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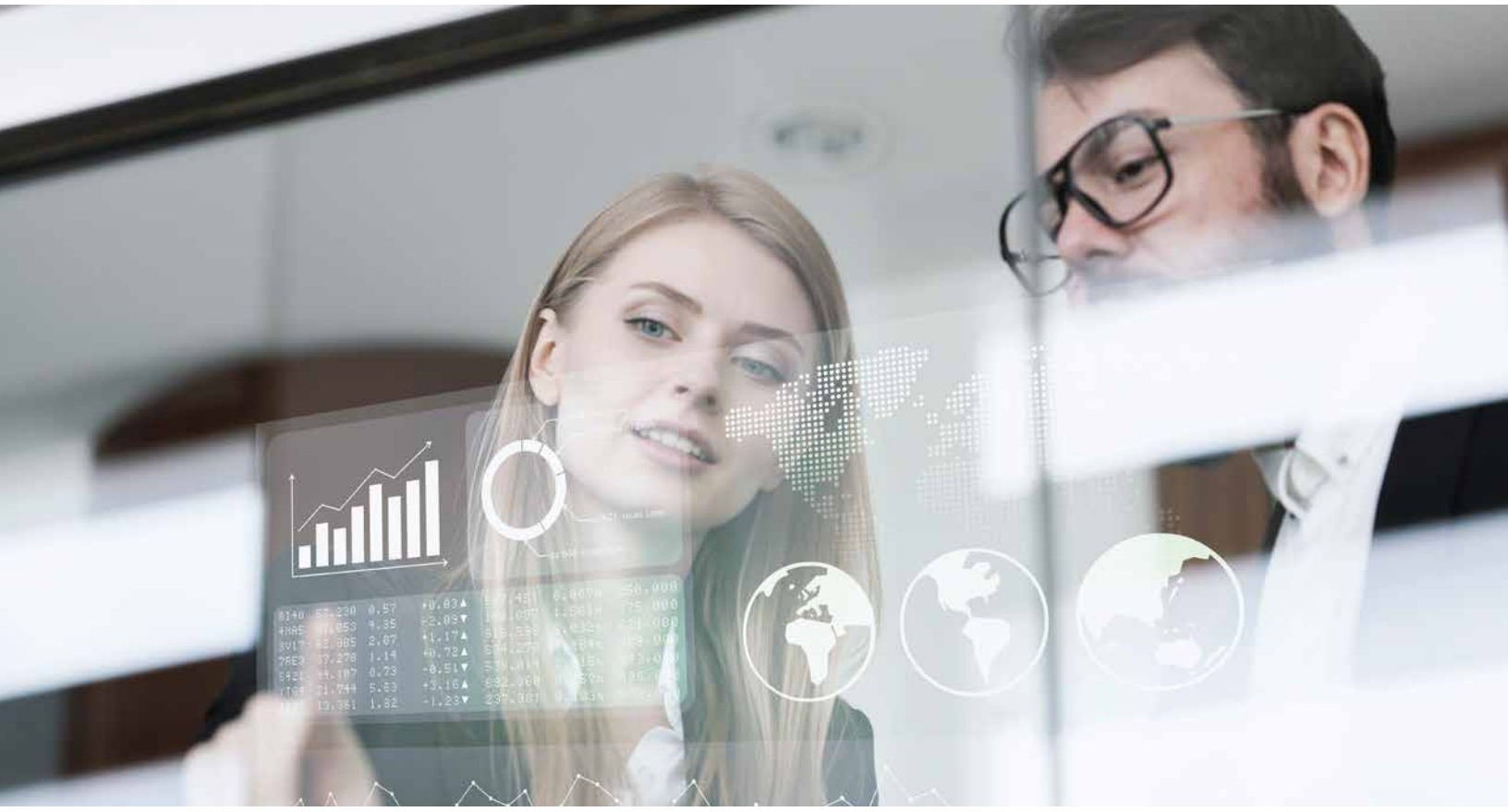
Consumer Packaged Goods Practice

