

Choosing the Right Path to Composable Commerce

A Practical Guide to Building a High-Performing,
Flexible Ecommerce Infrastructure



RED VAN



From Traditional to Composable Commerce

Adapt, Evolve, and Scale on Your Terms

Composable commerce is a flexible approach to building digital shopping experiences using interchangeable, handpicked components instead of relying on a single, all-in-one system. It allows retailers to choose and combine different tools and services — like product management, checkout, and content management — based on their unique needs. This approach offers more customization options, faster updates, and the ability to quickly adapt to changing market demands. With a modular approach, composable commerce means you're no longer locked into one platform — your tech stack evolves with your needs.

Brands and retailers seeking agility, scalability, and performance in their digital commerce operations will find this with a composable architecture. While implementing composable solutions within a Salesforce Commerce Cloud (B2C) environment requires careful planning and execution, the potential benefits, particularly for large enterprises, are substantial. However, organizations must carefully assess their resources, technical expertise, and digital maturity before embarking on a full-scale composable transformation. An incremental approach can mitigate risks and deliver value at each stage of the transition.

This guide compares three ways to ecommerce platform delivery:

Solution Accelerator (Red Van's Autobahn) - focuses on optimizing an existing Salesforce Commerce Cloud storefront.

Headless Commerce with PWA kit - provides a balanced approach, using Salesforce's PWA kit to deploy a composable storefront to enhance performance and flexibility without extensive custom development.

Fully composable - offers maximum flexibility by leveraging Salesforce Commerce Cloud's APIs to integrate custom-built components.

Each approach uses Salesforce Commerce Cloud and its services to provide a flexible yet high-performing online shopping experience. Salesforce Commerce Cloud with Autobahn emphasizes a traditional model where the platform handles all aspects of the delivery process, including user interactions and data management. Headless leverages a decoupled architecture where the storefront and the back-end systems operate independently, enabling greater customization and scalability. Fully composable focuses on modularity and flexibility, allowing developers to build custom solutions by integrating different components across the commerce tech stack. Each approach offers distinct benefits and challenges, depending on the specific needs and resources of the organization.

Traditional Commerce Accelerated for Maximum Performance and Minimal Development

Most ecommerce sites today are built on traditional, out-of-the-box platforms like Salesforce Commerce Cloud. These platforms are reliable and well-tested, reducing both risk and costs. While they may have some limitations, they still offer the flexibility needed to support a modern ecommerce business.

Salesforce Commerce Cloud provides a strong foundation through its Storefront Reference Architecture (SFRA), offering ready-to-use templates and a blueprint for building and launching a site. To further enhance this, ecommerce operators have also adopted “solution accelerators” like Red Van’s Autobahn to extend Salesforce Commerce Cloud’s capabilities and tap into a broader ecommerce ecosystem.

Autobahn is all about speed and efficiency, helping to connect the dots and create a comprehensive, modern commerce environment. It covers everything from storefronts to content management, promotions, and more while offering pre-built integrations to third-party technologies like payments, tax, and fraud prevention. This makes it easy to expand ecommerce operations. Besides speeding up delivery, Autobahn simplifies site configuration and management.

In the context of composable commerce, an accelerator like Autobahn is an ideal first step. It builds on the existing functionality of Salesforce Commerce Cloud, layering on new functionality while integrating additional features from various third-party services. This approach minimizes development effort, making it quick and efficient to launch and manage ecommerce sites

Advantages of the Traditional + Accelerator Approach

- Fastest time to market with an optimized, high-performance storefront
- Full support from Salesforce and Red Van

