

A glowing blue shopping cart is positioned on a computer keyboard. The background is a dark blue bokeh of light points, suggesting a digital or data environment. The cart is illuminated with a bright blue light, and its wheels have a glowing effect.

Critical Roadblocks in Retail and CPG Digital Transformation

POV by

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Mphasis

The Next Applied

Retail and Consumer Packaged Goods (CPG) organizations are investing heavily in artificial intelligence, digital commerce, cloud modernization, supply chain transformation and data platforms. Boardrooms have largely aligned on the strategic direction: build intelligent, customer-centric, resilient enterprises capable of responding to rapidly changing markets. Yet, despite significant investments, many organizations continue to struggle with realizing measurable business value.

The challenge is rarely a lack of vision. Instead, it lies in execution.

As transformation programs move beyond isolated initiatives, enterprises encounter operational, technological and organizational barriers that prevent innovation from scaling. Legacy architectures, fragmented data, disconnected operating models and inconsistent governance create friction that limits the ability to convert ambitious strategies into sustainable business outcomes.

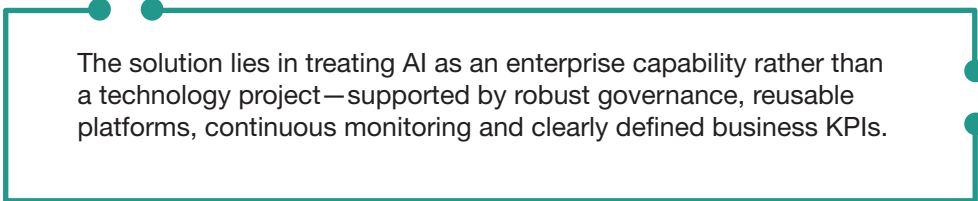
Understanding these roadblocks is critical because they reveal where organizations should prioritize transformation—not simply to adopt new technologies, but to build an operating model capable of delivering continuous value.

1. AI Proofs of Concept that Never Reach Production

Many retailers have experimented with AI through pilots in demand forecasting, customer service, pricing and merchandising. While these initiatives often demonstrate promising results in controlled environments, relatively few achieve enterprise-wide deployment.

The underlying issue is rarely the AI model itself. More often, organizations lack production-ready data pipelines, governance frameworks, standardized MLOps practices or clearly defined ownership between business and technology teams. AI initiatives become isolated experiments rather than integrated business capabilities.

Without operationalizing AI, organizations continue investing in experimentation while failing to generate measurable commercial outcomes. Leadership confidence declines, budgets become more difficult to justify and transformation momentum slows.



The solution lies in treating AI as an enterprise capability rather than a technology project—supported by robust governance, reusable platforms, continuous monitoring and clearly defined business KPIs.

2. Fragmented Customer Data Limits Personalization

Today's consumers interact across stores, mobile applications, websites, marketplaces, social commerce, loyalty programs and customer service channels. Unfortunately, these interactions often remain disconnected across multiple systems.

Customer identities become fragmented, resulting in duplicate records, inconsistent profiles and incomplete behavioral insights. Marketing teams operate with limited visibility, reducing personalization to broad segmentation instead of truly individualized engagement.

This fragmentation leads to missed cross-selling opportunities, lower customer lifetime value and declining engagement effectiveness.

Organizations that establish unified customer data foundations—bringing together transactional, behavioral and operational data—can enable consistent personalization across every customer interaction while improving campaign performance and loyalty.

3. Siloed Channel Operations Prevent Unified Commerce

Shoppers now move fluidly across digital and physical channels—from browsing online and buying in-store to using curbside pickup or returning items through a different touchpoint—and they expect the experience to remain consistent.

However, many retailers still operate digital commerce, physical stores, fulfillment, inventory management and customer service as separate organizations with disconnected technologies and KPIs.

These operational silos create inventory inaccuracies, inconsistent pricing, delayed fulfillment and customer frustration.

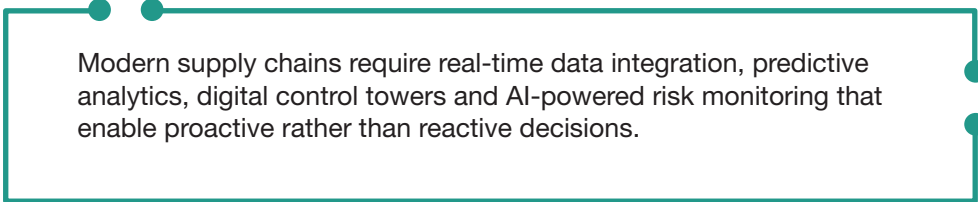
Unified commerce requires more than omnichannel storefronts. It demands integrated inventory visibility, shared operational workflows, standardized customer experiences and coordinated decision-making across every channel.

4. Limited Supply Chain Visibility Encourages Reactive Decision-Making

Global supply chains have become increasingly volatile due to geopolitical disruptions, climate events, transportation constraints, supplier variability and changing consumer demand.

Many organizations still depend on disconnected supplier data, lagging reports and backward-looking dashboards that explain past performance but offer limited insight into what may happen next.

