



# How advanced analytics can fuel growth

Organizational maturity will be a critical element for grocery retailers seeking to unlock the full potential of analytics.

*by Gemma D'Auria, Andreas Ess, Holger Hürtgen,  
Gereon Sommer, and Alex Sukharevsky*



Interview with Igor  
Shekhterman on page 48

Advanced analytics, including artificial intelligence, offers a big opportunity for the retail industry. McKinsey Global Institute estimated in a study the potential annual value of artificial intelligence for the retail industry at \$400 billion to \$800 billion globally.

For grocery retail specifically, we see the potential for an incremental increase in

earnings before interest and taxes (EBIT) of up to two percentage points if all use cases are implemented and the value is fully captured. Most of this value is driven by commercial use cases around assortment, pricing, promotions, and personalization (Exhibit 1). These are also some of the most mature use cases for which analytical approaches have begun to converge across

Exhibit 1

## Most value is driven by commercial use cases that support actual business decisions.

		Typical impact (contains overlaps) <sup>1</sup>		Enabler use case—no decision		
		Percentage points of EBIT:  <0.1    0.1–0.25    0.25–0.5    >0.5				
		Existing pilots and tests    In use in a few companies    Becomes standard				
Domain	Classic use cases (selection)			Innovative use cases (selection)		
Category management	Macro space allocation		Pricing (KVI identification, price recommendation)		NLP on customer reviews to support for (de)listing decisions	
	Macro space order					
	SKU listing or delisting		Online or dynamic pricing		Automated product comparison (NLP)	
	Assortment localization		Markdown optimization			
	Store clustering		Promo (historic effectiveness, forecast, optimization)		Automated product tagging (NLP, computer vision)	
	Planogram (position, facings)					
Marketing	Personalized promotions		Marketing mix optimization (MROI)		Facial recognition for personalization	
	E-commerce personalized content <sup>2</sup>					
	Forecasting (category, market)		E-commerce improved product search <sup>2</sup>		Customer journey analytics	
Purchasing	Vendor negotiation support		Indirect optimization (AI-based spend cube)			
Supply chain and operations	Store labor scheduling		Warehouse labor scheduling		NLP for customer service	
	Store network (expansion, pruning, performance)				Seamless checkout (eg, Amazon Go)	
	Energy optimization in store		Warehouse “digital twin”		Inventory and shelf monitoring	
	Order forecast and optimization (including shrink or out-of-shelf)		Logistics network optimization		In-store tracking	
			Route optimization, including CO <sub>2</sub> simulation		End-to-end product tracking	
Others (eg, support)	People analytics (eg, hiring, churn)		Credit scoring		Sentiment analysis for customer service	
			Fraud detection			
	Data ecosystems		Back-office process automation			
	Retail media					
	Report optimization		Automated budgeting			
	Analytics self-serve					

<sup>1</sup> Impact partially overlapping—up to 2 percentage points in total realistic.

<sup>2</sup> On e-commerce revenues.  
Source: McKinsey Analytics

the industry and standard analytics solutions are available on the market.

During the past five years, grocery retailers have moved beyond experimenting with advanced analytics and started to adopt these use cases in a systematic way. The majority of European grocery retailers are now embracing advanced analytics and are investing in capturing its value. For example, in 2020, Ahold Delhaize announced the implementation of tools for assortment, pricing, and promotions across its European brands. Players such as ICA, Migros, and REWE have well-established analytics organizations, and several retailers have hired additional data scientists, including discounters Aldi and Lidl.

