

# Taming the Tech Complexity Beast:

A Pragmatic Approach to Mastering Headless and Composable Commerce



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We've all been there before: the desire to improve customer experiences or add new features clashes with system limitations. Even changes that should be simple take too long and are too risky. Flexibility to support the evolving business is all that we seek, but instead, all our resources are allocated to just maintaining the current services.

But although migrating from old legacy systems to fully best-of-breed may seem liberating, you might end up stuck

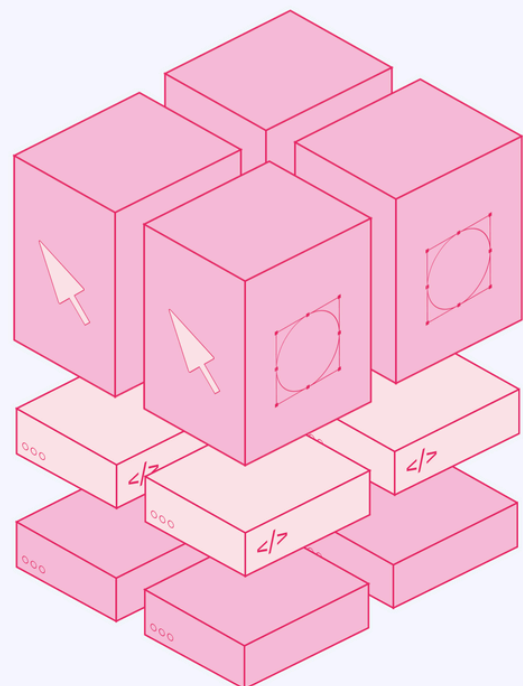
with a complex architectural monstrosity, risking security and raising maintenance costs once again.

Join us on this read to understand the pitfalls of unlimited freedom and escape from the complexity that haunts all developers.

## From Monolithic to Headless to Composable

The maintenance, reliability, security, financial, and opportunity costs associated with legacy, monolithic digital commerce architectures have become unsustainable for retailers, distributors, and brand manufacturers. According to [analysts from Gartner Research](#), "monolithic legacy applications and the technical debt they impose often prevent organizations from moving quickly and achieving their desired business outcomes." The explanation is quite straightforward: their stack is weighed down by point-to-point interfaces, complex middleware logic, and a reliance on backend systems that make them fragile and hard to adapt.

Many of the restrictions of legacy monolithic systems stem from their architecture as single, indivisible applications. Even minor code changes require refactoring the entire software stack, leading to downtime and lost business opportunities.