Solving the digital and analytics scale-up challenge in consumer goods

Many consumer-goods companies have entered the digital and analytics race, but very few are scaling impact. Here's what leaders are doing right.

by Ford Halbardier, Brian Henstorf, Robert Levin, and Aldo Rosales



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Ask any consumer-goods executive if his or her company has invested in digital and analytics, and you'll almost certainly get an affirmative response. But ask whether those investments have yielded the desired results—and more than half of the time the answer will be no. Our research shows that only 40 percent of consumer-goods companies that have made digital and analytics investments are achieving returns above the cost of capital. The rest are stuck in "pilot purgatory," eking out small wins but failing to make an enterprise-wide impact.

The value at stake isn't trivial: our analysis suggests that a company's aptitude at scaling up digital and analytics programs is correlated with its financial performance. In this article, we describe the most common pitfalls that companies encounter in their journey toward digital and analytics scale-up. We also explore an emerging recipe for sustained success.

Measuring digital and analytics maturity—and its value

The consumer-goods industry has some catching up to do when it comes to digital maturity. Among 11 industries analyzed in the latest McKinsey Digital Quotient[1] survey, consumer goods ranks third lowest (Exhibit 1). The industry does much better in a comparison of analytics maturity, coming in at fifth place. This isn't surprising: most consumer-goods companies have focused on established analytical areas (such as pricing) that require relatively little direct consumer data. Sectors with more direct consumer connections, such as retail, have focused more on digital capabilities to enable an omnichannel consumer experience.

Within the consumer-goods industry, the companies with the highest levels of digital and analytics maturity are creating significant value. Between 2010 and 2018, the compound annual growth rate (CAGR) for the total shareholder returns (TSR) of the most mature digital and analytics performers—those in the top quintile—was 19.2 percent, approximately 60 percent higher than the 12.3 percent CAGR for bottom-quintile companies.

While that analysis doesn't prove causality, the correlation is compelling. And in light of the growth challenge that the industry is up against, the call to action is loud and clear: either fully tap into the power of digital and analytics, or get left behind.

The most common failure modes

Drawing on our experience working with consumer-goods players around the world, we have identified the four most common failure modes—the mistakes that hinder organizations from capturing value at scale from digital and analytics:

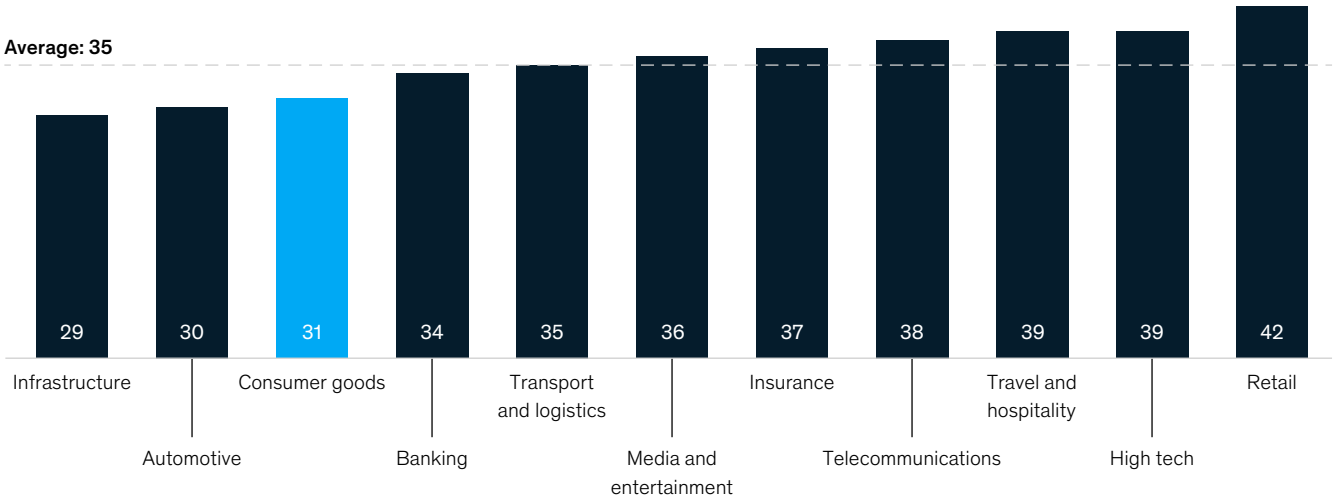
1. *Neglecting to connect digital and analytics programs to the enterprise strategy.* Laggards tend to treat digital and analytics efforts as side projects rather than important enablers of enterprise-wide priorities. Not surprisingly, these efforts struggle to get the attention and resources they require to succeed.
2. *Making big investments prematurely.* Some companies, enamored of having the latest technology, invest in digital and analytics before they thoroughly understand what the business truly needs and what will deliver significant impact. This failure mode tends to come in two flavors: a company either pursues a costly, all-encompassing "data lake," without carefully thinking through exactly what that data lake will enable or invests in a new technology stack in efforts to simplify or harmonize core platforms (such as enterprise-resource-planning systems), only to find that today's best-in-class tech stack becomes outdated just two years later.
3. *Holding out for "perfect" hires.* Laggards spend as much as six months searching for two or three data scientists or wait until they feel they've found the "perfect" hire to lead

