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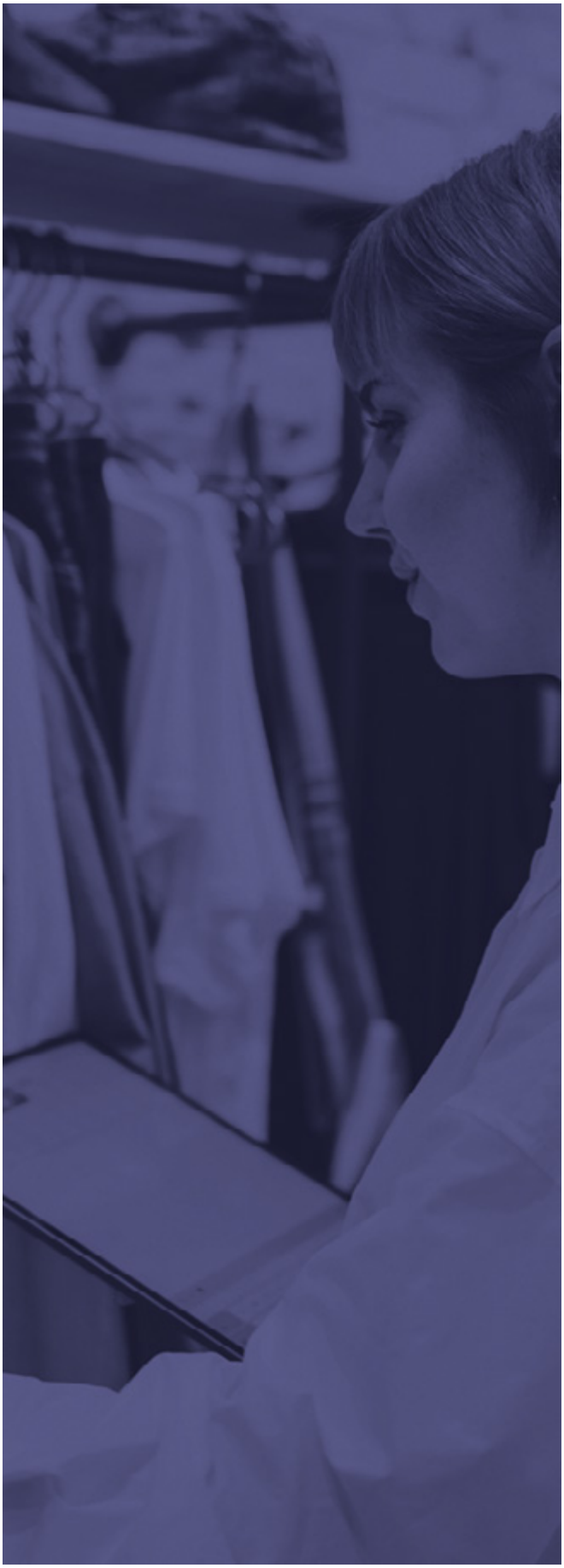
E-BOOK:

# The Foundations of Composable Commerce at Scale

## Content





SECTION 1:

# Decide Your Path: Who Is Composable Commerce For?

## Introduction

Since the dotcom boom of the 90s, digital disruptions—like the introduction of mobile tech, wearables, VR, and beyond—have led to significant changes in customer expectations and behavior. In response, commerce technology has evolved to provide retailers with the necessary tools to navigate the complexities of the market and consumer trends. But just as every brand is faced with its own set of unique challenges, no two tools are built the same.

The beauty of the current commerce tech landscape is the sheer variety of possible solutions. Most retail businesses understand that all-in-one or monolithic platforms (e.g. Shopify, Adobe Commerce, Squarespace) offer a commerce solution where a single vendor provides all of the commerce capabilities. Newer terms, like headless technology and composable commerce, are often conflated, making it more difficult to navigate the burgeoning modern commerce space.

## What Is Headless Technology?

The term headless describes any technology or solution—like a content management system (CMS) or search function—that severs its front-end presentation layer from its back-end. In contrast to monoliths, which couple customer-facing pages and functionality with the website's back-end, headless technologies access data and communicate through an API layer—thereby creating a more modular commerce architecture that is easier to customize.

## What is Composable Commerce?

Composable commerce isn't a specific or singular technology. It describes a commerce architecture paradigm built on MACH principles: microservices, API, cloud-based SaaS, and headless technologies. At the core of composable commerce is the idea that retail and commerce organizations can be best served by curating a suite of microservices, each addressing a unique business function (e.g. checkout, loyalty, customer data, etc.), rather than having one vendor provide all of these functions. Its core ethos is empowering brands to select the best tools for their needs.

## What Are the Benefits of Composable Commerce?

With a composable commerce platform, you no longer have to remain in the grips of a single vendor, nor do you have to invest significant resources into building custom solutions to realize your vision. With a composable commerce architecture, you can build a curated suite of vendors to address your needs and support your brand's goals. All you need is some ambition and a willingness to invest in building digital skills and capabilities.

While composable commerce is relatively young compared to other commerce architectures, it draws on existing technologies and proven practices to provide retailers with a robust and flexible commerce architecture.

## Is Composable Commerce Right for You?

If you're reading this, chances are that you're experiencing challenges with your current commerce platform. Maybe you find yourself having to decide between compromising on features so they work within the limits of your platform and investing in expensive custom solutions built atop your platform. Maybe you'd like to be less dependent on a single commerce provider. Perhaps you'd like to expand your brand into other countries or markets. Or maybe you'd simply like to improve your day-to-day operations and improve your customer experience.

These are all common concerns for omnichannel retail brands looking to improve their ability to flex and adapt to an unpredictable market, so you're not alone.

The *Foundations of Composable Commerce at Scale* covers the end-to-end journey of transitioning to a composable commerce architecture—from contemplation to implementation and beyond—and the considerations your retail brand will have to make throughout the process to achieve your goals.

This first section will help you assess both your current capabilities and your future goals, exploring how different commerce platforms work, what questions you should be asking yourself, and where you should be concentrating your efforts.

CHAPTER 1

# Ground Zero: Getting Started With Composable Commerce

Compared to their custom-built and composable alternatives, all-in-one commerce platforms continue to appeal to many retailers that prioritize simple, convenient, and economic solutions. And even with the increase in popularity of composable commerce architectures, monoliths aren't going anywhere anytime soon.

Despite what you might read online, it's not a question of which commerce platform solution is best— it's a matter of determining which platform best meets your needs and sets your brand up for future success.

## All-in-one, and One for All

All-in-one commerce platforms offer the same tools to all of their users, making it easy to get an online store up and running quickly. But many business users find that they hit a wall once they set their sights on a more ambitious omnichannel strategy. This wall often manifests in the form of a decision: remain subject to the limitations of the current offerings and future features roadmap, or pursue riskier, custom-built solutions on top of the existing platform. The more a brand pursues strategies to grow and scale, the more often these walls will pop up.

If your brand has access to its own development resources, building a custom point-solution to address a particular need could be a viable option. There are some serious factors to consider, however.

For example, barring the potentially considerable investment in developer time and resources, you still won't be entirely free from the constraints of your platform, since a custom work-around still relies on the frameworks and technologies compatible with the platform. There's also no guarantee that a platform update won't break any custom integrations, forcing you to repeat the effort, only this time under the pressure of a broken customer experience that was working just fine only yesterday. The challenge is that the more embedded a given solution is into your brand's existing data architecture, the harder and riskier it is to replace it with something else, should the need arise.

Ultimately you'll never have complete flexibility, adaptability, and customizability you can get with a composable solution, but depending on your circumstances, this may not be an issue. If your brand has a limited product set and you operate in a single locale and have modest growth plans, the one-and-done nature of an all-in-one platform might be the best option for you. But the more ambitious your plans and the greater the complexity you face, the more likely it is you should be considering a move to composable commerce.

## Buy Versus Build

The obvious trade-offs in choosing a headless or composable solution over an all-in-one platform are the investment and resources required to implement and maintain the solution. Vendor selection, for example, is a core aspect of opting for a composable commerce platform.

Composable commerce requires you to curate a suite of technologies that meet your needs and support your brand's roadmap. As those needs and your plans evolve, you may need to consider new vendors to incorporate into your platform. There is some ongoing effort there, but the result is far greater control over your business and customer experiences across all of your brand's touchpoints (e.g. web, mobile apps, in-store, voice-operated smart home devices, AR, etc.).

Headless technologies leverage APIs and cloud-based services, making it easy for your brand to essentially plug-and-play or swap components out of your modular architecture as your needs

change. So building a composable commerce platform using headless technologies eliminates dependence on any single vendor, framework, or templating language.

## The Twin Forces of Digital Transformation

Identifying that your incumbent commerce platform isn't working for you is only one piece of the puzzle. Figuring out what to do about it calls for a more nuanced analysis. Determining your level of business complexity and digital maturity allows you to capture an accurate snapshot of your current state and reveal the path you might wish to explore for your future roadmap. But bear in mind that both of these elements are ever-changing.

**Business complexity**

Your brand's level of business complexity varies depending on factors like: business size, revenue models, product offerings, marketing strategies, tech stack, and more. And with shifting trends in digital retail and increasingly connected consumers, your brand is expected to meet consumers wherever they are, across a multitude of touchpoints, devices, and platforms. These challenges are amplified if your brand is a larger omnichannel retail brand that operates in multiple countries or across markets. Managing multiple product catalogs, currencies, region-specific SKUs, and fulfillment options adds layer upon layer of business complexity—each demanding a higher level of sophistication from a brand's commerce platform.

**Digital maturity**

In addition to the extent of your business complexity, digital maturity is another force that influences your brand's possibilities for digital transformation. Digital maturity centers around your business's means and willingness to invest in innovation through technology. In other words, if your business is digitally mature, it likely has the technical skills, resources, desire, and vision to:

- Build, manage, and maintain a curated suite (i.e. composable commerce);
- Create an entirely homegrown, custom commerce platform; or
- Build customizations on top of your incumbent all-in-one platform

## Asking the Right Questions

You can think of business complexity and digital maturity as two spectrums, with smaller or newer businesses on one end, and larger or more established businesses on the other. You probably already have a sense of where your business might fall on both spectrums, but consider these questions:

1. What unique customer experiences do you offer today (e.g. BOPIS, smart home integration, augmented reality experiences)?
2. What growth have you encountered over the last five to ten years that has added complexity to your business model (e.g. subscriptions, loyalty programs, etc.)?
3. What are your operational processes today (e.g. store fulfillment, integration with third-party logistics, etc.)?

CHAPTER 2

# Looking Ahead: Growth & Scale

So you know that your current commerce platform doesn't meet your needs, you've learned how headless technologies and composable commerce platforms differ from monoliths, and you have some sense of your level of business complexity and digital maturity.

But your current state is just one piece of the puzzle.

Digital retail isn't stagnant, and your business shouldn't be either. Unsurprisingly, however, there's no one-size-fits-all solution, and what success looks like for your brand can be very different than how it looks for another brand. Your ideal solution will be the one that makes the best use of your available resources and skills, while allowing for uninhibited and sustainable growth, scale, and innovation.

## Growth ≠ Scale

Because growth and scale both speak to a relative increase in revenue, many business leaders conflate the two terms. This mistake can lead to an unpleasant surprise when leaders realize they have to pump in more resources to stay afloat, but far worse is when this conflation of terms leads to a tipping point with disastrous consequences.

A growth strategy entails increasing revenue with a proportionate increase in the resources (e.g. employees, clients, capital, etc.) and underlying technologies to support your growth— in other words, doing more with more. Growth often happens naturally as a result of simply running a business, assuming you're turning a profit. And it can be sustainable up to a certain point, but the resources required to support growth will eventually surpass the returns.

