The Future of Retail is Modular



Right-size your retail organization with a strategy designed for the way customers shop today.

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Introduction

According to the dictionary, "modularity" is "the ability to be arranged or fitted together in a variety of ways."¹ The concept of modularity started to gain popularity a century ago, in various kinds of industrial processes, and mostly for efficiency reasons. In the 1930s, architects started to experiment with modular design to massfabricate houses for the middle class. In the 1960s, modularity again was applied for efficiency reasons in the construction of electronic computers. The goal was to achieve scale effects, and through scaling up, lower overall production costs and gain efficiency benefits. Modularity was a way to commoditize certain products, components or "modules" so they could be created and deployed efficiently on a mass scale.

Nowadays, many products and solutions are modular: cars, furniture, computer hardware, restaurant menus, training programs and even holiday packages: They can be configured and assembled together based on consumer preference—and often one module can be replaced with another to make it a better fit. Initially employed as a means to achieve cost effectiveness and efficiency gains in production processes, modularity has, over time, begun to offer more choice and flexibility as well.

Modularity today can play a critical role in retail. In this whitepaper, we'll explore how modularity can help retailers offer consumers more choice in their personal shopping experiences—or "journeys"—while ensuring these journeys are executed as efficiently and effectively as possible. We'll also address how modularity can support modern retailers' needs for scalability and upgradability. Today's retailers must constantly adapt to change. Modularity can be your secret weapon.

¹https://deacademic.com/dic.nsf/dewiki/968283

Modularity: A Strategic Differentiator in Retail

Modularity has evolved from a vendor-centric efficiency play to a much more strategic, *consumer-centric* flexibility play. This is particularly true in the retail industry. We all know consumer journeys are no longer linear or predictable, and we've witnessed how they continue to change over time. For example, many consumers now prefer shopping journeys with limited staff interactions (or completely contactless self-service), a change that was expedited by COVID-19 yet is likely to stay in place once the pandemic is over.²

In a previous whitepaper,³ we took a closer look at how consumers are emerging as the ones in charge of their shopping experience: they can dictate where and when they shop, how they pay, how and when it is delivered, and what aftersales service they would like to receive. Given this new reality, retailers who are in the process of making future-focused investment decisions should start with the consumer journey in mind. Before adding new technological innovations to their store infrastructure, retailers should start by analyzing the consumer journeys they can support, and then map out any new or preferred journeys. It's an iterative process focusing on the friction points of today, eradicating them and then evolving the journey to their desired state of tomorrow.

Of course, that's easier said than done. As the world becomes more fragmented, brand loyalty has been replaced by fickle brand competitiveness. Retailers and brands need to prepare for a future shaped by greater economic volatility. The COVID-19 pandemic is only accelerating changes in consumer behavior⁴ that were already occurring, as well as adding new requirements with regards to health, hygiene and home shopping. Consumers' priorities and associated journeys will continue to shift with global trends, and they'll shift more and more quickly as the industry drives toward complete omnichannel ecosystems.

Retailers unable to adapt will see consumers doubt their relevance. This has turned modularity into a strategy for retailers who want to upgrade their store infrastructure with innovations like self-checkout, in-store ordering via kiosks, mobile self-scanning, etc. Being able to flexibly and quickly adjust store technologies, and sometimes even store layouts, has become a key differentiator. Modularity offers this flexibility and agility to quickly respond to changes in consumer demand and to competitive threats. As retail evolves, the landscape has become a survival of the fittest, where "fittest" indicates those who are best able to *fit* with changing consumer demands.

²https://www.accenture.com/us-en/insights/consumer-goods-services/coronavirus-consumer-behavior-research ³Storevolution. Retail in the Age of the Consumer (2020) ⁴Future Retail Disruption Report, 2020/2021.



Case Study: Why Retailers Prefer a Modular Approach

Needless to say: Frequent changes in store setup and equipment have their price tag. In addition, these overhauls can be time-consuming, often causing stores to close their doors for a few days to get everything set up, properly tested, and staff trained. And until everything is deployed, there's no way to know if consumers will like the changes and continue to feel comfortable in the new store setup.

Here we see a major role for modularity. A modular approach to hardware setup allows you to keep your options open, and to make changes to your retail space as you see fit, based on emerging consumer journey patterns. Modularity is not only key in adapting to emerging trends, it also gives you the flexibility to configure different journeys *today*. If your retail network includes different types of store formats, you need a flexible platform approach that can support the range of formats. A modular platform approach offers more options and allows retailers to respond faster to shortterm changes in consumer preferences by leveraging and adapting technology investments they've already made.

Case Study: One Platform, Five Formats

We worked with a large international retailer to develop and implement a retail platform that was flexible enough to power different service offerings for each of their store formats, yet standardized on hardware equipment, software and services across all of their stores for efficiency reasons:

The retailer's team made the decision to replace their store equipment across all store locations. They already had been using self-checkout technologies for years, but wanted to modernize to meet modern and emerging consumer expectations. After identifying their unique situation, we were able to offer them a solution that was flexible enough to adapt to different consumer journeys yet also fitfor-purpose in their current range of five different store formats:

- Some of their smaller express-style convenience stores required an optimized footprint and only digital payments would suffice.
- At the same time, their large community-oriented stores needed the option to switch between self-service operations and attended (staffed) checkout for customers who needed extra assistance. That challenge required a hybrid checkout solution that could be switched from self-service to assisted checkout in a matter of seconds.
- In addition, some store formats preferred a security scale and cash rack as well, to complement the self-checkout equipment.

