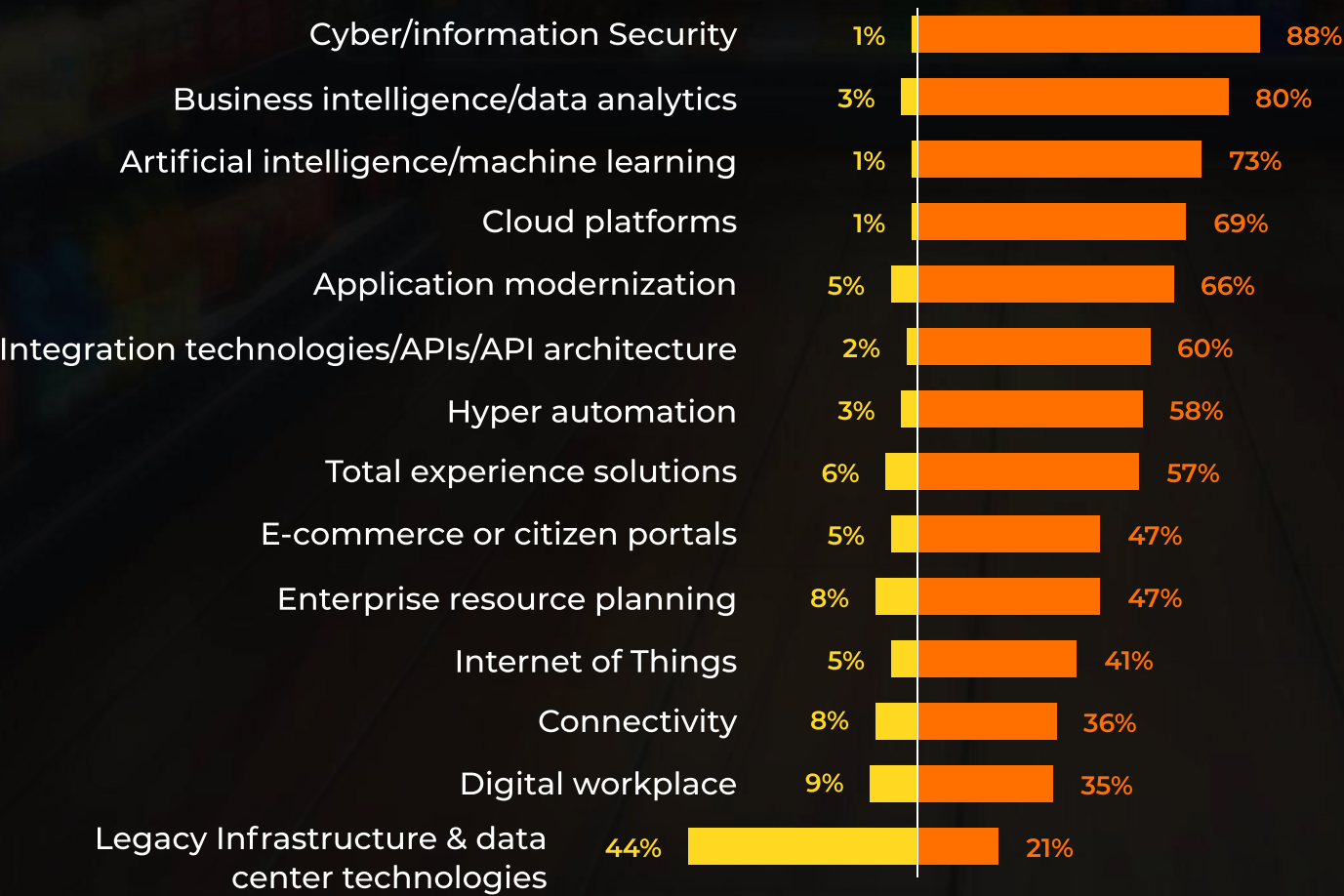# Beyond the Shelf: How CPGs Use Data for Business Efficiency

AI & Analytics lead emerging changes in CPG

✓ Overall increase in Sales growth- More than **10%**

✓ Ecommerce analytics- **10%** increase in revenue

✓ Supply chain planning analytics- **4%**

✓ Reduction in inventory- **20%**

Source: **McKinsey and BCG**

AI and analytics is rising, unlocking new possibilities. And to capitalize on this trend, companies have increased the investment in AI and analytics related technologies. While, at the same time are pulling resources away from legacy systems.

Beyond direct investments in analytics and AI/ML, firms are also focusing on technologies that empower them-

Cloud Platforms

For virtually limitless storage and processing power, ideal for running complex data analytics and AI algorithms.

API Architecture

API allows for different applications to communicate and exchange data seamlessly within the cloud.

With the increase in investments, multiple use cases have emerged covering the value chain of CPG in its entirety. In the core of use cases, there is descriptive, diagnostic, predictive, prescriptive, and generative AI, powering them.

Next, lets look at these various use cases that have emerged throughout the CPG value chain.