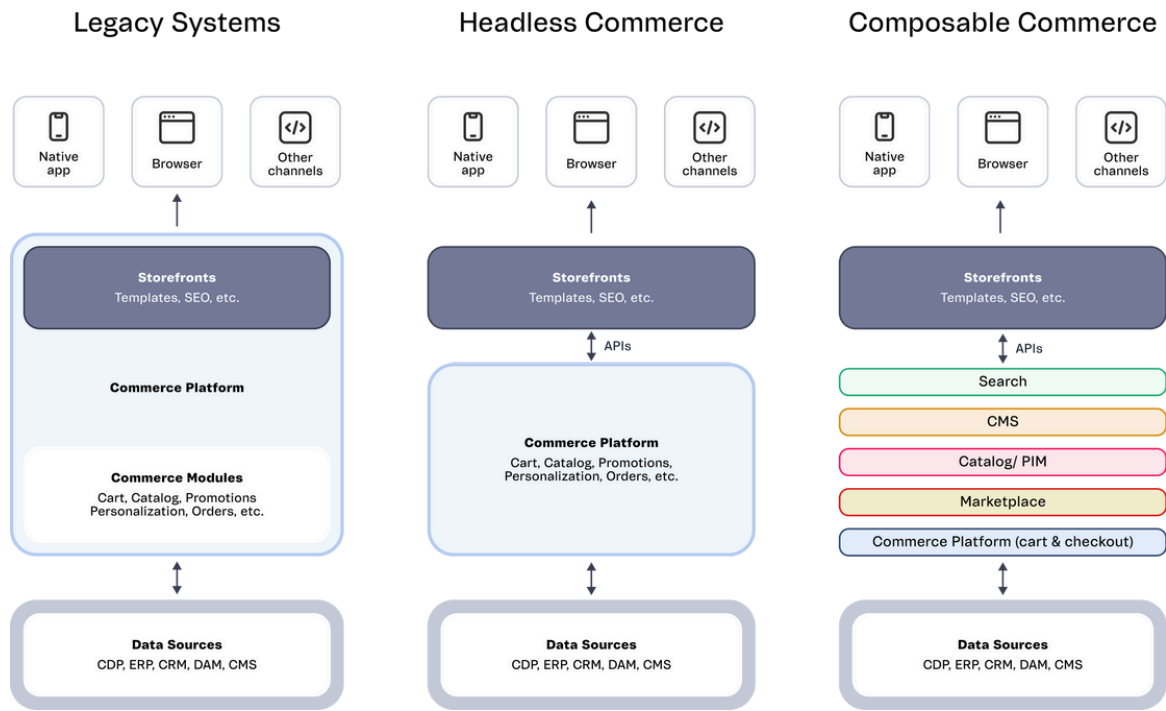


This forces developers to focus on maintenance rather than on value-adding features, particularly in the customer-facing experience layer. Consequently, legacy commerce platforms have constrained B2C and B2B online sellers from adding new channels and fostering innovation.

Trapped in a maze of inefficiency and chained to fragile systems, merchants sought a way out. That's where the headless and composable commerce paradigms came in. Headless digital commerce architectures decouple the frontend presentation layer from backend commerce services, allowing each to evolve independently. This separation simplifies development, enables teams to work more autonomously, reduces the risk of system updates, and provides greater freedom to build unique experiences and add new functionalities.

Digital commerce platforms supporting headless commerce are API-first, facilitating connections across various touchpoints, including desktop, mobile, social, IoT, and video commerce.

Composable commerce architectures go a step further by enabling merchants to selectively compose and integrate best-of-breed applications and services, creating a tailored commerce architecture across the front and backend. This approach frees online sellers from being locked into a single vendor, allowing the use of custom or purpose-built third-party services for functions like content management, order management, site search, product information management, pricing and promotions, and marketing.



It's the perfect scenario: all the freedom you need to build and integrate whatever you want. Right?

Well, not quite.

# The Hidden Pitfalls of Unlimited Freedom

When migrating from monolithic legacy commerce systems, many retailers, distributors, and brand manufacturers fall into the trap of over-correcting by prioritizing their newfound unlimited technology freedom. However, composing an ecosystem that integrates many third-party best-of-breed applications requires custom user interfaces and intricate middleware to ensure interoperability. These applications often have different code bases, data models, and development paradigms, making integration challenging.

This means that the flexibility and customization benefits come at the cost of overwhelming technical debt, integration hurdles, and maintenance challenges. What's more, highly complex fully best-of-breed commerce architectures demand skilled and expensive development resources, requiring months of development work to get projects up and running.



"The projects are too difficult, they take too long, and they are too expensive. It takes too much effort to even get back the functionality they had before."

