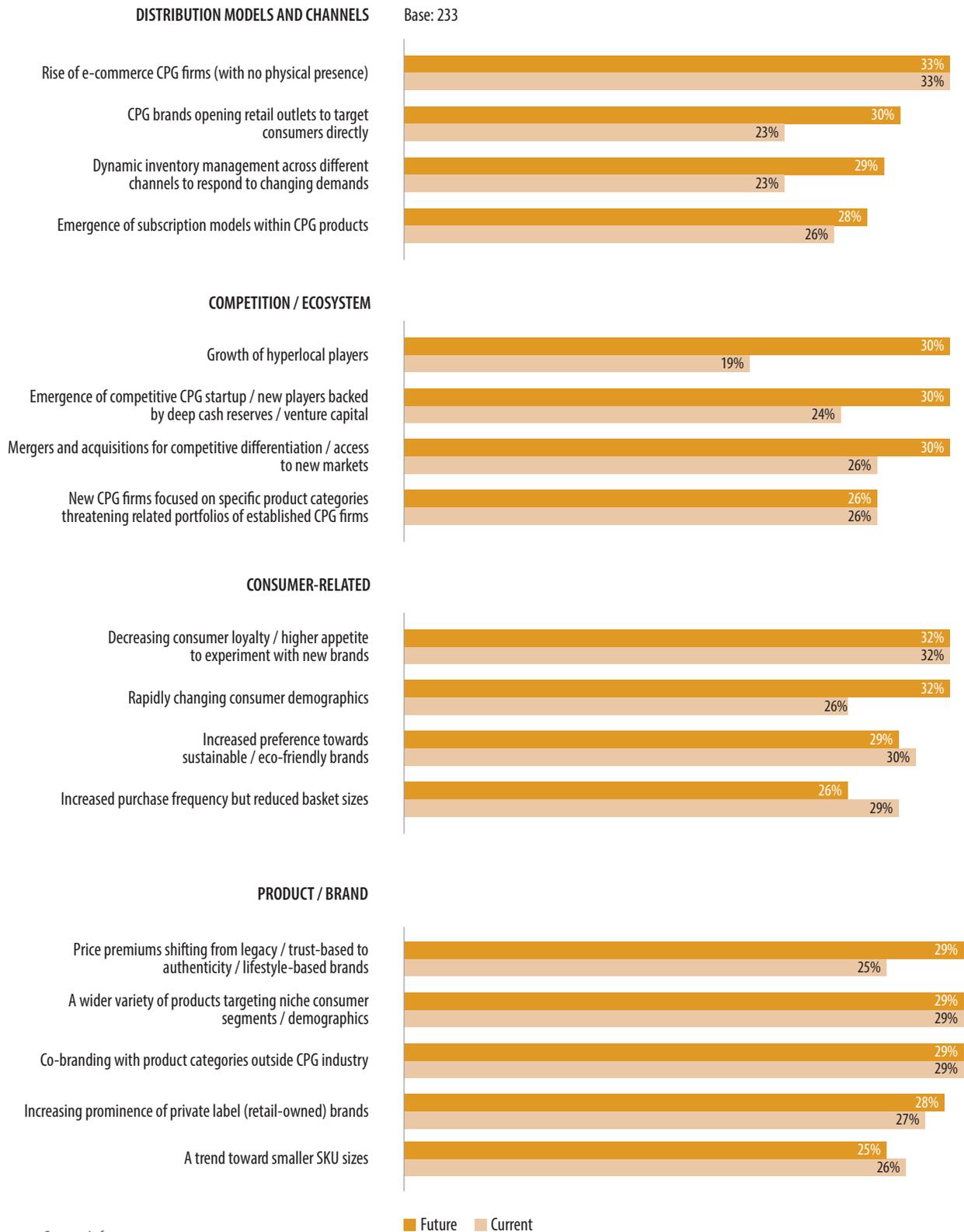
CPG companies also expect there will be increased competition in next two years with the emergence of new players with specialized products and offerings. They expect a rapid growth in hyperlocal players (30%) and the emergence of CPG startups backed by deep cash reserves (30%). Thirty-three percent of the CPG firms surveyed expect a constant rise in e-commerce CPG firms in the next two years. Twenty-nine percent of the business respondents also see a shift from legacy to niche, lifestyle-based brands.

Related to this is the increasing number of mergers and acquisitions

in the CPG sector. CPG companies see mergers and acquisitions as ways to gain a foothold in new markets and new segments. Our survey shows that 30% of the respondents expect mergers and acquisitions to influence business strategies in the next two years.

CPG firms expect that these factors will significantly change their business models in the next two years. As a result, distribution models and channels are also expected to evolve significantly over the next two years. For example, new entrants like Dollar Shave Club and Harry's forced traditional CPG players to take note of their disruptive distribution models. However, reorganizing their supply chain and logistics to cater to directly delivering to the consumer can be complex and expensive. The companies have to overhaul their existing distribution networks to accommodate the optimal size and frequency of shipments.