Whereas growth refers to a linear expansion of your capabilities, scale is exponential. It demands that your business is able to respond quickly and flexibly as you expand, without needing to catch up on the resources and technologies to support that expansion. Any additional costs should increase incrementally,

if at all. Scaling ultimately requires a large initial investment to establish the proper foundation for support, but once you have it, it pays dividends.

Despite the issues that may arise from unchecked growth, it's a necessary strategy to pursue, especially if your business is a startup or smaller company. In this situation, trying to scale would be putting your cart before your horse—an expensive decision that would take resources away from what matters, like building your product or service, strengthening your brand identity or customer journey, and establishing your brand's position in the market. Only after your business has achieved a certain size with a healthy pattern of growth does it make sense to pursue a strategy for scaling.

## Asking the Right Questions

There's no magic formula to determine the ideal time to switch from a growth to a scale approach, but let's consider some questions around your future roadmap:

1. Are you planning to expand internationally? If so, what sort of complexity might that add to your business (e.g. support for additional languages, currencies, customer demographics, marketing needs, etc.)?
2. Are you planning to expand supporting services (e.g. returns portals, loyalty integrations, subscription services, etc.)?
3. What customer experiences would you like to add or improve upon in the future (e.g. endless aisle, customer service chatbots, sales floor robots, location-aware services)?
4. Where do you see your operational processes shifting as your business evolves (e.g. store fulfillment, integration with third-party logistics, etc.)?

## A Commerce Platform for Scaling Businesses

While all-in-one platforms can help businesses grow, the "walls" we referred to in the previous chapter inevitably come up when you switch to a scaling mindset. These platforms simply lack the agility and responsiveness needed to support large-scale omnichannel retail. Like trying to bail water out of a leaky boat, you'll eventually find that you're chasing one point-solution after another to address your growing needs.

Rather than ceaselessly bailing out your leaky boat, composable commerce lets you build your own ship— a ship that can be as large and fast as you want it to be, regardless of the waters you might be in.

A composable commerce approach enhances both your brand's customer experience and your business practices, regardless of your business model(s). The inherent modularity of composable architectures offer the flexibility to pick and choose the components that meet both globally- and locally-relevant business needs. This might look like a location-agnostic product information management (PIM) system to maintain product data or a headless content management system (CMS) that can deliver tailored content to localized digital channels, like WeChat in China.

Global expansion isn't a prerequisite for composable commerce, but it reflects the sheer scale on which it can operate. By breaking your business functions into smaller, more independent pieces you can address the unique needs of your business at a micro level.

In the case of customer experience, composable commerce treats every customer touchpoint with the same level of importance, leveraging the ability to both collect useful customer data and activate it to deliver timely and relevant content to customers. Through the use of a customer data platform, for example, your business can consolidate all customer data into one funnel, ensuring that all data gets where it needs to be. This also allows your business to bridge digital and in-store channels, building your omnichannel capabilities and allowing you to do things like empower your associates and automate personalized promotions.

## Asking the Right Questions

Your answers to the previous questions will give you a sense of the investments and resources required to support your goals. But before we discuss your options, consider these questions:

1. How advanced are your in-house tech capabilities, both in terms of your systems and personnel? Are you open to seeking the support of a consultancy or systems integrator?
2. Is your business on a growth or scale trajectory?
3. Can you leverage any current platform features to solve your problems?
4. What changes to teams, systems, structures, and processes will you need to introduce to align new technologies?
5. What do your product management teams, as well as supporting business and technical teams look like?
6. Where do you want to invest time and capital today, tomorrow, and five years from now (e.g. marketing strategies, customer data, commerce replatform, etc.)?

CHAPTER 3

# Now What? 3 Stages of Digital Transformation

Whether your business is growing, scaling, or even slowing, digital transformation can help you stay or get back on track. And even if your business doesn't yet have the digital maturity to realize your goals now, there are still strategies you can implement now to work toward them.

Your ideal solution will largely depend on which stage your business is in, but bear in mind that there's no single way to approach your digital transformation. To that end, these stages will give you an indication of where you should be concentrating your efforts.

### 1. Growing

Growing businesses have good retail practices with low business complexity. They might be startups, or they might be operating in a niche market with a simple product line. These businesses operate on monolithic platforms and they may not be ready to make the jump to a completely composable commerce platform just yet, but they're looking for ways to grow quickly while preparing for incremental expansion and added complexity down the road.

If your business is growing, a full composable commerce replatform is likely overkill. You're not quite at the threshold where you should be focusing your sights on scaling, but you can start planting the seeds for future innovation. Start thinking about how your marketing strategies can enhance your growth, and lean into your customer data to support it. You don't want your customer data to be spread out over disparate silos, so look for solutions that allow you to create

a single source of truth that will make it easier to activate your data across any new touchpoints that you might expand to.

You can also start working your way up to modularity by seeking headless technologies that will allow you to be less dependent on your all-in-one commerce platform. The trick here is to start with a singular focus on components like POS/mPOS or search and discovery. It's ultimately up to you to determine what features will be most important for you down the road so you can start working toward your future vision.

### 2. Scaling

Scaling businesses have mid-level business complexity and strong innovation capabilities, but they need to find a balance between innovation and profitability. These businesses operate on monolithic platforms, but they've likely started to run into challenges as they expand their omnichannel offerings. They have a broad catalog of items and have experimented with differentiated customer experiences. Now they're looking to make the switch from a growth to scale strategy. These businesses are still relatively small and nimble compared to a global enterprise brand, but they're big enough to be looking for help to get their brand to the next level where they start to close that gap.

If your business is scaling, this is where it's especially important to start leaning into headless technologies and even exploring a composable replatform project. Your focus should be on eliminating dependence on your all-in-one commerce platform by starting to build your own ecosystem of unique solutions. Because you're likely innovating your omnichannel experiences, a headless CMS at the very least can help you scale your content across any current and new touchpoints. If relevant, you want your in-store and digital customer experiences to be as seamless as possible, which requires consolidation of your customer and product data. This is also an ideal time to involve a consultant or system integrator to help you plan your future roadmap, ensuring you're investing in the right solutions for your brand's evolving needs.

### 3. Transforming

Transforming businesses have the highest level of business complexity. They've been with their monolithic commerce providers or homegrown solutions for a long time, and their customer data and processes are deeply embedded in their legacy systems. Their rate of growth has surpassed the capabilities of their platform, and the size of their business makes change management difficult. These challenges could make for choppy waters, so their focus is on risk mitigation.

If your business is transforming, you have the resources to innovate, but they're likely tied up keeping your operations going. The complexity from your numerous touchpoints, evolving revenue models, and ongoing commerce technology needs has probably led to a patchwork of point solutions, and calls for a complete digital transformation. This level of digital transformation occurs at a systems level, and here in particular is where you should seek recommendations from a trusted integration partner for how to begin a replatform project of this size. In contrast to growing and scaling businesses, which can choose more focused approaches to addressing specific needs first, your focus should be on creating a new platform that can address your current needs, while building in the flexibility that will allow you to add features as needed and continue scaling after your replatform.

## Conclusion: What's Next?

Every business can benefit from some level of digital transformation, and this book has explored some key considerations for taking that first or next step. If you identify your brand with the Scale and Transform personas in this chapter, you're the ideal candidate for composable commerce. But even if your brand sits more in the Grow camp, you can still leverage the many benefits of headless technologies to set you up for future success, and now is the best time to start considering how to make this technology work for you.

The next section of *The Foundations of Composable Commerce at Scale* will delve into how to start your journey to composable, and the final section will explore how to continue innovating and scaling after your composable commerce launch.

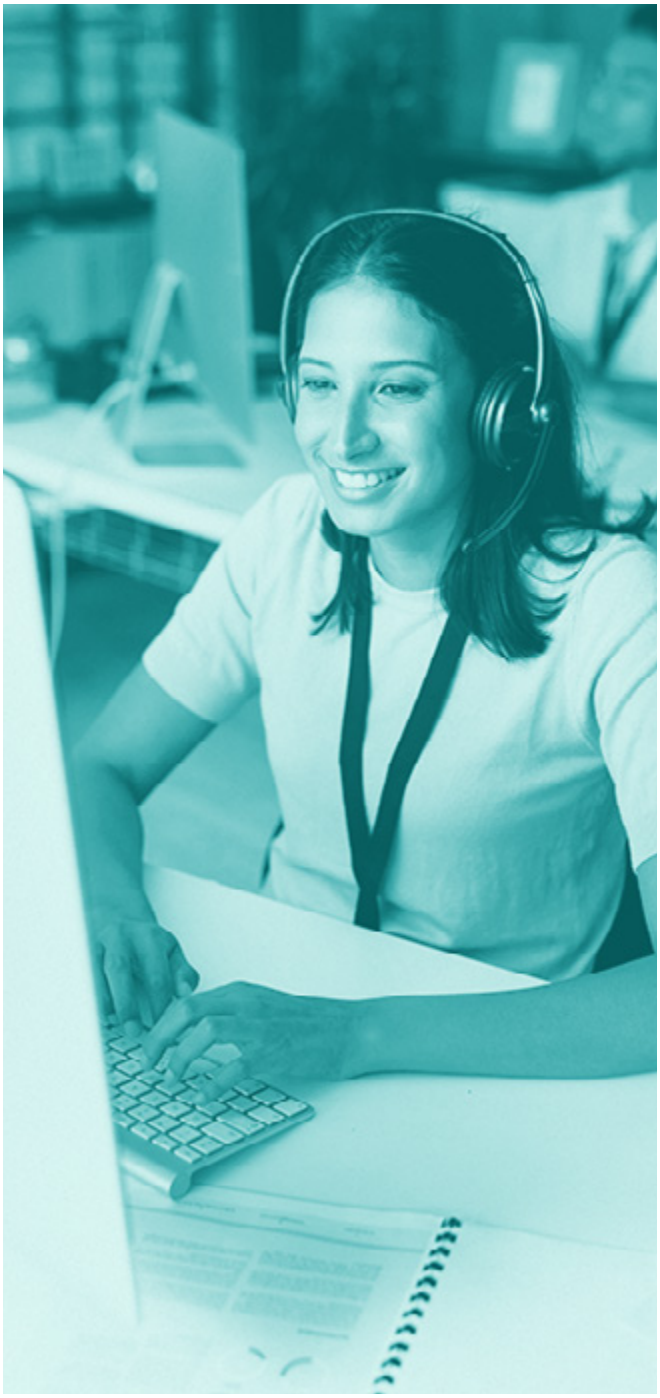
SECTION 2:

# How to Launch: Consideration & Planning

## Introduction

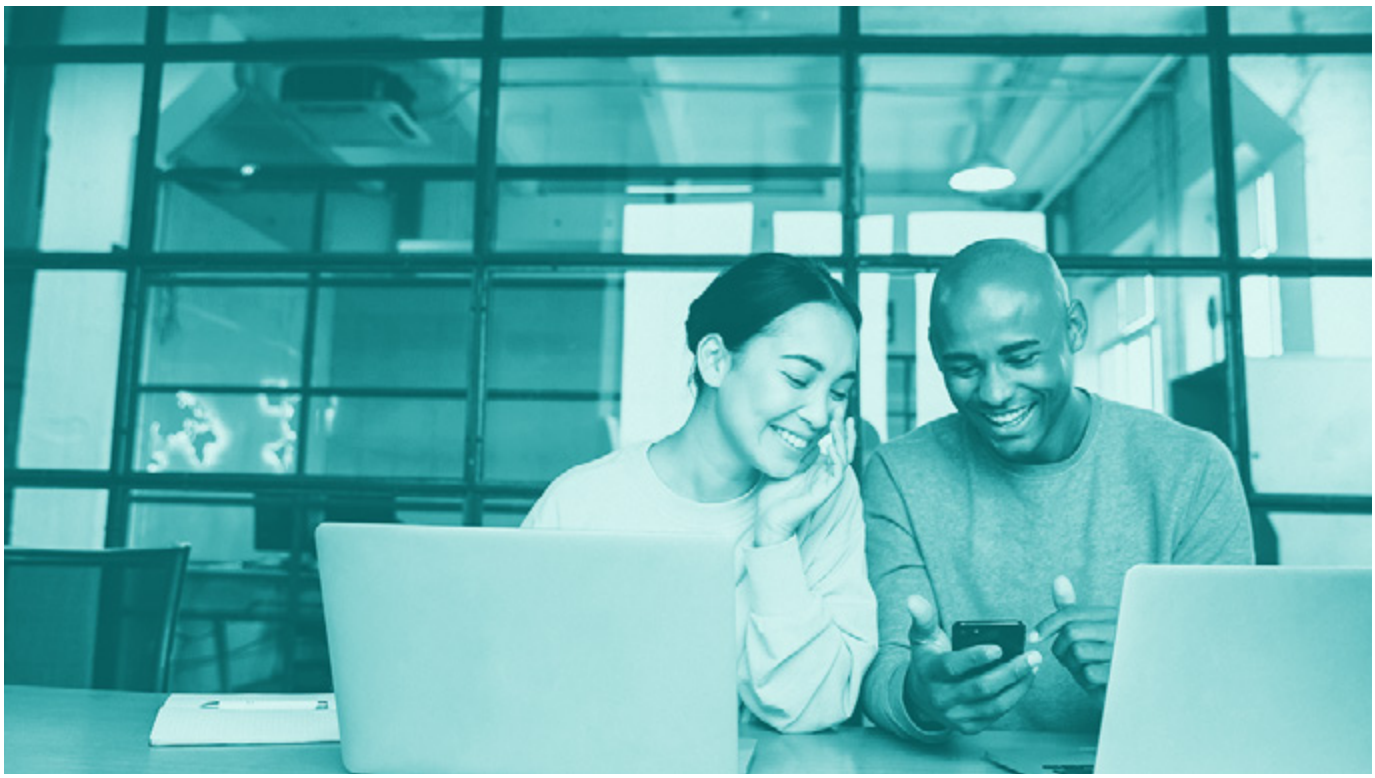
Retail commerce is moving at lightning speed and the demand to keep up with customer expectations is only increasing. Brands looking to keep pace with the market need to take advantage of the technologies that offer the flexibility and scalability a modern commerce experience requires. Moving from a monolithic platform to a composable commerce solution allows brands to take control over their platforms and systems, but there's a lot of information to wade through. How do you begin the replatform process? And more importantly, how do you do it without risking the experience your customers have in the process?

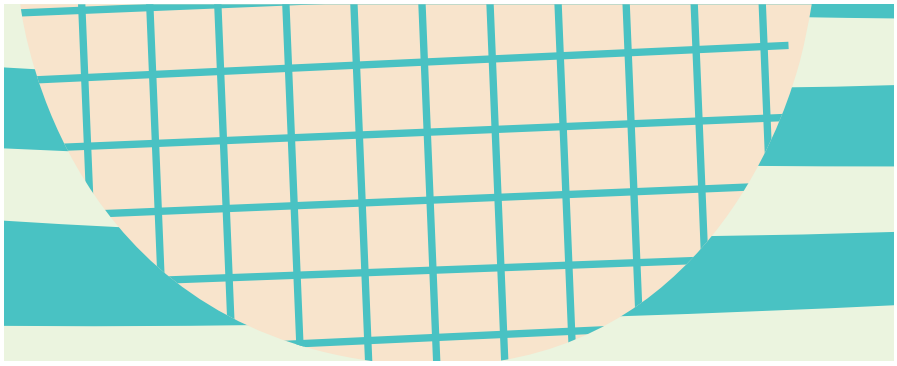
Replatforming is complex, and sifting through the information to figure out what makes sense for your brand can feel all-consuming. Part one of the *Foundations of Composable Commerce at Scale* is all about getting a better understanding of composable commerce and helping brands figure out if the flexible, scalable approach of a modular architecture is right for them. This part guides brands through the next step to transitioning to composable commerce, sharing the five foundations of launching a tech stack that is flexible, scalable, and enables innovation using composable commerce architectures. From what to consider when composing your tech stack to the incremental approach to replacing technologies that will achieve the best time-to-value and deliver tangible impacts for your business, this book was designed to give you the knowledge you need to get started.



CHAPTER 1

# Technology





The true benefit of a composable commerce architecture is a brand's ability to choose best-for-me technologies to meet business needs, adding or trading them out incrementally as those needs change. But that flexibility, which is a massive advantage in the long run, also comes with one big challenge for brands starting the transition to composable commerce: what technologies should you choose?

The technology vendors you pick are at the foundation of how you present your brand to the world and the customer journeys you orchestrate, so it's important to find the ones that will complement and enhance your vision. Maybe you just need basic payment technology now, but you know in the future you'll want more robust features— how do you find the tech that makes the most sense for you?

The good news is, the inherent structure of composable commerce means you're not locked into the choices you make today forever. But even though it's comparatively easy to add or replace a technology, you still want to be making the smart, informed decisions that will serve you best.

For some brands, identifying the vendors that best suit their needs is straightforward, but even if it is, deciding everything on your own can be overwhelming. A trusted integration partner who knows the digital commerce landscape well can help you identify the options available to you and help you select the right technologies for your brand.

## Choosing Your Technology Vendors: Order of Operations

Not all businesses have the same requirements or ambitions, so not all digital retail commerce platforms should be the same. Customizing your technology vendors, from your order management system to payment, and from content management to search and discovery to experience management, is all about equipping your retail organization with tools that reduce the workload on business users and enable you to focus on growing your brand.

CMS, commerce engine, CRM, ERP, and customer data management: when every service is up for consideration, it can feel overwhelming to have to pick and choose the best technology partners on which to build your new platform, so start by identifying where

an improved technology solution will have the most impact for you. Don't forget to consider the order of events you might follow when implementing a new modular architecture, because regardless of which microservices you start with, the order in which they are implemented is paramount. Let's look at an example.

Say you identify search and commerce as two areas for immediate improvement. Depending on the search service and commerce engine you choose, you may end up having to retool your search if it's implemented first. The order of operations in implementing your new technology solutions will play a factor in when and how you replatform, which is why this is at the top of our list of recommendations.

Many brands get into the weeds when it comes to choosing their tech stack if they try to do it all at once. Typically, you want to start with commerce and content. From there, you can look to an integrator for suggestions that meet your needs. They'll be able to guide you on which vendors work well together to enable your vision for your brand. Composable commerce isn't a one-and-done proposition and change is both inevitable, and the beauty of this approach.

### Choosing Your Technology Vendors: Nice vs Necessary

The choice a retail brand makes about which microservice to implement first often comes down to immediate needs versus long-term wants.

Everything that was possible on your old platform, including all the features that business users relied on, can be available in your new solution. But just because it can be done, doesn't mean it should. Generally, when planning the migration, you have the opportunity to eliminate overhead and make the move to a leaner solution, releasing tech debt as you move forward.

As you start to build a composable commerce platform, keep in mind that there's no need to migrate with feature parity. There's a reason you're leaving your legacy platform. This new modular architecture enables you to think in an agile manner, choosing microservices that meet your needs, not the bloated possible needs of every commerce organization in the world.

When choosing if something is a nice to have or a need to have, think about three things:

1. What is your ideal state of operations 5 years from now?
2. What will hamper your business if it's not functioning within the next six months?
3. What can your team reasonably support given their size, skillset, and focus areas?

The first two will help you determine what you truly need now: if it's a technology that you want in five years, but isn't essential in six months, now is probably not the time to focus on it, but it should be a consideration in how you set the foundations for success over the long haul. The third will help you determine when to lean on internal capabilities and when to find a solution that doesn't require as much direct intervention and support.

Consider your team's capabilities and limitations, and the trade-offs they might need to make if you choose one vendor over another. For example, is your organization capable of managing the risk when it comes to securely processing customer payment information? A third-party vendor can take this increasingly challenging effort off the team's plate so they can focus on tasks more within their wheelhouse.

Take PCI compliance: your company can engage a vendor to avoid purchasing, implementing and maintaining security software and hardware to keep sensitive credit card data private. Third-party solutions can securely accept and store the data, taking away considerable complexity, cost, and risk. If card data never touches your servers, you would only need to confirm approximately 22 security controls, instead of the 300 usually required. That's a significant amount of overhead you've saved.

As you scale and grow your brand, you'll continually assess if any of your microservices need to be customized or swapped out for a more robust solution. If your needs change over time, you can then assess new vendors that will give you the functionality you require and implement that technology into your composable commerce platform.

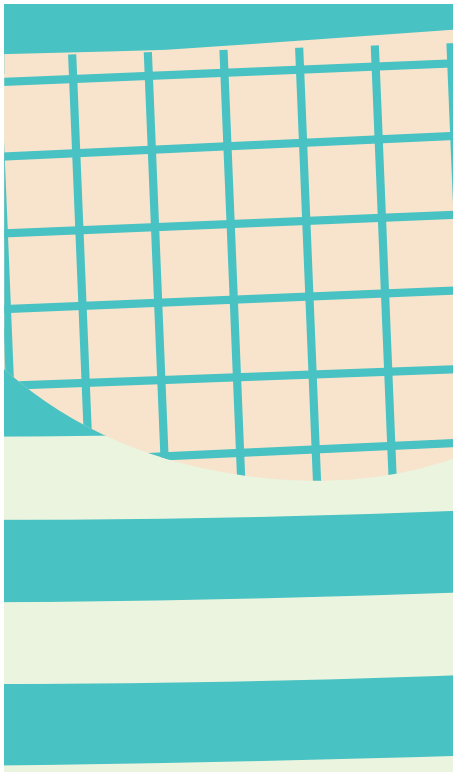
### Custom Where It Counts

Choosing where to build customizations on top of services is where brands realize the most impact for their customers. What makes the best experience for your customer? What journeys will best serve them? Many of the technologies chosen can be used as is, but dreaming big and really differentiating your brand happens when you build delightful, unique experiences. Investing in impact enables the delivery of high-value experiences.

We'll explore these concepts in more detail in the third section, *After the Launch: Continued Innovation & Scaling*. Once you've successfully made the move to a composable commerce platform, it's time to leverage your ability to customize the technologies to best suit your brand.

CHAPTER 2

# Operations



## Keeping Things Running While You Make The Shift

In most cases, brands leaving their monolithic platform will choose a gradual transition to a modular architecture. This means going from an on-premise all-in-one to a service-oriented, headless cloud solution, where all technologies are connected, happens using a phased migration, instead of a rip-and-replace approach. An incremental process like this allows for the least disturbance to operations and mitigates risks to your customer experiences as much as possible.

During this process it's important to consider data modeling. When leveraging your data, data integrity is a crucial prerequisite. Before you can start using data to make decisions you need to be able to trust that the data sets are accurate and reliable.

Businesses need to consider data modeling for building transactional and operational systems, such as a POS, and building reporting and analytical systems. Ensure that your data modeling is planned with insights from both business and technical experts across your organization.