Technology	Decreasing	Increasing
Cyber/information Security	1%	88%
Business intelligence/data analytics	3%	80%
Artificial intelligence/machine learning	1%	73%
Cloud platforms	1%	69%
Application modernization	5%	66%
Integration technologies/APIs/API architecture	2%	60%
Hyper automation	3%	58%
Total experience solutions	6%	57%
E-commerce or citizen portals	5%	47%
Enterprise resource planning	8%	47%
Internet of Things	5%	41%
Connectivity	8%	36%
Digital workplace	9%	35%
Legacy Infrastructure & data center technologies	44%	21%

■ Percentage of Respondents Decreasing investment   ■ Percentage of Respondents Increasing investment

AI and analytics-based use cases throughout the CPG value chain

Value Chain Stage	Descriptive Analytics	Diagnostic Analytics	Predictive Analytics	Prescriptive Analytics	Generative AI
Sourcing & Procurement	Invoice compliance (Spending patterns)	Supplier risk assessment (Potential risk with suppliers)	Demand forecasting	Sourcing recommendations (Recommending best partners)	Negotiations (Identifying optimal sourcing strategies)
Production	Machinery performance (Equipment performance data)	Quality monitoring and maintenance (Identifying defects)	Predictive maintenance scheduling	Production schedule optimization (recommend best schedule)	Plant layout design (Simulating layout improvements)
Logistics & Distribution	Inventory management (Stock levels)	Delivery channels optimization (Analyzing delivery performance)	Capacity planning for fleets (for better demand, availability and cost reduction)	Dynamic order fulfillment (Recommending fulfillment methods)	Identification of issues in orders (Database query)
In-Store Planning & Operations	Inventory Turnover rate (Stock levels)	Foot traffic analysis (Expected customer rate)	Staffing levels prediction (Based on historical data)	Merchandise assortment planning (Recommending product mixes)	In store layout shelf layout planning
Digital Channels	Website traffic analysis (Reach analysis)	Customer feedback analysis (Identify missing opportunities)	Marketing campaign prediction (expected reach, engagement etc.)	Website/App recommendations (heat map analysis)	Virtual try-on systems (Generating virtual product experiences)
Sales & Marketing	Market sentiment analysis (Identifying customer preferences)	Promotion Effectiveness Analysis	Churn rate prediction (Based on behavior and preferences)	Pricing optimization (Recommending optimal prices)	Personalized recommendations (Generating tailored product suggestions)

> Now that you have seen all the use cases. The question is, should you start working on all of them?

> Well, not really. Some of the use cases have shown more impact compared to other and hence should be prioritized first.

High Impact ↑

Demand forecasting

Assortment planning

Reverse logistics

Pricing optimization

Trade promotion management

Supplier/distribution management

Machinery maintenance

Customer sentiment analysis

Production Schedule optimization

Website/app optimization

Virtual try on systems

Product detail generation

Low Impact ↓

In the following table we have showcased different analytics that these use cases bring to your organization.

Hot analytics that are driving these powerful use cases

Use Case	Specific Analytics	KPIs that see improvement
Demand Forecasting	• Time Series forecasting • Network Capacity Planning • Demand Sensing	• Forecast Accuracy • Inventory Days of Supply • Service Level • Demand Variability
Product Mix & Assortment Optimization	• Inventory management • Product Mix Plan • Cluster Analysis	• Assortment Width & Depth • Gross Margin Return on Inventory (GMROI) • Sell-through Rate
Pricing effectiveness & optimization	• Customer segmentation • Competitor price analysis	• Conversion Rate per Price • Price Elasticity • Competitive Pricing Index
Trade Promotion Management	• "What-if" scenario planning • Post-Event analysis • Harmonized transactional data	• Incremental Sales Lift • Trade Spend as % of Sales • Cannibalization Rate
Distribution management	• Inventory analytics • Distributor analytics • Logistics route optimization	• Order fulfillment rate • Stockout Rate • Return Rate • Lead Time
Customer Analytics	• Customer acquisition analytics • Customer engagement analytics • Customer churn rate	• Customer Lifetime Value (CLTV) • Customer Retention Rate • Customer Acquisition Cost (CAC)

Polestar – Your Trusted AI and Analytics Partner for CPG Growth

The success of analytics and AI initiatives depends on your data ecosystem and how you which helps transform your raw data into actionable insights. Rest assured, with our comprehensive service, we will help you convert your data into actionable insights

Intelligent analytics

Automated reporting for faster insights into category performance, predictive modeling for demand forecasting and pricing strategies.

Modern data platform

Cloud native data warehouse for omnichannel data aggregation, real-time data integration across POS system, automated quality control for accurate demand planning.

Enterprise data governance

Access control to keep consumer data secure, compliance monitoring or regulatory requirements like GDPR and CCPA.

Our three phased approach will guide you from establishing data framework technologies to enabling advanced AI across your CPG value chain.

Analytics foundations service	Analytics implementation service	Advanced AI & Optimization Service
Data integration and consolidation	Exploratory Analytics: Define hypothesis and conduct POC	Use case-driven app Development for LOBs and functions
Technology rationalization and modernization	Self-Service exploratory analytics and data visualization	Model maintenance and performance tracking
Meta data management, pipelines	User training and knowledge management	Scenario Simulation and What-If Analysis
Analytics Architecture Blueprinting	Early use case identification	Advanced real-time analytics
Migration, governance and security	Data and analytics democratization (Initial Phase)	Future Optimization and scaling plans

Explore more about our **AI and Analytics consulting services for your CPG value chain** and unlock the full potential of your data, helping you drive smarter decisions with real-time insights.