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# Embracing software for retail survival

## How to build a future-ready business with the latest software


The ebook was published by InternetRetailing in association with CloudBees

# Editorial introduction

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**EDITOR**

## CONTENTS



We've seen seismic shifts in the way consumers shop over the last year. From this wave of change, obvious winners and losers have emerged. Pureplays, online retailers, and stores with an e-commerce strategy already in place had a huge competitive advantage. Other sellers did not manage to ride the wave of change and found themselves drowning under the pressures of setting up a webstore. Even those with an online presence struggled – many quickly realizing a subpar customer experience would not suffice. So what's the secret to this balancing act? A well-calculated strategy, yes. But perhaps more importantly, having the malleability to survive unexpected change. Software and software development are the unseen capabilities that can give a retailer flexibility as well as strength. It allows retailers to take the reins in today's technocentric retail landscape and make changes in sync with the customers' desires. This ebook produced by InternetRetailing in conjunction with CloudBees explains why new methods of software delivery are essential in supporting retailers through the post-pandemic period and beyond. It closely examines how software impacts e-commerce and multichannel, as well as the benefits and drawbacks of different release strategies. Finally, we look at industry leaders who are already experimenting with new digital technologies and creating unique customer experiences. And more importantly, how your business can do the same. ■

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What a time to be in retail! As we often say at CloudBees, "software is eating the world." We don't have to tell you that COVID-19 has rapidly expedited what was already a rapid digital transformation at most retailers. In the course of a few months, consumer behavior completely changed, and retailers that were able to adjust prospered, while many others were left in the dust.

A core theme of retailers leading the pack was the ability for those able to rapidly change course to meet customers' needs. More often than not, software was at the core of that agility. But what separates a good retailer's software practices from a bad one? It's much more than a seamless website experience or state-of-the-art logistics. It's about how efficiently software can be developed, delivered, and constantly evolved to meet the changing needs of customers, both online and in stores.

Are most retailers equipped to meet the needs of this changing landscape? I would argue the majority are not. The evolution of software development from waterfall to agile to DevOps has helped companies get software out faster, but is it really better? And how do they know?

In recent years, the most forward-looking companies have shifted to a new model of software delivery called progressive delivery. Rather than focusing on one version of software delivered to all customers at once, they've been able to decouple the act of deploying software with the decision of when and who to release the version to. This has opened a whole new world of experimentation and constant improvement of software with feedback from real customers in real environments.

In this eBook, CloudBees will cover how progressive delivery techniques, tied together with the rest of software development practices in digital transformation, can give retailers a permanent technological foundation to stay ahead of any future technological trends! ■

# Why software is imperative to retail survival

Software is no longer a nice thing to have, but a compulsory component of retail survival. Once an industry that prized property fittings, location, and staff as competitive differentiators, retail has undergone drastic digital transformation.

One catalyst is, of course, Covid-19, which led to the temporary death of the high street and saw over two billion people purchase goods online globally in 2020[1]. Changing customer expectations also means that there is more emphasis on not just the product, but the whole journey as a personalized experience. On top of this, retailers need to take online competitors into consideration to ensure they are matching, if not, surpassing their offerings.

As a result, we now see that the competitive front in retail is the use, adoption, management, and exploitation of software – the apotheosis of 'digital business'. In fact, McKinsey noted last year that software is a primary factor in retail growth, with up to a third of retail jobs forecasted to be replaced by technology by 2030[2]. Leaders in the sector are already taking software development in-house to create more memorable customer experiences. Even then, they are still tasked with maintaining, developing, and integrating their core platforms. The time and funding required to hire and maintain an internal software team is also a potential drawback – especially for smaller sellers.

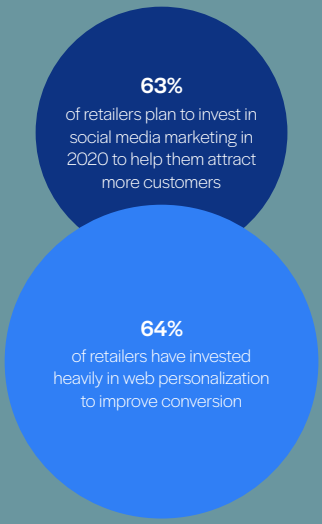
The solution? Retailers need to become creator-developers of code, rather than simply users of the software. And we're seeing this more frequently as a result of headless commerce – where smaller, open systems can be integrated quickly and there is increased openness of systems to end-user software add-ons. Against this background, and the desire to differentiate themselves to meet the expectations of consumers, more retailers are moving towards software development capabilities.