When migrating data across platforms, it is important to have your data models ready, with supporting metadata. Having your models planned will reduce time, costs, and effort needed to perform the migration successfully.

## What do you need to prepare ahead of time?

There are five areas where we suggest brands analyze and craft a plan before beginning the move to composable commerce. This is particularly useful when starting to build a plan for the transition. Let's explore these areas:

1. **Take stock:** Create an inventory of the technical needs of your business and the current tech debt incurred by having too much software that overlaps in functionality. This is where you can start to identify the components that are the most important and the ones you don't actually need or use.

2. **Set priorities:** Create a list of the processes and edge cases that will require migration immediately. By doing this you will ensure minimal down time and continuity in business processes. Then, based on your list, you can assess those that can be addressed at a later time— things that may help improve your customer data or experiences. Your imperative here is to only keep services that add value to your business.

3. **Gap analysis:** This is where you take your prioritized list and compare it with out-of-the-box features present in your microservices. Maybe a basic payment service is sustainable for now, but you identify other areas that will need more customization to deliver the experience you want to represent your brand.

4. **Build teams:** Teams will need to be cross-functional and vertical, instead of horizontal with clear-cut roles. This is where you will make sure your staffing needs and organizational structure meet the needs of a cloud-based solution.

5. **Data:** Determine your data migration approach and when the transition will begin. You'll need to migrate your data from your legacy system into your new modular architecture. Ordering and prioritizing your data will ensure nothing gets lost in the migration process. This may also create an opportunity for you to assess your data against your own criteria to ensure the cleanest possible transition.

### What new operational organization and infrastructure will be introduced with composable commerce?

Composable commerce introduces new microservices to your current technology stack, which will be incrementally updated over time. Each technology chosen will need to be managed across business users. Don't discount the need for training and documentation leading into this transition. Business users in each department will need to be trained on new software implementations and provided with the necessary documentation to ensure continuity in work and the ability to leverage new features and capabilities.

For example, a headless CMS gives marketers the ability to make changes to the front-end, saving developers time on user interface changes. The tech team would only need to do a small amount of work, if any, to publish content. Marketing teams gain autonomy in a modular architecture, as the CMS acts only as a back-end management system, facilitating the content within it.

Your developers can build with speed and independence of tools, code, and APIs. The decoupled architecture separates the backend content storage layer from the frontend presentation layer to provide added flexibility and easier access to more digital channels. Plus, the framework agnosticism of a headless CMS means that your developers can finally choose the languages and frameworks they're most comfortable with, removing the restrictions of legacy CMS platforms.

### Total Cost of Ownership

The total cost of ownership, or TCO, is the sum of all costs and expenses associated with buying, implementing, and managing your commerce platform, which includes but is not limited to: licensing fees, hosting, extensions, third-party apps/integrations, feature development, design, and ongoing maintenance with solution partners and optimization.

A composable commerce platform allows you to pick your vendors and avoid paying large fees up front, like you would with a monolith. Plus, it gives you the ability to choose from a variety of vendors to find the best pricing— and as we all know, a little competition can go a long way when it comes to saving money.

Composable microservices are a "best-for-me" approach that don't force you to buy an entire package that includes features you'll never use. Time you previously spent on fixing programs and finding workarounds for your legacy platform turns into money saved and value added when it gets reallocated to better use, and it must be accounted for when thinking about TCO. It can be hard to quantify the ROI of "less effort", but especially when it comes to stakeholder buy-in, it's important to look at the impact a more efficient system offers. When you go from 15% of dev effort going to new features to 50% because you're not battling bugs and bloat, that's a huge win.

CHAPTER 3

# Team Management

Businesses and their teams often have the expectation that a new architecture will simply be a modernized version of their existing processes. If only it were that easy. Composable commerce is a modern set of processes, to expand the scaling and growth opportunities for a brand, and it comes with new systems and processes that require planning and training to ensure the whole team is able to work cross-functionally to support a more agile mode of operation.

What does this mean for teams within an organization? It means lead time needs to be planned to give team members adequate time and space to learn new systems and adjust their daily routines and habits. Some may find it helpful to add extra support for teams to ensure crucial tasks maintain continuity and team members won't feel a sense of overwhelm while learning new systems. In our experience, the technology used may change, but the individual pieces of technology used by each team member sees little to no change.

### Unexpected Challenges

The most important thing to realize when shifting to a new framework is that your teams will still be doing their day-to-day work while they adapt to the new systems and processes. That means when your brand goes to implement the new technologies, you need to consider not only the fundamental shifts they're facing—which can seem daunting if not framed properly—but also the daily changes the team will need to adapt to, including everything from login locations to new content requirements.

Framing the changes in the right light is essential. First and foremost, emphasize the advantages the team will get: lighter, faster systems with less tech debt, fewer unnecessary elements to support, and more cross-functional capabilities to improve operations as a whole. Assuage fears they may have about learning new tools or having more systems to manage now that you're not on an all-in-one. Typically, the technologies being used may change, but the total number of individual pieces of technology doesn't really increase.

Working with your vendors to ensure training materials are available and the team is given the support they need when shifting from the old system to the new, and building in routines to support an agile process—especially if that's new to the org—are also essential parts of helping the team face an unexpected challenges with grace.

## Managing Team Migration

The added flexibility and functionality of your new systems mean you'll have to prepare your teams with an equally flexible approach to communications, training, and support. Process requirements may increase or decrease with the new systems, so informed and purposeful distribution of the workload will need to be assessed. Anticipating the impact to teams and empowering them to work through the transition will be key, as will keeping lines of communication open to ensure you hear about any "unknown unknowns" as they arise so you can pivot and adjust as needed.

Composable commerce enables an organization to focus on providing value and service to their customers. If your teams are struggling to adapt, their concerns need to be validated and addressed right away. Leaving a monolith and moving to a headless architecture can seem daunting and for some, even feel like a fracturing of functions, but in reality it has the power to create a more cohesive team in the end. A composable commerce framework makes cross-functional teams the norm, instead of departments working in silos, which increases collaboration and growth.

## Vertical Product Management

Commerce organizations have historically operated with horizontal teams working in silos, and the result is often teams struggling to be agile enough to meet time-sensitive demands. This approach creates experts in specific functions, who are then unable to flex their skills to other parts of the product, remaining limited to the function or technology in which they specialize.

When moving to a modular architecture, teams are best organized vertically. This results in cross-functional teams who are oriented towards specific value chains. They have a broader view and combine all the skills necessary to implement features of a value chain. Vertical organizations are more flexible and have a better overview of the entire product.

By evaluating your organizational structure, you can begin to combine similar business processes—or business processes that interact very closely—into a vertical. These verticals will later be the responsibility of a group of people who organize themselves into one or more small cross-functional teams.

With a new composable commerce platform, product and marketing teams need to be focused on experiences, not isolated pieces of technology. The customer journey and brand experience will require thoughtful execution and a holistic approach across several systems.

### Questions for Teams in Transition:

- How comfortable are teams with the new platform?
- Do any tasks seem particularly daunting?
- Are there skill or knowledge gaps within the current team?
- What level of support do they need or expect?
- What value streams must be ready to go on day one?
- What changes are creating issues but don't affect value delivery?

By approaching the changes head-on with a collaborative mindset, you'll increase team morale during the transition and maintain business continuity.

### Recommended Practices for Enabling Teams

1. **Train early and often:** Empower teams to use new technologies in order to anticipate and understand their impacts. Collaborate with vendors for support and encourage teams to do this as well. Continue to learn new tools and facilitate other teams.

2. **Prepare permissions:** Teams will need access to new systems that may have different permission structures. Team members won't necessarily know what they're missing, as they will only see the interfaces they have access to. Platform teams facilitating password management and preparing system roles ahead of time will reduce dependencies and access requests.

3. **Keep teams small:** Workload and agility is correlated with team size. Large teams create competing value streams.

4. **Own documentation:** Team leads will have a view into several aspects of business operations and can help direct functional teams to resources. They may also request that team members create reference documentation to assist with onboarding and process control, creating useful documentation that continues to grow as practices expand.

5. **Create cross-team briefs:** Have a regular cross team check in, similar to an agile stand-up, which will help identify concerns early and often. Teams can orient around challenges affecting the value stream and prioritize their work as it impacts the other teams.

6. **Appoint champions:** Having single points of contact between teams reduces repetition and context loss, as well as the number of meetings each team needs to attend. Select team representatives who own processes and can speak for their teams during planning sessions.

7. **Evolve and improve:** Solicit feedback from the team on a regular basis and update processes to best suit and adapt to your organization. Look for opportunities to automate, differentiate, or streamline processes.

CHAPTER 4

# Content

## Content needs and considerations

Omnichannel retail marketing encompasses all the interactions and touchpoints a customer has with your brand. Good omniretail marketing makes customers feel like every action is a continuation of the previous action, optimizing every touchpoint to create meaningful customer journeys. This means marketers need a strong understanding of where and how customers engage with your brand.

Retail brands use a content management system (CMS) as a backend repository to store and manage all of the brand's content. Using APIs enables your content to then be published to any channel, device, or digital experience seamlessly. Creating omniretail experiences freely across channels requires a modern CMS that is front-end agnostic and uses APIs to deliver content.

## Considerations When Choosing CMS Vendors

To choose the best CMS for your business, you first need to ensure its features align with your needs and goals. If, for example, you're interested in optimizing your content for search engines, you may want to consider a technology partner with built-in SEO tools. Or perhaps your brand has a distinct look and feel that requires custom themes that are also responsive.

Here are some key CMS features that brands need to consider when making their choice:

- Intuitive dashboard: Admin dashboard that allows you to manage all tasks in content production and distribution
- Responsive themes: Ability to build or choose a theme to establish a consistent look and feel across your site
- Content editing and publishing tools: Create and publish different types of content, including images, videos, forms, and more
- Version control and back-ups: Save and track as you go, including having a back-up
- Multi-language content creation: Create different language variations of your pages
- Publishing controls: Assign different roles and levels of access to create a workflow for creating, approving, and releasing creative assets

- Built-in SEO tools: Optimize your content for search and improve your ranking on search engine results pages
- Robust integrations: Integrations with third-party software into your workflow so data can easily flow between applications (this includes social media, CRM, and marketing automation)
- Detail analytics: Built-in analytics to support content strategy refinement, or integrations with external solutions
- Pre-made templates: Single-page layouts to simplify your publishing process, whether pre-designed or custom
- Content staging: Functionality to stage and preview content before publishing
- Security: Built-in protections for your visitors' data and your brand reputation
- Support: Extensive documentation and an engaged community
- Migration: Features and process for getting your data safely off your current platform and onto the new CMS

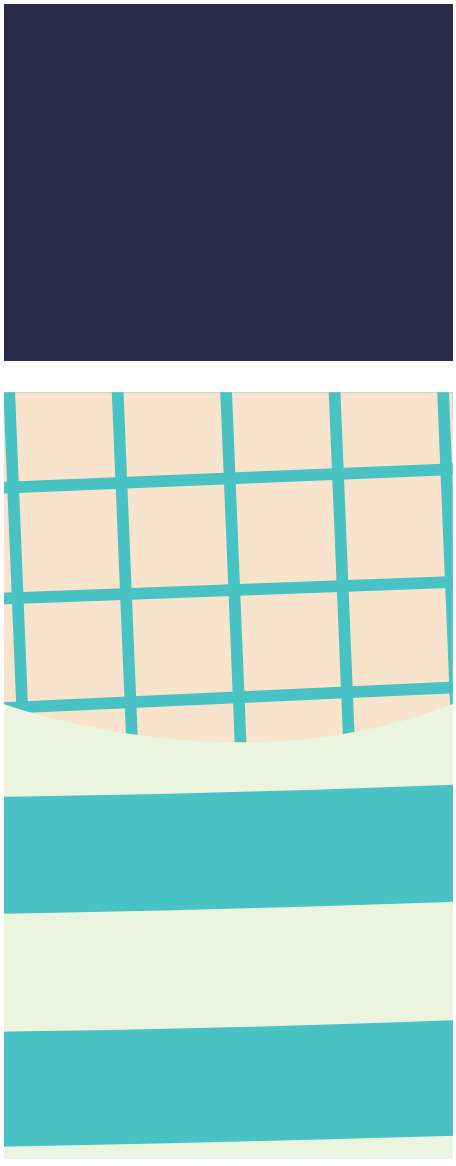
### How content and content generation needs will change

As your retail brand scales, so will your content needs across all channels. This will include content for sales, promotions, seasonal changes, personalization, and much more. Once you move to a modular architecture, the possibilities of content creation and marketing are expanded. Segmentation created from customer data will give you the opportunity to create specific and meaningful marketing campaigns or personalization touchpoints.