Figure 1. Trends like growth of hyperlocal players and direct-to-consumer strategies will take center-stage in next two years



Source: Infosys

## Consumer demographics

Demographic shifts and changing consumer preferences are an ever-present trend for CPG firms to be aware of. The survey results show that over 32% of the business respondents see that changing consumer demographics will play a key role in shaping business strategies in the next two years (Figure 2). The respondents find that a rising middle class in developing countries (76%) and increasing urbanization (74%) are changing purchasing patterns and choice of products. Increasing millennial spending (72%) and a larger aging population are also expected to influence consumer behavior.

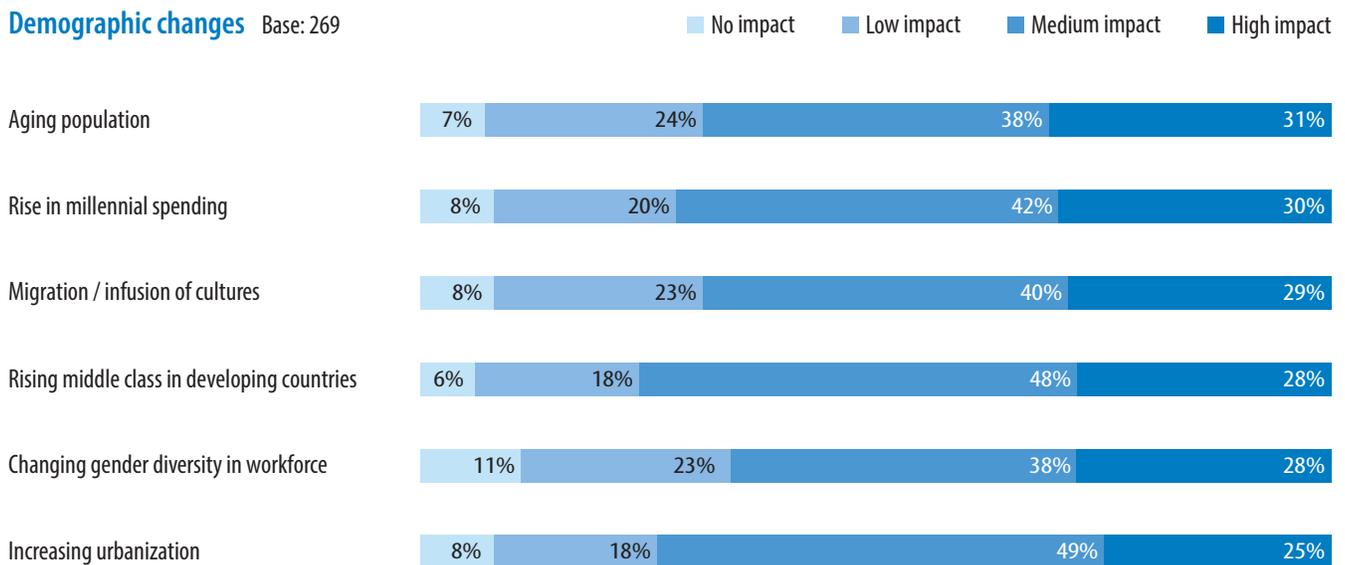
A keen understanding of changing demographics is essential, since each consumer segment has a different approach to buying. The typical millennial might choose premium products that offer “brag value” on social media. Further, “green” or locally sourced products will appeal more, as this next-gen consumer derives more value from niche products. Multichannel access with a personalized and interactive shopping experience added to this will ensure consumer loyalty.

The aging consumer segment will require a different approach. Consider the baby boomer segment in the U.S., which still has

a substantial disposable income and constitutes 22% of the total U.S. population<sup>1</sup>. The emphasis is on value for money, convenience and memorable in-store experiences. Consumers from busy urban families might look for convenient ways of shopping. The CPG companies should be equipped to cater to these different needs to deliver a personalized experience.

Shifts in consumer behavior and a rapidly evolving market landscape are compelling CPG companies to reevaluate their business models. But how do CPG companies equip themselves to gain from this changing environment?

Figure 2. Consumer demographics will play a key role in shaping business strategies



