Everest Group®

The Importance of Process Mining in the Consumer Packaged Goods (CPG) and Retail Industries

Achieving Superior Business Outcomes through Process Mining

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Introduction

The Consumer Packaged Goods (CPG) and retail industries are undergoing a transformation driven by the evolving economic landscape, changing customer behavior, increasing cost pressures, growing demand for omnichannel experiences, and intensifying competition. As a result, these industries are compelled to evolve their strategies to navigate the market. However, these changes have also presented multiple challenges for CPG and retail organizations, particularly around managing supply chain disruptions, increasing customer loyalty, and meeting employee needs.

To counter these pressing challenges, enterprises in the CPG and retail sectors are leveraging various operational levers such as product diversification and omnichannel strategy; technology levers such as cloud computing and Intelligent Automation (IA); and people levers such as change management and redefining job roles and requirements. By employing these strategies, CPG and retail enterprises can solidify their businesses and achieve their strategic objectives.

While operational, technology, and people levers play a vital role in helping CPG and retail enterprises meet market demands and create greater value, several organizations struggle to achieve the desired results from their efforts and investments. A majority of enterprises adopt these levers without a thorough understanding of their existing business processes, resulting in a failure to achieve target Key Performance Indicator (KPI) levels and lower Return on Investment (RoI). This lack of understanding amplifies inefficiencies, limiting the value and hindering the smooth implementation of these levers.

To achieve superior business outcomes, it is essential for the CPG and retail enterprises to understand and improve their processes before and during the execution of these levers. This is where process mining technology can prove to be a valuable asset. By using a data-based approach, process mining helps enterprises understand, document, and improve their existing processes, leading to seamless implementation of these levers and maximizing RoI. Organizations in these industries that have successfully embedded process mining as a key component of their strategy have experienced greater improvements across key business objectives compared to those that solely rely on operational, technology, and people levers.

To gain a comprehensive understanding of the impact of process mining in the CPG and retail industries, Everest Group conducted a survey of 53 enterprises across geographies from these industries. Out of those respondents, the survey included 16 enterprises that have adopted process mining. In addition to the survey, this viewpoint provides findings from in-depth interviews and Everest Group's ongoing research and IP and includes:

- CPG and retail industries' current state, including key trends and challenges
- Key levers to overcome the challenges
- The role of process mining to achieve superior outcomes and RoI
- Key barriers and best practices to accelerate process mining adoption

In this report, we explore the CPG and retail industries from an enterprise practitioner's perspective and identify enterprises that have achieved superior business outcomes by adopting process mining.

Research methodology

The majority of the enterprises included in this study are global companies with revenues exceeding US$1 billion. The survey respondents are mid-/senior-level business executives, business unit heads, operational excellence leaders, automation Center of Excellence (CoE) leaders/managers, process improvement leaders, Chief Experience Officers (CXOs) and their office, and process owners/managers with knowledge/visibility into the core CPG and retail business operations. These individuals can provide perspectives on process understanding and quality-related issues that impact the business. All respondents have spent at least 2 years with their current organization.

The survey included a total of 53 participants, with a mix of both CPG and retail organizations. Of these, 16 enterprises have successfully leveraged process mining for at least a year across two to three business functions (in industry-specific processes or horizontal functions such as F&A, procurement, ITSM, and HR) and achieved significant improvement across business objectives after process mining adoption. Exhibit 1 outlines the distribution of the 53 participating enterprises by total organization revenue. It is important to note that the respondents' collective profile does not represent the global enterprise landscape but only the sample considered for this study.

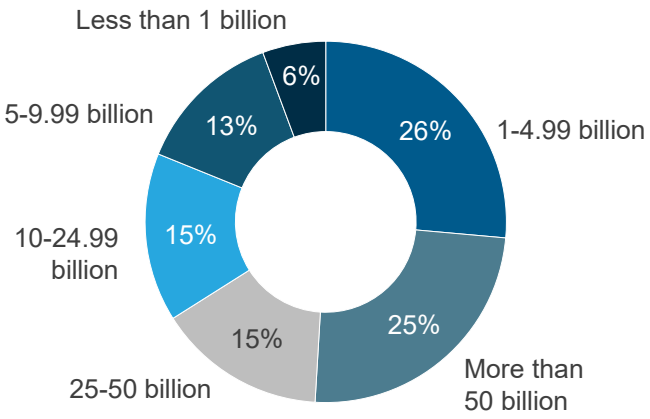
EXHIBIT 1

Revenue split

Source: Everest Group (2023)