If you've moved to a new content management system, the marketing team may require more staff to manage and create the new content being leveraged across the platform and they will definitely need to be trained on the new functionality of your chosen CMS.

CHAPTER 5

# Customer Data



## Why Collect Customer Data?

Retailers need a consolidated snapshot of their customers, to be able to draw useful insights about their preferences, shopping habits, past purchases, and more. These insights can help you properly scale your brand, customer relationships, and business outcomes.

Data is the driving force behind customer journey orchestration, allowing brands to provide a shorter, more frictionless path to conversion. And because journey orchestration is an ongoing and dynamic process, your data activation model must also be iterative, so you can continuously improve brand outcomes and customer experiences.

## Considerations For Choosing Data Vendors

Customer data platforms (CDPs) allow you to provide remarkably better customer experiences, but you need to choose one that delivers on its promises. Here's what we recommend when implementing a CDP:

- Real-time data streaming and ingestion: Allows you to see your customers in the exact moment they're interacting with your brand
- Purpose-built as a CDP: Enabling you to feel confident in the reliability of your customer data and how it gets handled
- Complete, unified user profiles: For your marketers to gain access to known and unknown data for every customer, allowing for intelligent segmentation, personal preferences, and adherence to standards for privacy and regulation
- Robust, native data governance: Tools that have pre-built and custom tagging capabilities
- Real-time data activation: At both ingestion and activation, your CDP should function in real-time, to responsively deliver experiences based on customer profile
- Easy for marketers to use: With an interface, tools, and workflow built to fit perfectly into a marketing context without help from IT
- Scalable, flexible, and extensible: Integrating seamlessly with your existing tech stack and able to handle complexity as you scale

## What data do I need to collect?

The short answer is, it depends. It depends on the specific metrics or KPIs you have set for your business as these will be the primary drivers for your customer data activation strategy. This strategy is best done through a consultation with an expert in customer data that can guide you through the decision making process and ensure you have the capabilities to do data right.

In general, look across these nine categories to determine what's important to you, to assess your current state, and gain insights into what will help you shape the customer experiences you want to deliver:

**Teams**

Do you have an in-house analytics team, defined data strategy, and corporate awareness and alignment of organizational goals?

**Time-to-value**

Do you have consolidated data in a single source of truth, effective dashboards, and near instantaneous time from data query to data answer?

**Customer awareness**

Do you have a strong understanding of your customer base, a customer centric business model, and customer profiles through accounts?

**Business awareness**

Do you have a view of historical performance, customer lifetime value, and marketing awareness of your customers?

**Personalization capability**

Do you have automated campaigns, product recommendations, and adaptive user experiences?

**Product insights**

Do you have user journey tracking, continuous measurement of site performance, and improvements to optimize conversion?

**Experimentation**

Do you have A/B testing capabilities, internal usage of test reports, and ongoing testing and optimization programs?

**Innovation**

Are you risk tolerant, is innovation part of your strategic place, are you willing to adopt emerging technologies?

**Tooling**

Do you have well implemented tools that are integrated with other systems and teams that are using the full potential of these systems?

Customer data activation can be implemented incrementally as your business grows and matures. The thing to keep in mind is that planning before you start is crucial to seeing the results you want. Bringing together data in a single source of truth also enables you to look for opportunities to audit your current tech stack and prioritize plans for a technology ecosystem that will deliver on your primary KPIs.

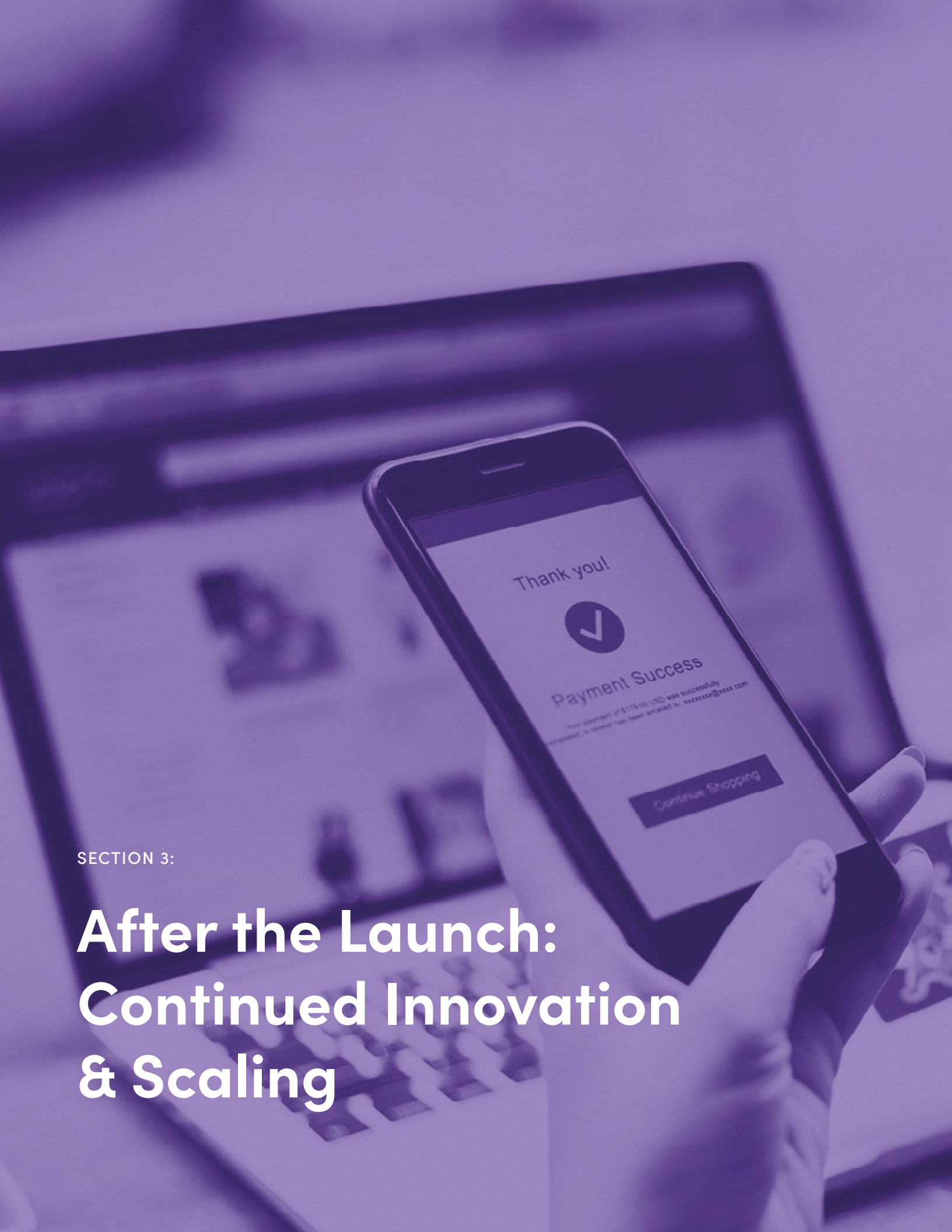
## Conclusion: Strategic investments to continually scale your brand

The five foundations in this section offer a look at what is required to start moving away from your legacy platform, and give a structure that carries through into the next stage of your composable commerce journey.

It may feel like a big undertaking to move to a composable commerce architecture, but if you've determined it's the right thing to do, then the time is now. Your biggest hurdle will be ensuring continuity during the transition, but that's easily managed with the right technology partners and trusted advisors to help you craft a change-management plan.

With an incremental approach, you can first decide which capabilities to decouple and when to slowly separate your entire monolith into a system of microservices. You can start transitioning to your new platform while you're still building out the parts.

A composable commerce framework means the opportunities for scaling are limitless. Deliver the brand experiences you want, when, where, and how you want, and give your customers the shopping journeys that they'll want to come back to.




SECTION 3:

# After the Launch: Continued Innovation & Scaling

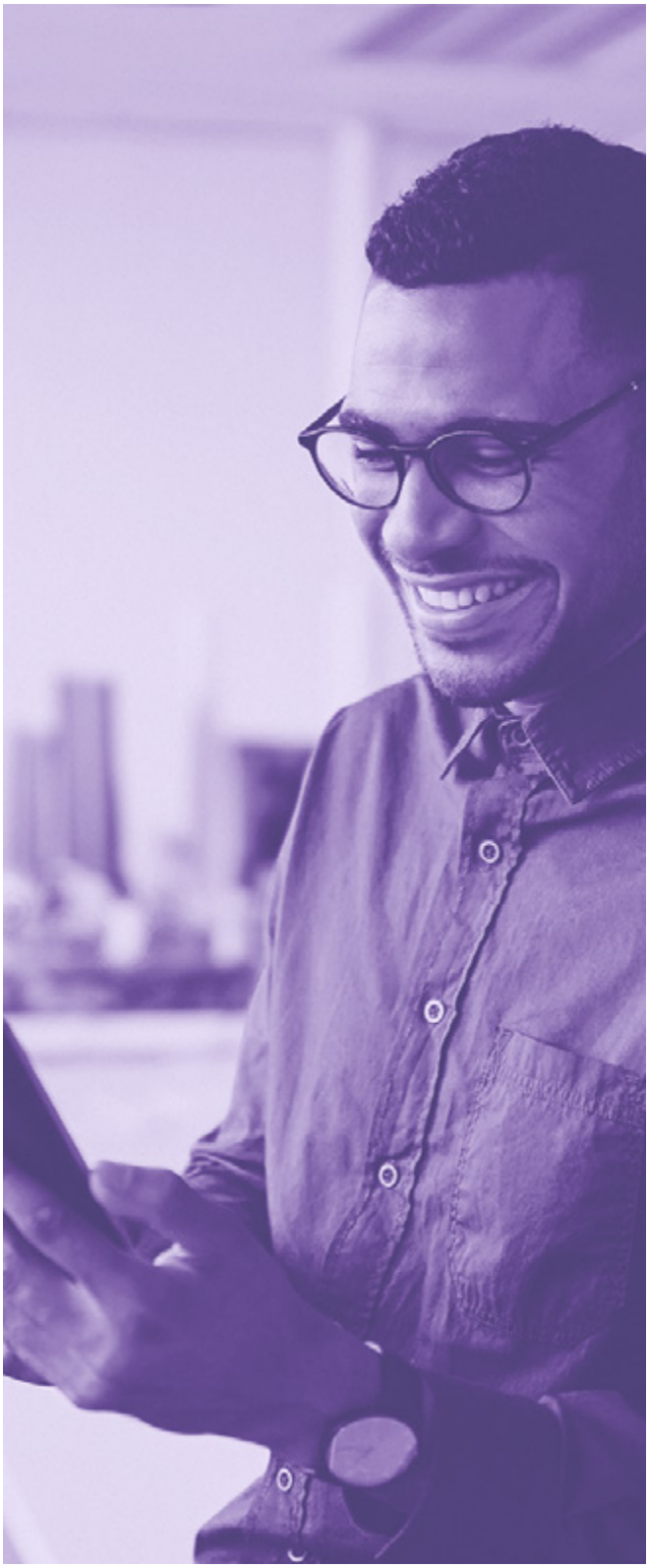
## Introduction

The benefits of composable commerce are well established for brands facing complexity and the challenges that come with the new world of multi- (multi-channel, multi-interface, multi-brand, etc). Brands know the time to replatform from an aging monolith is now—take advantage of headless flexibility or be left behind by competitors—and what considerations should be made when outfitting a composable commerce tech stack.