Source: Infosys

## Solution to changing business models

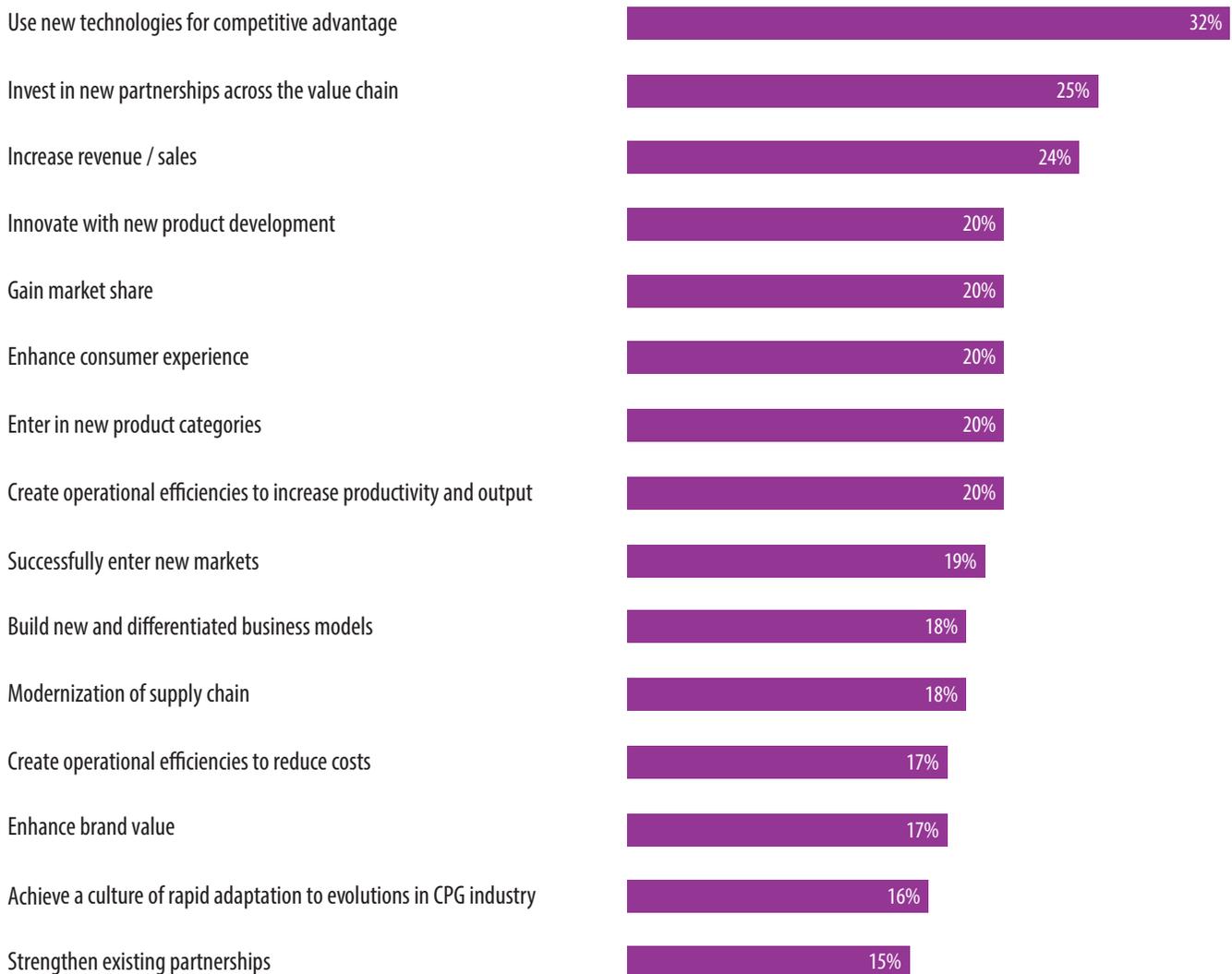
CPG companies expect many trends, such as changing consumer demographics, the rise of digital consumers, a surge in competition and emergence of niche players, to influence market dynamics. This will also result in significant

changes to their distribution models and channels. It is not possible to respond to these trends with existing systems designed for last century's retail landscape.

CPG firms expect rapidly evolving technology to aid them in adapting to changing dynamics. Thirty-two percent of the companies surveyed say that use of technology for gaining competitive edge is their top strategic business objective (Figure 3).

Figure 3. Using new technologies for competitive advantage is the key strategic business objective for CPG firms

Base: 502



Source: Infosys

To gain a competitive edge, an enterprise needs to be sentient and respond intelligently. In today's fast-moving environment, the speed at which a company can do this is crucial. The Live Enterprise works at three different levels, applying continuous learning and automation principles to enable digital transformation of every part of the company:

**Live by design** – employing the power of the core and scale to drive intuitive experiences, thereby radically changing the everyday journey of the users to be agile and hyper-productive.

**Live at core** – Developing machine led, automated processes to create a digital brain which can intuitively respond to the changing environment.

**Live at scale** – Driving seamless collaboration among all stakeholders, including suppliers, customers and end-consumers,

powered by high performing infrastructure and network.

The survey results show how CPG firms are looking at technology to enable them to gain better consumer insights, engage with customers better and respond operationally to their needs.

