



How to Compose Your Commerce in 2023

10 Top Tips and Lessons by Leading Brands

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Executive Summary

The next frontier for digital commerce involves giving the power back to brands and retailers to define their customer experiences. For too long, brands have been limited by legacy commerce platforms offering one-size-fits-all solutions; with customer expectations changing rapidly, eCommerce brands need more flexibility than ever to enable ‘wow’ customer experiences.

In this eBook, commercetools and E2X show you a model that fits your size (and goals) perfectly: composable commerce. Here, we unpack the basics of the next-generation approach with top tips and lessons learned from leading B2C retailers and brands, such as John Lewis & Partners, Trinnity London, LoveCrafts and more, to get you ready for your composable commerce journey.

Composable Commerce: Definition and Evolution

Retailers and brands know that keeping up with constant change is essential, yet adjusting to uncertain customer needs and expectations remains a struggle — even more so in digital commerce.

The underlying issue with managing change in digital commerce stems from off-the-shelf platforms, also known as monoliths, that are rigid and slow to update. This is because a monolith, by definition, is an indivisible block of standardized software that must be retested and redeployed in its entirety every time a change or update is queued.

The evolution of digital commerce, since it was born in the 1990s, has been a race to address the shortcomings of the monolithic approach, namely its lack of flexibility and agility. After decades of incremental improvements, new technologies developed by new industry players paved the way for modern commerce innovations: Headless commerce and APIs (Application Programming Interfaces).

Headless commerce decouples the frontend (presentation layer) from the backend (eCommerce engine). This clear separation enables brands to change and customize the frontend without affecting the backend, and vice versa, while communicating via nimble APIs.

Taking the flexibility from headless and API-first further, composable commerce enables you to choose best-of-breed solutions that best suit your customer experiences. You can expand, contract and/or replace components without dependencies or vendor lock-in. Think of it as

LEGO bricks that provide infinite combinations, offering custom, unique ways to differentiate your business. In a nutshell, composable commerce is:

- **Modular:** Select best-of-breed solutions for unique business needs, assembling a customized technology stack. Plug, scale and swap components at any moment without affecting other applications or your infrastructure.
- **Flexible:** Create, update and customize solutions with your chosen components.
- **Open:** With a modular and flexible architecture, you have the freedom to select vendors that offer the commerce solutions required for your specific business needs, so you can say goodbye to vendor lock-in.
- **Future-proof:** Being able to tailor the tech stack with swappable components means staying ahead of new market opportunities and changing customer needs.

As Gartner¹ states, “Monolithic digital commerce applications cannot support the agility and flexibility needed to support fast-moving digital business. Organizations will need to move toward composable commerce to keep up with the pace of change in customer demand.”

What’s the difference between composable commerce and MACH?

Composable commerce is often used interchangeably with MACH-based architecture, but these concepts aren’t the same thing:

- **Composable commerce** is about building an architecture piece-by-piece, comprising many distinct services and integrated tools to deliver user experiences, such as Search, Catalog, Checkout, etc.
- **MACH-based architecture** is the technical delivery model of those modular components invented by commercetools, and popularized more recently by the MACH Alliance. The technologies that come together to form the MACH foundation — microservices-based, API-first, cloud-native and headless — support a composable enterprise in which every component is pluggable, scalable, replaceable and can be continuously improved through agile development to meet evolving business requirements.

To put it simply, the MACH-based architecture provides the technical backbone with tested-and-tried principles that, together, deliver composable commerce for brands.

¹ Composable Commerce Must Be Adopted for the Future of Applications, Gartner

Advantages of Adopting Composable Commerce

While keeping up with constant change is a key driver for brands adopting composable commerce, it's certainly not the only reason. Ultimately, composable commerce benefits organizations across three core tenets: Customer experiences, internal teams and workflows, and brand differentiation.

Customer experiences (CX): Addressing changing needs and demands

Today's customer experiences come with high expectations: They must be seamlessly omnichannel and personalized. In-store and online buying journeys must be connected and offer consistent brand experiences. Addressing these requirements can only be met with a flexible and agile framework, such as composable commerce, so you can manage and add multiple touchpoints more efficiently, add personalization tools and deliver bespoke content that adapts to customers' behaviors and preferences. In short, connecting in-store and online experiences becomes much easier with composable commerce, as well as integrating new touchpoints from IoT devices to social apps.