But what happens next?

The commerce space (e-commerce in particular) evolves at lightning speed. In less than a year novel technologies can become stagnant. Brands can't simply replatform, dust their hands off, and call it a day. To stay competitive, retailers must continually optimize and evolve their digital efforts online and in-store.

That's where this section comes in. It will share five foundations of post-launch scaling and innovation for composable commerce. These pair back to the five foundations of moving to composable commerce, shared in the previous section of *The Foundations Composable Commerce at Scale*.



CHAPTER 1

# Technology

Perhaps the most crucial aspect of supporting post-launch scaling and innovation for years to come is the regular maintenance and assessment of the technology powering and enhancing your commerce platform.

Infrastructure powerhouses of the early 2000s and 2010s are now, in many use cases, outdated and inefficient. Eventually, the technologies that comprise today's composable commerce platforms will be too. Let's be clear: a rip-and-replace or total replatforming is not going to be necessary every couple of years. But it is a caution to remain on top of your technology. Be vigilant about assessing its performance, ROI, and flexibility to meet your changing needs and update as necessary, taking advantage of the opportunity to assess performance and make incremental changes to your tech stack to enhance performance and add new functionality.

Much like investing in the stock market, a fruitful and continually optimized investment in composable commerce technology warrants an understanding of knowing when to hold, sell, or adjust how you are using your current assets.

### Monitor your tech stack for performance degradation

You wouldn't let your site run without any commerce analytics to track performance and sales, or go by feelings and spot checks alone to determine how you're performing. It might sound obvious, but the same is true for all areas of your tech stack. Supporting continued post-launch performance improvements requires ongoing maintenance and review.

One of the great benefits of a microservices-driven platform is that one short in the system will not take your whole site down as it does with a monolith. Finding the problem and fixing it should be comparatively straightforward.

That said, it can be difficult to find the point of failure. Just because sales are coming through and you aren't being bombarded with customer calls about being unable to check out doesn't mean there aren't issues. Similarly, just because you don't notice your systems are slowing down by observation doesn't mean it isn't happening.

Every piece of your tech stack should be scrutinized and monitored for performance changes. Not just in isolation, but in their connections as well. See where errors or dropped communications are most frequently occurring. See where speed is decreasing. Listen anecdotally or review support tickets to learn where your customers are finding friction. A modular architecture makes it easier to make incremental improvements and address stand-alone problems along the way, before they can snowball into larger concerns.

If you can address these issues, great! If not, that leads into an opportunity for re-evaluation of components.

### How does your tech stack work together and serve your needs, now and in the future?

Best-of-breed does not always mean best for you, which might become apparent post-launch as you look to scale. Some systems may check the boxes for all your needs on paper and may have fully served your needs at the time of launch, but as complexity increases and the need and desire for experimentation grows, gaps may begin to show.

Maybe your product feed management tool can no longer handle updates at the frequency that your inventory and catalog details are changing, resulting in potential customers receiving ads with outdated information. Or maybe you're planning to start accepting new payment types that don't integrate well with your current checkout or payment gateway. Or you've found that you have two vendors performing tasks that one of them is now able to take on seamlessly alone. Whatever the reason you're having second-thoughts about your tech stack, lean into them. Technology is ever evolving, as are your business needs.

A key benefit of composable commerce is being able to make these kinds of changes to continue to operate at scale, rather than being stuck with the stack you implemented because you have no option to change.

### Autoscaling: Don't just throw more power at your problems

One of the biggest benefits of a composable commerce platform supported by cloud infrastructure is autoscaling. Your platform can beef up or pare down resourcing as needed to handle surges and declines in traffic and demand.

As you're scaling, keep an eye on your usage. Even though autoscaling can keep your problems out of sight and out of mind, an increase over time in computing power can be an indicator of trouble and a ticking time bomb for a brewing large-scale infrastructure problem—regardless of if you're feeling the cost now or not.

There will be expected scenarios when your systems need to tick a little harder to keep up (traffic surges are one example). But if your services are overticking at an alarmingly high rate, and requiring a degree of power you can't account for, it's worth looking into.

Something in the code of your calls or connections is making your back-end work harder than it needs to, and that should be addressed before it spreads and impacts other areas. Have your development team take a look at when and where they started to see these unaccounted for surges to triage a root cause—and protect your future platform.

## Build vs buy considerations post-launch

To build or to buy? It's a question you probably asked yourself many times during your replatforming, but now you've had time to sit with your technology and assess the outcomes of previous build versus buy decisions. With the greater expertise you possess post-launch, you'll have a new view when it comes time to scale.

The advantage here is that now you have a pretty good idea of the types of custom work your team is good at, and what doesn't make sense to build from scratch yourselves. Likewise, you probably have a good feel for where an out-of-the-box implementation isn't a good fit and you need more flexibility than current market offerings provide.

When you're looking to add to or change any part of your tech stack in the post-launch stage, here are some assessments you should be considering:

**Level of customization required**

How much customization will this technology require, and would this level of customization be supported by an existing vendor? If the answers are "a lot" and "no", then you have your answer: build. But tread with caution. A specialized vendor that could support the high level of customization you need may be advantageous to go with, regardless of your in-house development capabilities. You can inadvertently build yourself into a tangled web of complexity that may end up costing more than an external solution in development time (and headaches) by tackling it in-house, so it's worth thinking about where it makes sense to offload effort to a vendor with a specialized focus.

**Value vs cost**

What is the value you intend to get out of a new system, and what would the cost be to custom build it vs buy it? Is there a difference in projected value that could be recognized from what could be built custom vs bought?

**Market examples**

Is this change unique to your business, or is this a common problem or use case that can be solved with technology?

**Additional considerations (aka X-factors)**

Are there other considerations outside of the technical best fit that might come into play when considering a custom build? Could this proof of concept bode favorably as an opportunity to flex your organization's technical chops in the industry? For investors? For awards or qualifications? If so, this could add weight to the "build" column, but with the caveat that it needs to be a lot of weight to counter the potential risks of failure.

CHAPTER 2

# Operations

Replatforming and building your website is the easy part. No, really. While the technological aspect may be daunting, you're operating in an area of controlled variables. You have your systems, you have your plan, and your focus is relatively clear of outside interference and the volatile ups and downs of live commerce. You're just building.

And then you launch.

Suddenly you're not just building. You're monitoring, analyzing, maintaining, and handling the many curve balls thrown your way by live operations—all while probably continuing to build. Product issues, supply chain mishaps, sudden changes in your market share that need to be addressed: these all have to be handled on the fly.

Sure, many of these are ultimately outside of the world of your commerce platform itself. But they still have to be dealt with. And just because they exist outside the platform, doesn't mean they can't be solved—or at least improved—by technology.

### Expand your TAM and continue to scale with a marketplace

Technology isn't just able to solve operational problems, it can also identify and enable operational opportunity. In a business context, these opportunities will really start to present themselves after you've been live for some time.

Take the example of a marketplace. A marketplace is a great, relatively low-risk way to test new products and enter new markets. It allows you to access and send third-party vendor products directly to customers on-demand, without purchasing and holding the inventory yourself or even involving your own warehouses. Modern technology to integrate a digital marketplace on your website can handle most of the heavy lifting for you, providing

immediate access to thousands of products that can be ready for purchase on your website following what is generally a fairly hands-off, one-time configuration to connect the marketplace to your ERP/OMS/PIM.

Marketplaces are especially smart to consider in the post-launch optimization stage, rather than in the initial replatforming, because their value will need to be tested in real-time. You can't do pre-launch testing on whether a new product mix you're bringing in will resonate with your customers. You'll need to observe this in real-time as customers purchase on-site. This is why a marketplace within a commerce stack is usually considered for more mature retailers with a solid composable commerce platform. It's important to have been live long enough to know where the areas of opportunity are, to be able to integrate a marketplace with relative confidence and ease. Once you're aware of these opportunities, a Marketplace will let you test out your hypotheses relatively risk free.

As technology solutions go, marketplaces offer a lot of upside, but nothing is perfect. Despite their myriad benefits, marketplaces will not be the right post-launch decision for everyone. They generally operate at a loss for the first while, which means incurring not only the initial upfront costs to launch, but also a period of time involving operational trial and error to find the right vendors and the right product mix to sell on your site before you start to see any ROI.

Even once you're past that stage, there are risks. With your own products in your own warehouses, you have full control. You can define and abide by fulfillment agreements with your customers, but that's not the case when third-party vendors are fulfilling the orders, which means there's greater risk involved. Your business must be able to support and plan to operate at a loss in those early stages, with the expectation that the investment of time, strategy, and money will eventually pay off for you with a huge, long-term ROI.

Any trial will inevitably come with risk, but better to take that risk online in an on-demand ordering system, instead of being stuck with a warehouse full of unwanted products.

### Inventory backup: Sourcing product through marketplaces

Supply chain issues have been rocking the world for the last few years, since the onset of COVID-19. We won't always be facing a once-in-a-generation pandemic and its effects, but supply chain disruptions are always a possibility in any commerce environment.

In fact, even if your supply chain can keep up, sometimes your planning can't. What happens when there's an unexpected surge in demand for a product? How can you make your customers happy and get them what they're after?

A marketplace can solve for that, too. Outside of any in-house custom products you sell, most likely your products are coming from a vendor,

and most likely they are not the only vendor selling that product. So long as your business agreements don't have you tied to one particular vendor, you can look into using your Marketplace to connect with other vendors selling the same product that's out of stock in your warehouses, and have them fulfill the order to the customer directly.

You can implement an online call to run and see if an item can be fulfilled through a marketplace as an automatic backup when a product is out of stock. And, this can be used as a tool in-store if you enable your sales associates with devices linked to your marketplace system.

### Inventory backup: Stores as micro-fulfillment centers

If the marketplace route won't work for you, either due to the business model or due to the uniqueness of your product or vendor agreements, there are other ways that technology can improve operations and get your product to customers despite inventory issues.

One is to use your stores as micro-fulfillment centers. Generally, your online inventory levels will be connected to your warehouse inventory. The website will scan your warehouse database for the matching product a customer is browsing online and validate that enough are in stock for them to purchase. Then, when the customer completes their purchase, the fulfillment cycle begins, and the order is flagged for selection in the warehouse.

The warehouses serve online sales, and they serve orders for your physical stores, if you have them. Naturally, the inventory in stores will run leaner than your warehouses, and generally your stores will be placing orders for just the amount of inventory they plan to sell with some buffer, so they aren't sitting on huge amounts of unsold inventory.

