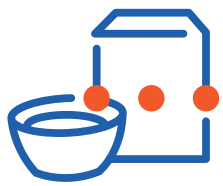
AI AND THE FMCG BUSINESS: GREAT PARTNERSHIP TO DELIVER THE GOODS



"The time is now for CPG companies to truly digitize their entire supply chain – from raw materials and finished goods to logistics – making their operational processes transparent and truly amenable to automation. Especially AI-led automation that can then take its efficiencies and productivity to a whole new level. This will allow intelligent systems to take over more of the known, well-defined aspect of the value chain, and decision makers can focus on finding new opportunities to create new kinds of products, experiences, and value that do not yet exist."

– An Infosys viewpoint

INTRODUCTION

Consumerism has greatly evolved over the years and today it is not just about owning desirable goods, but also about collecting and sharing great experiences. Personalized customer experience based on deep analytical insight is an important means of differentiation. In this "experience economy", brands are constantly investing in improving engagement to earn customer loyalty.

For the highly commoditized Fast Moving Consumer Goods (FMCG) industry, one of the biggest challenges is sustaining profitability in a price competitive market. FMCG marketers are always looking to optimize operations to squeeze out the last drop of efficiency. Here too big data analytics and other digital technologies are key since they enable marketers to see right across the supply chain to discover opportunities to cut cost, improve productivity, and raise service levels.

And now, the emergence of Artificial Intelligence (AI) technologies, especially machine learning and predictive analytics, is taking the capabilities of FMCG companies to a new level, further refining their understanding of consumer behavior and business operations, and paving the way for superior experiences.

How is the industry responding to the AI opportunity? As part of its study *Amplifying Human Potential: Towards Purposeful Artificial Intelligence*, Infosys commissioned independent research to investigate the approach and attitudes that senior decision-makers in large organizations have towards AI technology and how they see the future application and development of AI in their industries. Within that research, 10 industries were surveyed, including Fast Moving Consumer Goods (FMCG), Retail, Utilities, Financial Services, Healthcare, Pharmaceuticals and Life Sciences, Manufacturing, Telecoms, Automotive and Aerospace, and the Public Sector.

What follows are the findings specific to the FMCG sector.

MIXED FEELINGS

Our research reveals that the FMCG business is among the industries that have been disrupted the most by AI technologies. Yet, the players from this industry seem to be holding back from adopting AI, reporting a modest investment of US$3.8 million on average, well below the figure for all organizations taken together. FMCG was ranked sixth by AI maturity, scoring a "middling" 50 percent.

So it came as no surprise to find that very few FMCG organizations (14 percent) had fully deployed AI and found it working to their satisfaction.

However, it is not all gloom and doom because a respectable 39 percent of the respondents say that AI would create competitive advantage, while 34 percent say it could even increase revenues by 20 percent to 30 percent by 2020. 56 percent of the companies have begun to use AI technologies within their business during the past six months. 41 percent say that they believe their workplace was slightly ahead of their competitors' in the use of AI.

Regardless of the business/sector you're in, which of the following areas will AI have the greatest impact on in your opinion?

Business to consumer (B2C)	74%
Business to business (B2B)	62%
Consumer to consumer (C2C) (eBay, Craigslist)	35%

AI FOR BETTER CUSTOMER EXPERIENCE AND ENGAGEMENT

Consumer goods brands are contemplating automation of customer service operations to maximize employee productivity. They are also exploring ways to personalize consumer experience. 45 percent of the FMCG respondents mention that customer experience improvement and identification of new customer needs (42 percent) were top strategic priorities for the next three years.

The FMCG sector recognizes that data is fundamental to understanding consumer needs, attitudes and behavior. 57 percent of the respondent organizations in our survey are using or planning to use AI for its analytical capabilities in the coming months and years.