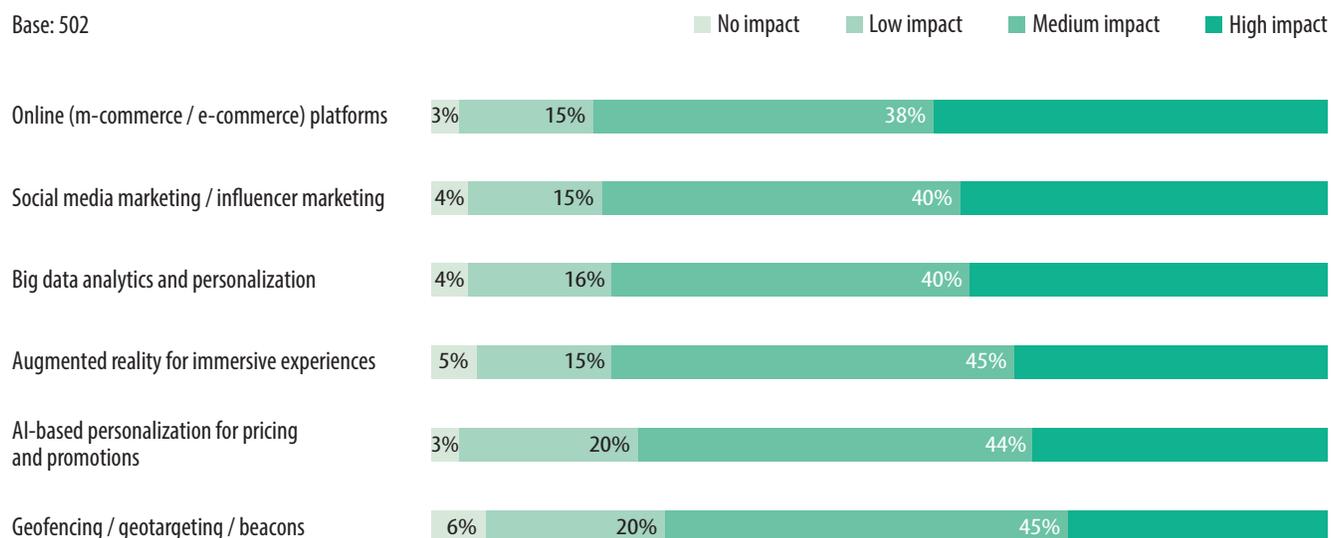
CPG firms understand that direct-to-consumer can be one of the best ways to build closer ties with the consumer so they can get a better sense of consumer expectations. The survey shows that 44% of the respondents are looking at technology to help them digitally engage directly with consumers.

CPG firms are also looking at new technological developments that can help them offer personalized experiences to consumers. We asked the respondents to rate technological developments on the basis of the impact they are expected to have in enabling transformation. CPG firms see

the need to drive intuitive, personalized experiences to their digital consumers, monetizing the data that they have. Eighty-one percent of respondents feel that big data analytics will play a significant role in personalization (Figure 4). With big data analytics, CPG firms can thoroughly analyze consumer preferences and behavior and feed insights across the consumer lifecycle, from product choices to marketing promotions, sales campaigns, in-store experiences and engagement mechanisms. According to 81% of the respondents, technological support in social media marketing and influencer marketing will be very crucial. CPG firms (80%) also plan to develop augmented reality and virtual reality applications to provide an immersive experience to consumers

When we cross-analyzed responses to the questions on business objectives and influential technology

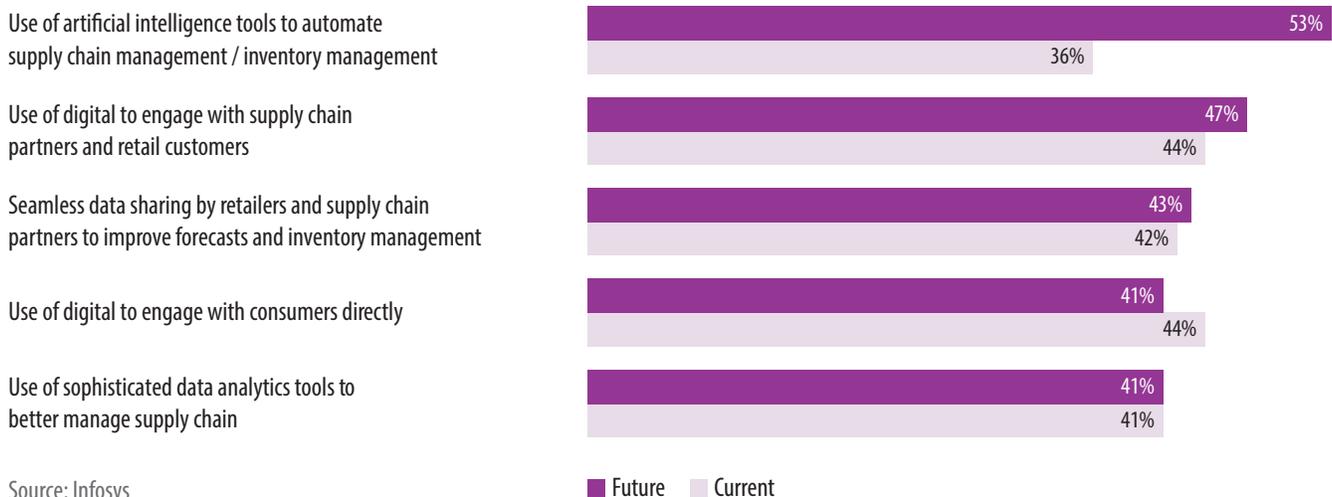
Figure 4. Big data analytics will be important to navigate disruption



Source: Infosys

Figure 5. CPG firms see artificial intelligence as key enabler for transformation

Base: 233



Source: Infosys

trends, we saw some interesting patterns emerge. We see that, in particular, respondents with a strategy to enter new markets see digital engagement with consumers as playing a significant role. Social media marketing and mobile commerce tools were selected by those who aspired to gain market share.