Internal teams: Iterate. Experiment. Launch. Repeat

Composability has significant implications for a company's people organization: The traditional business versus technical setup gradually dissipates as multifunctional teams are formed around core services, such as a pricing engine, and own it from design to implementation. The result is that teams can focus on innovation output, reducing time-to-market for new releases. Because composable commerce is versionless, you never struggle with upgrades or maintenance of old versions, eliminating technical debt and, consequently, reducing costs. With modular iterations and best-of-breed, you can add, remove or switch functionalities without vendor lock-in. Replatforming every five years is now a thing of the past!

Brands: Standing out from the crowd

In a world where 86% of buyers² are willing to pay more for a great customer experience, it's clear that brand differentiation relies on CX. Differentiating a brand starts by breaking free from template-like experiences offered by legacy commerce platforms and opting for composable commerce instead. With a best-of-breed approach, you choose what components best fit your brand's requirements, so you can build what's unique to your business, buy the commodity functions to run the commerce backend smoothly, and extend and customize those commodity features with bespoke parameters. Customizing your commerce stack with composability directly impacts how you deliver customer experiences and differentiate your brand — as many times as you need.

² Experience is everything: Here's how to get it right, PriceWaterHouseCoopers

Implementation Options: An Overview

If you're convinced that composable commerce is the right solution for your business, the next question arises: How to move from a monolithic commerce platform to a composable architecture? Here are three options to consider in your replatforming journey:

Beheading the monolithic architecture

This option decouples your customer-facing presentation layer from your monolithic commerce platform, but keeps the business logic in the commerce engine intact, as well as the workarounds created over time, and ERP and CRM integrations plugged into the system. Usually, this alternative is a temporary solution toward a fully composable architecture.

While this alternative doesn't cause any disruptions and comes with a low price tag, performing changes and updates remains challenging due to the platform's monolithic nature.

Switching from monolithic to composable with the “Big Bang” approach

In this option, you rebuild the commerce architecture and release it only when fully ready. Essentially, the monolithic platform remains in place until the brand-new composable infrastructure can be switched on — which can take months or even years.

In addition, this is a risk-prone migration alternative due to unpredictable errors that might cause headaches and, in the worst-case scenario, switch back to the monolith. This option requires thorough planning, which usually falls short due to unforeseeable issues.

Phased migration with the strangler pattern

Transitioning critical components of your monolithic system is a smart place to start, especially if your primary goal is to improve core aspects of the customer experience. In this option, you break your monolith into small pieces and slowly replace those with single components incrementally. Over time, the monolith will start to suffocate and eventually disappear.

While it may take a while to see the big picture of new composable architecture, the phased migration enables you to experiment with components and switch them in and out at your pace. You can progressively build your composable commerce architecture, controlling every step of the way and minimizing disruptions and mitigating risks. The main benefit is clear: You don't have to wait for a “switch day” to see the first results!

Composable Commerce in Action: 10 Top Tips and Lessons by Leading Brands

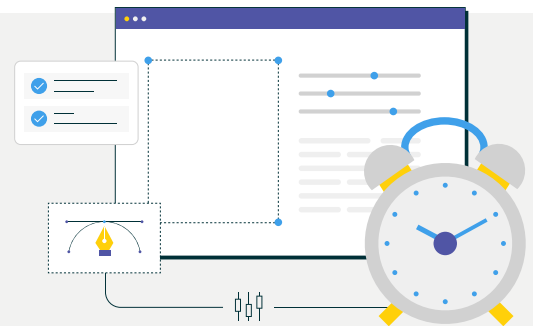
Now that we have explored the basics of composable commerce and the various options for implementation, we uncover top tips and lessons from leading brands that have transitioned to composable commerce.

#1 - Build vs. buy is now compose and customize



Going down a composable path means the job is much bigger in some ways because you can be flexible in your choices.

JAY JETLEY, CHIEF ARCHITECT, TRINNY LONDON



Like many start-ups, Trinny London, a beauty brand, first opted for an all-in-one commerce platform. When the beauty brand inevitably outgrew this monolithic setup, it decided to give its infrastructure a makeover with composable commerce. Powered by a fully customizable tech stack, Trinny London tailored the checkout experience to differentiate its brand; customers could pick samples complementing what they bought, such as an eyeshadow matching the color of a purchased lipstick. This simple yet highly effective CX was instrumental in how fast Trinny London grew since going composable.

This is a great example of “build where you differentiate, buy where you don’t”. Other areas, such as search, content and checkout, do not require anything ‘special’ in the eyes of Trinny’s consumers. However, the customizable stack is something that differentiates the Trinny customer proposition and is therefore a worthwhile feature for spending money on customizations.