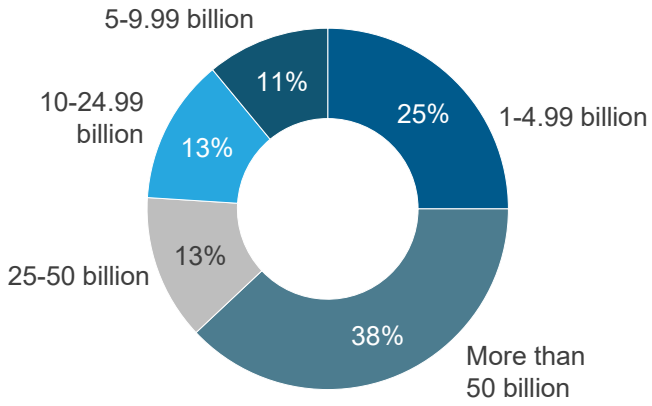
Enterprise profile by revenue (US$)
Percentage of respondents

100% = 53



Enterprise profile of process mining adopters by revenue (US$)
Percentage of respondents

100% = 16



The current state of the CPG and retail industries

Key market trends and challenges

The CPG and retail industries have evolved rapidly, driven by changes in the economic environment, technical innovations, and customer expectations. Both CPG and retail enterprises are increasingly prioritizing faster product innovation to enhance business agility and meet evolving consumer demands.

The onset of the pandemic resulted in a greater consumer focus on health and well-being, making it one of the top trends in the CPG and retail industries. The pandemic also disrupted established supply chains and resulted in significant inflationary pressure.

According to survey respondents, another prominent trend that has emerged is increased investment to support an omnichannel strategy with a presence in the Direct-to-Consumer (DTC) and e-commerce channels to enable greater market reach and provide a superior shopping experience. By eliminating the middleman, the DTC model offers greater margins and valuable consumer relationships.

The exhibit below illustrates the top market trends in the CPG and retail industries as identified by our study.

EXHIBIT 2

Key market trends

Source: Everest Group (2023)

% of respondents who indicated the aspect as a key market trend

CPG			Retail	
83%	Need for faster product innovation	1	Need for faster product innovation	78%
71%	Increased consumer focus on health and well-being	2	Economic uncertainty, including supply chain disruptions	64%
66%	Shift toward omnichannel strategy, including Direct-to-Consumer (DTC) and e-commerce	3	Shift toward omnichannel strategy, including Direct-to-Consumer (DTC) and e-commerce	64%
66%	Economic uncertainty, including supply chain disruptions	4	Increased consumer focus on health and well-being	61%
66%	High inflation	5	High inflation	61%

These trends are shaping the way in which CPG and retail organizations operate to navigate the evolving market needs. However, keeping up with these trends is not without challenges. Interestingly, there is a strong overlap in the key challenges faced by enterprises in these two industries.

The most prevalent challenge is logistics complications, which arise due to factors such as tedious freight procurement processes, manual document handling, growing incidental costs, and lack of shipment visibility. Additionally, CPG and retail organizations face significant challenges due to material shortages and supplier delays that affect production and inventory levels, thereby widening the demand-supply gap. The impending global recession and inflationary pressure have also fueled price sensitivity among consumers, driving them to watch their spending and adversely impacting CPG and retail organizations.

Exhibit 3 presents the percentage of enterprise respondents facing the listed challenges.

EXHIBIT 3

Enterprise challenges post COVID-19

Source: Everest Group (2023)

% of respondents who indicated the aspect as a key challenge

CPG		Retail
83%	Logistics complications	75%
77%	Material shortages	75%
63%	Supplier delays	64%
63%	Maintaining optimal inventory with volatile supply and demand	61%
60%	Increasing price sensitivity	47%

Although CPG and retail are distinct verticals, they both prioritize customer delight as a key business objective, along with other common goals. Cooperative relationships between the CPG and retail organizations have demonstrated that manufacturers who deepen and broaden their collaboration with retail partners outperform their peers in terms of both top-line and bottom-line results. Effective collaboration requires developing long-term strategies, evaluating collaboration across value chain segments, and conducting advanced analytics to jointly determine investment areas or make changes to the operating model.

Collaboration between CPG and retail enterprises can address key challenges and improve effectiveness in leveraging levers to achieve superior business outcomes. However, many enterprises face challenges in effectively collaborating. Survey respondents identified several factors that inhibit collaboration between CPG and retail enterprises, including a lack of shared systems and processes, minimal to no process visibility or inconsistent processes across the value chain, and a lack of accurate information and standardized reporting.

Key levers that CPG & retail enterprises adopt to achieve better outcomes

Recent market trends and challenges have compelled CPG and retail enterprises to overhaul their business operations. To achieve faster growth and enhance the customer and employee experience in a digital-first world, these enterprises have initiated various operational, technology, and people initiatives. Exhibit 4 illustrates the key levers that participating CPG and retail organizations have adopted.