However, operational capabilities, or rather the ability to respond to customers through efficient supply chain management, are a more dominant focus for respondents. More than 50% of CPG firms expect AI to play a significant role in helping them to automate and manage supply chains (Figure 5). This is a crucial point, because AI can support automation of the complex interplay between products, consumers, partners and third-party logistics. It relates to Live at Core, which is about automating processes at scale, reducing manual intervention in repetitive jobs, enabling upskilling

of the workforce to make more meaningful contribution towards further developing the business.

Yet firms cannot win in isolation. They need to build robust relationships with other partners in the ecosystem to ultimately deliver the best results to their consumers. However, the survey results also show that only 25% of respondents want to invest in new partnerships across the value chain. Nonetheless, seamless sharing of data between retailers and supply chain partners is still seen as very important to improve forecasts and optimize inventory management in order to avoid any bottlenecks in the value chain.

Analysis of responses on business objectives and technology investment in operational areas shows interesting results. Respondents who considered cybersecurity to be a critical investment were focused on

modernizing the supply chain and innovating with new product development — two areas that mandate a secure environment, given the growing sophistication of cyberattacks.

When we compare the responses from firms of different sizes, we see that small firms are keen on investing in mobile commerce tools (55%) and ‘software as a service (SaaS)’ solutions (52%) the most. While social media marketing tools (53%) are a priority for mid-sized firms, they do not appear to be looking at investments seriously in other areas.

Europe (50%) and Australia and New Zealand (48%) look to invest in e-commerce tools, while it is a low priority for the U.S. (40%). The U.S. considers SaaS solutions (47%), AI chatbots (45%) and supply chain tracking and provenance technologies (45%) as necessary for the future.

## Challenges in adoption

We have seen in earlier sections that CPG firms are actively assessing the trends that will shape the market in the next few years. They recognize that technology can help them in aligning themselves with these trends. However, this

shift to technology will not be easy. Almost half of firms see the pace of technology change as a top challenge (Figure 6).

To keep up with the changing environment, firms need to

continually align themselves with these changes. This can make systems very complex and also increase costs. Almost half of the respondents see this as a serious challenge in adopting new business strategies.

Figure 6. Keeping up with the pace of technology changes is a challenge for CPG firms

Base: 502



Source: Infosys

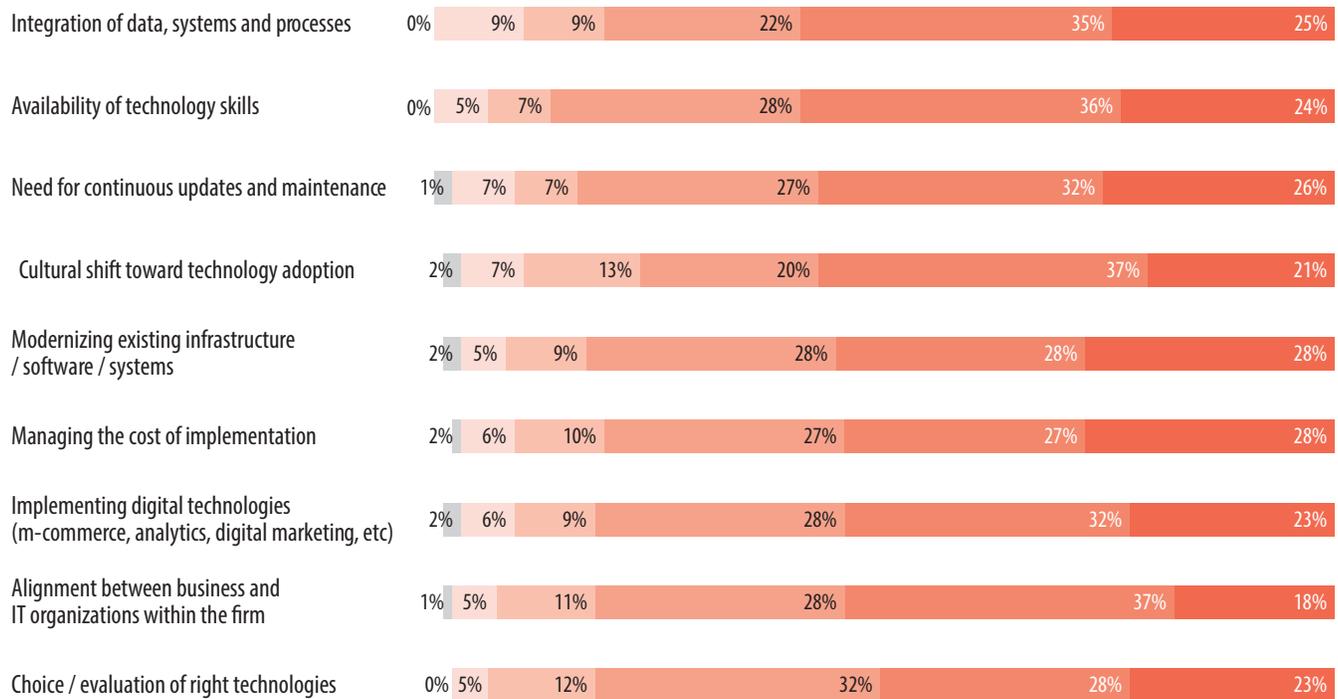
When asked about the severity of specific challenges in technology adoption, CPG firms consider integration with existing systems, availability of skilled workforce and cultural shift to be the biggest challenges. Around 60% of CPG firms see data and system integration and the need for continuous updates and maintenance as the biggest