[1] For an overview of the survey methodology, see Tanguy Catlin, Jay Scanlan, and Paul Willmott, "Raising your Digital Quotient," *McKinsey Quarterly*, June 2015, McKinsey.com.

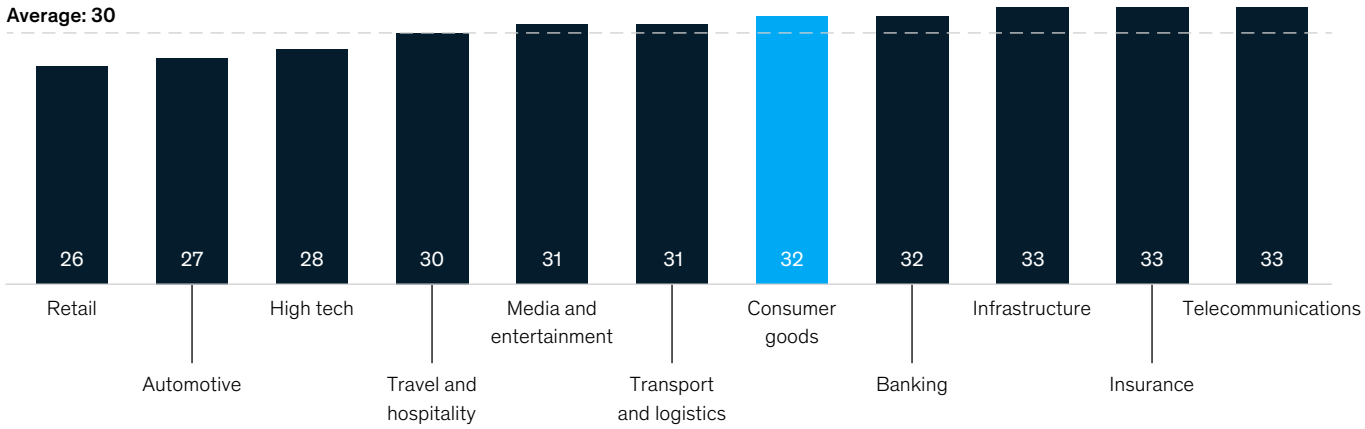
Exhibit 1

Consumer goods is among the least digitally mature industries.

Distribution of Digital Quotient score by industry, global, points (out of 100)[1]



Distribution of Analytics Quotient score by industry, global, points (out of 100)[1]



[1] As of June 2019.

Source: McKinsey analysis

the team. While it's not wrong to look for the best data scientists, data engineers, designers, and other skilled people to fill critical roles, there are several ways to accelerate progress while building your technical bench—such as training internal talent, disaggregating roles, or partnering for new capabilities.

