enactor

Unified Commerce with Headless Commerce

What is headless commerce?

Are you hearing about Headless Commerce everywhere you go? If you're not, chances are you will be soon. It's the latest "buzz phrase" that moves on from Omni Channel and Unified Commerce, focusing on improving the functionality and flexibility of front end channels.

Headless Commerce is a term used to describe when the front-end presentation layer is separate from the back-end e-commerce solution, and other internal applications that deliver functionality.

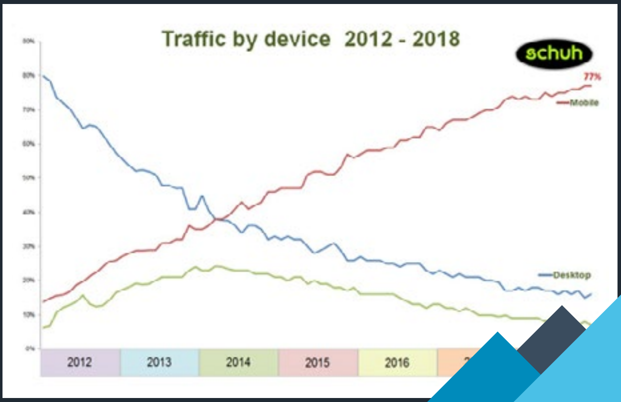
A crucial aspect of a retailers unified commerce strategy, headless commerce gives retailers the ability to provide a seamless experience to consumers, regardless of which device they are using, or where they are when accessing the commerce experience.

According to Digital Commerce 360, e-commerce accounted for almost 16% of all retail sales in 2019, and Amazon accounts for 40% of this total. The 14.3% represents over half of the growth in retail sales, which illustrates how crucial the online experience is in order to retain the spend of the consumer.

While the percentage of online spending seems small, what is clear is that online visits are heavily influencing offline spending. 55% of shoppers say they spend more time browsing online than in store, and 81% do so before committing to an in-store purchase.

Amazon is constantly proving that their approach works for commoditised retail purchases and other retailers have an opportunity to use headless commerce for more personalised & tailored experiences in areas such as fashion, homewares and department stores.

Mobile is another factor driving headless commerce, retailers such as Schuh for example have seen the use of mobile devices increase six-fold, Stuart MacMillan, Head of e-commerce at Schuh revealed that in the six year period from 2012 to 2018, mobile usage on their site went from 13% to 77%. During the same period, desktop usage plummeted from 80% to 20%.



So you are a player in Headless Commerce?

A retailer who is driven by any of the below growth strategies should be evaluating headless commerce as a route to delivering the strategy both in the short and long term:

- A desire to support any device and movement between devices in a single transaction or customer journey
- To more seamlessly manage international commerce across multiple sites and/or physical sites in multiple countries
- To enable improved customer experiences and journeys

Why is it so effective?

The effect of essentially "decoupling" the front-end experience from back-end functionality means that the consumer experience is not restricted by back end systems and the information they are able to provide.

Multiple back-end systems can be connected through this independent front-end in order to provide the information in the right place at the right time on the right device.
In this scenario, modern systems such as e-commerce, along with modules such as fraud management, PCI compliance, fiscalisation and inventory management can connect through to the infrastructure applications such as ERP, OMS and POS.

The attraction for this lies in the capabilities it can unlock such as:

- Providing mobile commerce in store across multiple disciplines such as retail space, café/ restaurant and bespoke ordering in home furnishings
- Creating a "follow me" experience across devices an channels, for example creating wish lists on one device and converting to order in store
- Enabling and tracking direct purchase from social media
- Loyalty and rewards across all channels and devices
- Highly complex promotions management at scale