challenges (Figure 7). Almost 60% of the respondent firms also find availability of technology skills, as well as the cultural shift required for technology adoption, to be challenging aspects of their technology road map. The issue of integrating existing systems and processes with new ones can be very complicated, and hence take

many years. However, today, where trends change in weeks and months, companies cannot afford to set aside such long periods for technical implementations. Therefore, the technology being used has to be agile enough to seamlessly align itself to new changes.

Figure 7. The biggest challenge for IT users is the Integration of data, system and processes

Base: 233



Source: Infosys

■ NA ■ 1 - not at all challenging ■ 2 - slightly challenging ■ 3 - moderately challenging ■ 4 - considerably challenging ■ 5 - significantly challenging

According to the [Infosys Digital Radar](#) study published in 2019, foundational initiatives like modernizing legacy systems and mainstay initiatives such as digital transformation were focus areas for CPG enterprises. In this study too, 56% of respondents cite legacy systems as a top concern. Saddled with legacy and monolithic systems, CPG companies struggle to emerge from the mire of complex processes,

security concerns and regulations. These challenges also weigh heavily on initiatives such as modernizing existing infrastructure, slowing down the process of implementing digital technology.

With a surfeit of legacy systems that must be moved to newer platforms, enterprises require a cohort familiar with the legacy systems and existing processes as well as one skilled in the latest technologies. And there

lies the problem, as obtaining skilled technology resources is a pressing issue globally.

While large firms agree on the top technology challenges faced, they also consider aligning the business and IT organization (40%) a vital issue. For small firms, on the other hand, managing the implementation cost (36%) and cultural shift to technology adoption (36%) pose challenges.

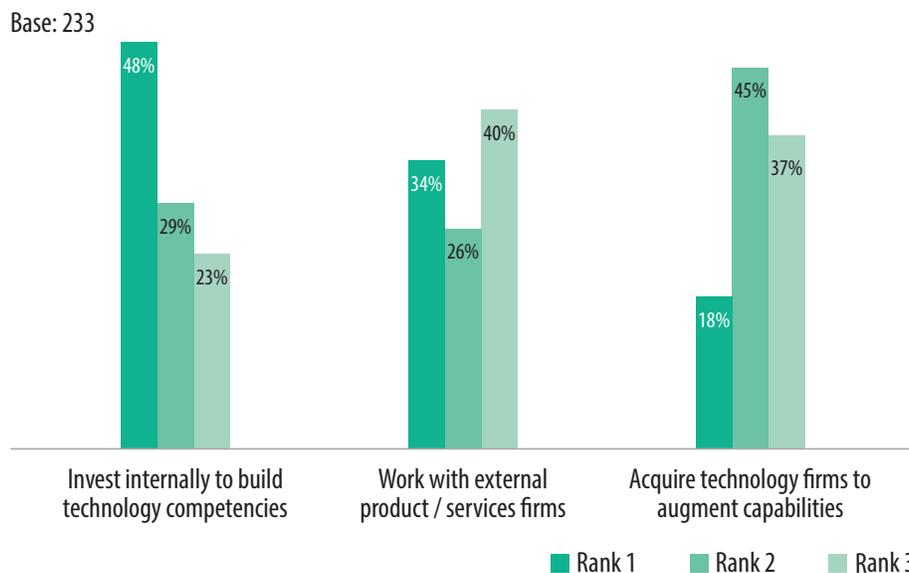
## Tackling the challenges

Next, we explored the paths these companies are taking to overcome these challenges and align themselves with the latest trends. There is a discrepancy around how CPG firms will tackle these

challenges. Almost half of the IT executives in CPG firms would prefer to invest internally to build their technology or acquire technology firms directly to augment their capability (Figure 8). For example,

the CPG giant Procter & Gamble has invested \$130 million in its latest digital innovation center in Singapore<sup>2</sup>. The majority see working with external technology providers as a secondary or tertiary option.

Figure 8. CPG firms prefer building internal capabilities to drive technology initiatives

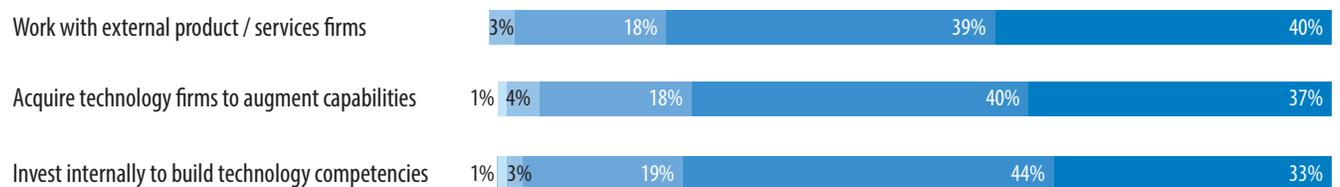


Source: Infosys

Yet when questioned on the perceived effectiveness of these strategies, only a third feel that investing internally is a very effective solution, with 40% considering external service providers to be the most effective option (Figure 9).