4. *Underinvesting in change management.* Executives often tell us that they wish they'd spent as much or more on change management as they did on technology. Without senior business leaders committed to role modeling the changes and a comprehensive plan for encouraging adoption by frontline employees,

new techniques won't stick. As a rule of thumb, digital and analytics leaders should allocate their energy and investment as follows: 25 percent on data, 25 percent on technology, and 50 percent on change management.

An emerging recipe for success

While only a few consumer-goods players have delivered impact at scale from digital and analytics efforts, the recipe for success is becoming clear.[2] The following are four core elements of digital and analytics success. Combined, they help companies avoid or overcome the aforementioned failure modes.

Set a bold long-term aspiration

Companies should avoid articulating only a vague, generic aspiration ("we will build excellent analytics capabilities"), which will inevitably fail to take hold. Instead, they must begin with a concrete, long-term digital and analytics vision clearly linked to the corporate strategy. One consumer-goods company, for instance, had the following vision for its transformation: to "create a best-in-class sales force using digital and analytics to enable the right actions, in the right outlets, at the right time, executed flawlessly every day."

This vision then determines priority areas and investments. Importantly, it must be informed by a candid, detailed assessment of the starting point, using a shared vocabulary and well-understood criteria and standards to ensure that people at all levels recognize the magnitude of the change required. One business unit's definition of "digital and analytics" might be vastly different from another's, so it's critical to establish a thorough understanding of the current state of affairs and a common definition of success.

Pursue 'domain transformations,' not unrelated use cases

At the heart of any digital and analytics program are "use cases," which define specific business problems to be solved through new ways of working. Use cases can be found across the front, middle, and back of an enterprise. They can be grouped together in "domains"—subsets of use cases that share a common element, such as a deployment mechanism, data sources, or business users (Exhibit 2). We've found that to bring about transformational change, it's best to pursue use cases within the same domain.

In the early days of digital and analytics transformations, companies prioritized individual use cases, largely in the commercial functions, based on feasibility and impact. To support the highest-priority use cases, companies then established a set of broad-based enablers—for instance, a data lake, a technology stack, and a technical organization that housed all newer talent profiles, such as data scientists. In theory, these enablers would meet the needs of the entire enterprise.

In practice, however, generic enablers rarely meet specific business requirements. Successfully scaling up digital and analytics efforts thus requires a different approach: one that prioritizes fully enabled domain transformations rather than unrelated use cases. Instead of pursuing the three highest-impact use cases in different domains, a company might pursue, say, the first, fourth, and sixth highest-impact use cases, if these reside within the same domain. The company can then develop domain-specific enablers, such as data the domain needs, surgical changes to the tech stack, or capability building for business users. In this way, the company reaps higher returns on its investment because these enablers support all the use cases within that domain.

This approach also allows companies to tackle each domain's unique challenges. The sales analytics and merchandising domain, for instance—particularly for large, dispersed sales organizations—typically requires an intense focus on handheld tools linked to the core tech stack and deployed through broad-based capability building. On the other hand, the revenue-management and omnicategory-

[2] For a cross-industry analysis, see Peter Bisson, Bryce Hall, Brian McCarthy, and Khaled Rifai, "Breaking away: The secrets to scaling analytics," May 2018, McKinsey.com.

Exhibit 2

Digital and analytics programs should support entire domains rather than unrelated use cases.

■ Domain ■ Use case

Front

Sales analytics and merchandising

- Insights-based selling
- In-store and outlet execution excellence
- Sales-force coverage/ enablement

Revenue and omnicategory management

- Pricing and trade-spend optimization
- Dynamic pricing
- Promotion optimization
- Assortment optimization
- Online merchandising

Marketing analytics and personalization

- Loyalty optimization
- User experience and in-store optimization
- Personalization and hyper-marketing
- "Consumer back" innovation
- Marketing mix modeling/ attribution

Middle

Design and procurement

- Product innovation
- Procurement excellence
- Integrated product-cost optimization