Without end-to-end visibility, businesses respond only after disruptions occur—resulting in excess inventory, stock shortages, expedited shipping costs and operational inefficiencies.



Modern supply chains require real-time data integration, predictive analytics, digital control towers and AI-powered risk monitoring that enable proactive rather than reactive decisions.

5. Pricing and Promotions without Causal Intelligence

Retail pricing has become significantly more complex as inflation, competitive activity, consumer behavior and regional demand fluctuate continuously.

Despite this complexity, many pricing decisions still rely heavily on historical sales reports or manual judgment. Organizations often understand what happened but not why.

Without causal intelligence that considers pricing elasticity, competitive actions, weather patterns, local events and customer behavior, promotional investments frequently fail to maximize returns.

Organizations adopting AI-driven pricing optimization and scenario modeling gain greater confidence in promotional planning while protecting margins and improving commercial performance.

6. Legacy Core Systems Constrain Business Agility

Many retailers continue operating decades-old ERP platforms, merchandising systems, warehouse applications and custom-built technologies that have evolved through years of incremental enhancements.

These environments create significant technical debt. New capabilities require lengthy integration projects, innovation cycles become slower and modernization costs continue rising.

As customer expectations evolve faster than technology delivery, organizations struggle to launch new services, expand into new markets or adopt emerging business models.

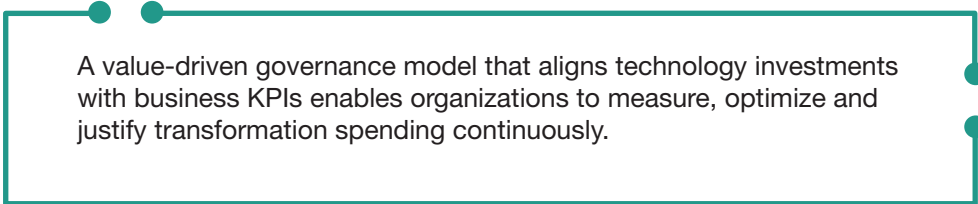
Modernization should focus not simply on replacing systems but on creating modular, cloud-native architectures that support continuous innovation and rapid change.

7. Difficulty Measuring Transformation ROI

Digital transformation initiatives often span multiple years and involve numerous technologies, making it difficult to connect investments with measurable business outcomes directly.

Organizations frequently track project milestones rather than commercial impact.

Without clearly defined value metrics—such as revenue growth, inventory reduction, fulfillment improvements, customer retention or operating margin gains—leadership struggles to assess transformation effectiveness.



A value-driven governance model that aligns technology investments with business KPIs enables organizations to measure, optimize and justify transformation spending continuously.

8. ESG and Traceability Increase Data Complexity

Consumers, regulators and investors increasingly demand transparency around sourcing, sustainability, product provenance and environmental impact.

Meeting these expectations requires organizations to collect, validate and report data across suppliers, manufacturers, logistics providers and retail operations.

Many enterprises still depend on disconnected reporting processes and manual data collection, increasing compliance risk while limiting operational visibility.

Building integrated data ecosystems with automated traceability enables organizations to strengthen regulatory compliance while improving supply chain transparency and operational resilience.

9. Poor Forecast Accuracy Drives Inventory Inefficiency

Demand forecasting has become increasingly difficult as purchasing behavior changes rapidly across regions, channels and product categories.

Many forecasting models continue relying primarily on historical sales without incorporating external variables such as weather, local events, promotions, economic conditions or social trends.

Forecast inaccuracies create two equally damaging outcomes: excess inventory that ties up working capital and stockouts that result in lost sales and dissatisfied customers.

Advanced forecasting models that continuously learn from multiple data sources significantly improve inventory optimization while reducing operational waste.

10. Inconsistent Customer Experiences across Every Touchpoint

Customers judge brands based on the complete experience rather than individual interactions.