Figure 9. CPG firms find external service providers to be effective in driving technology initiatives

Base: 233



Source: Infosys

Legend: 1 - not at all effective, 2 - slightly effective, 3 - moderately effective, 4 - considerably effective, 5 - very effective

Regional data shows that the U.S. is more open to working with external partners (35%) compared with other regions, while Europe is likely to acquire capabilities inorganically (21%). Small firms were most open to working with external partners (39%), while large (48%) and mid-sized (51%) firms preferred building internal capability.

## Ability to take advantage of emerging opportunities

While CPG enterprises take a planned approach to navigating the transformation journey, the study also sought to understand how equipped companies were to take advantage of emerging opportunities. CPG firms feel that they have a clear understanding of shifting patterns in consumer behavior. They also feel equipped to handle supply chain dynamics in the changing environment. However, they feel the need to gain a better understanding of emerging markets if they are to succeed. As mobile commerce becomes inevitable, these firms are also trying to upgrade their systems

and upskill their employees for seamless adoption.

While we saw that CPG firms believe M&A will be a defining trend in the next two years, they feel that they are not very well equipped to handle M&A. A major challenge with M&A is the successful integration of new companies with existing businesses seamlessly and quickly. The longer it takes to absorb the new companies, the less beneficial the acquisition.

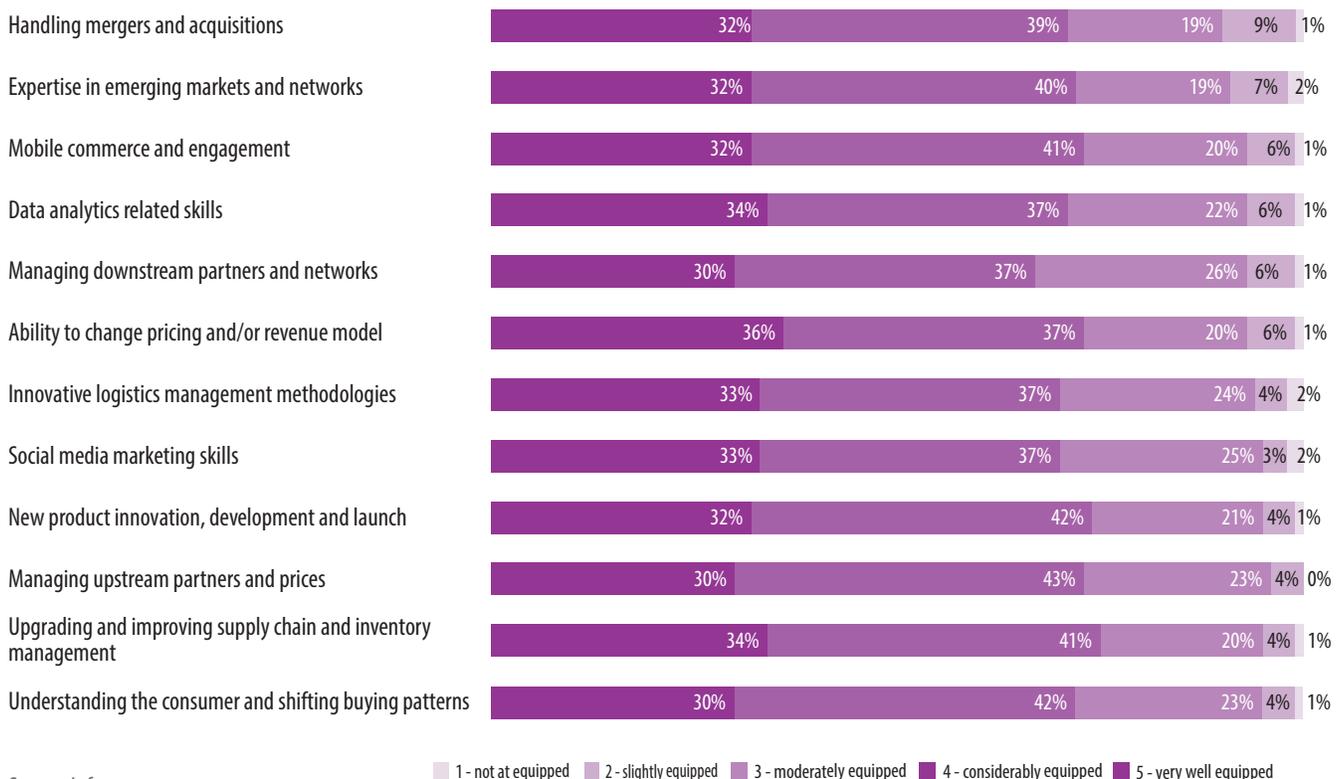
According to respondents, CPG firms are most confident about enhancing the supply chain and inventory management (75%), new product innovation, development and launch

(75%), understanding consumer and changing buying patterns (73%), managing upstream partners (73%), and mobile commerce and engagement (73%) (Figure 10).