However, in the depths of supply chain issues, more and more retail businesses have been turning to their stores as micro-fulfillment centers. For the overall success of the business, it has become imperative that all stores and warehouses talk to each other, and help each other fulfill orders.

To be able to call inventory from stores, and to be able to identify which store it's coming from, will mean additional complexity in your back-end platform. There will likely be more logic added on to that complexity in order to assess which store to pull from first based on a number of criteria like proximity to delivery address and relative store inventory levels. But when done correctly, the benefit here is a smart, self-sustaining operation that will allow you to fully optimize the inventory you already own, and keep your customers happy.

### Inventory backup: Alternative options

Despite your best efforts to get your customers out-of-stock product, sometimes it's just not possible.

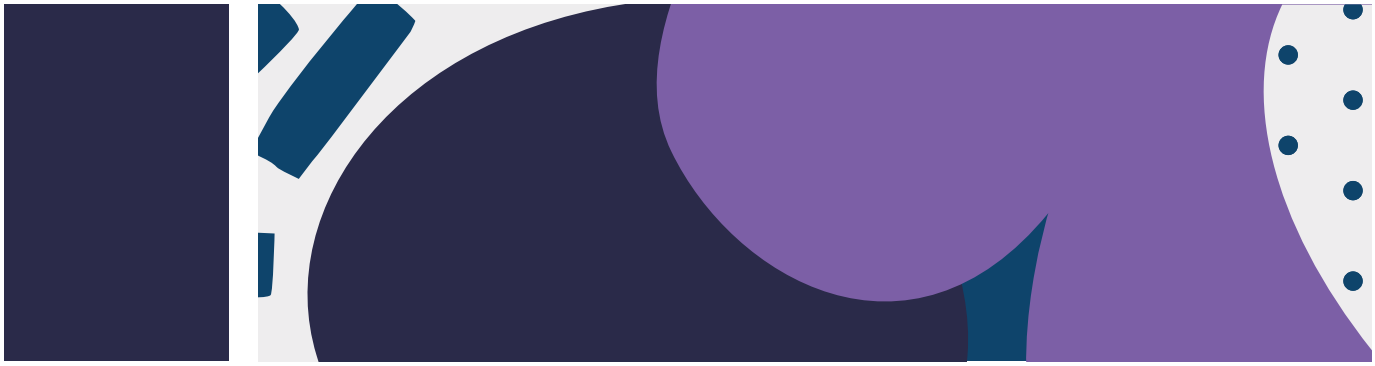
Though many people believe nothing can beat the original, there are alternative 'next best' options that can make it work for your customer in a crunch. Who knows? The next best might even end up being better— that's the beauty of discoverability.

There are plenty of tools out there for collecting data points on your products and on your customers' previous purchasing and browsing behaviors that will enable you to make smart recommendations on similar products they might like. There are even some that can scan using visual AI recognition to find the closest match on your website to what the customer has been browsing. Your in-house data scientists and developers may be able to build out this sort of machine learning algorithm themselves.

This technology can be hit and miss, certainly, but the goal here is to continue to save and win sales for you at relatively small—or perhaps no—incremental cost to maintain post-integration. In this case, any ROI is a good ROI!

CHAPTER 3

# Team Management



They say teamwork makes the dream work, but a team that's not structured optimally to serve their product or goals can ultimately become the downfall of an entire operation.

You can safely assume there will be a learning curve and some inevitable friction with how your teams operate and are structured when transitioning to a composable commerce platform, and the change management needed to match the new technology workflows are significant. Though they will diminish greatly as your team grows accustomed to your new platform, you should still expect some of those challenges when continuing to run at scale, innovate, and grow, too.

The good news is there are some strategies to set you for success—between, across, and within all areas of your business—so that your teams are all working at their peak towards a shared set of goals for commerce success.

### Have experts across platform technologies, but beware of knowledge silos

It's not possible for any one person to be an expert in every aspect of your business and platform, but deep expertise is crucial for the success of a technology solution. Instead of having the whole team striving to master the entire end-to-end requirements, assign each person an area (or areas) of expertise. By giving your technologists space for dedicated focus on one or two areas, they'll quickly begin to master their responsible microservice, leading to ease of maintenance and optimization.

That doesn't mean they only look at their slice of the pie. Each team member still needs to have a strong understanding of how to work with the system as a whole, and should be documenting more specific or nuanced knowledge that can't be gleaned easily. It's still very important to build resiliency here, for a number of reasons.

Firstly, no one wants to do the exact same types of tasks  every single day. Sure, being an expert is great, but if you have one of your engineers focused only on your loyalty engine day in and day out, you are not going to keep them engaged and energized, which puts you at risk for losing an expert in your business.

If you have a sole expert who is the only one who knows how to do X, Y, and Z, you're setting yourself up for disaster when there are shoes that cannot be filled. The risk becomes greater the further along you are in your post-replatforming journey, as more and more custom work and integrations are done within and between your systems.

Outside of attrition, as a general best practice across any line of work, siloed and non-contextual knowledge is not conducive to a high-performing program. Your commerce platform output is the connected workings of all of your integrated teams and systems together, not a container of many separate and unrelated systems.

All of your teams should have at least a cursory understanding of the work your other teams perform. When it comes to system knowledge, all of your developers should have more than a cursory knowledge of most, if not all, of your

integrated tech stack. Even if they're not working in each of the systems daily, this general understanding of the overall platform architecture, what they're integrating to, and what the downstream impact of changes will be, is necessary for making informed architectural decisions.

This is particularly crucial in a post-launch context as you are supporting a live website. Any changes you make could have immediate impact across a number of other components, which can then impact the performance of your website. Cross-platform understanding within all teams is essential to ensure you are not making any breaking changes that will halt live sales.

### Train strategic leads who understand the broader business context and plan for the future

On a related note, your technology and business units cannot operate in isolation. Anyone who works in software delivery knows there can be many different interpretations of the same acceptance criteria, and many different ways to get there. So while the outcome might be the same, there are numerous implications, limitations, or opportunities granted based on technical decisions made to arrive at that outcome.

That's why scalability and future growth plans should be top of mind for everyone and integrated across all teams, not just those on the business side.

Knowing your company's strategic initiatives as well as the short- and long-term goals will ensure that your solutions architects are informing their plans with this knowledge. This will ensure their plans serve the broader business imperatives instead of operating to only serve micro-level goals and tasks at hand. You will prevent the creation of a disjointed platform of features or systems updates and will instead encourage a scalable, unified experience for your employees and customers alike.

Teams in a scaled commerce business should be preparing for the future, not just operating with the present solution in mind.

For example, immediate needs might dictate support for one currency, but if global expansion

is in the five year plan, future needs might dictate support for multiple currencies. It's important not to engineer yourself into a corner where you'll need to completely rework all the functionality you've built.

It's important to take due care in how you organize and educate your teams to ensure their focus doesn't stay within their microservice alone.

### Promote a shared and clear understanding of ownership between teams

As organizations grow, it can become harder to know who owns what. This goes for external vendors as well (in some cases, especially for vendors). Throw in the added layers of confusion and ambiguity that inevitably come the longer you've been live and the many different work groups touching many different components of the platform, and the hot potato of responsibility can start to get tossed around pretty quickly.

But the good news is that implementing and logging clear RACIs for your teams indicating ownership and responsibilities across departments and vendors will allow you to continue to scale with confidence and clarity, and always know who to come to about any area of the platform needing reassessment—and who ultimately owns the outcome of that experience.

Organizing teams by responsibility and experience, rather than technology, helps promote the understanding needed for continual success. And with an integrated composable commerce platform made up of many different teams, vendors, and technologies, that's essential because you're all a part of the same outcome. There is no "us vs them".

As a bonus, this ties into similar strategies that should be followed for product management.

When you start to work on a composable commerce platform with many vendors in the mix—and in some cases many vendors touching different shared parts of the purchasing journey—it can be easy to point blame and shirk responsibility even inadvertently, which becomes a blocker to efficient operations on a large scale.

For example, if three different microservices work together to power inventory and a discrepancy in the output is observed, who is responsible for owning this investigation? It becomes very easy to assume someone else will take care of this.

If you're the owner of one of the three microservices and don't immediately see an issue on your end, knowing there are other vendors involved may lead you to stop your own system investigation preemptively, assuming the problem falls elsewhere and letting them do their due diligence first.

The best way to mitigate this is by ensuring a centralized understanding of ownership, as outlined above. It's important to promote an experience-driven focus with your teams, and that at the end of the day you'rre all supporting positive outcomes of your area of responsibility together. That said, it's very important to have a single owner of all decisions to be made for each experience, because if everyone is accountable, no one is.

### Vertical product management: Think about experiences, not technologies

Organizing functional product teams for a composable commerce platform should be driven by experience first, and supported by technology second. Your customer cares about their start-to-finish experience acquiring, viewing, and redeeming loyalty points— they don't care about the engines that make it happen.

In other words, if experience is the vertical bars of the product management team setup, all those crucial, supporting horizontal rungs on the ladder are the different technologies making it all happen.

The goal should be to eliminate technical bias that can come from a product management function owning a singular system. What happens when it comes time to replace an element of the system you've built, as should be the case in a flexible composable commerce architecture? Undoubtedly there would be friction and vested interest from a product team to keep 'their' system and show its worth— even if they logically know it isn't in the best interest of the business. The best way to combat this is by encouraging a holistic view of the business-driven outcomes.

When you are in the replatforming stage, most of your work is necessarily technology focused as you work to implement necessary components of your platform like your ERP, PIM, OMS, and other supporting technology.

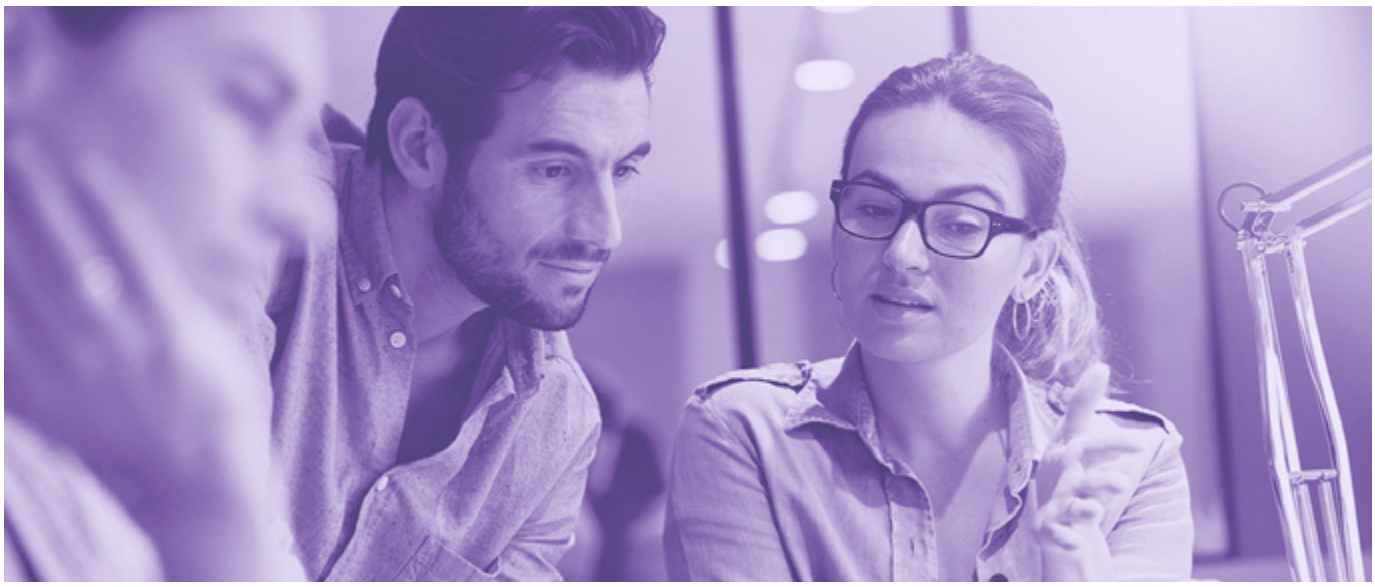
But post-launch once the basics are stood up, it's important to think holistically about the output of these technologies together, not in isolation. What aspects of the customer experience are they serving together, and what are the team's goals for that experience, not for individual systems.