EXHIBIT 4

Key levers that CPG & retail enterprises adopt to achieve better outcomes

Source: Everest Group (2023)

Percentage of respondents who indicated the initiative as a key lever

		CPG	Retail
Operational levers	Expansion of the supplier network	63%	50%
	Omnichannel strategy	60%	78%
	Shared services to drive efficiency	60%	53%
	Shift toward Direct-to-Consumer (DTC)	60%	44%
	Sustainability for packaging	60%	47%
	Diversify product portfolio	49%	58%
Technology levers	Cloud	86%	89%
	Enterprise Resource Planning (ERP)	66%	58%
	Intelligent Automation (IA)	63%	61%
	Internet of Things (IoT)	51%	56%
	System transformation	49%	44%
	Augmented Reality (AR) / Virtual Reality (VR)	26%	33%
People levers	Redefine job roles and requirements	74%	64%
	Change management, including training and proactive communication	69%	64%
	People engagement surveys	60%	67%
	Performance management of employees	57%	58%
	Reward and recognition	54%	56%

While CPG enterprises are focused on expanding their supplier network to increase the resilience of their supply chains, retail enterprises are adopting an omnichannel strategy to deliver a superior shopping experience to their customers. Other key operational levers include a shift toward DTC to improve brand loyalty, sustainable packaging to address customers' environmental concerns, and a diverse product portfolio to offer more choices in a highly competitive environment. These organizations also leverage shared services to take advantage of cost and labor arbitrage and drive greater efficiency.

Notably, more than 85% of surveyed CPG and retail enterprises identified cloud as the top technology lever for keeping up with innovation and leading the market. Migrating from on-premises to cloud applications provides several benefits such as a more resilient supply chain, greater mobility and agility to access data and applications, reduced infrastructure costs, improved employee collaboration, enhanced ease of handling customers, better data analysis capabilities to make informed decisions, disaster recovery and data security, and, most importantly, improved customer and employee experiences.

Over 60% of CPG and retail organizations have emphasized their focus on adopting IA technologies such as Robotic Process Automation (RPA), Intelligent Document Processing (IDP), conversational AI, process mining, task mining, and process orchestration. These technologies, along with ERP systems, are being used to overcome challenges associated with legacy business models, including high turnaround times, excessive dependency on manual tasks, operational disruptions, and an inability to scale and manage demand spikes.

Enterprises are also redefining job roles, conducting people engagement surveys, and focusing on change management to effectively manage their workforce. These people-focused initiatives such as incorporating employee feedback, are a key component of the strategy to drive an engaging work environment and an enriched organizational culture.

Most enterprises have specific business objectives in mind when implementing operational, technology, and people levers mentioned above. The table below lists these objectives in order of importance and the associated metrics/KPIs that organizations track to assess the impact of the levers.





Improve customer satisfaction and retention	Increase labor productivity	Improve shipment effectiveness	Increase profitability	Reduce spend
• Customer touchpoints • Customer Lifetime Value (CLV) • Customer loyalty	• Cost per FTE • Automation rate • Cycle time	• Transportation cost • Shipment cost • Inventory turnover	• Conversion rate • Procurement spend • Revenue leakage	• Spend under management • Total discount allowed

With customer satisfaction driving the agenda, metrics such as Customer Lifetime Value (CLV) and brand loyalty are the key focus for CPG and retail enterprises. Employee productivity is another vital objective, especially for technology levers, with improvements measured by cost per FTE and automation rate. Improving shipment effectiveness, which is closely tied to accurate visibility, is also a key goal for organizations. They also assess the impact of these levers in terms of achieving broader objectives, such as increased profitability and reduced spend.

CPG and retail companies operate in a highly volatile environment that presents unique challenges and opportunities. Irrespective of the lever they adopt, these enterprises face several challenges in executing these initiatives and, more importantly, in realizing the expected value. Often, companies start these projects hastily, such as operational initiatives to address immediate customer pain points or rushing technology adoption processes to retire outdated systems and legacy business processes. However, they fail to achieve the desired objectives and see tangible impacts on relevant KPIs. In the next section, we discuss the key roadblocks and how process mining can help address these challenges.

The role of process mining to achieve business objectives

Roadblocks in enterprises' transformation initiatives

The success of any transformation initiative relies on the core components of process health and efficiency. As enterprises strive to meet their business objectives and support transformation initiatives, they encounter various process-related roadblocks. If these roadblocks are not addressed, they can derail the transformation initiatives and result in suboptimal outcomes.
Exhibit 5 highlights the key challenges that enterprises face while implementing operational, technology, and people initiatives.

EXHIBIT 5

Roadblocks to achieving business objectives related to the transformation initiatives

Source: Everest Group (2023)

Percentage of respondents who indicated the factor as a key challenge

Inability to analyze process exceptions and eliminate inefficiencies — 68%

Lack of a fact-based approach to understand, discover, and document as-is processes — 58%

Other challenges include lack of alignment between business and IT teams and employee resistance

Around 58% of the respondents indicated that the lack of a fact-based approach to understanding, discovering, and documenting as-is processes is a key challenge in meeting business objectives. This lack of approach results in limited process visibility and documentation. As a result, it becomes difficult to analyze process exceptions and eliminate inefficiencies, which was highlighted as another significant challenge by 68% of the respondents. These challenges, along with limited alignment between IT and business teams, employee resistance, and a lack of ownership and accountability for change, impact the process quality/health and render subsequent transformation inconsequential. Therefore, it is crucial for CPG and retail enterprises to have a complete and up-to-date understanding of the process before implementing initiatives such as adopting an omnichannel strategy, establishing shared services centers, and deploying cloud.