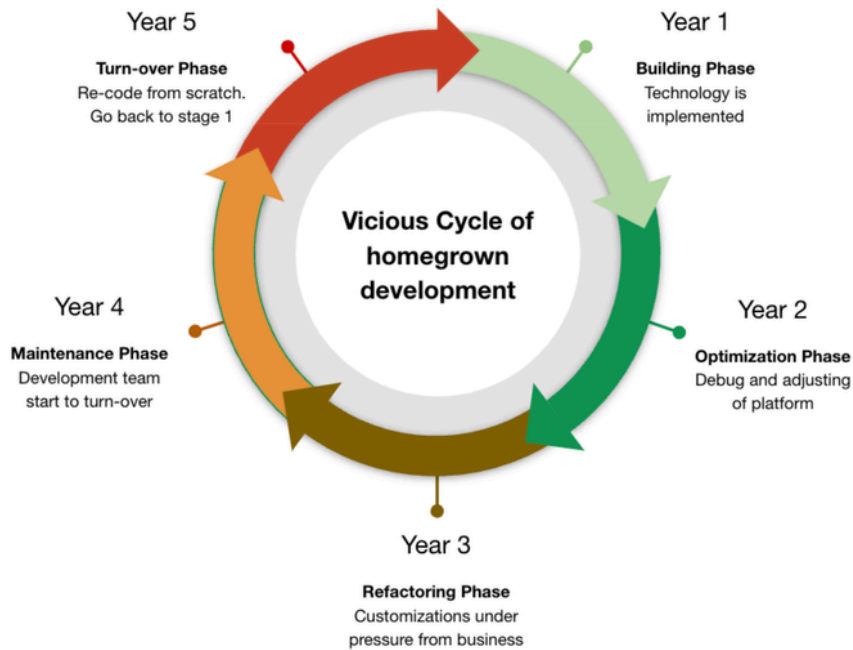
Emily Pfeiffer, Forrester's principal analyst,  
in an interview with [The Gazette](#)

Over time, maintaining the expanding stack becomes a daunting task. Key developers and resources come and go, taking critical knowledge about integrations and customizations with them. New developers struggle to maintain inherited code and feel compelled to refactor, hindering progress and architecture modernization.

These systems also require firms to orchestrate and maintain every aspect of their tech ecosystem. The maintenance burden becomes unmanageable, causing costs to skyrocket.

Organizations can find themselves right back where they started: with a system that is difficult to evolve and expensive to maintain.

So while embracing fully best-of-breed commerce systems might feel like breaking free, organizations venturing down this path can quickly find themselves ensnared in the clutches of complex architecture once again. This intricate system compromises security, increases expenses, becomes a maintenance nightmare, and proves resistant to change—which can be a death sentence for brands, distributors, and retailers in today’s era of profitability. Finding balance is key.



Source: VTEX, 2024

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Digital businesses will pivot to reengage with commerce solutions that balance ecosystem management, business user experiences, and function-first tech buying enablement.

Source: Forrester Research's [Predictions 2023: Commerce report](#)

# The Pragmatic Composability Approach

Both headless and composable commerce paradigms offer tremendous benefits, enhancing flexibility and adaptability. But when you adopt a purely best-of-breed approach without a rollback button, you're committing to invest time and resources in elements that might not deliver much value to your business.

If organizations don't want to fall behind in the ever-changing ecommerce landscape, they need to be able to test the capabilities they want without putting their architecture or business at risk. In other words, compose elements that provide a tangible business advantage without putting their operation's time, security, or investments on the line.

**Pragmatic Composability** is the digital commerce architectural approach that empowers brands, distributors, and retailers to leverage the native services of an ecommerce platform for their core needs while selectively composing custom-built and best-of-breed applications that will deliver a clear competitive advantage. This approach encourages a "crawl, walk, run" strategy, focusing on going live with a minimum viable architecture to generate revenue before incrementally decomposing and recomposing components to deliver measurable benefits.



"In a world where commerce grows more complex by the day, pragmatic composability stands out by offering businesses a way to streamline their tech stack, integrating essential tools in a unified platform while retaining the flexibility to extend through APIs."