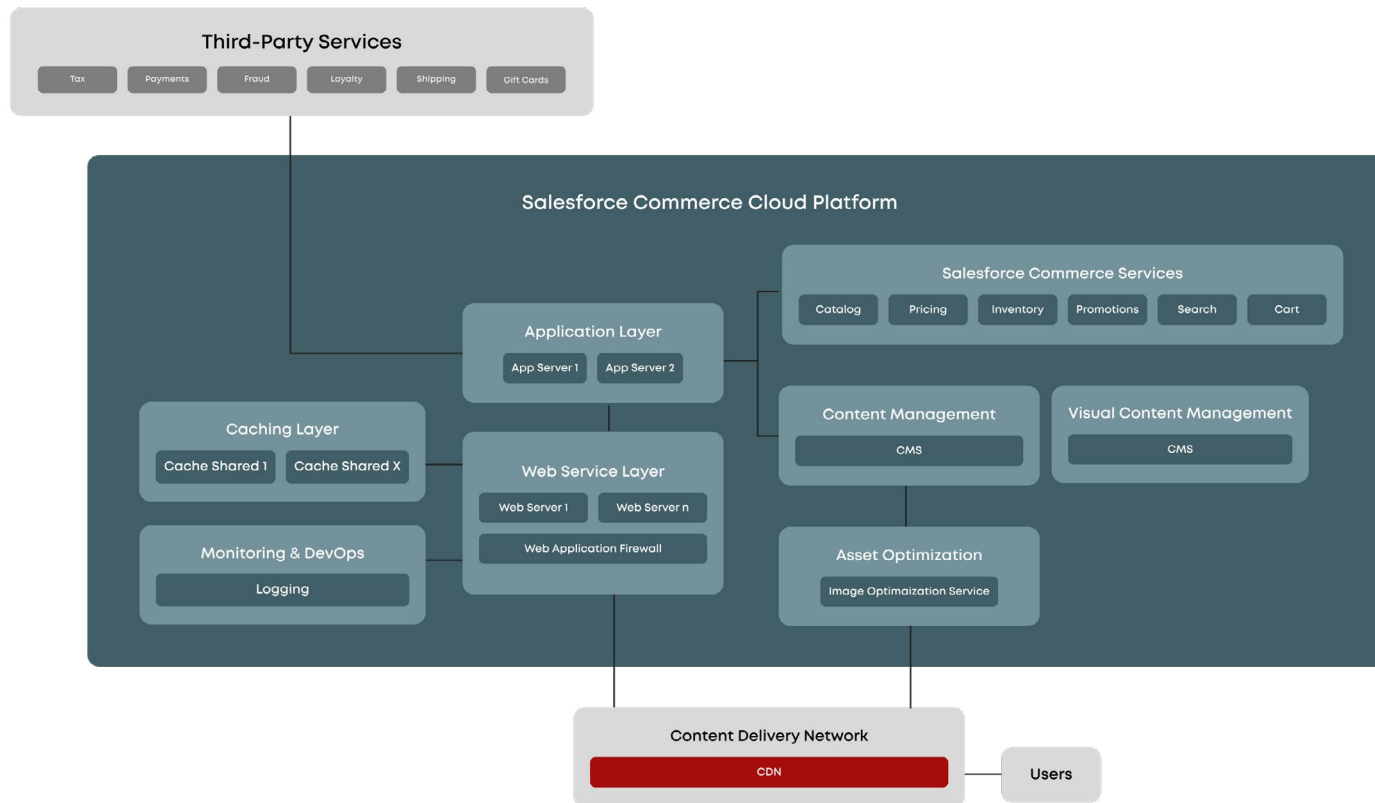
Disadvantages of the Traditional + Accelerator Approach

- Less flexibility in design and functionality
- Potential for weaker performance in some cases (e.g., slower initial page load times)

When the Traditional + Accelerator Approach Makes Sense

- For organizations looking for a quick time to market with an optimized storefront
- For teams that want a tuned ecommerce experience without heavy customization.

Salesforce Commerce Cloud and Autobahn Infrastructure View



Salesforce Commerce Cloud offers all the tools for smooth site operations — from caching popular pages and content fragments to log analysis and search optimization. Developers use the JavaScript API to build essential business logic, integrate third-party systems, and connect with Salesforce's core offerings. Commerce Cloud manages maintenance, high availability, disaster recovery, and performance monitoring to keep your site running smoothly.

Go Headless and Boost Performance with a Flexible Front-end and Reliable Back-end

Many enterprises want to enhance their customer experience and boost the performance of their commerce platform but don't have the resources to handle the development and upkeep. For these companies, transitioning gradually to a headless architecture can be an ideal solution.

A headless architecture separates the front-end from the back-end, allowing the front-end to tap into the back-end's capabilities through APIs without the need for a complete overhaul.