Operations and supply chain

- Advanced inventory modeling and out-of-stock prevention
- Digitized end-to-end supply-chain planning
- Demand shaping
- Point-of-sale-based demand forecasting

Manufacturing and distribution

- Predictive maintenance
- Network optimization and dynamic routing
- Production optimization/ lean manufac-turing
- Frontline and asset-performance management

Back

Human capital

- HR analytics for frontline performance
- Back-office automation/ robotic process automation
- Diversity and inclusion
- Organizational health

management domain is much more about sophisticated, granular analytics conducted by a relatively contained team, with limited implications for the tech stack. By transforming domains, companies can home in on these domain-specific challenges and more rapidly achieve impact at scale.

Domain transformations in the middle of the enterprise are often the most difficult: consumer-packaged-goods (CPG) companies typically have hundreds (or even thousands) of people in their supply-chain organizations, as well as multiple data sources scattered across planning teams, plants, and distribution centers. One CPG manufacturer had historically struggled to optimize the availability of its products while keeping the cost of goods sold (COGS) and inventory low. The executive team agreed to prioritize one domain—sales and operations planning—and selected two use cases within that domain that would both deliver outsize impact and build the necessary foundations for future efforts. The first use case was digitized end-to-end supply-chain planning; the second was demand forecasting based on point-of-sale data.

The main enablers of the domain transformation included a data ecosystem that integrated inputs from more than 100 data sources and became the organization's "single source of truth"; a robust set of digital and analytics tools—jointly chosen and refined by the planning managers and use-case experts—to automate key portions of the planning process and free up the planning team's capacity; and an intensive capability-building effort that touched all 200-plus people spread out across multiple planning cells. This third enabler, overlooked in previous transformation

Data is one of the toughest enablers for consumer-goods organizations to get right.

efforts, was crucial to success, especially in light of the wide variability in technical expertise across the talent pool.

The impact was evident within the first year: higher revenues through lower out-of-stock levels and better customer service, reduced costs through a decrease in the number of obsolete products, and significantly reduced inventory through lower safety stocks. The company's demand-forecasting accuracy, already above average for the industry, improved by more than six percentage points.

Ensure the coherence of enablers across domains

Each domain must be fully enabled to succeed—but there must also be coherence in the enablers as they are built out across domains. Creating a bespoke digital and analytics organization for each domain, for example, isn't sensible. Instead, leading companies have only one digital and analytics organization—centralized, federated, or a mix of both—and then deploy specific skills and capabilities to each domain as needed.

Data is one of the toughest enablers for consumer-goods organizations to get right (see sidebar, "Instilling a healthy data culture"). Many of them don't have as much consumer data and retailer point-of-sale data as they'd like. The relevant assets they do have—internal financial, product, and customer master data—typically reside in siloed legacy systems that are difficult to access and harmonize. And consumer-goods companies tend to lack the strong data-governance processes to use, secure, and share data across the organization in compliance with privacy regulations.

Some consumer-goods companies, recognizing these inadequacies, mistakenly believe that they need to acquire troves of new data, build a massive new database to store the data, and change their entire data infrastructure—and do all of this at once. But in our experience, prioritizing the enablers that will yield the greatest value is much more effective and helps ensure the coherence of enablers across domains.

When a regional consumer-goods manufacturer embarked on a digital and analytics transformation, for instance, it chose a cloud-based data ecosystem that could expand as needed. This ecosystem would serve as the company's single data repository across all domains. The company made sure that its data strategy and rollout aligned with the overall digital and analytics road map. Data were ingested incrementally, so the company could first tackle the most critical data elements required by the highest-priority domains and use cases.

The company also emphasized data governance from the start of the transformation effort by appointing a chief data officer (CDO) within the IT organization. The CDO had "data ambassadors" embedded into each business unit. These ambassadors collaborated with business-line leaders in defining the end-state requirements and domain-specific initiatives.