In addition to tweaking core CX processes, the best-of-breed strategy meant the company could integrate peripheral functions outside its expertise, such as managing U.S. taxes. Instead of using a half-baked solution by a legacy platform, Trinny London integrated a top-notch service to increase operational efficiency. Swapping functionalities without vendor lock-in maximizes flexibility, ensuring Trinny London continues to differentiate the brand and stays ahead of consumers’ expectations.

#2 - Experiment and fail fast to succeed faster



With a composable stack, employees feel like [they have] superpowers.

MARTIN CHRISTIANSEN, CTO, TRENDHIM



With a monolithic architecture, touching one functionality means another may easily collapse in the process. This risk within a tightly-coupled system translates into employees being more reticent to run updates, try out new features and innovate.

Trendhim, an international jewelry and accessories retailer for men, saw first-hand how composable commerce enables businesses to constantly experiment without constraints. With a composable stack, it's easy to try things out for Trendhim and its employees have more control over what they can do and when. For instance, the team at the Scandinavian retailer created an optimization landscape to A/B-test everything they build and see the results come in split by country. Seeing composability in action changed the mindset to deal with constant change; now, instead of saying “no” as a response to a request, now colleagues simply ask, “How long does it take?”

This culture of “failing fast” (constantly experimenting, plugging what works and unplugging what doesn't) helps fast-growing companies like Trendhim respond faster to market opportunities — something only the modularity of composable can empower.

#3 - Replatform at your own pace



If you're unplatforming [with big bang] for two years, you don't get value in two years.

MARTIN CHRISTIANSEN, CTO, TRENDHIM



Replatforming (or “unplatforming”, as Trendhim calls it) is a daunting project, even more so if a “big bang” process is involved. When initial discussions started at Trendhim on migrating to composable commerce, the question of how to get business value during this switch arose.

Opting for a phased migration with the strangler pattern, Trendhim separated functions into business domains that were migrated step by step, slowly “strangling” the monolithic platform based on Adobe Commerce (formerly known as Magento).

During the process, the Scandinavian retailer first integrated commercetools as its centerpiece to connect every aspect of the customer journey. Next, the team at Trendhim selected a low-risk system to migrate first — fulfillment — and plugged it. This gradual rollout also allowed the company to optimize constantly, unplug components when something went wrong, and stay on top of its migration roadmap with minimum disruption to the business.

The strangler approach allows you to track and, most importantly, show value over time to senior stakeholders. Such values are measured in terms of “increasing speed to value”, “reducing waste”, and “limiting investment in things that bring no change (e.g. updates to monolithic platforms)”.

For Trendhim, migrating to composable commerce proved business value early on and helped convince internal stakeholders that this was the right approach.

#4 - Attract and retain talent



The question was, ‘do we want to be able to hire people, attract and retain talent?’ and the answer was overwhelmingly a big yes. Essentially, that was the key driver behind the investment.

CHRISTOPHER COOKE, SENIOR INTEGRATIONS MANAGER, FRASERS GROUP



While the Frasers Group, a British retail and intellectual property group, saw the need to shift its traditional brick-and-mortar businesses toward eCommerce, the main driver for composable commerce was, in fact, people and hiring led.

Working with modern technologies is a significant factor in hiring and retaining talent. Job seekers want to boost their careers and are eager to work with modern technologies. An organically grown platform with high technical debt is unlikely to attract applications; in order to succeed in eCommerce, the Frasers Group first needed the right people.

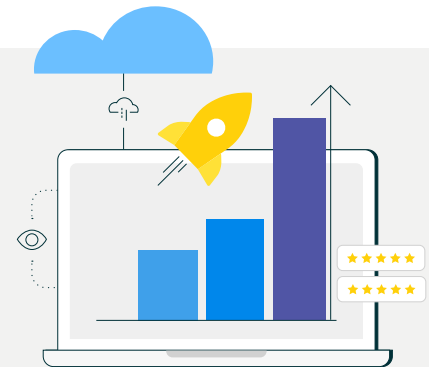
This realization prompted the move toward composable commerce as the foundation to cement the company’s position as a retail leader globally.

#5 - Use localized launches to test technology choices and prove business value



We started to hire people out of Malaysia and we've had their first contributions being put live into production within the first week.

CHRISTOPHER COOKE, SENIOR INTEGRATIONS MANAGER, FRASERS GROUP



Attracting new talent for the Frasers Group was critical to run localized eCommerce approaches, as part of the company's international expansions.

The Frasers Group selected Malaysia as the country that ticked many of the company's criteria, including a multi-language environment as the perfect testing ground. The recently-hired local team would have the autonomy to perform localization features via the best-of-breed integrations powered by composable commerce, including adding products to regional marketplaces.

