



# reimagining retail.



upgrading in-store Point of  
Sale systems with MACH.

By Chris Griffiths,  
Managing Partner for Customer Experience  
at REPL, Part of Accenture.

# retailers: solve your POS system migration challenge with MACH.

intro

Embracing a MACH – Microservices-based, API-first, Cloud Native SaaS, and Headless – approach has the potential to revolutionise retail and accelerate digital programmes

Traditionally, the point-of-sale (POS) system has not been the most thrilling and fast-changing customer touch point. But the combination of changing customer expectations, the evolution of in-store digital technology, and the convergence of consumer-facing channels means that retailers that want to provide a differentiated store experience can no longer afford to ignore the importance of having a capable and flexible POS platform.

In general, retailers tend to delay replacing or upgrading their POS systems until the last possible moment, because as IT professionals know it is most likely to be complex, time-consuming and expensive. And also risky – you might end up where you started: with a monolithic system that is hard to evolve.

Additionally, those in charge of budget purse strings will ask: what's the return on investment? That can be a difficult conversation. Most of the time, investment in core in-store systems is driven by critical-asset integrity or compliance challenges.

The counter-argument is simple: if your POS is neither good enough nor compliant there will be no ROI on anything; without keeping pace with demands, you will struggle to trade, and stores will close, ultimately – just ask former Toys“R”Us executives.

And given the gallop of digital-powered change in 2020, the move to a cashless society, and the mass pivot to eCommerce – with progress supercharged by the coronavirus pandemic – improving the customer experience is essential for retailers to survive now and thrive in the coming years.

While in the past it has often been the stick – and threat of operational or compliance issues – that eventually triggers action and investment in an upgraded POS system, the advanced tech accessible today means there is a juicy carrot to consider, too.

## MACH: new approach and mindset needed.

It is inevitable that, sooner or later, your POS system will need to be modernised. At REPL, we understand that migration challenge. But with a proactive mindset and more of a progressive attitude to new ways of thinking, tech can provide a neat solution, and more.

Some vendors might have you believe that a full POS replacement programme is a mandatory step in your digital transformation journey. It is far from the only route to omnichannel capability, though.

Indeed, as **The Forrester Wave: B2C Commerce Suites, Q2 2020** report, states: “As monolithic technology becomes outdated and less appealing to merchants, the providers that lead the pack will demonstrate deep integrations with both owned and competitive solutions, as well as business user tooling that unifies controls across those solutions and streamlines workflows.”

By adopting a “MACH” – an acronym for Microservices-based, API-first, Cloud Native SaaS, and Headless – approach there could be a way to accelerate your digital programme while simultaneously reducing reliance on POS, and liberating budget for critical omnichannel strategies.

Granted, many retailers cannot avoid the requirement to “rip and replace” their POS system. And this is still very much a viable strategy. However, the introduction of MACH technology could enable a new approach for deconstructing your legacy in-store POS.

MACH technology can solve the POS challenges many retailers face by building a common set of backend services across all channels. More than that, it opens up new strategies for decomposing unwieldy and complex in-store systems. Adopting this approach enables you to start thinking of your POS as a system of innovation and differentiation, rather than the traditional view that POS should just be stable and never change.

And as **Gartner’s paper on composable commerce**, published in June, points out: “Application leaders responsible for digital commerce should prepare for a ‘composable’ approach using packaged business capabilities to move toward [and] future proof digital commerce experiences.”

[Click to Explore The Forrester Wave: B2C Commerce Suites, Q2 2020 Report](#)

[Click to Explore Gartner’s Paper on Composable Commerce](#)

## different thinking: embracing MACH to build for the future.

With retailers seeking a firm footing on a rapidly shifting landscape, where the sales value from traditional in-store check-out is constantly compared to other channels, it makes little sense to build all the business logic for customer engagement into a POS system.

To achieve the optimal capability, and bearing in mind the direction of digitally powered travel in the retail sector, where greater agility will be needed to provide a better customer experience, a conventional and different methodology for understanding the current POS setup is required.

Domain-led design can be used to assess the current POS. And, depending on circumstances, MACH technology opens up new strategies for decomposing your in-store systems in a way that should be considered by retailers.