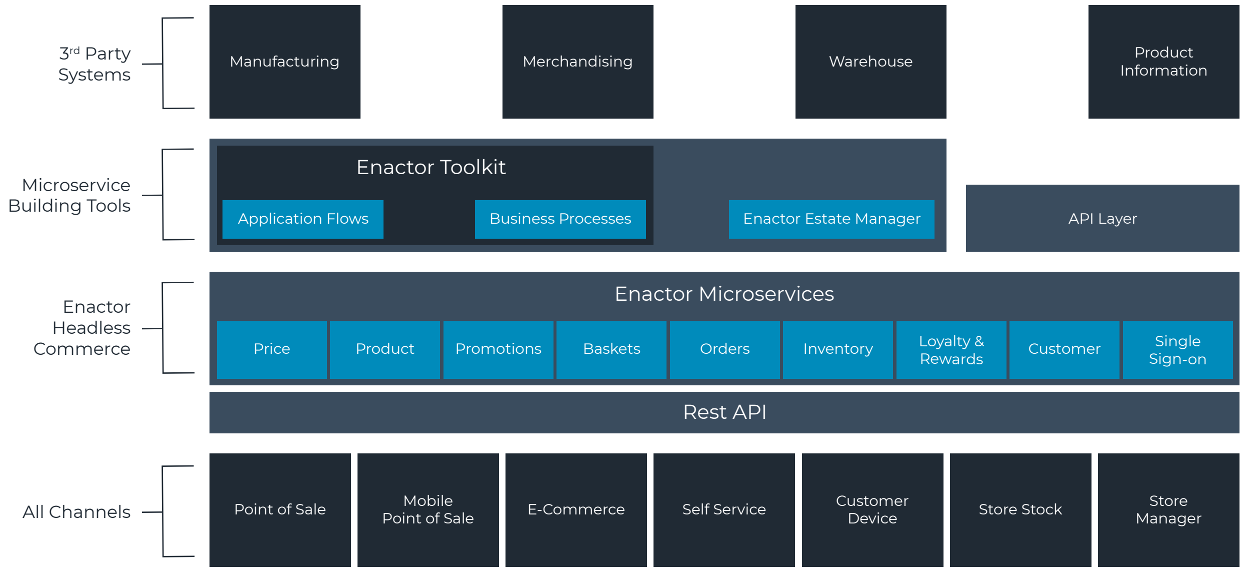
Why is it different to pure API e-commerce?

As retail moved from monolithic infrastructure-enabled commerce into e-commerce, APIs emerged as the best practice for connecting and sharing information between multiple systems.

Experience led commerce however demands more flexibility and leverages front-end systems such as CMS for example, to provide unparalleled consumer journeys. This requires a more nimble architecture that can change quickly, and as a result technology is moving on from a pure API layer to adding micro services as a way of building experiences that aren't reliant on re-defining thousands of lines of code.

Micro services are re-usable and easily swapped out to facilitate new or improved experiences, are faster to change and less hard wired than APIs.

The API layer still exists, but micro services sit above this to facilitate experiences that use the APIs as tunnels to the right information. What's really powerful and flexible is when microservices themselves are built by connecting smaller microservices, leading to incredible business agility that is not reliant on thousands of lines of fixed code.



What's also changed in recent years is the technology around the actual APIs. RESTful APIs focus on how to expose the microservices to maximise their functionality, making it easier by defining named resources that can be manipulated using a small number of methods.

