

Retail and Consumer Packaged Goods

The end of IT in retail?

Retailers who want to stay ahead of the pack and drive business results through technology innovation are rethinking the setup of their IT departments.

by Marcus Keutel, Gautam Lunawat, and Markus Schmid



“The IT is the problem—as usual!” This complaint is a constant refrain whenever retailers with brick-and-mortar beginnings realize that desired process improvements or (tech) product innovations will be delayed, must take a different form than planned, or won’t be realized at all. Usually this statement is true and false in equal measure. It’s true because today nearly every change a retailer might make depends on technological solutions—and they often fall below expectations. But it’s false as well because the business side often is the root cause. In fact, a joint study by Oxford University and McKinsey of more than 5,000 IT projects identified three reasons behind most failures: inadequate management of the many people involved, investment that is not aligned to business needs, and a lack of transparency regarding the project portfolio.

The biggest stumbling block: Silo structures

Invisible trenches between the IT department and the rest of the company constitute one of the main reasons why brick-and-mortar retailers often struggle far more with technology than their digitally grown counterparts. Many decision makers in traditional companies still see IT as an administrative function positioned somewhere below the CFO, far away from the operative business owners. IT departments like this tend to be places where countless people toil on large monolithic projects and political criteria rather than arguments that help determine how resources are allocated. Business-side practitioners and developers seldom share ideas directly. As a result, this type of IT function is generally unattractive for digital talents, and commercially successful retailers often struggle to build the internal technology competence that they need.

The technological shortcomings that result from this silo structure can threaten retailers’ very existence—especially as the demands they face multiply dramatically in the age of digitization, and the digital disruptors like Amazon continue to invest and innovate aggressively. Over the last few years,

leading retailers such as Walmart, Tesco, Kroger, and John Lewis have significantly boosted their technology investments in response. However, many retailers still continue to devote less than 1.5 percent of revenue to developing their technology assets.

While higher investment is essential, incumbent retailers cannot close the gap to the industry’s technology leaders by simply throwing more money on the table. Choosing the right digital model and continuously developing it in a test-and-learn process are far more important. The company must build a modern technology organization supporting the delivery of the best business results. In the end, transforming mind-sets, capabilities, and ways of working is critical not only in classical IT areas such as application development and infrastructure but also in core commercial divisions like sales, merchandising, supply chain, and marketing.

Paths to a modern technology organization

When it comes to organizing IT, traditional retailers might look to digital pioneers such as Amazon or Zalando. Some digital natives might also have their struggles when it comes to the IT setup, e.g. with regard to scalability of their technology. However, they are good role models based on one organizational commitment in particular: for them, joint responsibility for commercial processes and technology development has always been the rule.

Retailers can consider this basic idea and optimize their technological performance in six steps:

1. Entrust responsibility to small, effective product teams

The modern technology organization is not a large IT department organized by systems anymore. Instead, small teams of developers provide technical support for specific business processes, known as “products.” For example, individual teams could be built around various products, such as assortment planning (in sales or purchasing), promotions and pricing (marketing), or inventory management (supply

chain). The individual products are defined at such a granular level that a small team of developers can support the process from beginning to end. This approach obviously enables “tearing down the walls” between business and IT. The granular structure also creates an opportunity to connect each of these products and development teams with a counterpart from the business. This type of connection typically increases the effectiveness of the product teams. Thanks to their cross-functional staff, such teams can drive further development independently and be measured against the concrete business results of their work. An overview from one retailer, which has been transforming toward such a structure with approximately 90 product

teams, shows just how differentiated the new structure can be (Exhibit 1).

2. Set up “tech chapters” as new structures within IT

The establishment of product teams usually requires a change of the classical IT structures with leaders at the division, department, and team levels. One option that is currently used by many companies is to replace the classical structure with so-called “tech chapters” that manage the professional development of employees in the product teams and recruit new tech specialists. Typically, chapter leads do not influence the content of product development (the “what”). They focus on the methodology and technology (the “how”). In large IT organizations

Exhibit 1

The end of centralized IT: small, effective product teams handle technological development in each business unit.

Allocation of product teams to a retailer’s commercial units

1st level	2nd level	Allocated IT product teams (selected)	
Customer	Acquisition		
	Product search and advising	Product presentation Recommendation engine Product search	Electronic price display Web landing pages Product configurator
	Checkout		
	Service		
	Loyalty		
Products and services	Assortment management		
	Pricing		
	Supplier management	Sales forecasts Demand planning Replenishment	Order management Availability management Stocktaking
	Inventory management		
Supply chain	Warehousing		
	Transport		
	Service fulfillment		
Support	Finance		
	HR	IT security Data warehousing and reporting	Identity management User support Development support
	IT platform		
	Analytics		

(1,000 employees and more) retailers typically break up the tech chapters, as otherwise the resulting organizational units would become too big and thereby the responsibilities would become unclear. One possibility is to break the tech chapters into domains. For example, one domain, titled “customer,” focuses on all customer-facing products. This is an effective way to create meaningful groups of employees that benefit the most from knowledge sharing.

3. Assign product ownership to the business

Instead of throwing requirements from the business over the wall to the IT department, in this model each product team has a product owner in one of the business divisions, such as purchasing, sales, or finance. He or she leads the content of the team’s work and, in contrast to most of today’s models, is not limited to defining requirements. They determine what their teams work on and initiate the development of further technological solutions that can improve the company’s performance in their respective business area. In concrete terms, this means that the head of sales, for example, is responsible for the checkout product team or the head of purchasing has responsibility for the demand planning/forecasting product team. Product owners work with their product teams using agile methods. In such a modern technology organization, product teams and tech chapters work together as needed: product owners directly drive development with a business mind-set, while chapter leads contribute technological know-how (Exhibit 2). In many cases this concept leads to the need to higher experienced product owner profiles into the business that have the needed skills and mindset for this challenging role.