The need for process mining

Enterprises typically rely on manual techniques to gather comprehensive process understanding, which can be time-consuming and significantly delay the time-to-value realization. These techniques are also prone to inefficiencies and errors since they rely on opinions, human subjectivity, and biases rather than actual data. Consequently, such techniques have proven to be highly ineffective in accurately representing as-is processes and identifying ways to improve them.

Process mining addresses these challenges by providing an objective and fact-based approach to discover as-is processes and continuously monitor and optimize them. Having a better process understanding facilitates the smooth implementation of levers, which, in turn, helps organizations achieve business objectives such as improving customer satisfaction, increasing labor productivity, and enhancing supply chain effectiveness.

Process mining refers to any software product or solution that can:

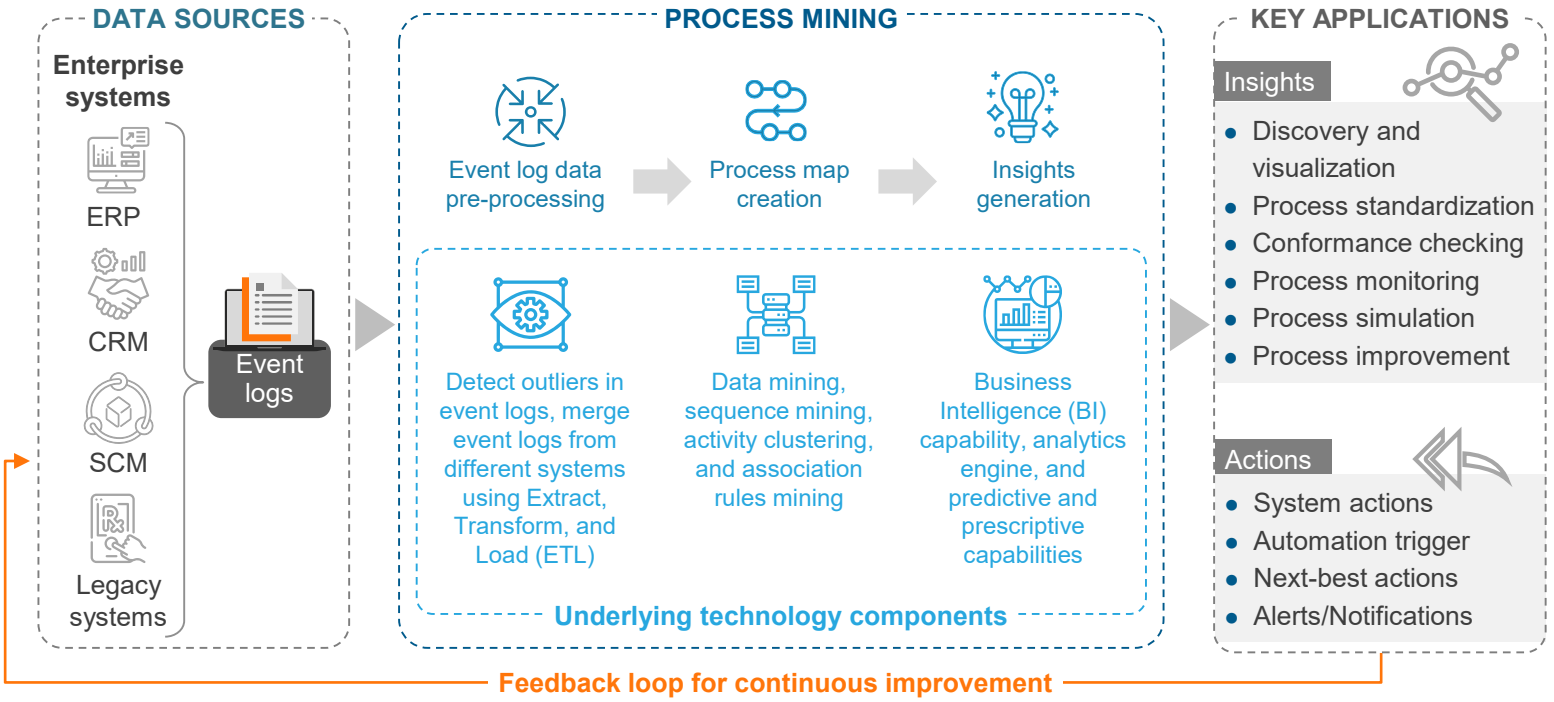
- Collect event log data from different information systems, such as ERP and CRM, containing date, time stamp, unique ID, and activity, which are further analyzed
- Generate process maps that capture the different process variants with the sequence of tasks/steps involved
- Extract relevant business insights, such as process discovery, root-cause analysis, process conformance checks, and process benchmarking

Exhibit 6 presents an overview of process mining.