AI technologies like machine learning and predictive analytics that feed on big data are creating powerful use cases in the areas of customer experience improvement and engagement. Brands, including Nestlé, L'Oréal and Whole Foods Market, employ machine learning algorithms to personalize marketing content to individual consumers based on habits and preferences in a variety of channels ranging from email to mobile to paid display. To solve the universal "what's for dinner" problem, Kraft has launched an AI-based app that offers recipes, lists out ingredients, and even loads discount coupons on any of those ingredients on to the customer's phone. The app's AI, which learns as it goes along, advises customers where to buy the ingredients from and what to do with leftovers from previously used recipes. It can even guess the size of a customer's family based on the recipes downloaded.

Machine learning can also automate decision-making and customer support. For that to happen, insights must be embedded at each and every decision point.

When it comes to the application of AI technology, is your organization doing or planning to gain more insight from big data?

Currently doing	57%
Planning to do in next 12 months	32%
Planning to do but not within next 12 months	3%
No plans to do	4%
I don't know	4%

AI FOR EFFICIENCY, ACROSS THE BOARD

Often, with little to distinguish between rival consumer products, price becomes a key lever of differentiation. Operating on wafer thin margins, FMCG companies are always looking for ways to do more with less – when managing inventory, running advertising campaigns, segmenting customers, stocking supermarket shelves or setting prices. Big data automation is central to this agenda (77 percent of the companies in our survey are considering implementing it), and so are allied technologies like predictive analytics (59 percent) and machine learning (49 percent).

Some companies are already leveraging AI to improve functions such as inventory management. Weather being a major influencer of shopping behavior, Walmart uses it to refine stocking patterns. Seeing that consumers eat more steaks in warm, windy, cloudy weather and hamburgers when it is hot and dry, the company times promotions, for beef patty for example, based on weather conditions to gain substantial improvement in sales.

Another application of AI is to use machine learning to correlate price and sales, and dynamically optimize prices based on that insight. AI can also factor detailed inventory information to estimate price elasticity of different products to help sellers increase margins.

ETHICS AND AI

While the ethics of employing AI in the FMCG sector may not stir up as many emotions as it does in say healthcare and life sciences, it is still an important factor in adoption. 41 percent of the respondents from the industry feel that ethical concerns prevent AI from being as effective as it could be, while 30 percent say they are a barrier to AI adoption. It is worrying that only 45 percent of the organizations are considering the ethical implications of AI, and that too partially.

An important ethical implication is the impact of AI on employees. 48 percent of the FMCG organizations say their employees are concerned about job security. The employees would be reassured to know that 61 percent of the organizations expect to retrain employees impacted by AI for new roles in a new area, while 33 percent feel they would be redeployed within their current functional area.

This suggests that when FMCG companies adopt AI, they will likely overhaul the structure and responsibilities of the workforce. We endorse this because AI really offers an opportunity to relieve employees from manual repetitive jobs and deploy them in essentially human pursuits, such as innovation and problem solving, which are beyond the capabilities of machines, however intelligent. Organizations that do this will have leveraged AI purposefully, using it to amplify human potential instead of merely replacing human effort.

What does your organization primarily plan to do in terms of employees that have been replaced with technology?

Retrain them into a new role/area of the organization	61%
Redeploy within the same area of the organization	33%
Make them redundant	7%

CONCLUSION

For FMCG companies in the digital economy, personalized experience and customer engagement are imperative for success. Nimble and optimized operations with insights embedded at every decision point are equally essential at the back end. All of this can only be achieved with the extensive use of digital technologies, including AI.

FMCG companies have faced significant disruption at the hands of AI technologies, yet have been slow to adopt them. Our study suggests that there could be several reasons for this including ethical concerns and lack of knowledge about where AI can assist. That being said, FMCG companies realize the importance of deploying AI in their business and are beginning to prepare for it by largely investing and supporting IT infrastructure (61 percent), developing knowledge and skills (58 percent) and building AI into the company ethos. In fact, 36 percent of the companies expect to race to mature AI adoption in the next three to five years.

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