After all, agile software enables agile business which – as the coronavirus crisis illustrated – is mandatory for retaining customers within the hypercompetitive landscape of e-commerce. Investments in infrastructure are also closely linked to software; from AI-powered warehouse robots to data-enabled route optimization for sustainable delivery – so understanding, prototyping, releasing, and managing software is more important for key players than at any time since the web revolution of the noughties. ■

1. https://www.statista.com/topics/871/online-shopping/
2. https://www.mckinsey.com/~/media/mckinsey/industries/retail/our%20insights/rebooting%20retail%20how%20technology%20will%20shape%20the%20future%20of%20retail/rebooting-retail-how-technology-will-shape-the-future-of-retail.pdf

# 5 benefits of software for e-commerce

Internal software development capabilities offer major benefits that outweigh the investment and help optimize the online customer shopping experience. When done right, embracing software allows retailers to:




**REAL-WORLD TRENDS**

A recent study by Brightpearl[1] reveals that web personalization (64%) is one of the most popular areas for software investment amongst online businesses in 2021. This is closely followed by social media marketing (63%) and an expansion of payment options (62%) for customers shopping online.

1 https://www.brightpearl.com/retail-tech-stack

**1. FORECAST DEMAND**

Planning and prediction software helps retailers prepare for high demand periods (i.e. increase stock in advance), adapt marketing strategy for low periods, and uncover consumer trends.

**2. UNDERSTAND CUSTOMER NEEDS**

The software also assists retailers in catering to their consumers' needs through data collection and analysis. This will help the business understand which products to offer, at what time, and to which customers. For instance, if you know your UK customers don't view same-day delivery as an essential offering, why would you put pressure on that area of the supply chain? With the right software, you can rule out issues like these.

**3. CREATE CUSTOM SHOPPING EXPERIENCES**

It is now easier than ever for retailers to personalize the customer journey online. Customized features can be released to a specific group of e-shoppers, based for example, on their language preference, without impacting other app users/web visitors.

**4. SCHEDULE MARKETING RELEASES**

New functionality can be introduced to correspond to promotion weeks and high traffic periods (e.g. Black Friday or Christmas). Sellers can also align with marketing events, such as commercial TV advertising.

**5. CUT DOWN ON COSTS**

Based on data analytics, merchants can gather point-of-sale data to make revenue-building decisions and ensure that they don't spend money on areas that aren't driving sales. ■

# 3 benefits of software for in-store

Considering that by 2023 e-commerce is expected to make up only 21% of all retail sales and a mere 5% of grocery sales[1] – it is imperative that retailers continue to invest equally in both the online and offline experience. Looking to China for future trends, we see that digitally-driven in-store experiences are likely to become standardized across bricks-and-mortars over the coming years. Burberry in Shenzhen, for example, recently rolled out "luxury's first social retail store" complete with interactive displays, QR code links, and product monograms[2]. As digital and physical customer experiences merge closer together, the importance of software for retail will only increase. Until then, retailers must embrace software today in order to be prepared for the customer expectations of tomorrow.

Benefits of software integration in-store include:

**AFFORDED TIME**

Automation and analytics processes can be carried out behind the scenes by software. In-store staff are then afforded back time to focus on more valuable tasks such as interacting with customers, answering questions, and building positive face-to-face rapport.

**NEW CUSTOMER INSIGHTS**

The consistent analysis and integration of new data are also integral to understanding customers in more detail; from best-selling products to preferred payment methods. With this insight, merchants can make informed decisions about which areas to invest in and vice versa.