Much as you should be continually evaluating the efficacy and relevancy of your tech stack, as outlined in the Technology chapter, you should be doing the same with your team organization and the structure and scope of your product management verticals.

As technology, the retail space, and your customers' behaviors and expectations continually change, so too should your product management teams, and the scope of the experiences that they serve.

CHAPTER 4

# Content



The back-end of your commerce platform and your available products to sell can be relatively easy to scale once you get going. With a well-engineered platform and infrastructure to support growth, you can go from 1,000 to 10,000 to 100,000 products online in a snap. Especially if you've brought a marketplace into the mix for virtually immediate scale.

But what about the content? The copy? The images? Promotional content not only for the web but for social channels and newsletters and in-store features and digital billboards? By nature, that is not so scalable. There's an inherently (and necessarily) individuated aspect to all creative content that you can't exactly dropship in.

As always, technology and strategy can't solve all our problems, but they can certainly help, especially in the context of post-launch continuous scaled content generation.

### Design system: Maintain it (and get one if you don't have one!)

A design system is a need-to-have for any mature digital business with a growing content and design team. Hopefully, you built one or refined your existing design system during your replatforming, but if it was deprioritized until the dust settled, the time to act is now.

A design system is a coded, live repository of branded components for repeatable use across multiple mediums. This means your design and content teams won't need to create from scratch every single time they need to update a new component or piece of content, and ensures consistency across all of your content updates. This will allow you to grow your content teams to produce infinitely higher amounts of content without sacrificing quality or worrying about inconsistencies between content creators. Even without growing your team, you can significantly scale the output from your existing team by enabling them to create many more pieces of content at minimal incremental effort.

### Scalable content generation: Use your CMS to its fullest potential

With your design system allowing your content teams to easily grab and adjust from existing design guidelines, your CMS will round out the perfect team to unlock seamless scaled delivery of content across live destinations.

Think of your design system and the components within as the building blocks, with your CMS as the house of all those components, brought together to form full page content.

Your design system should be able to integrate directly with your CMS as one unit, so that the content types within your CMS are your design system components, ready to copy, edit, and publish in a matter of minutes. Your CMS will allow you to create one version of a piece of content that it will then optimize for formats that can be published to multiple different front-end displays or locations, like desktop, mobile, social feeds, and more. Scaled content generation at its finest!

Where you may continue to find efficiencies of scale down the road is if you end up building out multiple digital products— for example, a number of partner websites, or multiple international subdomains, for content and products tailored to your customers' specific locations.

You can share content type structures within your CMS across all of these instances, adjusting in-line with differing design systems and brand guidelines where applicable. This means that both your developers and your content creators can take advantage of component setups that were already completed in your replatforming across a growing number of distinct products.

Don't be afraid to look for the possibility within your CMS. Most headless CMSs are extremely flexible, and they're able to work with you and your developers to go far outside of the box in terms of the capabilities they support.

Experimentation and creativity to support scaled content generation through your CMS should really just be starting, not stopping, after you launch.

However, remember that technology alone will not drive efficient operations. It is important that content workflows and processes are clearly defined across your teams. There are many agencies who can support you through content modeling workshops to define the content workflows and governance that will work best for you.

### Content for new markets

On the topic of international subdomains, expanding into new global markets is another area where scalable content is crucial.

You need to ensure that your branding is consistent across all of your international domains, but that the language, messaging, and presentation is appropriate for each culture. Where other aspects of the website can be straightforward direct translations (product names, pricing and currency display, etc.), often the custom content piece requires a little more care.

It goes without saying, if you can get away with the same content across domains with the only change made being a translation (and lots of services can automate that for you) then go ahead and do it. The easiest way to scale your content to serve new markets is to copy as much of it as you can.

However, before making this sweeping decision, consider cultural expectations and differences.

Some cultures favor text heavy, informational messaging, where for others the snappier the better.

Certain images or advertisements may not be socially or legally acceptable in some countries. Certain compliance or regulatory information may be required to be on easily accessible display for some countries and not others. It's not always as straightforward as a 1:1 translation.

It's important to be aware of these cultural and legal differences for content generation on an international scale. The easiest way to make sure these are accounted for while operating as efficiently as possible is to do that legwork once, and make checklists for your international markets.

It might be easiest to group together all instances that can have the same content as your local site, translated to their own respective languages.

The remaining markets requiring individual care in content generation can have their own checklists. Where patterns appear, you might want to consider adding components into your design system and CMS that follow guidelines for the markets they're aiming to serve, which can act as scalable templates for future updates as well.

### Support content: Letting technology work for you

Outside of promotional content, all commerce sites should have support content as well, which can present in the form of features like FAQ pages and opportunities to chat live with support agents. This type of content can and should be scaled as well.

The more you can enable your customers to gather their own content and information, the easier it will be for you to scale. Chatbots are a great example of this. Nothing will beat getting to connect in real time with a live support agent, but in recent years chatbots have come a long way in their intelligence and internationalization.

To continue to scale your business and have your support scale at the same pace without needing to hire 24/7 support line staff across the globe, look into programming a chatbot with frequently asked questions, responses, and helpful links. These programmed responses can be easily and automatically translated, to support various international audiences in a few clicks.

Where you can, look at continuing to implement as much self-serve interactive content on your website as possible. Tools like order trackers, loyalty point checkers, gift card balance checkers, and more will allow customers to support themselves with content, saving your support staff time to focus on trickier issues as you grow.

CHAPTER 5

# Customer Data

At the core of all of your focus as a retailer—whether your focus falls more on the business side, the technical domain, or somewhere in between—is the customer.

The customer informs your replatforming decisions, but they aren't present in the build when your new website has not yet launched. After deployment, the customer returns to front and center in the digital space, and you need to be able to serve them at scale, continue to optimize their experience, and lean into new features and integrations that will serve them, with the help of collected data.

This is why an integrated omnichannel retail customer data strategy is integral to serving your customers the best you can to keep your business booming.

It's also worth calling out the complexity that surrounds product and business data, and the challenges that come with continuing to keep this data clean and leveraging it to its fullest extent to optimize your operations. While this section centers around customer data, we will touch briefly on using product data in partnership with customer behavior indicators for optimized selling.

While continued stabilization and handling of product and business data through retail platforms is out of the scope of this e-book to cover in great depth, this should be acknowledged as another key pillar of your company's data strategy.

### Importance of centralized customer data sets post-launch

When you migrate from a monolith to a platform of microservices, by design your services will speak to each other, but their data points will be self-contained.

While this makes for optimal architecting and technical flexibility and security, it can add significant degrees of complexity when it comes to capturing and synthesizing a full-picture view of your customers and their behavior from data points.

That's where a Customer Data Platform (CDP) comes into play. A CDP should be a post-launch priority for all retailers with multiple data sources, a need to target and personalize experiences for their customers, and the ability to prioritize their marketing and development efforts from this data.

Once the legwork of integrating all of your custom sources and destinations is complete, you will have an intelligent data aggregator that can give you a complete view of your customer from all angles of engagement that you can use to inform marketing outreach, targeting, and future product decisions.


A recurring theme throughout this section of the e-book is continual reevaluation post-launch for improvement opportunities across your tech stack, your team structures, and your product management verticals. Customer data is another crucial area you should be constantly monitoring and leveraging to be able to serve your customers what they need, when they need it, and how they want it.

As you continue to grow your platform, ensure you're keeping an eye out for new events that should be tracked through your CDP to continue to cultivate more and more refined views of your customers and their behavior.

### Scaled targeting as your customer base grows: Activating your customer data

All customers are looking for a personalized experience when they're shopping. Whether on the web or in-store, they want recommendations tailored to them. One size fits all will not win over customers, and in the increasingly competitive e-commerce space where customers are presented with an infinite spread of alternative options, losing customers with no personalization—or worse, bad or invasive personalization—can be especially damaging.

The answer, yet again, is that you let technology help you. CDPs are able to aggregate millions of data points and identify patterns across millions

of customers. They can group them together into similar customer types, create or work with existing personas, and integrate with AI tooling to automatically generate opportunities for individual outreach personalization. Through data-backed programming, your CDP (in partnership with other activation and outreach tooling) can help you present emails, texts, pop-ups, or recommendations to the right customer, in the right place, at the right time.

While this level of personalization is capable of running on its own once it has been programmed with enough real data to be able to do so, it can also be used to enable humans. Your sales associates—online, in-store, or anywhere in between—can access curated customer data profiles and information sets from the comfort of their own phones, pulled up in less than a minute to provide timely support and present them with any information they may need about their customers, even if this is their first direct encounter.

Capturing, leveraging, and activating customer data as you continue to scale your business post-launch is one of the most valuable assets you have at your disposal. Ensuring you are using it in the right way to connect with your customers is crucial to continuing to scale a successful business and positive customer experience.

### Product data and live customer purchasing behavior

Live data that you capture about your customers post-launch can tell you valuable information not just about their behavior and personas, but also about your products.

CDPs are positioned if you set up your sources appropriately to take in a large degree of information surrounding your products and how customers interact with them.

There are a number of personalization vendors designed to support scaled targeting and improved product recommendations for your customers following your launch, with a focus on optimizing product offers and mixes, to put in front of the right customers at the right time.

This type of data will identify what types of products are heavily viewed but low converters; the most commonly stated reasons for return on which types of products; which kind of products are typically purchased together (identifying potential bundling or upsell opportunities); and when a discount offer of a certain percentage on a particular type of product will result in a high enough increase in sales to turn an ROI without taking a critical margin loss, as just a few examples.

The more of this type of data you capture and leverage, the more successful you'll be at scaling your merchandising for customers based on live, ever-changing data, taking the guesswork out of your product presentation mix.

### An omnichannel retail view of the customer for scaled commerce experiences

Another benefit of an aggregated customer view with a CDP is the ability to merge physical and in-store data points for a true omnichannel retail view of your customers and their behavior. Long gone are the days when e-commerce and in-store shopping operated in isolation.

More often than not, digitally-driven tooling will be used to support in-store selling, or an online browsing session will end with a booked fitting room, appointment, and physical sale. This blend of the digital and physical spaces into a singular commerce experience needs to be reflected in a holistic customer view and data set.

Though their shopping behavior may differ by the medium, your customers aren't two separate shoppers online and in-store, and it's time we stopped treating and monitoring them as such.

Unlocking omnichannel retail potential starts at the source: the data you can derive from your customers to learn more about how they shop through and between different touchpoints. With these data insights, running scaled commerce experiences of the future is right at your fingertips.

### Conclusion

The five foundations of post-launch scaling and innovation shared in this section are just the starting points to set yourselves up for continual scaled advancement. In the ever-changing commerce space—where more than ever physical, digital, and virtual experiences begin to blend—a future-proofed, scalable strategy and the teams, processes, and technology to support it are crucial.

With your composable commerce tech stack you're perfectly positioned to experiment and grow far beyond the point you're sitting at now, even though that probably already feels like a pretty great spot. The opportunities are unlimited.

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