ENDLESS POSSIBILITIES WITH DATA FOR RETAIL, CPG AND LOGISTICS

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INTRODUCTION TO THE STUDY

Keeping pace with constantly changing tastes and buying behavior is one of the biggest challenges of the consumer goods, retail and logistics industry. In the past, consumer goods manufacturers depended on their physical distribution network for historic market information that yielded delayed and frequently outdated insights. With the emergence of digital channels, such as online shopping platforms and social networks, the industry can now tap huge volumes of consumer data in real-time and use a variety of analytics solutions to generate timely, actionable insight. Whether it is creating detailed consumer profiles, predicting the impact of changing income and spending patterns, launching new products, or targeting marketing spends, analytics can enable it all.

While data analytics has made tremendous progress in recent years, what are these industries doing with the technology? And what would it do with analytics if the possibilities were endless?

To understand the answer to these and other questions, we recently spoke to 280 professionals from the consumer goods, retail and logistics industry as part of a larger independent survey of 1,062 senior executives from 7 verticals across the globe. Of the 280 respondents, 59% were decision makers, 33% belonged to senior management, 5% were responsible for project/ program execution and 3% were external consultants. 50% of the respondents were based in the United States, 34% in Europe and 16% in Australia and New Zealand.

The study explores the current scenario and usage of data analytics among consumer goods, retail and logistics organizations, including the opportunities and challenges of data analytics, its role in a world of digital and AI technologies, and the maturity and preferences of enterprises. It also examines what the future of data analytics in the industry would look like if there were no limit to its possibilities.

IN A WORLD OF ENDLESS POSSIBILITIES WITH DATA

We use data that we collect through our stores to help identify traffic of supplies; this enables us to identify new locations where we should open stores. – American convenience store

Our analytics move has helped us in managing our logistics chain in time planning, truck load management etc. The extensive use of telematics and sensor data, combined with algorithms helps us to calculate optimized delivery routes for drivers. – Global courier delivery service company

The survey decided to explore what other applications of data analytics would be most relevant to consumer goods, retail and logistics companies if there were no limit to the possibilities.

30% of industry respondents named Risk Mitigation, while 26% mentioned Experience Enhancement. Business Model Creation was next, cited by 24% of respondents; 20% of participants thought that Revenue and Profitability Maximization was of the greatest relevance. Consumer goods companies responded differently from retail and logistics firms by attaching equal importance to all areas. Respondents from Australia and New Zealand found business model creation – and not risk mitigation – most relevant (31%).

User Groups	Overall Retail, CPG and Logistics	Individual Industry			Geographies		
		Consumer	Retail	Logistics	USA	Europe	ANZ
Base	280	77	125	78	140	95	45
Business Model Transformation	24%	25%	25%	23%	19%	28%	31%
Experience Enhancement	26%	25%	29%	22%	28%	24%	22%
Revenue and Profit Maximization	20%	24%	15%	23%	22%	17%	20%
Risk Mitigation	30%	26%	31%	32%	31%	31%	27%

Table 1: Scenarios where data analytics would be extremely relevant if possibilities with data were endless

How far were consumer goods, retail and logistics companies prepared to draw these outcomes from data analytics? When we asked them about their current data analytics strategy, 47% of participants said that they rigorously implemented an enterprise-wide strategy. In 41% of companies, the enterprise strategy existed, but business functions were allowed the flexibility to develop their own. This was especially the case with consumer products and logistics companies (47% each); on the other hand, retailers seemed to be more mature, with 58% claiming strict adherence to the enterprise roadmap. The same could be said of European companies (61%). A relatively large proportion (13%) of respondents from Australia and New Zealand said that their company did not have a roadmap, and that business functions and regional units deployed analytics as needed.

MEETING AND BEATING DATA CHALLENGES

In the words of a representative of an Australian liquor supermarket chain, "There is a huge obstacle in pulling and integrating the data from various systems."