Heather Hershey, research director for  
IDC Worldwide Digital Commerce practice

# Build Less and Test More

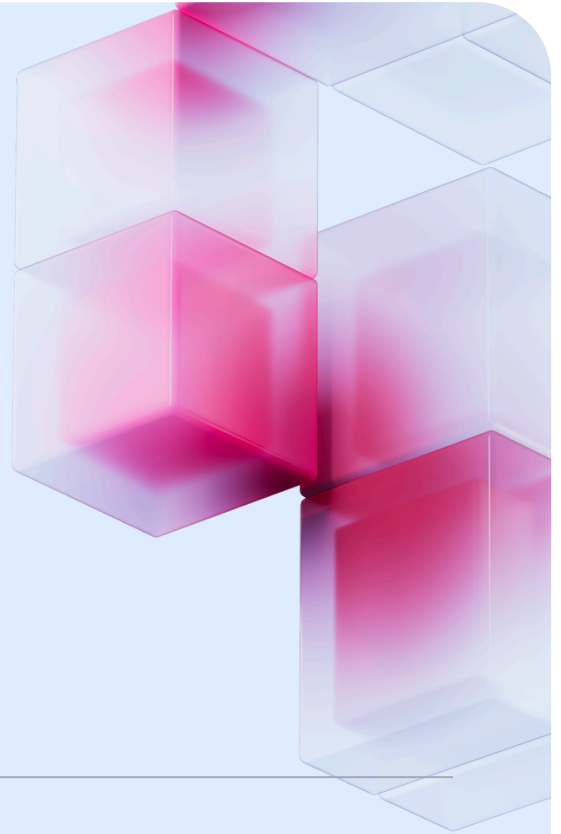
Executed correctly, pragmatic composability results in speed of deployment, flexibility, lower maintenance, and reduced total cost of ownership. It allows businesses to **build less and test more**, ensuring long-term success.

	Traditional Hosted SaaS	Fully Best-of-breed	Composable and Complete
Description	Readymade ecommerce platforms cater to SMBs by facilitating fast implementation through templated builds, while limiting complex customization due to inherent functionality constraints.	Provide customizable, API-driven ecommerce ecosystems, integrating best-of-breed services with a focus on flexibility and customization, but increase integration complexity and technical overhead.	Blending opinionated “out-of-the-box” capabilities with modular enhancements, these platforms upgrade merchants from costly legacy monoliths for global commerce needs without extensive custom software.
Fast time to market			
Extensibility			
Ability to test 3rd party apps			
Ease of integration			
Ability to launch new channels			
Low TCO			

Source: Interviews with System Integrators, 2023



# Forward-Thinking Organizations Have Already Migrated



In their "Predictions 2023: Commerce" report, Forrester Research recommends that digital businesses prioritize an architectural approach that balances ecosystem management with business user experience and commerce functionality. Brands, distributors, and retailers who have embraced Pragmatic Composability are already reaping the benefits of this forward-thinking approach.

The **Total Economic Impact™** (TEI) study conducted by Forrester Research on behalf of VTEX identified the following quantified benefits from the interviewed companies that migrated off their outdated commerce platforms:

USD  
**5.8 M**

in digital commerce  
platform cost savings

**20-50%**

more efficiency in  
marketing operations

USD  
**17.1 M**

in ecommerce  
growth

**20-50%**

more efficiency in  
developer and platform  
support efficiency

## Carrefour

Take **Carrefour**, the renowned French multinational retail and wholesaling corporation, for example. With a vision to emerge as the premier ecommerce grocery provider in Brazil, Carrefour embarked on a comprehensive digital transformation journey.

The cornerstone of this strategy was the development of a customer-centric, agile, and scalable platform. The outcomes were remarkable, with a notable **30% increase in order conversion rates** and an impressive 168% surge in the Net Promoter Score (NPS).



"Being able to pick and choose what we want and what we don't want buys us time, gives us optionality, allows us to build the best economic model. It allows us to focus on the things that are the difference makers for the business."

Sam James, Chief Digital Officer  
at Group Carrefour

Picking and choosing the right elements in your digital commerce architecture isn't just smart—it's the secret sauce for speedy success. Ignore it, and you might find yourself playing catch-up in the fast-paced digital game.

