



The Path to Headless Commerce (an OMS Perspective)



The world of online retail is abuzz with the concept of headless commerce (or at least that's what headless commerce vendors would lead us to believe). Whether the current hype is justified or somewhat slightly exaggerated, it will likely represent the future of commerce.

Still, it is anyone's guess when that future will arrive.



What Is Headless Commerce?

Headless commerce is basically a separation of the front-end sales channel (the graphical elements of a website/app/kiosk) from the back end (data and workflows).

Traditionally in e-commerce platforms, the front end (for example the digital storefront) was tied to the back end (checkout, merchandising, etc.). If you wanted to change something in the back end, you also had to change the front end. This made development and time-to-market slower.

As consumers have come to expect faster and richer shopping experiences irrespective of the channels, retailers are forced to act. With a headless architecture, you can design the front end as per the customer channel (be it web/mobile/kiosk/social media/AR/VR/metaverse) and develop the back end to your heart's content, without one affecting the other. This provides freedom and flexibility to build out those robust consumer experiences and with a faster time to market. The underlying technology that enables a headless architecture is open APIs (but more on that later).

FRONT-END DESIGN

BACK-END DEVELOPMENT

OPEN APIS



How Headless Commerce Impacts Order Management

Since order management is inextricably tied to omnichannel commerce platforms, order management needs to be able to meet the demands of headless commerce. So how does an order management vendor do this?

To understand how, we first need to look at the two types of order management platforms.

Monolithic Architecture

In the beginning, many applications and platforms started with having monolithic architectures. Monolithic servers represent one single unit with all its functionalities and services tightly knit together. All the developers access the same code base at ease whether they want to change or create a new functionality. With everything in one place, it made it easy to deploy and develop, but at the expense of scalability. Monolithic architectures are well, monoliths, which means you can't take them apart; whenever you want to change something, you must change out the whole deal.

Monolithic servers represent one single unit with all its functionalities and services tightly knit together.

Microservices Architecture

In a microservices-based system, each service is decoupled and disconnected from each other. As a result of this decoupling, microservices are one of the architectural paradigms that can power a headless architecture. Three cheers for microservices!

Not so fast ... with microservices, there are trade-offs: "distribution tax" can be an issue. As all the services are decoupled and need to communicate with each other, it can result in an increase of latency when too many calls are made. To add on, there is development complexity and debugging can be difficult as each service has its own logs, which can be very time consuming and complicated.

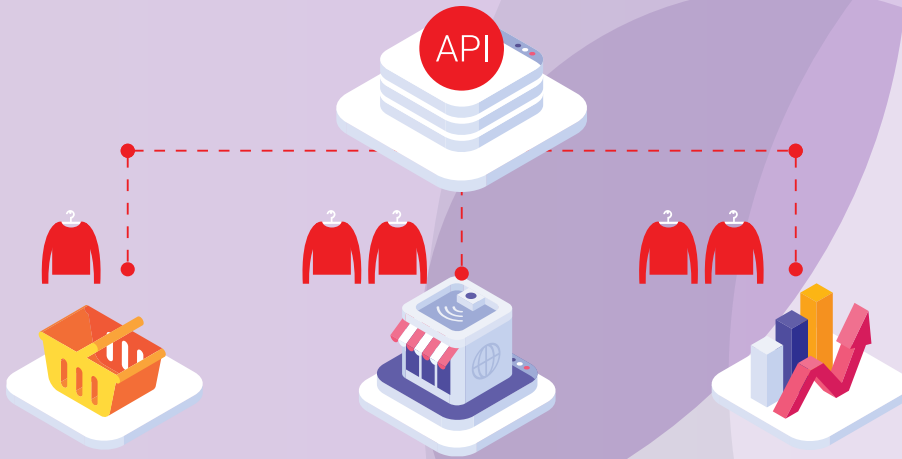
In a microservices-based system, each service is decoupled and disconnected from each other.

Choosing a Path

Ok, so you are probably wondering which order management platform can meet the demands of headless commerce best? The answer to that is ... it depends.

If you're not going to a headless commerce architecture any time soon, you can continue on your path. If you want more flexibility and scalability, there may be light at the end of the monolith tunnel (depending on who your OMS vendor is).

An OMS vendor with a base monolithic system is bound to be constantly innovating, adding features and functionality. Plus, if these new features end up on a microservices-based architecture, then you're essentially looking at a hybrid monolith-microservices system which gets the job done.



Open APIs Are Table Stakes

Irrespective of existing services/features or new innovations (whether microservices or monolith), the path to a seamless headless commerce journey is often traversed with an open API layer. Open APIs are APIs that are publicly available for everyone to use and based on the open API specifications. They provide an interface for businesses that can scale their services quickly, as open APIs are standardized and have the same rules. They are low cost and easy to implement. Additionally, REST APIs make it convenient to access information using its universal commands.

Key Takeaway

In summary, whether or not headless commerce is coming to a retailer near you, the key takeaway is that REST APIs in order management are the future of omnichannel commerce. Whether a system is microservices-based or a hybrid monolith, as long as REST APIs are able to expose the services available, you will be able to meet the future of e-commerce head-on!

Speak to a OMS and retail expert at Tecsys