Salesforce Commerce Cloud Composable Storefront is designed to help organizations improve their digital experiences with a headless setup. It uses a progressive web application (PWA) architecture for a flexible front-end, paired with Salesforce's Managed Runtime for headless commerce. The Managed Runtime acts as a bridge, enabling communication and data exchange between the front-end and back-end via APIs.

This setup lets businesses keep Salesforce Commerce Cloud as their back-end system while adopting a flexible, PWA-based front-end. It's a hybrid solution that offers improved performance and scalability without the complexity of building a fully custom composable architecture.

Advantages of the Headless Approach

- Flexibility and speed from a PWA-based storefront
- Improved performance and scalability
- Stability and support from the Salesforce Commerce Cloud platform

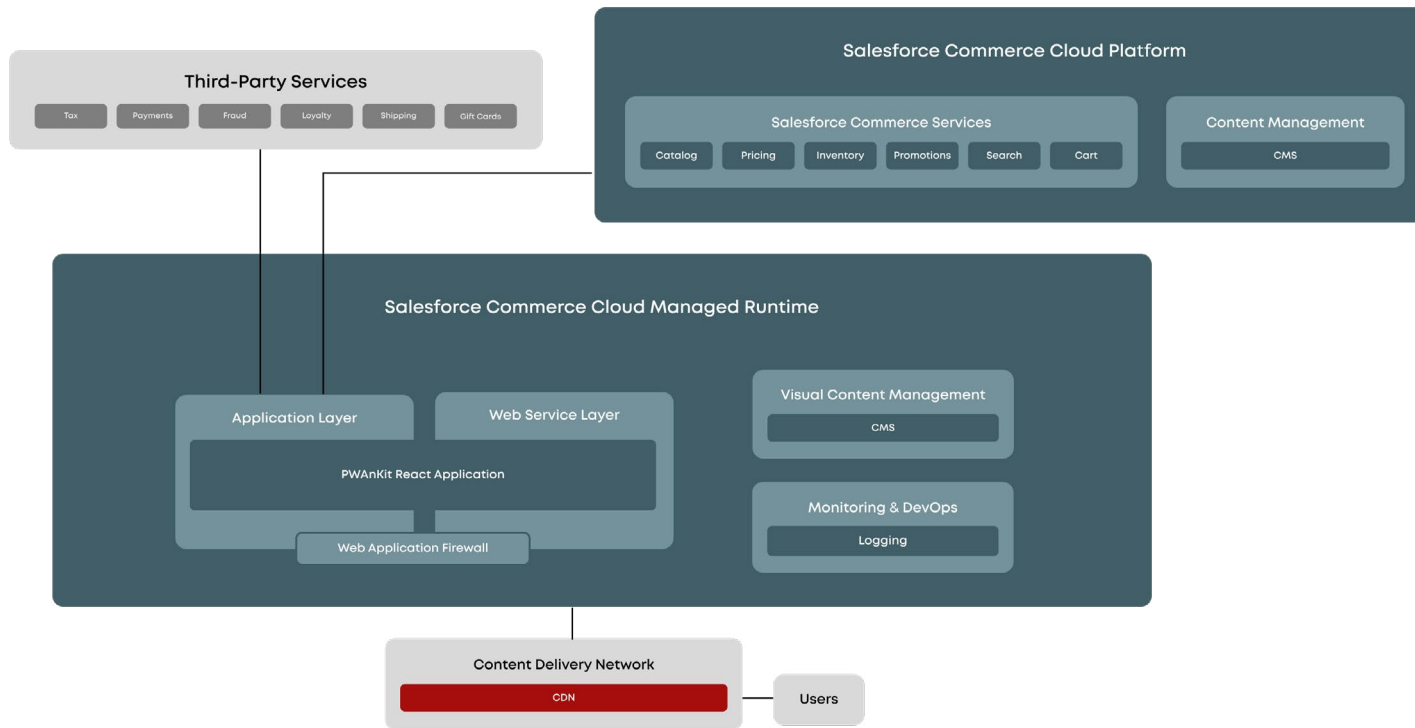
Disadvantages of the Headless Approach

- Requires expertise in progressive web application development
- Still involves a moderate investment in development and maintenance