**BETTER CONVERSION**

Once consumer behaviors are identified and understood, retailers have the bandwidth to create new customer experiences which are highly personalized and more likely to lead to conversion. According to a study by McKensey[3], those who manage to introduce this successfully could see their store revenue increase by circa 20-30%. ■

1 https://www.mckinsey.com/~/media/McKinsey/Industries/Retail/Our%20Insights/Future%20of%20retail%20operations%20Winning%20in%20a%20digital%20era/McK_Retail-Ops-2020_FullIssue-RGB-hyperlinks-011620.pdf

2 https://www.burberryplc.com/en/company/social-retail.html

3 https://www.mckinsey.com/~/media/mckinsey/industries/retail/our%20insights/rebooting%20retail%20how%20technology%20will%20shape%20the%20future%20of%20retail/rebooting-retail-how-technology-will-shape-the-future-of-retail.pdf

# Traditional software delivery explained

Traditional software delivery for most companies today involves what is commonly referred to as the software development lifecycle[1] or SDLC. This process involves stages like planning, designing, building, testing, releasing, and monitoring new features. It tends to be a linear, albeit continuous process of iterating on one version of the software. There are hundreds of companies in the world focused on optimizing various elements of this process for software development teams. But what about optimizing the process itself? Even efficient companies have limitations with the SDLC when it comes to how they can deliver software and to whom at any given time. Typically, one version of the software is going to all users at once in this process and this limits a company's agility when it comes to their ability to send different versions of the software to different users, and experiment with that version of software before all users receive it. And if something is wrong in the release? It tends to be a fire drill, with emergency rollbacks and a noticeable problem viewable from customers. Over time, this can result in lower customer satisfaction and a loss of company's efficiency, but also how it impacts their end customers.

**Big bang**

"Big bang" is often considered the more traditional approach and refers to the release of multiple updates that occur all at once. Although this strategy gives companies the advantage of reducing the implementation timeframe, it can also be detrimental to retailers due to a number of risk factors. ■

**KEY RISK FACTORS:**

**Bugs**

When deploying the "big bang" approach there is always a high likelihood of post-live bugs. And with everything being integrated simultaneously, it can be challenging to locate the root cause of the failure.

**Time-consuming**

Once the defect is located, it can take a long time to fix. Meanwhile, the user experience is compromised for everyone involved, putting the retailer's reputation at stake.

**Loss of customers**

If the update misperforms or isn't received well by end-users then they may look elsewhere to continue their e-commerce love affair.

**Painful rollback release**

Having to roll back a release due to either negative feedback from users or the interference of troublesome bugs is an arduous process. Not only does this reflect badly on developers; but also threatens customer loyalty.

1 https://www.techopedia.com/definition/22193/software-development-life-cycle-sdlc

# Progressive delivery

Progressive delivery is the iterative approach to software delivery where the release can be gradually pushed out to customers for review, which allows companies to analyze how it's received and reduce risk if it isn't well received. It allows for safe experimentation of new features with real users, customized experiences for subsets of users, and overall reduced risk in the delivery process as there is no longer one "big bang" release of all users receiving the version at once. Progressive delivery is typically achieved using feature flags, which are at the most basic description "if/then" statements in code that allow features to be turned on or off for users while the application is running. The business benefits of progressive delivery are many:

**Allows for authentic customer feedback**
Feature flags push new features out to everyone but are only turned on for a small subset of the users. This acts as a form of closed-loop marketing for the company and gives them the security to experiment with new features. Retailers can also gain real-time feedback from customers and find out if the new features have improved the checkout journey (for instance) or made it more complicated and so on.

**Memorable personalized shopping experiences**
The "progressive" part of delivery comes from the fact that the business can now choose to slowly and continuously release features first to internal users in production and then to real users based on any criteria that exist for them in their database, such as language, location, or designated preferences.

**Increased flexibility**
Feature flags give retailers the power to turn on or off certain features in production. You can use it to test new features with different sets of customers, roll out new features without breaking the entire system, or if a feature has unwanted adverse effects – it can be instantly disabled in run-time with a feature flag "kill-switch".

**Online and in-store monitoring**
Progressive delivery is also ideal for omnichannel retailers, as the gradual testing of new features can be used to monitor performance and interaction with real customers online, as well as customers at the checkout in-store. We will most likely see this concept grow in importance as artificial intelligence (AI) and augmented reality (AR) grow to become part of the everyday shopping experience.