It is vital to point out that this is a nascent technology, and there is no “one-size-fits-all” solution. The MACH approach and strategy has to be tailored for each retailer to maximise both efficiency and long-term efficacy. Further, a retailer’s roadmap will be dictated by how critical their store system replacement needs are, and also the maturity of their existing omnichannel technology – for example, the tech the organisation uses to run its eCommerce channel.

What is clear, though, is that agility is crucial for businesses to triumph in these uncertain times. It might not be the most exciting element of an organisation, but the backend is the engine room. Many leading retailers REPL is talking to realise they need to have an IT system – and POS – that can bend and evolve with their customers’ transforming needs and increasing demands.

The good news is that the traditional rip-and-replace approach to POS can be decomposed in a different way. By embracing MACH technology, and adopting a progressive mindset, it doesn’t have to be the complete, costly and complicated IT programme that you might expect. And, on the flipside, MACH can increase a retailer’s flexibility to accommodate consumer expectations while saving time and money in the short and long term for the business. Grasp this unique opportunity to solve your migration challenge: explore the possibilities with MACH technology today, for tomorrow.



# assessing the benefits and challenges of adopting a MACH approach.



## benefits.



A competitive advantage can be gained by retailers who use “MACH” – an acronym for Microservices-based, API-first, Cloud Native SaaS, and Headless – technology to update and upgrade their organisation’s POS system.



It has the potential to **accelerate a digital programme**: by enabling digital transformation that doesn’t solely rely on POS replacement. While simultaneously **reducing the reliance on POS**, MACH can **free up budget for critical omnichannel strategies**. Therefore, quick wins are attainable – and it makes the conversation about return on investment easier to navigate.



A stronger business case can be made because **a rip-and-replace approach to POS can be avoided**, saving time and money. With MACH technology it doesn’t have to be the complete, costly and complicated IT programme you might expect.



As such, it **releases the stranglehold POS vendors have** on the organisation and retail industry. More importantly, and with an eye on the future, it **allows retailers to move to a more agile deployment model**.



It is important to stress, however, that there is no one-size-fits-all solution – though looked at another way, this **creates greater customisable capabilities**. And it is more **straightforward to add or remove elements**, to evolve with customer and market demands. Finally, **MACH can complement an existing POS platform** – therefore reducing the need to over-develop the existing system – and help deploy flexible, purpose-built apps within the store, or for customers to use on their devices.

## ! challenges.



**MACH technology is not for everyone.** (Although, depending on the solution and priorities of the retailer they might wish to cherry-pick specific elements of MACH – for example, Headless POS might not be suitable, but a microservices- or API-driven approach could be.) Retailers lumbered with a complex legacy POS system may have to build from the ground up. Urgent business and IT drivers could necessitate a full POS replacement and the strategy of gradual reduction may not be suitable to all retailers. For many the rip-and-replace strategy will still win the day.



The operational complexity of the store will mean that **POS can never be completely irrelevant.** There are **unique processes and requirements that need to be managed**, in line with regulations, including cash handling and management, customer-present transactions, and then peripheral elements – for example physically scanning a cash drawer and connecting with PIN Entry Devices (PEDs).



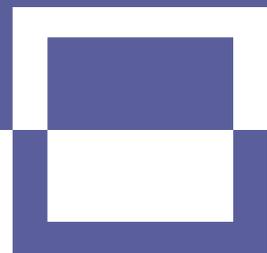
Indeed, **POS complexity is driven by customer presence**, meaning MACH technology, which is still developing, might not be up to the task at the moment. For instance, CCTV integration is crucial for in-store reporting, stock management, and loss prevention.



Arguably the biggest challenge to using MACH technology is that it **doesn't offer offline capability**, for when connection goes down. Retailers that use MACH will have to have a contingency plan in place for such occasions.