Sure enough, integrating multiple datasets from various sources was one of the most cited challenges among respondents (44%). Only ensuring data hygiene (46%) and choosing the right analytics tools and technologies (45%) received more mentions. The last was a bigger problem for retail organizations than for others (named as a key challenge by 50%).

	Overall Retail, CPG and Logistics	Individual Industry			Geographies		
		Consumer	Retail	Logistics	USA	Europe	ANZ
Base	280	77	125	78	140	95	45
Integrating multiple analytics tools to draw synergies	40%	40%	42%	35%	37%	48%	29%
Deciding on choice of tools/technologies to pick from	45%	36%	50%	45%	43%	54%	31%
Maturity of existing systems/architectures and technology environments	41%	36%	48%	35%	36%	46%	44%
Required resource skills in the analytics realms	38%	31%	42%	37%	36%	37%	47%
Absence of a dedicated analytics team to drive the initiatives to closure	11%	10%	11%	12%	14%	8%	9%
Pace of execution/ implementation of the initiative	30%	25%	34%	27%	31%	33%	20%
Lack of high levels of clarity in the execution roadmap	29%	29%	35%	21%	25%	38%	24%
Understanding the right analysis techniques to be deployed	44%	42%	46%	42%	42%	41%	56%
Integration of multiple datasets for various sources	44%	44%	46%	40%	41%	54%	29%
Ensuring data hygiene (correctness of data, relevance)	46%	48%	45%	45%	40%	57%	40%

Table 2: Key challenges in implementing data analytics-led initiatives

Consumer product companies, retailers and logistics providers had different views about how to solve these challenges. For consumer goods it was having the right strategy and roadmap (57%); retailers said they needed people with the right skills and investments in cloud/latest IT infrastructure (54% each); and logistics firms said the solution lay in choosing the right analytics tools and technologies (62%).

	Overall Retail, CPG and Logistics	Individual Industry			Geographies		
		Consumer	Retail	Logistics	USA	Europe	ANZ
Base	280	77	125	78	140	95	45
Identifying the right analysis techniques	 49%	49%	51%	44%	42%	56%	53%
Choosing the right analytics tools/ technologies	 52%	49%	48%	62%	49%	58%	51%
Ensuring a clear roadmap/execution strategy is set before	 49%	57%	47%	45%	49%	48%	53%
Deploying the right people with the right skills	 49%	42%	54%	49%	49%	45%	58%
Enabling/ Evangelizing digital culture across the organized	 41%	31%	51%	33%	39%	54%	18%
Investing in latest IT Infra/Cloud technologies	 46%	45%	54%	35%	42%	57%	38%
Centralizing organisation wide data for better fungibility	 40%	32%	45%	41%	38%	51%	27%
Partnering with external service providers, data experts	 19%	14%	16%	28%	18%	15%	31%

Table 3: Important aspects to drive in order to overcome execution challenges in analytics initiatives

WHAT ANALYTICS AND WHY

74% of organizations had deployed descriptive/diagnostic analytics; 70% used predictive analytics; and 39% used prescriptive analytics. Notably all three industries leveraged descriptive/diagnostics analytics the most to drive experience enhancement, risk mitigation and profit maximization across all regions except Australia and New Zealand. For Australia and New Zealand bucked the trend with the maximum initiatives being in predictive analytics (80% mentions).

	Overall Retail, CPG and Logistics	Individual Industry			Geographies		
		Consumer	Retail	Logistics	USA	Europe	ANZ
Base	280	77	125	78	140	95	45
Descriptive/ Diagnostic analytics	74%	73%	78%	71%	70%	86%	62%
Predictive analytics	70%	73%	70%	67%	69%	66%	80%
Prescriptive analytics	39%	40%	45%	27%	39%	43%	29%

Table 4: Analytics initiatives deployed or currently running in organizations

ANALYTICS USAGE BY FUNCTION

Which functions had the most initiatives? The consumer goods, retail and logistics industry virtually mirrored the overall trend of the survey. The greatest number of analytics initiatives was in finance and accounting (named by 32%), followed by marketing (21%) and sales and pre-sales (16%, 15% overall).