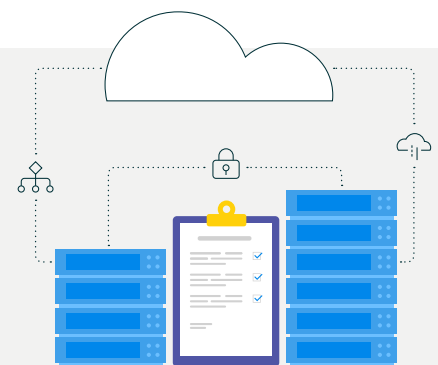
Since implementation, the team based in Malaysia integrated a "buy now, pay later" plan to address local market needs. Later, the feature was made available to all other locations operated by the Frasers Group. This line of action helped balance localized approaches and the global brand while breaking the silos of multiple local teams.

#6 - Test your cloud migration



We've used Oracle ATG for 10 years and that worked quite well until the start of Black Friday coming over from the States. That was quite a scary time.

SIMON SKELTON, PLATFORM AND OPERATIONS MANAGER, JOHN LEWIS & PARTNERS



When John Lewis & Partners, a brand of high-end department stores, decided to abandon on-premise IT infrastructure in favor of the cloud, the retailer relied on Oracle ATG as its eCommerce platform. At the time of the cloud migration, it was unclear how their current vendor would support this switch. The result? The on-premise-to-cloud switch caused performance issues and outages worth millions of dollars.

Performing any large-scale infrastructure migration, it's imperative to have a well-constructed, coherent and full spectrum testing strategy in place, covering the breadth of capabilities the application suite provides. For instance, it must ensure there's no loss in fidelity when it comes to performance or security, and that the new infrastructure can cope with the same or greater load — and be elastic when doing so. Without this safety net, as John Lewis & Partners found, these kinds of migrations are scary and daunting.

In addition, this test suite provides predictability to your day-to-day operations. The ability to continuously test and deliver software to production without fear of failure allows for greater experimentation and encourages a more nimble and agile business able to react quickly to changing markets.

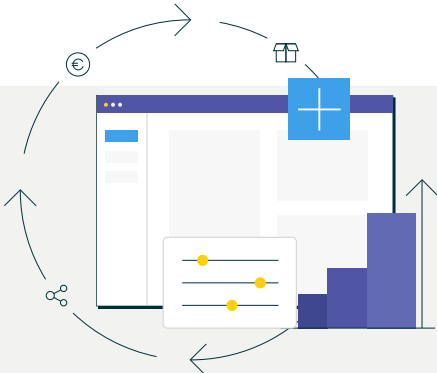
With the cloud migration performed, today John Lewis & Partners relies on cloud-native architecture via commercetools and Google Cloud and constantly tests in a manual and automated fashion, ensuring the webshop can withstand traffic peaks during planned and sudden sales surges, in addition to maintaining high speed and performance.

#7 - Accelerate product go-to-market



Composable gives us more flexibility to get different products into the market.

JIM HINGSTON, DIGITAL PRODUCT DIRECTOR, THE GYM GROUP



With a low-cost and flexible membership model, The Gym Group found the technology stack that perfectly fits this ethos: Composable commerce. With agility and flexibility at its core, the leading fitness group in the UK can iterate and learn from new product launches to find out what resonates and what doesn't. Digital products have been essential during lockdowns and have remained an option for customers that can't be bothered to go to the gym and need an easy option to exercise wherever they are.

Combined with analytics powered by a richer data layer since migrating to composability, the team at The Gym Group can closely monitor what's not working and take immediate action, responding to customer feedback instantly.

#8 - Create a backend-agnostic frontend



Generally, [when choosing a frontend technology] it was about the composition so that you can integrate into the backend independently from your frontend.

HALIL KÖKLÜ, CTO, LOVECRAFTS



The frontend is also a core piece of composable commerce; the customer-facing presentation layer is where shoppers interact with the brand, taking the form of an eCommerce website or other touchpoints like mobile apps and social media.

As a growing community of crochet and other crafting enthusiasts, LoveCrafts invests heavily in customer experiences, so it opted for the latest frontend technologies. The company follows a component-based design and a backend-agnostic approach for its frontend, so the team at LoveCrafts can integrate frontends into the backend independently from the content.