When the Headless Approach Makes Sense

- For teams looking for a middle ground between flexibility and ease of implementation
- For organizations that want performance benefits without the complexity of a fully composable solution

Headless Commerce with Salesforce Commerce Cloud Composable Storefront and Managed Runtime Infrastructure View



Salesforce Commerce Cloud's Managed Runtime enables a headless commerce approach with the advantages of composable architecture, such as a PWA-based storefront, but without the complexity of custom infrastructure. Including an integrated API server connected to the core Commerce Cloud platform allows for a flexible front-end experience that's easier to implement. Built on Salesforce's PWA Kit SDK, the Managed Runtime offers all the necessary infrastructure to deploy, host, and scale a React-based storefront.

Rapid Innovation and Unmatched Performance with Fully Composable Commerce

Leading brands and retailers view technology as a strategic advantage, aiming to innovate rapidly and scale efficiently. Composable commerce supports these goals by providing a flexible, high-performance tech stack tailored to specific needs. Its modular design allows organizations to pick the best tools available and easily add, replace, or remove technologies, ensuring adaptability and continuous improvement.

This approach significantly boosts site performance, especially on mobile, and delivers customized, immersive customer experiences. When done right, composable commerce is a powerful way for large ecommerce organizations to scale, innovate, and localize their offerings with ease.

Salesforce Commerce Cloud plays a crucial role in a fully composable environment. Developers use APIs to integrate Salesforce with other systems, tapping into essential commerce features. However, ecommerce organizations must supplement Salesforce with additional resources — such as compute, storage, and network. While this approach offers maximum flexibility, it requires significant knowledge and expertise to set up and manage effectively.

Advantages of a Fully Composable Approach

- Complete flexibility in design, functionality, and technology choices
- Optimized performance and scalability

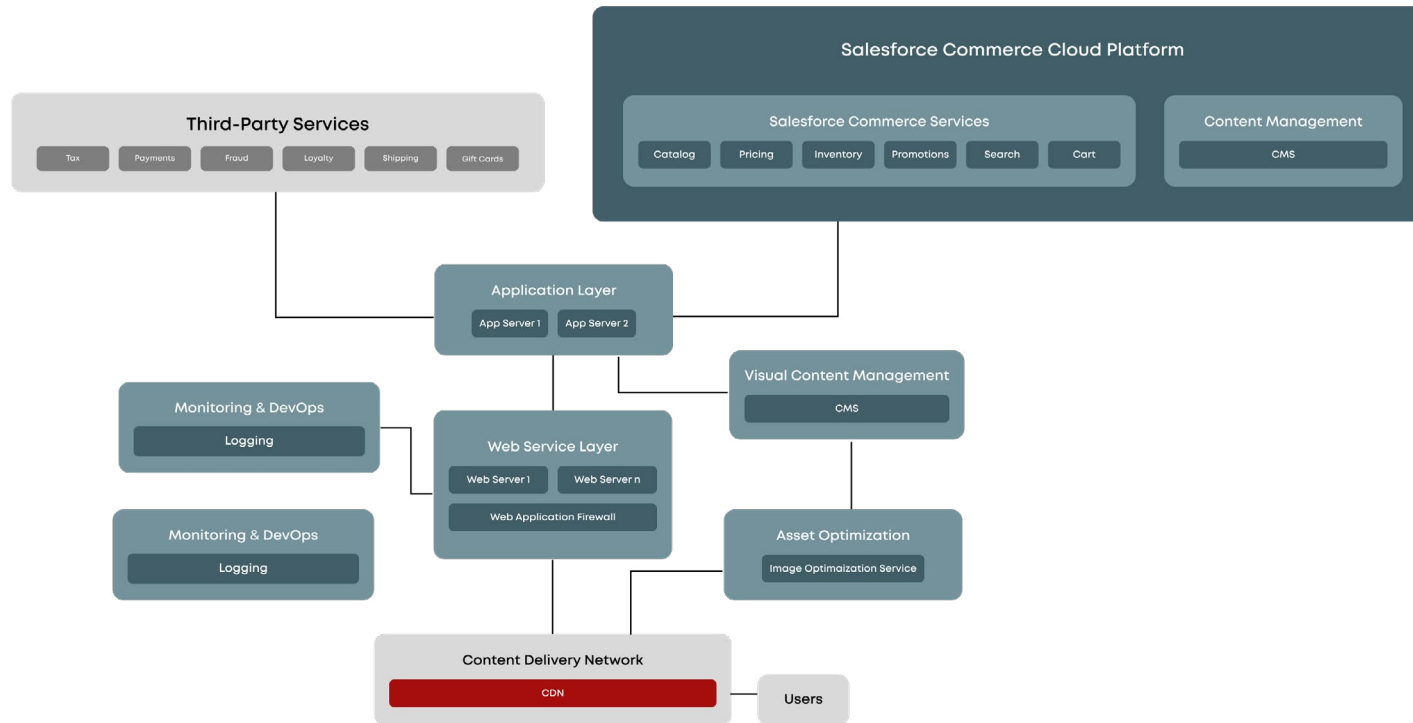
Disadvantages of a Fully Composable Approach