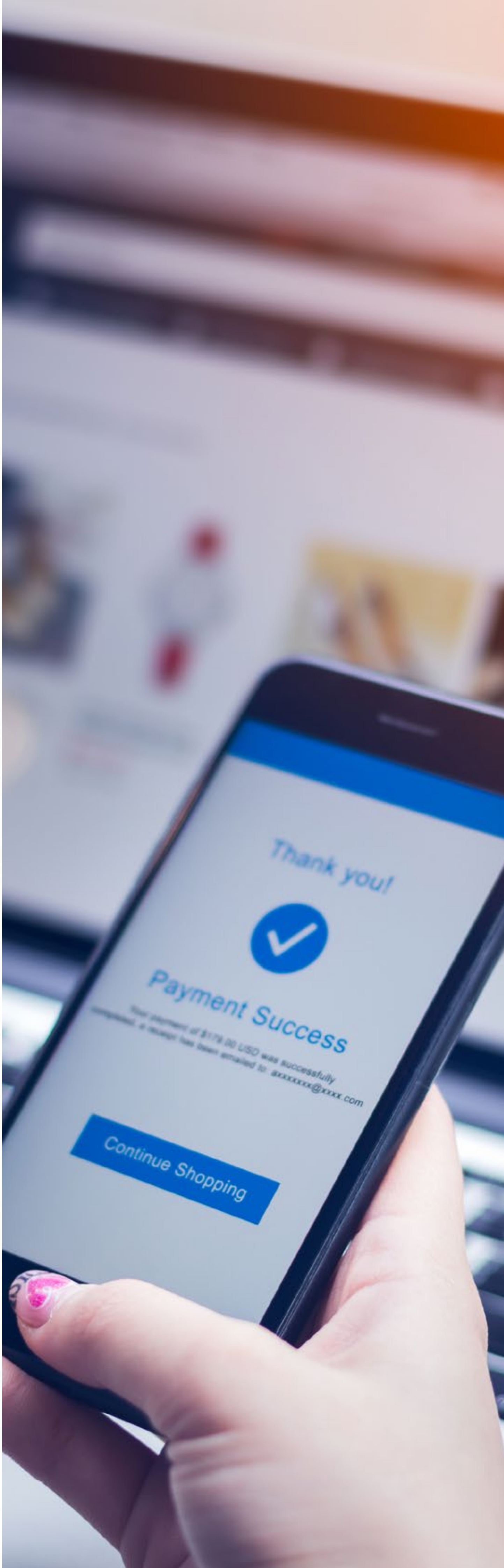
The challenge is that many vendors are jumping on the Headless Commerce bandwagon but don't have the underlying technology to properly support the advantages it can offer.

As you can see from the previous diagram, the true flexibility comes from having cascading microservices that create building blocks that connect up business processes in the most flexible way possible in order to enable rapid change when needed.

In reality, what we've typically seen is a collection of databases wrapped up in standard code with a data structure and API, which cannot deliver the same flexibility as a cascaded microservice structure (shown in the diagram).

The impact of the above is very little true functionality at the front end, hard coding still makes calls to back end systems, and requires coding knowledge and understanding to enable business process. The microservices themselves are also hard coded, as opposed to being made up of smaller microservices, which again limits the functionality and their ability to be change quickly.

The ideal solution is to have tiered microservices combined with a set of tools that allow even business users to drag and drop elements to form new processes on demand.



Why is it different to pure API e-commerce?

The flexibility that comes from deploying headless commerce shifts the focus from selling to buying, supporting how the customer wants to buy as a priority over and above how IT infrastructure allows the retailer to sell.

For example:

- Marketing led customer initiatives can be quickly implemented by developing new micro services and without impacting back end processes
- Personalisation based on multiple factors (purchase history, loyalty accrual, abandoned baskets promotions etc) can be easily facilitated
- Increased conversion rates and reduced customer acquisition costs
- Faster implementation of omni channel market development plans

According to Baymard Institute's cart abandonment statistics[1], the top reasons for cart abandonment are closely linked to the user experience, such as long page load times, having to create an account and too complicated a checkout process.

Headless commerce leads to faster page load times as the site doesn't have to deal with data from the presentation layer, and smaller modules of information are passed via APIs and microservices. This also leads to easier personalisation, as each journey through the site can be easily tailored to the consumer's needs using small packets of information without disrupting other core system processes.

As user experiences are monitored, if an online process is creating a "blockage" between browsing and buying, it can be quickly and easily modified without impacting back end processes.

What you need to know when working with headless commerce providers

When working with providers in this space, it's crucial to ask the right questions and dive into the detail around the architecture.

The difference between APIs and a microservices layer
Headless commerce is more than just shifting information around, in order to supply fast, rich experiences for consumers, functionality in this front end layer is also important.

It's not enough to just have APIs that maintain lists of software Entities, which admittedly share many of the same names as microservices which can cause confusion, including lists of products, prices, orders etc. It's crucial to have functionality in the front end, that can do something with the information presented, independent of the back end system.