EXHIBIT 6

A holistic process mining solution

Source: Everest Group (2023)



Applications and benefits of process mining

Process mining solutions have a wide range of applications in generating fact-based insights from processes and assisting with the transformation of these insights into actions. The pointers below provides a detailed overview of the various process mining applications.

Process discovery: Provides in-depth information about as-is processes, generates a process map demonstrating process variants

Process conformance and monitoring: Provides insights into deviations/violations in the discovered as-is process map compared with the input reference model, performs root-cause analysis, and enables continuous monitoring of process performance against key KPIs/metrics

Process simulation: Performs what-if analysis on the discovered process models with multiple scenarios and helps visualize the alternative to-be processes

Workforce intelligence: Provides workforce-related insights, such as team productivity/performance across tasks and time spent by users on applications to improve resource utilization

Automation opportunity identification: Extracts process information such as frequency, cost, volume, repetitiveness, and transactional nature to derive the automation potential of process steps

Action triggers: Initiates/Triggers workflows based on defined criteria, allowing interactions with multiple third-party applications connected to process mining using APIs

All these process mining applications enable enterprises to gain a comprehensive understanding of current business processes and detect and eliminate inefficiencies using a data- and fact-based approach.

Additionally, process mining solutions offer a range of strategic, operational, and cost benefits to enterprises. Strategic impact benefits include accelerated digital transformation, enhanced customer experience, top-line growth, and sustainability; operational benefits include improved governance and compliance and scaled automation initiatives; and cost benefits arise from optimization and reduction in effort over manual tasks.

> Process mining integrates multiple existing data sources and presents the data in a more **consumable** format, prioritizing value for our business stakeholders. This, in turn, raises the **transparency** bar and enables the identification of **inefficiencies** for prompt resolution.
>
> – Scott Mathers, Process Mining Lead and Supply Chain Program Manager, ASOS plc

Process mining in the CPG and retail industries

Current adoption maturity

Enterprises are increasingly adopting process mining software due to its varied applications and benefits. This trend has led to the global process mining software market experiencing a growth rate of 75-80% and reaching US$580-600 million by the end of 2021. Leading adopters include industries such as manufacturing, BFSI, and healthcare and pharma, while CPG and retail account for shares of around 5-6% and 4-5% respectively. The CPG and retail industries are experiencing a growth rate of around 79-84%, which is slightly higher than the market growth rate. This indicates a stronger demand for this software in these two industries.

Exhibit 7 illustrates process mining software market split by industries and share between CPG and retail.

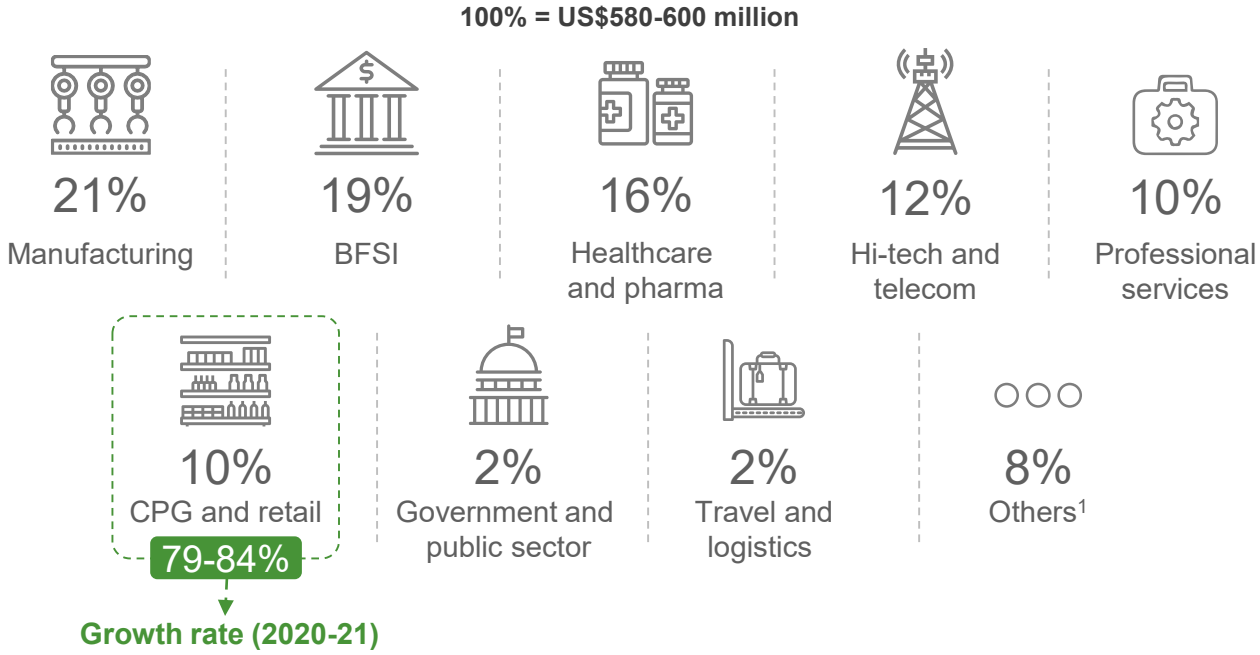
EXHIBIT 7

Process mining market size analysis

Source: Everest Group (2023)