- Demands technical expertise and resources for development and maintenance
- May involve higher upfront and ongoing costs (likely offset by measurably improved performance)

When a Fully Composable Approach Makes Sense

- For organizations willing to invest in the necessary expertise and ongoing maintenance to gain ultimate control, efficiency, and flexibility for their commerce platform
- Well-suited for large enterprises with a mature IT team and a staff of developers with a skill set that matches what is required for composable (APIs, microservices, etc.)

Fully Composable Commerce Supported by Salesforce Commerce Cloud Infrastructure View

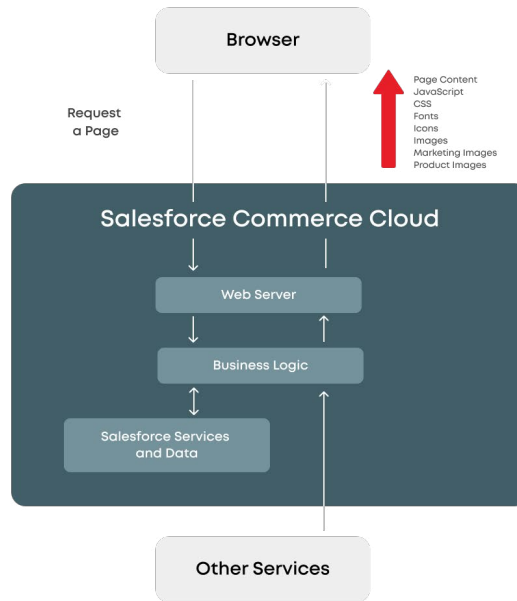
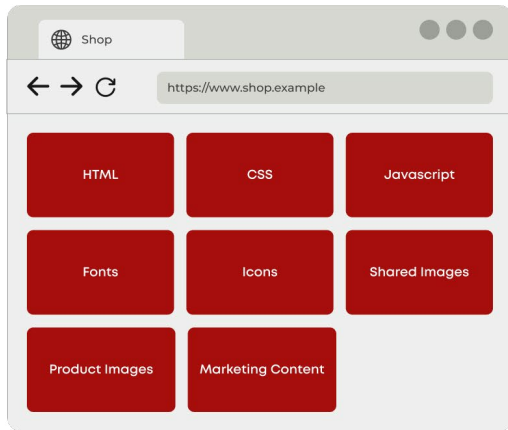


In a fully composable setup, customers enhance the Salesforce platform with additional compute, storage, and network resources, gaining maximum flexibility but requiring significant expertise for setup and maintenance. Developers use Commerce Cloud's OCAPI and SCAPI REST APIs to integrate Salesforce and third-party systems, building essential business logic. Clients aren't limited to Salesforce's JavaScript API and can choose their preferred technology stack. The customer manages infrastructure, ensuring high availability, disaster recovery, and handling events like spikes in traffic.

Comparing Performance

Traditional Storefront vs. Composable Storefront

Traditional Storefront



Page Components

Website pages, which shape the entire user experience, are made up of various web technologies like HTML, JavaScript, CSS, and images. These elements create the website’s look, feel, and functionality.