U.S. respondents rated themselves low on handling mergers and acquisitions, while European respondents felt that they were not well equipped to manage the downstream ecosystem. Business users were least confident about managing emerging markets. Mid-sized firms viewed their social media marketing skills as insufficient, while large firms expressed confidence in handling all opportunities.

Figure 10. Many CPG firms see the need to gain better understanding of emerging markets

Base: 501



Source: Infosys

## Conclusion

CPG companies expect significant change to their business models in the next two years, in response to changing environment. The key trends to look out for will be the rapidly changing consumer demographics, the adoption of direct-to-consumer strategies, the rise in mergers and acquisitions to access new markets, an increase in competition, and significant changes in distribution and channels to respond to changing demands.

CPG firms expect that rapidly evolving technology will aid them in adapting to the changing dynamics. More than half of the respondents expect AI to aid them in smarter inventory management and supply chain management. They are also looking for technological solutions

to digitally engage with customers and partners. They are ideating direct-to-consumer strategies to build closer ties with the consumer so they can understand the consumer better and provide personalized experiences using big data analytics and automation.

However, this shift to technology will not be easy. Around 60% of CPG firms see data and system integration and the need for continuous updates, the availability of technology skills, and the cultural shift required for technology adoption as challenging aspects in their technology road map.

To overcome these challenges and adopt the new trends, companies want to build internal capabilities.

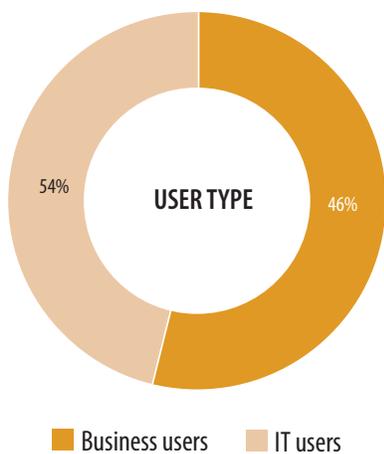
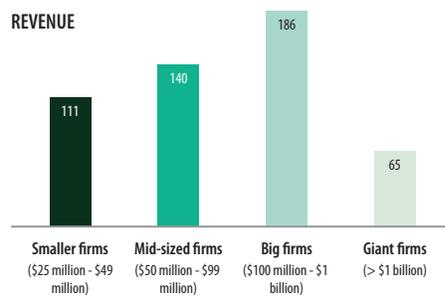
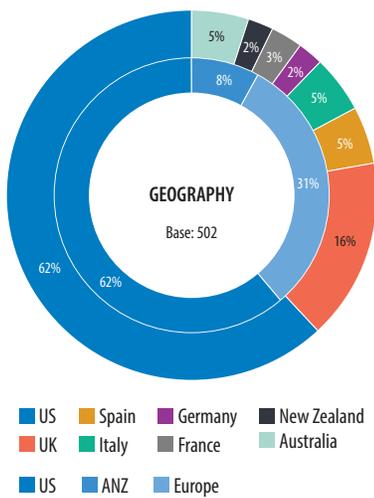
However, they feel that support from external service providers will be the most effective, and it will be crucial in building a dynamic system that can actively sense changing needs and adapt itself to deliver consistently in the continuously evolving environment.

To navigate through the disruptions, CPG firms see the need to transform themselves so that they can sense, understand and intelligently respond to the changing environment in an agile, automated way, and become 'Live Enterprises'.

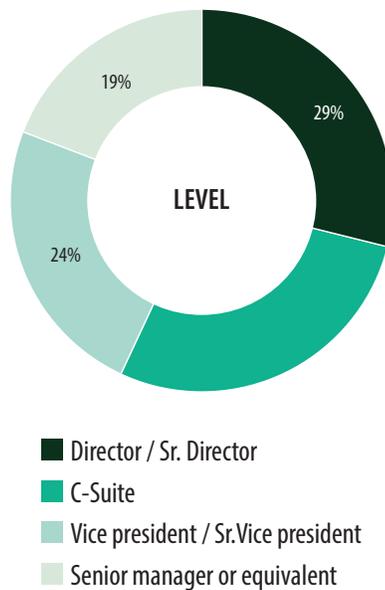
# Survey methodology

Infosys surveyed 502 senior business and IT users in the CPG industry across the United States, Europe, Australia and New Zealand. To get a holistic perspective, the survey covered very large firms with over \$1 billion in revenues, as well as small firms with under \$50 million in revenues (Figure 11).

Figure 11. Survey methodology



**Business users include:**  
Accounts & finance, HR, manufacturing, production & operations, marketing, sales, research & development, procurement, supply chain, service & facility management



Source: Infosys

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2. <https://www.bizjournals.com/cincinnati/news/2018/10/26/p-g-ups-investment-in-digital-innovation-center-to.html>

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