Process mining software market size by buyer industries

Percentage split of license revenue



Split of process mining software market between CPG and retail industries

Percentage split of license revenue

1 This category mainly includes energy and utilities and media and entertainment

Applications and use cases of process mining in the CPG industry

Process mining finds applications in both the industry-specific value chain and horizontal functions of the CPG industry. The industry-specific value chain consists of steps starting from consumer insights and continuing through to the evaluation of market success. Horizontal functions include HR, F&A, contact center, etc. Exhibit 8 highlights the top process mining applications leveraged by CPG enterprises in each of the value chain steps and horizontal functions.

EXHIBIT 8

Process mining applications in the CPG industry

Source: Everest Group (2023)

Top applications in the CPG-specific value chain

	Consumer insights	R&D	Develop and manufacture	Supply to market and promote	Evaluate market success
	Target market analysis including customer needs and purchasing patterns	Research on new products, product innovation, and concept development	Vendor management for raw materials, inbound logistics, and product development	Assortment planning, outbound logistics, trade promotion, and after-sales service	Map customer journey, spend management, user feedback, and RoI and growth analysis
Top applications	Process conformance and monitoring	Process discovery	Process discovery	Process discovery	Process discovery
	Action triggers	Automation opportunity identification	Automation opportunity identification	Process conformance and monitoring	Process conformance and monitoring
	Process discovery	Process simulation	Process conformance and monitoring	Process simulation	Workforce intelligence

Top applications across CPG's horizontal functions

HR	F&A	Contact center
• Process conformance and monitoring • Workforce intelligence • Process discovery	• Process discovery • Process conformance and monitoring • Action triggers	• Process discovery • Process conformance and monitoring • Automation opportunity identification

Procurement	Legal, governance, and compliance
• Process conformance and monitoring • Process discovery • Automation opportunity identification	• Process conformance and monitoring • Action triggers • Automation opportunity identification

Below we discuss a few representative use cases of process mining in the CPG industry :

Objective	Business challenge	Solution
Logistics	• Enterprises struggle to manage inbound and outbound logistics, including shipping, transportation planning, and distribution • The complex logistics scenarios and the requirement for multiple checks make it challenging for enterprises to maintain an end-to-end view of the process, hampering the cycle time, throughput, and reliability • To reduce cycle time and improve throughput, enterprises require a near real-time view of the process to identify potential bottlenecks	• Process mining can enable continuous monitoring of processes, send prompt alerts about potential bottlenecks/delays to the relevant stakeholders, and trigger automations based on business logic to manage transportation and synchronize distribution • When process mining identifies any issues in the supply chain, it can automatically update delivery dates and alert the accounts team to inform customers, enhancing the overall customer experience
Streamlining procurement	• Enterprises face unexpected delays from suppliers and encounter difficulties in managing a diversified supply chain, resulting in longer time-to-production • Enterprises also face issues with maverick buying, which leads to increased spend • Data present in disparate systems further limits spend visibility and results in poor decision-making and lower efficiency	• Process mining can enhance process visibility and promptly identify high-risk providers • It can continuously monitor procurement-specific KPIs, providing insights into supplier performance and improving decision-making • It can also analyze data from multiple systems and identify the root causes of deviations caused by maverick buying

Applications and use cases of process mining in the retail industry

In this section, we highlight the top process mining applications leveraged by retail enterprises in each of the retail-specific value chain steps and horizontal functions (see Exhibit 9, on the next page).

Process discovery and **process conformance and monitoring** have emerged as the top process mining applications currently leveraged by CPG and retail enterprises.

EXHIBIT 9

Process mining applications in the retail industry

Source: Everest Group (2023)

Top applications in the retail-specific value chain

	Consumer insights	Sourcing of product	Purchasing and invoicing	Supply to market and promote	Evaluate market success
	Target market analysis including customer behavior and purchasing patterns	Final product selection, vendor management, price comparison, and inbound logistics	Purchasing goods, goods receipt, quality check, payment, and invoice processing	Assortment planning, outbound logistics, manage real estate, and after-sales service	Map customer journey, spend management, value share, and RoI and growth analysis
Top applications	Process discovery	Automation opportunity identification	Process discovery	Automation opportunity identification	Process conformance and monitoring
	Process conformance and monitoring	Process discovery	Workforce intelligence	Process discovery	Process discovery
	Automation opportunity identification	Process conformance and monitoring	Process conformance and monitoring	Process simulation	Process simulation

Top applications across retail industry horizontal functions

HR	F&A	Contact center
• Process discovery • Process conformance and monitoring • Automation opportunity identification	• Process simulation • Process discovery • Process conformance and monitoring	• Process discovery • Process simulation • Workforce intelligence