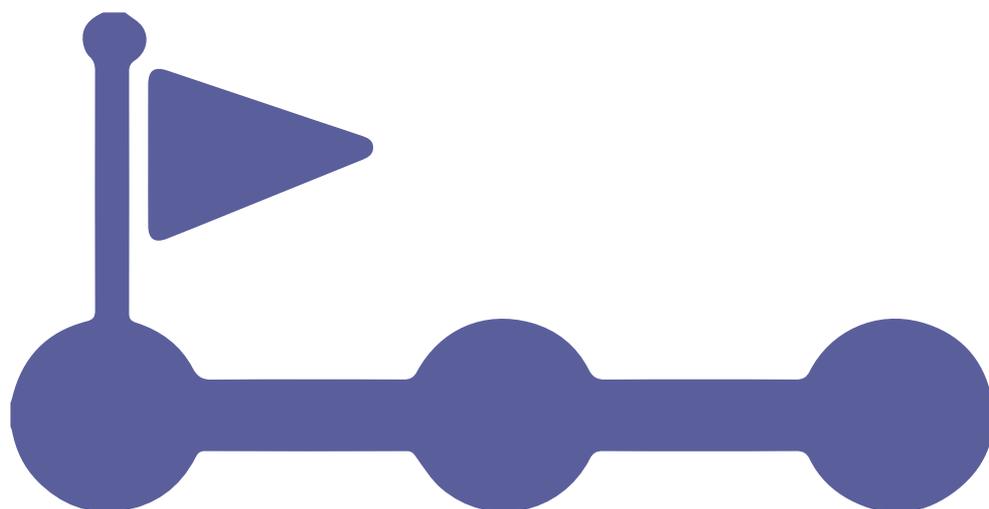


# steps to POS migration success with MACH technology.



With MACH technology and point-of-sale system migration, there is no one-size-fits-all. To take advantage of this nascent technology, retailers must plot a roadmap to suit them and their needs. Their MACH journey will be directed by how critical their store system replacement needs are, and also the maturity of their existing omnichannel technology. With that in mind, here are four steps showing what could be possible with a MACH approach and strategy.

**Please note that the steps and their ordering will be different depending on what the retailer is trying to achieve. This offers a hypothetical scenario to help illustrate the potential of MACH.**



## steps to POS migration success with MACH technology.



Step one is **build all the services you need to support the common customer journeys**. If your retail organisation, for example, wanted to drive improved in-store customer experience with closer omnichannel integration, you might use MACH technology to build layers to your POS that would create smoother and closer integration with the eCommerce channel e.g. shared basket. Essentially it would utilise an API-first strategy to expose data and focus on Cloud Native SaaS solutions while allowing the user experience experts to build out the frontend user interface.



Next the business would **prove the strategy**: build a proof of concept that uses the new services and delivers a high-priority business requirement with a complex customer journey. Show that the MACH solution can deliver value. And rather than invest in a costly multi-year IT programme that returns little business value, MACH technology enables you to test and learn at a significantly cheaper price.



Step three, in this hypothetical journey, would be **migrating the POS system to incorporate the new systems** – but only if it makes sense, bearing in mind there will be duplicate business logic until you do so. If you can use the services for eCommerce – perhaps for self-scanning – then you might start thinking about decommissioning the traditional “fat-client” POS. The reality is POS will always be around in some way, shape or form – but what could be decommissioned is the version with its heavy processing, data and software all loaded on the POS client. With MACH, this could be **replaced with a lightweight POS drawing data and business logic from cloud**.



Over time the retailer’s IT department will **further reduce old features and functions in the POS system**, upgrading them with MACH technology solutions. Eventually the POS will be replaced completely – or at least have a significantly reduced POS. Instead the newly built out solutions would be embedded in the core store system, and could be dialled up or down depending on customer demands and business drivers.

As such, there is a phasing of possible development with MACH and decommissioning of POS elements. Compare the result with a traditional “rip-and-replace” IT programme that might take years to implement – meaning you run the risk of the technology not being the newest and most suitable being available – and at great cost. This tailored strategy fosters greater agility, which is the watchword for retailers in the digital age. Whatever route you decide to take, REPL can help you at every step.

# adopting MACH technology: a case study.



Because embracing MACH technology to migrate point-of-sales systems is a new concept, publicly available case studies are currently few and far between – though that will change, and soon. Rest assured, REPL is working with a number of leading retailers who recognise its great potential to deliver value, and provide both agility and therefore a competitive advantage.

There is one public case study for your consideration, however. It comes via commercetools, a software company whose MACH architecture demonstrates many of the principles outlined in this ebook.

The organisation was named a “strong performer” in **The Forrester Wave: B2B Commerce Suites Q2 2020** report, in part because of its work with GrandVision. Forrester labels commercetools as “new-school commerce tech [for the] digitally mature”, arguing that the organisation’s offering of developer-friendly APIs backed by cloud-native microservices in a multi-tenant architecture “gives it the distinct advantage of being version-less and highly elastic at unprecedented cost efficiency”.