First Site Visit

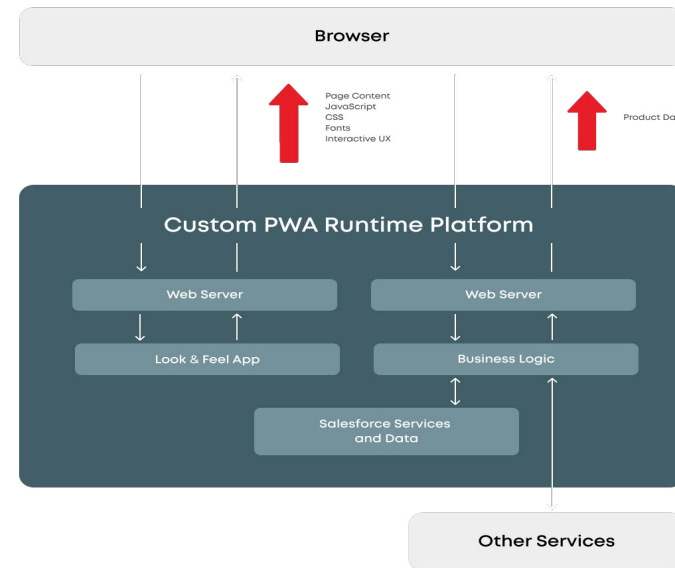
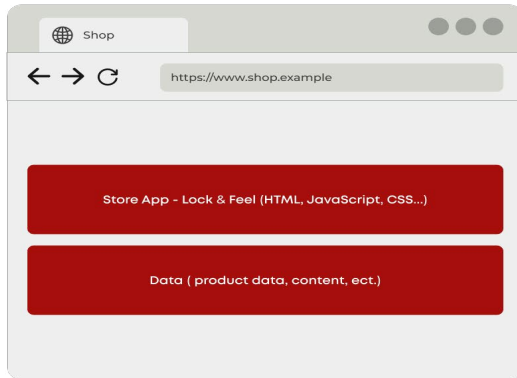
When a new user lands on the website, Salesforce Commerce Cloud processes the request. It runs the business logic, accesses Salesforce data, and connects with any needed third-party services.

Once that’s done, the browser downloads the full page content all at once, leading to slower initial load times — especially on complex or resource-heavy pages.

Next Steps

On return visits, the process is similar to the first visit. However, shared content like stylesheets, scripts, and layout elements are retrieved from the browser cache. Only dynamic content, like updated product details and new marketing images, must be downloaded — resulting in smaller file sizes and faster load times.

Composable Storefront



Page Components

On the UX/Front-end side, a composable architecture relies on PWA technology for an optimized experience.

- Look and Feel: The elements that drive the site's functionality, interactions, and overall shopping experience.
- Data: Product and content information that provides detailed information only when necessary, ensures a more efficient and responsive user experience.

First Site Visit

When a new user arrives on the website, the "Look and Feel" components load first, ensuring the core layout and interactive elements are quickly available.

Next Steps

After the initial processing, the site loads only the specific data needed, like product details or marketing content. This reduces unnecessary data transfer, making the first-time user experience faster and more efficient.

Take Your Own Road to Composable Commerce Success

Composable commerce opens up a world of possibilities for ecommerce brands, offering unmatched flexibility and scalability. However, the journey to a fully composable architecture requires thoughtful planning and a clear understanding of your organization's resources and goals.

For those looking to move quickly, Red Van's Autobahn Solution Accelerator offers a fast, reliable way to optimize a Salesforce Commerce Cloud storefront with minimal complexity. If you need more flexibility without a full overhaul, a headless approach using Salesforce's PWA kit provides improved performance and a modular front-end while keeping your trusted backend in place. And for organizations ready to invest in the future to gain a competitive advantage, fully composable commerce delivers ultimate control, allowing you to customize every aspect of your digital experience, though it demands significant technical expertise.

Each path comes with its benefits and challenges, and the right choice depends on your current needs and digital maturity. Whether you take an incremental or full-scale approach, the key is aligning your strategy with your long-term vision for growth, innovation, and customer experience.



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