Instilling a healthy data culture

by Alejandro Diaz and Mike Doheny

In scaling digital and analytics, the gap between leaders and laggards—both within and among industry sectors—is growing. For all consumer-goods companies, the emergence of digital and analytics as omnipresent realities of modern organizational life means that a healthy data culture is becoming increasingly important. A culture that brings together data talent, tools, and decision making can unleash competitive advantage.

Our experience suggests that instilling a data culture strengthens the nuts and bolts of a company's digital and analytics enterprise, helping it avoid the pitfalls that often trip up transformation efforts. Here are some of the practices that have helped companies build a culture that clarifies the purpose, enhances the effectiveness, and increases the speed of their digital and analytics efforts:

— Don't amass data for data's sake. Some companies approach data analysis as a cool "science experiment" or an interesting side project. The fundamental objective in collecting, analyzing, and deploying data should be to make better decisions. Data culture is decision culture.

— Make sure the CEO and the board show commitment. Leaders' commitment to a data culture must manifest in more than occasional high-level pronouncements. Instead, there must be an ongoing, informed conversation with top decision makers and those who lead data initiatives throughout the organization.

— Get data in front of people. Building cool digital experiments or imposing analytics tools top down doesn't cut it. To create a competitive advantage, stimulate a grassroots demand for data. When you put data in front of the people who can actually use that data, they get excited.

— Marry talent and culture. The competition for data talent is unrelenting. But there's another element that's sometimes overlooked: integrating the right talent for your data culture. That calls for striking the appropriate balance for your company between hiring new employees and upskilling current ones. Take a broader view in sourcing talent and a sharper look at the skills your data team requires.

Culture can be a compounding problem or a compounding solution. When an organization's data mission is detached from business strategy, it should come as no surprise that the results of digital and analytics initiatives fail to meet expectations. But when excitement about data analytics infuses the entire organization, it becomes a source of energy and momentum. The technology, after all, is amazing. Imagine how far it can go with a culture to match.

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Reconfigure your operating model for speed and flexibility

Consumer-goods companies aren't typically structured to move fast or flexibly. Digital and analytics leaders are starting to organize their efforts around "squads" or "pods" that can move and react more nimbly.[3] One manufacturer revamped its operating model to incorporate the following elements:

— *Business-led squads with dedicated IT support.* Squad leaders are responsible for defining the specific business problems that the squads tackle and for ensuring value capture. Squad leaders (or product owners) aren't IT or other technical staff but rather experts from the business lines, with deep knowledge of each domain and the relevant use cases. All squads

[3] For more on squads and other aspects of agile organizations, see Daniel Brosseau, Sherina Ebrahim, Christopher Handscomb, and Shail Thaker, "The journey to an agile organization," May 2019, McKinsey.com.

also have IT and data-science experts as needed and can thus achieve rapid progress, from a minimum viable product to impact at scale, using a sprint-based working model.

— *A data-science center of excellence.* The company built a team of data scientists and engineers, sourced both internally and externally, for a new center of excellence (COE). The COE is distinct from other technology teams, such as those for infrastructure and security. It oversees data science within each squad, as well as best practice and knowledge sharing across squads.

— *An empowered transformation office.* To help ensure the transformation's success, the company formed a transformation office comprising top-team executives. During regularly scheduled reviews, sponsors and squad leaders update the transformation office on the progress of initiatives; sponsors can also pitch new ideas. This structure and cadence allow the company's senior leaders to track milestones and dynamically reallocate resources to priority areas.

— *An emphasis on leadership training.* Executives and managers completed a mandatory capability-building curriculum that taught them not only how the digital and analytics program would help the business outperform, but also how to adjust their management styles to the new ways of working. (One way, for example, was to steer clear of a "command and control" style and to empower teams to make decisions in agile sprints.) The investment in leadership development sent a strong signal to all levels of the organization, generating excitement and enabling more credible change management.

Digital and analytics programs are no longer optional. Companies can't compete effectively in today's business environment without harnessing the power and potential of these technologies. Scaling them—so that they work their magic across the entire organization instead of in small pockets—will be increasingly crucial to improving total shareholder returns and sustaining competitive advantage.

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