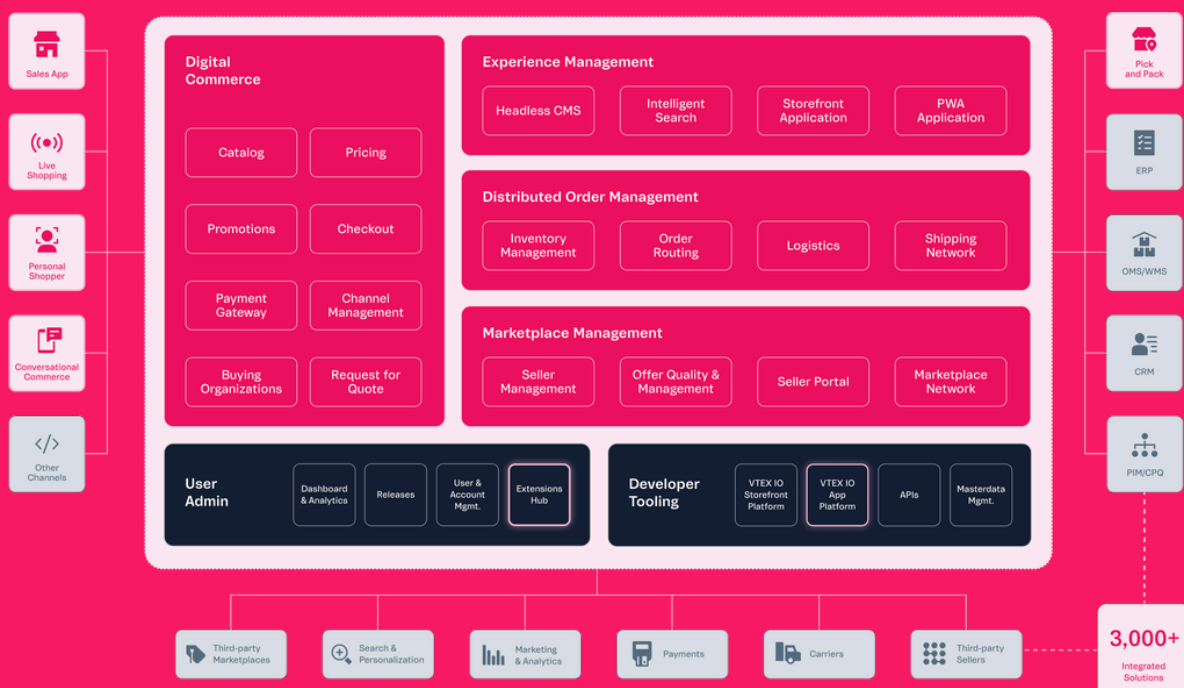
# VTEX: Composable and Complete

To realize the vision of Pragmatic Composability, VTEX offers a composable and complete solution. Our platform encompasses core digital commerce services, including experience management, order management, and marketplace management. With VTEX, you can get up and running quickly with our native capabilities and customize where it makes sense for your business. VTEX allows for seamless integration of third-party solutions, enabling merchants to test and optimize their commerce architecture. The option to revert to VTEX's native services ensures stability and adaptability in commerce operations.

VTEX's approach reduces tech stack costs relative to a merchant's online GMV. By utilizing VTEX's out-

of-the-box functionalities and retaining only the most effective third-party apps, merchants can save considerably, potentially doubling their business profit. This cost-effective strategy underscores VTEX's commitment to providing a scalable and efficient commerce platform.

Whether you are migrating from a legacy tech stack, a fully best-of-breed commerce platform, or launching an ecommerce business for the first time, avoiding complexity is the path you want to take. VTEX's composable and complete platform evolves with your business and doesn't lock you into a single vendor or architecture. More efficiency and less maintenance without all the risk, cost, and complexity.



# Conclusion

Pragmatic composability is a strategic approach to refining commerce architectures, merging best-of-breed components with native core commerce services. This calculated decision-making is essential to finding the balance between customization and maintenance overhead and forging a sustainable and cost-effective commerce architecture. Incorporating a composable and complete platform like VTEX can greatly enhance operational agility and long-term success in the ever-evolving ecommerce domain.