Finance and accounting faired highest for all industries across USA and Europe except Australia and New Zealand where the marketing function was the highest user of analytics.

	Overall Retail, CPG and Logistics	Individual Industry			Geographies		
		Consumer	Retail	Logistics	USA	Europe	ANZ
Base	280	77	125	78	140	95	45
Marketing	21%	17%	25%	19%	18%	23%	27%
Finance and Accounting	32%	40%	28%	29%	31%	36%	24%
Sales and Presales	16%	5%	22%	17%	14%	19%	18%
Operations (Production, Supply chain, Support)	15%	13%	14%	19%	18%	9%	20%
Research and Development	9%	16%	5%	10%	11%	7%	9%
Human Resources	4%	5%	5%	3%	4%	6%	–
Sourcing and Procurement	3%	4%	1%	3%	4%	–	2%

Table 5: Analytics savvy functions in an organization

THE IMPACT OF OTHER TECHNOLOGIES

The power of analytics is amplified when it is combined with other digital technologies. When asked what role artificial intelligence (AI) and automation would play in the analytics world, nearly 60% of consumer products, retail and logistics respondents said AI would drive predictive and prescriptive modeling, while automation would improve their ability to scale and deploy current solutions.

	Overall Retail, CPG and Logistics	Individual Industry			Geographies		
		Consumer	Retail	Logistics	USA	Europe	ANZ
Base	280	77	125	78	140	95	45
Automation							
Ability to scale current analytics initiatives and deploy	58%	53%	62%	58%	56%	65%	49%
Standardization of data and analysis techniques	52%	47%	60%	44%	51%	52%	53%
Drawing higher efficiencies	47%	39%	52%	46%	46%	44%	53%
Artificial Intelligence							
Driving prescriptive and predictive modeling	59%	61%	57%	59%	61%	51%	67%
Possibility for creating new business cases/ models	54%	60%	56%	44%	45%	71%	44%
Effective risk detection and mitigation	31%	22%	35%	35%	27%	36%	36%

Table 6: Role of AI and Automation in the analytics world

Convergence of Cloud, Big Data and IoT was expected to:

64% make data management more effective

52% facilitate predictive and prescriptive analytics

50% enable cross-organizational synergies

50% provide scalable, repeatable analytics frameworks

A department store in the U.S. says it best – "Data analytics and the internet of things clubbed with cloud capabilities will share a closely knitted future. Without doubt, the two would create new solutions and opportunities, which would have a lasting and long impact."

	Overall Retail, CPG and Logistics	Individual Industry			Geographies		
		Consumer	Retail	Logistics	USA	Europe	ANZ
Base	280	77	125	78	140	95	45
Effective data management	64%	61%	67%	62%	58%	73%	64%
New business models/cases	47%	47%	55%	33%	47%	53%	33%
Cross organizational synergies	50%	47%	57%	41%	46%	57%	47%
Predictive and prescriptive analytics	52%	55%	50%	54%	51%	52%	58%
Scalability and repeatability of analytics frameworks	50%	45%	54%	50%	47%	57%	47%
Real-time impact on decision making	35%	29%	37%	38%	32%	43%	27%

Table 7: Convergence of Cloud, Big Data and IoT

CONCLUSION

Consumer product companies have always used historical data to improve products and promotions. Today, these companies, and allied businesses such as retailers and logistics providers, are seeing beyond those applications in their analytics initiatives. Hence, risk mitigation is an important priority, as is taking a longer-term view through predictive and prescriptive modeling. But the challenge is that they do not know which analytics techniques and tools are right for them. This is a clear opportunity for analytics providers.

About Infosys Knowledge Institute

As enterprises navigate the path to being digital, Infosys Knowledge Institute offers thought leadership to guide their transformation. With decades' worth of business and technology experience we help enterprises strategize how they reinvent themselves from the core: their people, processes, and proposition.

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