Procurement	Legal, governance, and compliance
• Automation opportunity identification • Process discovery • Process conformance and monitoring	• Process simulation • Process discovery • Process conformance and monitoring

Below we discuss a few representative use cases of process mining in the retail industry:

Objective	Business challenge	Solution
Improving delivery lead time	• Enterprises typically have limited visibility into their overall delivery process, with a lack of understanding regarding the percentage of late deliveries and their root causes • Late deliveries negatively impact customer satisfaction and working capital	• Process mining can provide valuable insights into the percentage of orders delivered early, on time, or late • It can help analyze the root causes of late deliveries, leading to the addressing of underlying issues • It can notify business users and customers timely in case of expected late delivery through action triggers
Optimizing the order management process	• Retail enterprises commonly face the issue of order cancellation due to stockouts, which can have a negative impact on customer satisfaction • Additionally, manual processes and multiple handoffs between teams (to incorporate customer-specific instructions) increase the likelihood of errors in orders and invoice queries, thereby causing delays and impacting customer satisfaction. Transactional manual work also has an adverse effect on employee productivity.	• Process mining can help identify alternate sources of stock to avoid stockouts, flag orders in the event of unavoidable delays, analyze the root cause of delays, and proactively send alerts to the customer support team when an order demands immediate attention • Furthermore, it can help prevent errors due to manual processing by detecting repetitive manual steps, such as sales order entry, that can be automated. It can also identify and resolve order errors and blocks, such as price or quantity changes, to ensure timely processing

Impact of process mining on key business objectives

After implementing process mining, surveyed enterprises achieved superior improvements in their business objectives. They realized an incremental improvement of more than 50% across all key objectives such as customer satisfaction, labor productivity, and shipment effectiveness.

The table on the next slide provides a representation of the extent of YoY improvement (on a scale of 1-7, with 7 indicating the maximum improvement) experienced by process mining adopters across various business objectives.

Business objective	Improvement without process mining	Improvement with process mining	% increase in improvement
Improve customer satisfaction and retention	2.6	4.6	**76%**
Increase labor productivity	2.4	3.8	**58%**
Improve shipment effectiveness	2.5	4.4	**76%**
Increase profitability	2.1	3.5	**65%**
Reduce spend	2.8	4.5	**61%**
Optimize working capital	1.7	3.2	**84%**
Enhance compliance and sustainability	2.2	3.8	**73%**
Mitigate risk	2.1	3.4	**62%**
Increase sales	2.4	3.6	**54%**

The significant improvements achieved by enterprises after implementing process mining demonstrate the value of having a better process understanding and being able to eliminate inefficiencies.

The impact of process mining on key business objectives is as follows:

1. **Customer satisfaction and retention:** Process mining facilitates a near real-time view of inventory and order status, proactively notifies customers, and identifies root causes to avoid late delivery
2. **Labor productivity:** Process mining enhances the employee experience by intelligently prioritizing high-value tasks and automating routine, tedious, and repetitive work
3. **Shipment effectiveness:** Process mining provides better visibility of the supply chain, leading to the identification and eradication of inefficiencies
4. **Increased profitability:** Process mining helps analyze the root causes of costly problems, such as high order cancellation rates and order return rates, and suggests a possible plan of action that can increase profitability
5. **Reduced spend:** Process mining helps streamline processes, such as procurement, returns management, and outbound delivery, resulting in a reduction in spend

> Adopting process mining to analyze data from ERP systems has reduced process complexity and facilitated process standardization, resulting in cost reduction, increased employee productivity, and higher revenue generation.
>
> – Jeff De Sandre, Chief Information Officer, AmerCareRoyal

Process mining adoption challenges and best practices

Challenges in adopting process mining

CPG and retail enterprises have cited software and training costs and data integration and transformation challenges as the major inhibitors for not adopting process mining so far. In fact, even the adopters of process mining face challenges during adoption and scaling up.

Exhibit 10 illustrates the major challenges that CPG and retail enterprises faced in their process mining adoption journeys.

EXHIBIT 10

Challenges in adopting process mining

Source: Everest Group (2023)

% of respondents who indicated the factor as a key challenge

Challenges that adopters face

Limited data availability	81%
Data transformation challenges	63%
Change management	63%
Lack of solution awareness	44%
Transparency of operations leading to employee dissatisfaction	44%

More than half of the surveyed process mining adopters encountered challenges related to **data management** and **change management**.