The functionality at this level is crucial when it comes to large scale, complex retail operations. A good example of business value created with a rich, functional microservices layer is Promotions.

Many promotions engines can't keep up with requirements that change and flex depending on consumer behaviour. When a retailer has thousands of SKUs, and many more thousands of purchase combinations impacted by hundreds of product promotions, a strong configurability around the e-commerce layer is crucial. In practice this could mean that promotions are dynamically managed and assigned to a transaction in the front end, to provide the best possible price for the customer based on all the options available.

When the above is multiplied across thousands of transactions, it becomes clear why the functionality at the front end is more important than just simply "passing" lists of information between the front end and the back end via an API. If the latter were the case, the processing speed would slow to a crawl during business periods such as black Friday.

As explained earlier, the ability to have tiered microservices that can be in turn manipulated by easy to use tools to form new business processes.

Ultimately Headless Commerce offers an extremely flexible way for retailers to manage and optimise customer journeys, providing the ability to respond quickly to consumer and market trends, separating commercial possibility from IT infrastructure. However it's important to understand what a true Headless Commerce structure looks like, and what it doesn't.

Microservices in action:

US Auto Parts Retailer

For one major US retailer, the superior web service calls (microservices) and APIs of Enactor were key to success. One of their key services to customers is intelligently managing promotions ensuring the customer, whether trade or consumer, gets the best possible price. At any one time the retailer is running hundreds of promotions and bundle offers that overlap across hundreds of product lines.

Managing this well is crucial, during a transaction many calls are made to intelligently assess what the best deal is for that purchase, across every single promotion, and whether it's B2B or B2C the customer gets the best price available for that individual transaction.

This rich configuration capability ensures that not only do the processes work faster, but due to the "component" nature of microservices, they can be quickly reconfigured and deployed over the network without the need for API re-configuration or system integration.

Dunelm Case Study

Supporting complex Sales Journeys via e-commerce and Store.

Enactor's Microservices architecture allows us to build complex store device or e-commerce solutions that allow our customers to support a unique relationship with their customers. Often these are the core services and products that built the retailer in the first place.

Dunelm was built on their specialised curtain and blind customisation service and Made to Measure is still at the heart of their business, that has now been built out into a full homewares store including furniture.

Enactor built a made to measure solution for Dunelm, creating a data-driven sales journey for customers on their e-commerce platform, allowing them to build and get delivered the exact curtains and blinds they require, regardless of the complexities around colours, styles, size and materials.

This solution is fully omnichannel and consumers can access the service via the Dunelm website, in-store or on their own mobile device.

The next challenge was to extend this into a far more interactive customer-driven service into their stores. Due to its complexities, homeware retailing requires a consultative relationship with customers to ensure that all their requirements are met in-store, and that there is no unfulfilled demand that "leaks" onto competitive e-commerce sites.

Dunelm used Retail J as their store solution and Enactor, and in partnership with the Dunelm IT team, decided to build a mobile point of service as a priority to support the store teams with improved engagement on the shop floor directly with customers.

Enactor built a mobile sales service integrating point of sales in-store processes with ordering from the web. This allows the store staff to sell from web stock via a user interface that helps customers buy product.

The immediate impact of this solution was significant. The pilot stores recorded significant increases in sales, both in terms of basket size and trapping potentially lost sales through upselling and cross-selling.

This is a prime example of the latest technologies SOA and microservices being used creatively with a key revenue generation touchpoint and this solution has now been rolled out across all stores.

Finally, the replacement of the Retail J point of sale estate was replaced with the Enactor, as was the point of sale in the coffee shops.

With all service points in Dunelm being managed by Enactors Estate manager and serviced via our SOA digital services for, pricing, promotions and rewards, Dunelm can now manage the customer journey and profile across all service points, giving them the capability to tailor their customer engagement.

1. https://www.digitalcommerce360.com/article/us-ecommerce-sales/
2. https://econsultancy.com/stats-show-online-retail-ecommerce-changing/

Thank you for reading
Unified Commerce with Headless Commerce

For more information on our retail solutions please contact us via info@enactor.co.uk or visit enactor.co