GrandVision, a global leader in optical retailing – with over 7,000 bricks-and-mortar stores and more than 30 brands including Vision Express, Pearle, and Eye Wish, among others – helps millions of customers see with greater clarity, and engaged with commercetools to provide a clear way ahead in the digital era.

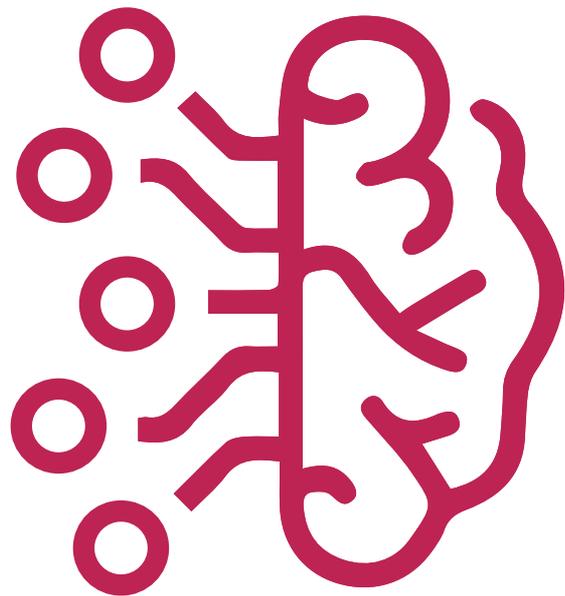
GrandVision’s customer-journey data identified consumer pain points and unmet needs – and one area in particular stood out: the need for a front-end customer experience layer decoupled from the business logic layer. It was determined that this capability would empower the dozens of brands to have freedom to build their own identities while keeping the back-end consistent for easy maintenance and scaling.

[Click to Explore The Forrester Wave: B2B Commerce Suites Q2 2020 Report](#)

## adopting MACH technology: a case study.

GrandVision chose a combination of the BloomReach Digital Experience Platform (DXP) and the commercetools “Headless commerce” platform as the core engine of their digital channels. Dirk Hoerig, Chief Executive of commercetools, says: “GrandVision represents the type of innovative retailer that will thrive globally by meshing online and offline customer journey including future channels such as virtual assistants or social selling. We are thrilled to help this dynamic company to handle its transactions ... with just one commerce platform.”

Kunal Mukherjee-Chakraborty, Group VP and Chief Digital Officer at GrandVision, adds: “The API-first nature of commercetools’ eCommerce microservices platform is helping GrandVision to build a best-in-class, modular, cloud-native global omnichannel commerce proposition that can be scaled to 30 retail banners and 44 countries over the coming years.”



# retail trends - statistics that indicate the direction of travel.



of total retail sales in the UK internet sales accounted for in May

Office of National Statistics



forecast decline in cash usage in the UK in 2020 compared to last year – 10 per cent higher than the rest of Europe's drop, which is currently forecast at 30 per cent year on year.

Accenture



year-on-year rise in online non-food sales in the UK in the three months to August.

KPMG



of consumers in the United Kingdom who did more shopping online relative to pre-lockdown levels – half maintained these behaviours post-lockdown.

Deloitte



79% – number of global retailers planning to use social media, digital marketing (also 79%), and smartphone apps (68%) to enhance the customer experience.

Fujitsu

# REPL is here to assist you

at REPL we can help you understand if a MACH-based approach is the right solution to drive value and meet your customer experience needs and also support through all stages of your journey to delivering your next-gen POS platform.



Part of **Accenture**

REPL Group, Part of Accenture, is a world-leading consultancy and technology group specialising in workforce management, supply chain, customer experience and enterprise systems. Since 2007, the highly specialised retail technology team has developed intimate partnerships with businesses to deliver long-lasting value. Hundreds of businesses around the world rely on REPL to solve critical enterprise problems. Driven by doing the right thing for its customers, team, and the world at large, REPL has enjoyed year-on-year growth and international acclaim. As part of Accenture, REPL Group helps clients reimagine their supply chain, people and store technologies to become more efficient and meet new customer needs.



[info@replgroup.com](mailto:info@replgroup.com)



+44 (0)808 200 7375



[replgroup.com](http://replgroup.com)