Best practices to achieve superior business outcomes

The adopters of process mining in our survey have highlighted the following best practices for enterprises to successfully implement process mining and maximize the benefits of their investment:

1. **Secure buy-in from enterprise leadership and IT:** To foster a culture of continuously identifying process mining opportunities and ensuring data security and compliance, enterprises must obtain buy-in from their leadership and relevant IT stakeholders. Interested teams should develop a business case that illustrates the clear benefits of process mining to the leadership to secure buy-in for these efforts
2. **Start with a simple project:** Enterprises should start with a simple project that is structured, contains a limited number of steps, and requires low data preparation. This will enable them to secure initial results quickly, establish credibility, and accelerate adoption
3. **Center of Excellence (CoE):** Enterprises should form a dedicated process mining team responsible for technical implementation, training, governance, and value frameworks that works closely with the business process owners
4. **Change management**
   a. Increase awareness: It is vital for enterprises to spread awareness about process mining technology and its benefits, address concerns related to increased transparency, and disseminate success stories. This will help increase buy-in from stakeholders, enhance the chances of success, and facilitate faster adoption
   b. Train/Upskill employees: Enterprises can collaborate with technology providers or their training partners and leverage in-house experts to train employees on using the platform and develop a hypothesis-driven mindset. This will help enterprises maximize the benefits of process mining and ensure that employees have the necessary skills to work effectively with the technology

Case study: Ingka, an IKEA retailer

Context

IKEA, the world's largest furniture retailer, operates 460 stores across 62 countries. To leverage the benefits of cloud ERP, Ingka, the primary franchisee of IKEA, focused on implementing SAP S/4HANA in the finance and procurement functions. Furthermore, it was also acting on the plans of moving from traditional brick-and-mortar stores to an omnichannel strategy to stay abreast of industry trends and deliver superior customer experience. Consequently, Ingka initiated both technical and operational measures, comprising ERP implementation and omnichannel strategy setup, respectively.

Challenge

As the ERP implementation progressed, challenges began to manifest in the sales order process. During its journey to make its technology and operational initiatives functional, it faced several challenges, mainly due to the low process visibility as elaborated on the next slide:

- Inability to identify and eliminate inefficiencies in the sales order process, especially on the lines of high cancellation of click-and-collect orders and expanding into other order types
- Inability to track frequent manual price changes
- Lack of visibility in sales order flow in countries without central customer distribution centers

As a result, Ingka soon recognized the significance of process optimization to realize strategic value from its technology and operational initiatives.

Approach

To address these challenges, in mid-2021, Ingka collaborated with Celonis and deployed process mining after securing executive and operational buy-in. Ingka utilized a hub and spoke CoE model for its process and data insights laboratory to enable the smooth implementation of the solution and identify future development opportunities. The CoE also acted as a central point for coordination among stakeholders such as enterprise IT, data analysts, business analysts, and other business users.

Ingka predominantly leveraged applications such as process discovery and process conformance and monitoring to gain visibility of the end-to-end sales order process, identify the root causes of problems such as high order cancellation rates, and obtain actionable insights. Additionally, Ingka emphasized having the appropriate group of people involved who could comprehend these insights and act upon them.

Business outcomes

Process mining enabled process transparency and the identification and elimination of inefficiencies, resulting in a streamlined sales order process. After adopting process mining, Ingka experienced significant improvements in metrics such as:

- Perfect order rate: currently operating at 20% below its goal of the Perfect Order Performance KPI by APQC
- Order cancellation rate: in one of the European markets, the cancellation rate decreased by 40-50% within three months since November 2022
- Top-line growth: a multi-million euro increase in one of the Ingka markets due to the reduced order cancellation rate

Future outlook

Moving forward, Ingka plans to test and implement advanced process mining applications such as action triggers, which can trigger automation based on the insights generated, and simulation, which can help predict the outcomes of process changes before implementing them.

Ingka also intends to deploy process mining for other processes such as accounts payables, accounts receivables, and hire-to-retire, in addition to sales order processes. Furthermore, Ingka plans to extend its partnership with Celonis to other areas such as Business Miner™ and Workforce Productivity. This will make the process mining solution more business user-friendly and enhance employee experience and productivity.

> What process mining gives you is – an undeniable truth through a fact-based approach to process insights that is not opinion-based. It offers actionable insights for removing inefficiencies, which are of great value.
>
> – Tim Hills, Process and Data Insights Development Manager, Ingka

Conclusion

CPG and retail enterprises are employing various technology, operational, and people initiatives to navigate challenges, such as supply chain disruptions and material shortages, in this fast-changing market. Some of the initiatives include expanding supplier networks, diversifying product portfolio, adopting cloud technology, and modifying job roles. To track the effectiveness of these initiatives, enterprises focus on business objectives such as customer satisfaction and labor productivity. However, the inability to eliminate inefficiencies and lack of process visibility act as major roadblocks in meeting these objectives.

To address these roadblocks, many enterprises are leveraging process mining, which provides an objective and fact-based approach to visualize and optimize business processes. CPG and retail enterprises primarily leverage applications such as process discovery and process conformance and monitoring for use cases such as optimizing order management process and improving lead time. This has resulted in improvements of more than 50% across business objectives.

In their process mining adoption journeys, enterprises face challenges such as limited data availability, data transformation issues, and ineffective change management. To successfully tackle these challenges, enterprises must secure early buy-in from leadership, start with a simple project, and ensure data availability and quality. Best practices must be followed to scale up adoption, including leveraging additional process mining applications such as process simulation and action triggers. This technology has the potential to detangle hidden process inefficiencies, unlock superior value, and act as a competitive differentiator.

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