4. Specify KPIs as standards of success for each team

Binding KPIs let product owners and their teams know how their performance is measured and where it needs to improve. Digital retailers have long used this approach to steer their teams: instead of a single target for everyone based on an indicator like overall sales development, each

team has its own set of KPIs linked to business performance. This ensures that developers are incentivized in the same way as their colleagues in the corresponding business area. For the marketing team, for example, a KPI could be transaction cost per website visitor, for the search team, the share of search results that result in a purchase, for the recommendation team, sales due to recommendations. By setting targets for indicators like these, retailers ensure that the team’s objectives are in line with those of the company as a whole. The KPIs themselves are not new, but using them to explicitly evaluate the content of technology development inspires a much stronger commitment to them—they essentially become the currency that product teams use to both prioritize their activities and demonstrate their usefulness.

5. Add sponsors at the top management level

Ideally, each business division will have a sponsor on the executive board whose involvement includes setting priorities for his or her area. This close connection to top management helps resolve cross-divisional conflicts regarding development priorities early on and reduce the need for coordination at the expert level. Another welcome side effect: technological questions and their prioritization become consequential not only for product owners but for nearly every manager in the company.

6. Modernize the tech stack

To realize the maximum benefit from such a transformation, it is crucial to enable the product teams by reviewing and updating the tech stack in the company. Typically, the result is a rather intensive modernization with a higher degree of modularization. To ensure scalability and allow for rapid change, a shift to cloud platforms and SaaS solutions is inevitable. Further, most companies are working on breaking up their monolithic architecture and moving to microservices with a clear API-first strategy. This will at the same time decrease the need for manual operations and pave the way to migrate to a DevOps setup, where most product teams

Exhibit 2

The technology-driven organization lives from the close interplay between product owners, which determine “what” development will entail, and the tech chapters, which determine “how” it will be done.

Target structure of a technology-based retail company, illustrative example

Product teams		 Product owner	 Product owner	 Product owner
Tech chapter	Agile coach	●		●
	UX ¹ designer		●	●
	Architect	●	●	●
	Developer	●	●	●
	...	●	●	●

¹ User experience.

are responsible not only for developing their products but also for running them. Retailers on this journey typically take a stepwise approach – starting where they expect the highest business value from further development.

In general, we see two alternatives for how companies have implemented a modern technology organization:

“Big bang” refers to changing the full setup all at once. This approach has the advantage of a short implementation timeline; however, it also requires a huge amount of preparation and bears a high risk of disrupting daily operations.

“Step by step” starts with selected domains and is followed by a sequential roll out. This approach enables a test-and-learn environment and provides enough time for the affected employees from the business functions to understand and adapt to the required changes. In most cases the step-by-step approach will be the preferred choice.

New organization, new challenges

Tearing down the walls between business and IT by implementing the transformation steps described here can unleash vast potential. Experience shows that the resulting setup enables companies to develop and use new technologies much more efficiently (see sidebar, “Suddenly fast and reliable: How two retailers benefit from restructuring their IT setup”). At the same time, it frees the classical IT function to focus exclusively on cross-cutting technology topics. Central-expert teams therefore coexist alongside the tech-chapter leads to make decisions on system architecture, ensure data security, and manage relationships with major technology partners. Responsibility for infrastructure, such as cloud computing and data pipes, is another overarching concern that is an important enabler function.

Demands on the CTO as the organization’s ultimate technology authority increase as well. The new model requires far greater business foresight, since the CTO must provide the right impetus for

Suddenly fast and reliable: How two retailers benefit from restructuring their IT setup

The experiences of two European retailers show the potential that reorganizing technology structures can set free:

- After making the organizational changes, a housewares retailer was able to complete an order-management module, which had fallen months behind schedule, within budget and in less than two months.
- A food retailer using the new structure managed to develop an entire

technical solution for deliveries to end customers—from the online shop to the management of merchandise, inventories, and the delivery fleet—within ten months. The solution went live on schedule as a result.

In both cases, the key to success was entrusting operational decision makers from the business with the product owner role working with their product teams. It quickly became clear that they could be far more targeted in identifying and

prioritizing requirements when their responsibility expanded from simply operating solutions to shaping them as well. At the same time, this put the responsibility of deciding on potential benefits and costs in one place—an important prerequisite for making technology decisions from a business perspective.

potential digitization initiatives in the organization. Doing so requires not only a person with outstanding capabilities but also one positioned at eye level with the other business unit leaders and top managers. That's why retailers that move towards this structure often decide to make the CTO a board-level role.

The changes laid out here are immense: decades-old structures disappear, hundreds of employees must learn new ways of working, and in many cases the business becomes directly responsible for technology development. Implementing this takes time. Companies may be able to set up business-led product teams in a matter of months, but fully learning the corresponding new behaviors and ways of working can take years. Transformation toward modern technology organizations will only be successful if the top management team wholeheartedly stands behind the journey. Transforming from a classical IT department to a modern technology organization

can be a radical step, but taking it can mean the difference between a retailer struggling to survive and one that translates digitization into genuine business success.

Key takeaways

1. For many traditional retailers, digitization and the shift towards omnichannel requires a change from a classical IT function to a modern technology organization.
2. Effective technological development requires many small teams who are responsible for supporting individual business processes (products) end to end.
3. Connecting development teams to the business divisions responsible for the business process in question, including connected KPIs, tears down the walls between business and IT—business and IT have to create impact together.

Marcus Keutel is a partner in McKinsey's Cologne office, **Gautam Lunawat** is a partner in the Silicon Valley office, and **Markus Schmid** is a partner in the Munich office.

Copyright © 2020 McKinsey & Company. All rights reserved.