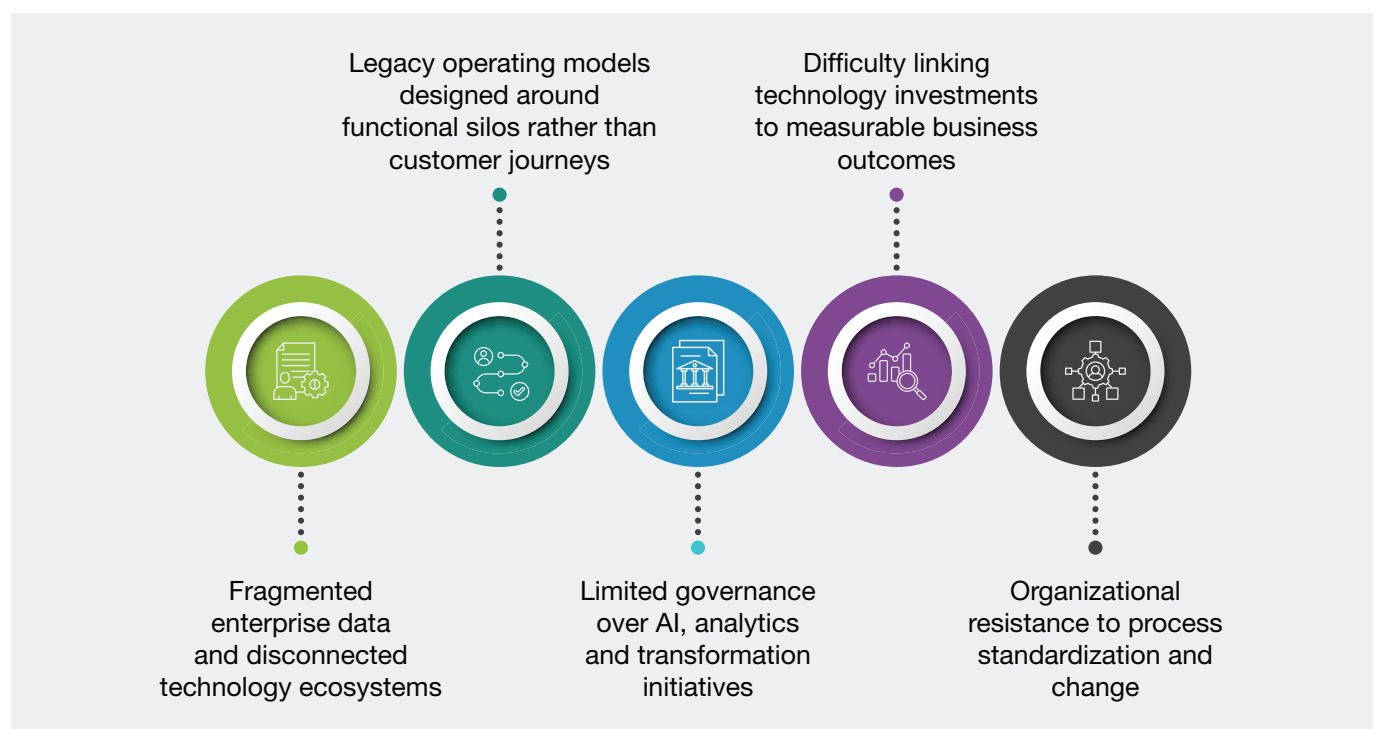
When websites, stores, contact centers, mobile applications, loyalty programs and fulfillment operations operate independently, inconsistencies become highly visible. Customers encounter different pricing, inconsistent product availability, conflicting policies and varying service quality.

Over time, these fragmented experiences reduce customer trust, weaken loyalty and increase churn.

Delivering a consistent customer experience requires unified operational processes, shared customer intelligence, standardized service models and connected digital platforms.

11. Moving Beyond Individual Problems

While each challenge appears distinct, they often stem from the same structural issues:



Treating each symptom independently often results in isolated improvements without addressing the underlying causes. Sustainable transformation requires organizations to modernize platforms, unify data, embed AI into core business processes and establish governance frameworks that continuously measure value creation.

12. From Transformation to Enterprise Value

The next phase of Retail and CPG transformation is no longer about deploying more technology—it is about orchestrating technology, data, processes and people into a cohesive operating model.

Organizations that successfully bridge the gap between strategic ambition and operational execution will be better positioned to scale AI responsibly, deliver personalized customer experiences, optimize supply chains, respond to market volatility and improve commercial performance.

Ultimately, competitive advantage will belong not to those that invest the most in digital transformation, but to those that consistently convert innovation into measurable business outcomes.

About Mphasis

At Mphasis, engineering has been in our DNA since inception.

Mphasis is an AI-led, platform-driven company with human-in-the-loop intelligence, helping global enterprises modernize, infuse AI, and scale with agility. The [Mphasis.ai](#) unit and Mphasis AI-powered 'Tribes' are focused on client outcomes and embed artificial intelligence and autonomy into every layer of the enterprise technology and process stack. Mphasis built [NeolP™](#), a breakthrough AI platform which orchestrates a powerful pack of AI platforms and solutions to deliver impactful outcomes across the entire enterprise IT value chain, because we believe 'AI Without Intelligence Is Artificial™'. NeolP™ is powered by the Ontosphere, a dynamic and ever-evolving knowledge base, delivering continuous and constant innovation through perpetual intelligent engineering - driving end-to-end enterprise transformation.

At the heart of our approach is customer-centricity—reflected in our proprietary [Front2Back™](#) transformation framework, which uses the exponential power of cloud and cognitive to deliver hyper-personalized digital experiences ($C = X2C_{\infty} = 1$) and build strong relationships with marquee clients. Our Service Transformation solutions enable enterprises pivot from legacy systems and operations to secure, adaptive, cloud-first operating models with minimal disruption. Continuous investments in platforms, such as the Neo series, enable enterprises to stay efficient, relevant, and ahead in a dynamic AI-first world. Mphasis is a Hi-Tech, Hi-Touch, Hi-Trust company, rooted in a learning and growth culture. Click here to know more. ([BSE: 526299](#); [NSE: MPHASIS](#))

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