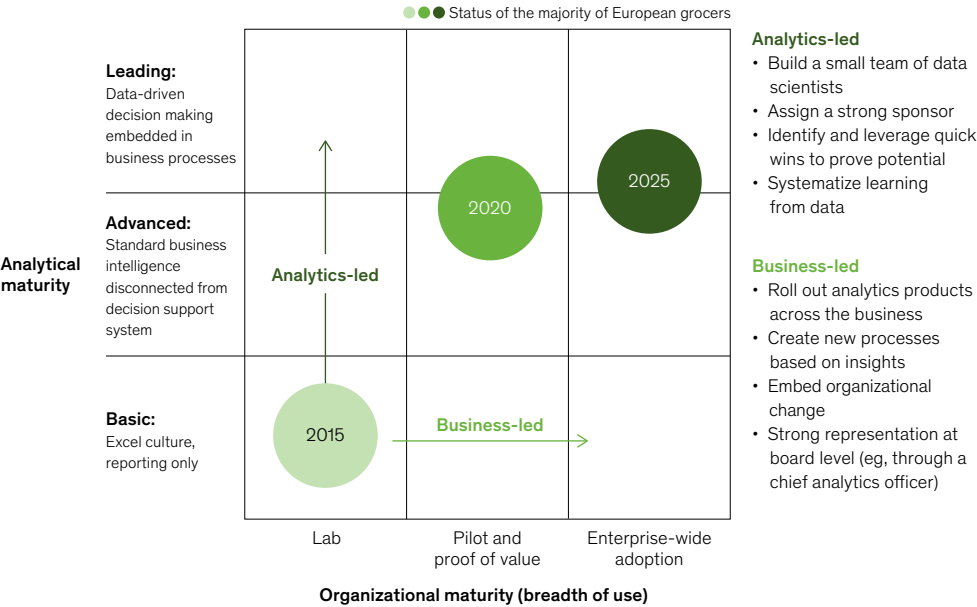
While we observe these investments, we so far do not see that the potential value is captured in the profit and loss (P&L). To determine what distinguishes analytics leaders from the pack, we analyzed grocery retailers along two dimensions: analytical and organizational maturity (Exhibit 2).

We found that capturing the value of advanced analytics depends even more on a retailer's organizational maturity than its analytical maturity. In fact, retailers can achieve results only if organizational maturity is in place—which is still the exception in the industry rather than the rule.

Many grocers have made great progress on analytical maturity. Leaders in analytics

Exhibit 2

# **Most companies can ramp up their analytics capacity, but many struggle to produce analytics.**



Source: McKinsey Analytics

have tackled the majority of fundamental use cases, such as pricing, mass promotion, and assortment optimization. Now, they have increasingly turned their focus to pursuing new use cases along the value chain and improving the existing use cases—for example, using more granular, real-time data. These efforts are often driven by a strong analytics unit, but adoption of these use cases in the business varies. The best analytics solution does not help if it is not used and understood by the respective decision makers (such as category managers).

Organizational maturity in many cases is the main barrier to going beyond partial adoption and realizing analytics' full potential. Organizational maturity encompasses both processes to technically embed and continually improve use cases, as well as constant change management with the users of the analytical insights—fostering understanding of analytics, ensuring it is embedded in daily processes, and measuring against new key performance indicators (KPIs).

Our analysis of winners—both digital natives and traditional grocers—highlighted five strategies that have helped them excel, particularly in organizational maturity.

## **1. Focus on strategic use cases instead of on data.**

Value is driven by business decisions based on insights provided by data (see sidebar, “An analytics use case, defined”); vast quantities of data do not generate any value by themselves. Transparency on the value of a use case, and a clear road map for how and when to realize it, is therefore key.

Grocers should create a prioritized portfolio of use cases derived from strategic priorities

### Sidebar

## **An analytics use case, defined**

An analytics use case describes an application of analytics and data to achieve an improvement of business performance and decisions. It defines the scope of change, a set of objectives with key performance indicators (KPIs), users affected, and data and analytics methods to be used.

with clear business objectives, and reallocate resources to those with the highest risk–reward potential. They should also group the defined use cases into larger units or domains (such as store operations or merchandising). This accelerates the change in a given business domain, because almost all of their decisions become more data-driven and, ideally, interconnected.