**Faster online/digital in-store pricing updates with minimal overhead**
These changes can be made instantly by changing a flag value (find out more **here**)

**Speed & efficiency**
Retailers can get higher quality features out to their end-users faster.

**Better tracking of engineering impact on business objectives**
Allows for greater collaboration and analytics across engineering, product teams, and end customers. ■

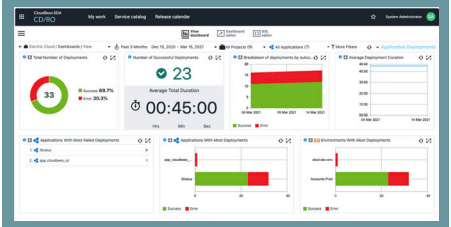
For further information visit the **Cloudbees** website where you can try CloudBees Feature Management for free.

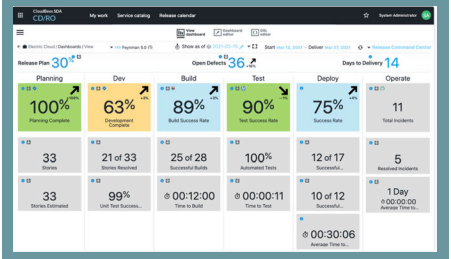
# Next steps...

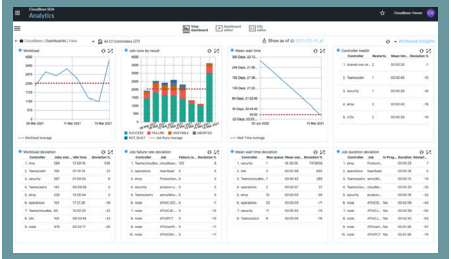
Software investment is forecast to boost the retail sector by £21bn by 2040[1] – and those already digitizing their businesses are clearly enjoying the rewards – so why haven't we seen all retailers jumping on the technology bandwagon? According to a survey by Forrester[2], one of the primary reasons for businesses not investing in third-party software is down to a lack of technical skills (22%). However, with the right software delivery partner, retailers can become sophisticated and demanding commercial users of the software, without winding up as software development houses themselves. Leading retailers such as **M&S**, **Lush**, and **Amazon** are already experimenting with new digital technologies in-store and seeing the benefits of increased convenience for shoppers, more unique customer experiences, and safer checkout journeys. And there is now the opportunity for all retailers, regardless of size, to catch up quickly with key players in the industry and yield the game-changing advantages of software.

Those who do will have the resources to maintain agility and flexibility as life changes, all without needing an internal DevOps team. Find a software delivery team that can provide the advantages of software in an accessible, managed service so you can focus on customizing your offerings, increasing integration, and optimizing performance. ■

1 https://www.virginmediabusiness.co.uk/revolutionise-the-everyday/retail/
2 https://reprints2.forrester.com/#/assets/2/1392/RES148195/report




CloudBees has an integrated feature management solution with the rest of CloudBees Software Delivery Platform. This allows for greater collaboration and analytics across engineering, product teams, and end customers. For faster delivery of value to customers and better tracking of engineering impact on business objectives.

# In summary

Covid-19 has been an unexpected catalyst for accelerated change in retail and sellers who attuned to new customer demands the fastest were the ones that came out on top. Retailers have seen first-hand why agility is a necessity for success and learned that they should be equipped to tackle anything from peak season, all the way through to unanticipated global crises. Embracing developed software is an excellent way to ensure flexibility within your business, while also driving down costs and increasing customer satisfaction. As this publication has demonstrated, progressive delivery is the most effective release strategy for e-commerce and multichannel retailers to deploy if they want to keep up with the ever-evolving changes in consumer behavior. Feature flags, in particular, provide retailers with a safety net in which they can experiment with personalization features, app design, and everything in between, with little to no risk involved. And the rewards retailers will reap from this solution will only increase over time as in-store technology begins to play a larger role in the customer experience. ■

Image: shutterstock.com/metamorworks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