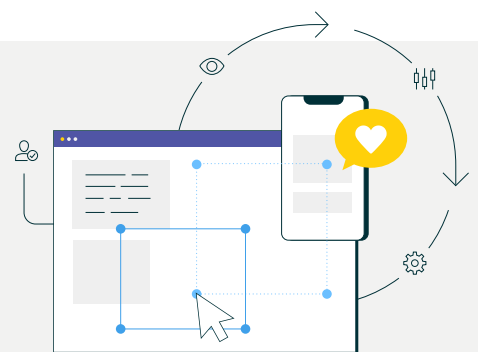
LoveCrafts has implemented Progressive Web Apps (PWAs) — a hybrid of regular web pages and modern applications for enhanced customer experiences and responsiveness — with the latest frontend technologies such as Vue JS and React. In practice, this modern frontend setup weaves unique customer experiences across multiple touchpoints, so passionate crafters always come back for more.

#9 - Start with the UX and don't try too many things at once



We'll focus on the user experience first and keep as many things as possible in the back-office the same, so we don't do too many things at the same time.

HALIL KÖKLÜ, CTO, LOVECRAFTS



Focusing on the customer experience at LoveCrafts was the first migration step toward a composable architecture. Choosing a phased migration via the strangler pattern, the company started with the checkout experience; an unusual choice, considering the complexity of integrating multiple components, but a centerpiece of LoveCrafts' customer journey.

In that process, the company decided to perform A/B testing with specific segments; for example, “crochet users in the UK”. Data synchronization and consistency were crucial to crafting the checkout experience according to customer response. The company takes customer input further by collecting feedback at every step of the buying journey.

To focus 100% on customer experiences, the team at LoveCrafts left back-office applications and other integrations untouched, avoiding doing too many things in one go.

#10 - Forget expensive replatforming projects thanks to composable commerce



No matter how good your due diligence is, there’s always something that needs customization or doesn’t work the way you expected. And also your business is changing. In the future, you might have requirements that are not compatible anymore.

HALIL KÖKLÜ, CTO, LOVECRAFTS



Replatforming is a time-consuming and expensive endeavor; that’s why the team at LoveCrafts needed to get the commerce stack right. The company’s leadership decided to invest in composable commerce because, in essence, that would be the last time the thriving retailer would have to replatform — ever.

With modularity and best-of-breed as the thread connecting LoveCrafts’ strategy, composable architecture leverages top-notch components and connects them independently; swapping components is easy and doesn’t affect the eCommerce engine.

However, Halil makes the point: composability doesn’t just mean an automatically “cheaper stack”, as it enables value-driven decision-making.

Despite the simplicity of composable architecture, there are costs associated with replacing components. For LoveCrafts, replacing functions after initial incompatibility or issues is not really feasible. That’s why the ability to extend and customize is crucial, as it tailors functions to fit their needs instead of constantly swapping components. With an enduring model that never gets old, LoveCrafts doesn’t need to replatform, as it can buy, build and customize bits according to its needs.

Bonus tip: Watch all the insights

Are you curious to learn more about how brands have successfully implemented composable commerce?

[Watch all the testimonials](#) with John Lewis, Trinnny London and more recorded at the **Composable Commerce Breakfast 2022** event hosted by E2X Ltd and commercetools.

Co-authors



commercetools

Munich-based commercetools is a technology disruptor delivering an industry-leading eCommerce SaaS solution. Today, some of the world's most iconic brands trust commercetools to enable their digital customer experiences. As the visionaries leading the modern MACH (Microservices-based, API-first, Cloud-native and Headless) architecture movement, commercetools gives companies the agility to innovate and iterate on the fly, merge on and off-line channels, drive revenue and future-proof their business.



E2X

E2X is a headless and composable eCommerce specialist - understanding how to get from A-B when moving from a monolith to a more modern architecture. We take the experience from other company's learnings to enable a smooth transition.

As a first member of the MACH Alliance, and both commercetools and BigCommerce Solutions Partners of the Year, our specialty lies in building modern, composable architectures, and creating the operational plan to accompany it.

Co-sponsors



Algolia

Algolia is an API-First Search and Discovery platform that empowers builders to compose experiences to predict what customers want with blazing fast search and the best application browse experience leading to more remarkable Discovery.



Amplience

Amplience is an API-first, headless content management platform for enterprise retail, enabling teams to do more, better, faster.



Adyen

Adyen is the payments platform of choice for leading companies including many MACH adopters. By providing end-to-end omnichannel capabilities, data-driven insights, and financial products in a single global solution, Adyen's technology helps businesses achieve their ambitions faster.



Fluent Commerce

Fluent Commerce is a vendor of a cloud-native, highly flexible, and extensible distributed order management system. Fluent Order Management enables optimized store fulfillment and provides accurate, near real-time inventory visibility across all systems and locations.



Vue Storefront

Vue Storefront is a Frontend as a Service that delivers custom storefronts at the fraction of cost and time, and with lightning-fast page loads to achieve better conversion rates and higher revenue.