As that project makes clear, a 'one-size-fits-all' approach does not work. For that retailer, a "right-sized," modular approach in which different checkout configurations could be configured according to store format and specific needs proved to be the way forward. Our solution enabled the retailer to upgrade selfcheckout units as they saw fit, without being stuck with just one solution variant. For example, the option to add or remove cash payment modules when needed was seen as a huge benefit, as it ensured the retailer can be future-proof: they can swiftly make the shift from accepting cash to digital forms of payment. In addition, being modular in setup allowed the retailer to continue to get the best bang for their buck, and to keep total cost of ownership (TCO) low, freeing them to consider future upgrades and changes to store formats. On top of that, by keeping their options open, their future upgrades can be realized in a much shorter time, as it will typically require adding or replacing just one hardware component.



Scalability and Upgradability: Two Benefits of Keeping Options Open

Modular store equipment holds two promises: on-site

scalability and easy upgradability. The first promise is about being able to quickly scale up or scale down the same modules across all store locations, regardless of location or store format. This offers efficiency gains and reduces overall TCO, as well as time benefits: The same modules can be purchased once—in bulk—and then deployed across multiple countries and store formats. This gives retailers more room for negotiation with their equipment suppliers. In addition, the learning curve is dramatically reduced both for staff and maintenance engineers, as the same equipment modules are used everywhere. Moreover, as experience in deploying, configuring and using these modules is gained quickly, overall roll-out will face less hurdles and go smoother and faster in each subsequent store.

The second promise is about upgradability. This means it is much easier to adjust hardware configurations to new consumer journeys, store innovations or government regulations. For example, if a retailer decides to replace cash with digital payments, upgrades and extensions could be rather cumbersome and costly to achieve in traditional, fixed setups. However, with a modular system setup and standardized interfaces, this can be realized quite easily, costefficiently and in a relatively short time, by simply taking out the cash module and adding a new digital payment module. As such, retail organizations can become much more responsive to changes in consumer demands, adopting a step-by-step innovation path without any upfront or prohibitive investments needed.

With Diebold Nixdorf's latest self-service hardware technology, retailers can choose to have different unit types or adaptations in each of their stores, enabling them to fully tailor the technology and consumer experience to each store—a true *right-sizing* approach, while keeping their options open. More specifically, this means retailers can operate on one self-service platform with different modules that can adapt to changing consumer journeys for today and for tomorrow, with right-sized technology for stores in each sub-vertical. This leads to an optimized checkout mix in each store, with reduced queues and increased staff efficiencies and more space to increase throughput and sales. Moreover, with on-site scalability and upgradability for future needs, our self-service technology will augment the consumer experience now and for many more years to come.



Modularity Applies to Software and Services as Well

Although you may think hardware first from a modularity perspective, it equally applies to software products and services.

Software products can be architected and set up in a modular way, offering benefits in terms of extensibility and upgradability. In some cases, depending on how "open" a software solution is, modularity also expedites the development of new applications by smartly integrating and using existing components and 3rd party software applications. For example, at Diebold Nixdorf, we have developed our software solutions based on *Open Retailing*. This is a strategy centered around openness and modularity, with a shared set of open interfaces based on a modular architecture⁵ (learn more in our whitepaper on **Open Retailing**). The same software module can be applied for multiple types of hardware devices. In fact, it's just a matter of configuration, since no additional programming is needed.

The same goes for modern *services* solutions: These should also adhere to a flexible, modular approach. Perhaps even more so than hardware and software solutions, services definitely do not fit in a one-size-fits-all approach. Modern service providers can offer simplified service operations through modular options that aggregate and integrate service delivery across the retail estate. This way, they ensure the right mix of service, at the right level, at the right location for the right price point, so retailers can focus on creating differentiated experiences for their customers and staff. At Diebold Nixdorf, we have materialized this modular services approach through DN AllConnect Services.[®] Our services suite integrates services into one model across all multivendor solutions, and it's adaptable to each retailer's specific operation, reducing complexity of service delivery and making the introduction of future solutions more effective. And it is scalable as well, ensuring retailers always receive expert support, from basic installation services for hardware and software, to store openings, modernization, transition to new formats, relocations and store closures.

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⁵Open Retailing: Why Openness is Essential for a Successful Self-Service Strategy.

Storevolution[™] and Modularity

As customers constantly evolve, so too must retailers. Continuous change and adaptability should be core elements of your business philosophy, underpinned by a platform and solutions that facilitate both in the most flexible and controlled way. We bring that vision to life through Storevolution; it's our comprehensive approach to future-focused retailing, and it equips retailers to be successful in the Age of the Consumer. Based on a vision in which the consumers and their shopping journeys are at the forefront, Storevolution offers retailers all the necessary tools, data and processes to design, enable and operate relevant consumer and staff journeys on a daily basis.⁶ Modularity necessarily underpins this approach, from a software, services and hardware perspective. It ensures flexibility of design and deployment, offers scalability and upgradability, and drives enhanced customer experiences while lowering overall costs.

Learn more about how your organization can benefit from modularity and our Storevolution approach to retailing at DieboldNixdorf.com/Storevolution.



⁶Storevolution. Retail in the Age of the Consumer (2020)