## **2. Create agile, interdisciplinary product teams.**

One of the most crucial factors in extracting value from analytics insights is the translation process between business and technology. Many business teams don't fully understand how technology and data science teams can support them, and vice versa. As a result, businesses don't ask the right questions, while technology and data science teams try to answer questions that do not exist. This part of the analytics value chain can be regarded as the “secret sauce,” and traditional grocers have particular difficulty in achieving greater visibility and understanding between tech and business.

Winners create agile, interdisciplinary product teams that are led by the business and consist of people from business, analytics, and IT. Such an interdisciplinary team collaborates closely to achieve a defined business goal (for example, improve the delisting decision in assortment). In this approach, business is closely involved in the identification of use cases and also in designing the solution for the business case—either by providing a full-time resource in the role of product owner as part of the team or as part-time business owner. The business is key in closely defining the business objectives and use-case specifications, as well as in ensuring the necessary change in the business organization: process changes, understanding of analytics, and relentless measuring of P&L impact. The result is a product that ensures P&L impact and, above all, scalability.

### **3. Invest in large-scale change management to ensure use-case adoption.**

Many use cases require that someone approach decisions differently or work in a different way. Therefore, deploying a use case often requires adjustments to processes, roles and responsibilities, and incentives as well as the acquisition of new capabilities. Merely giving employees access to a new tool and explaining it in a training session often is not enough.

For example, if pricing is automated based on analytics, this will have profound implications for the role of a pricing or category manager. While in the past they might have been focused on doing tactical adjustments to prices, they now might be responsible for setting strategic guidelines and providing input to the analytics team on how to further improve the pricing logic.

*Providing data and insights to many business users is a key way to drive adoption and promote organizational maturity.*

Even with smaller changes, we find that embedding the analytics insights deeply into the existing processes and workflows and investing heavily in building the required capabilities and understanding of the users is an elementary prerequisite to harvest the expected impact—and which is often underestimated.

### **4. Develop a fit-for-purpose analytics platform to maintain and scale multiple use cases.**

Providing access to data and insights to many business users is a key way to drive adoption and promote organizational maturity. To achieve this goal, retailers must build a dedicated analytics platform.

Moving from legacy IT systems to a fully modernized big-data IT stack requires significant time and cost. But a complete transition may not be necessary—legacy systems can coexist with cloud-based data infrastructure. The most crucial components are data collection and an analytics platform consisting of a data lab, allowing for quick experimentation and a factory environment that can monitor, run, and scale use cases continuously. Grocers should then integrate analytics into back-end and front-end systems incrementally, one use case at a time. Eventually having an advanced analytics platform, the data layer itself, and a visualization and results layer accessible to the entire organization boosts grocery retailers' organizational maturity.

## **5. Decide whether to buy an existing solution or develop one in-house.**

Grocers do not need to reinvent the wheel to achieve business impact. But the choice between buying a proven off-the-shelf solution and investing the resources to develop one can be surprisingly difficult. Many organizations lack expertise in certain use cases, and they must also navigate complex requirements from technical and business perspectives.

In our experience, a successful vendor strategy takes a staged and differentiated

approach. For use cases that have become a commodity and are at least in a widely available base version in the market (for example, forecasting and assortment), using external vendors and tools might be the fastest, cheapest, and least risky route. For use cases that can generate a competitive advantage or are still in early stages (for example, personalized promotions), a bespoke solution might hold more impact. Another option is to buy tools or code from vendors to start or accelerate use cases before bringing the solution in-house to create distinctive, tailored solutions.

---

All grocers must master advanced analytics to remain relevant. By now, for many important use cases, such as assortment, price, and mass promotions, standardized software is available in the market. This also allows for smaller retailers or retailers with lower analytics maturity to achieve first results quickly. For more analytically mature retailers, more experimental use cases, including localization of assortment or personalization of promotions, are the next frontier. To succeed, grocers must invest not only in technical solutions but also organizational capabilities, which will require significant investment in change management, driven from the very top.