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Building a composable e-commerce storefront with Salesforce

Supercharge the composable experience

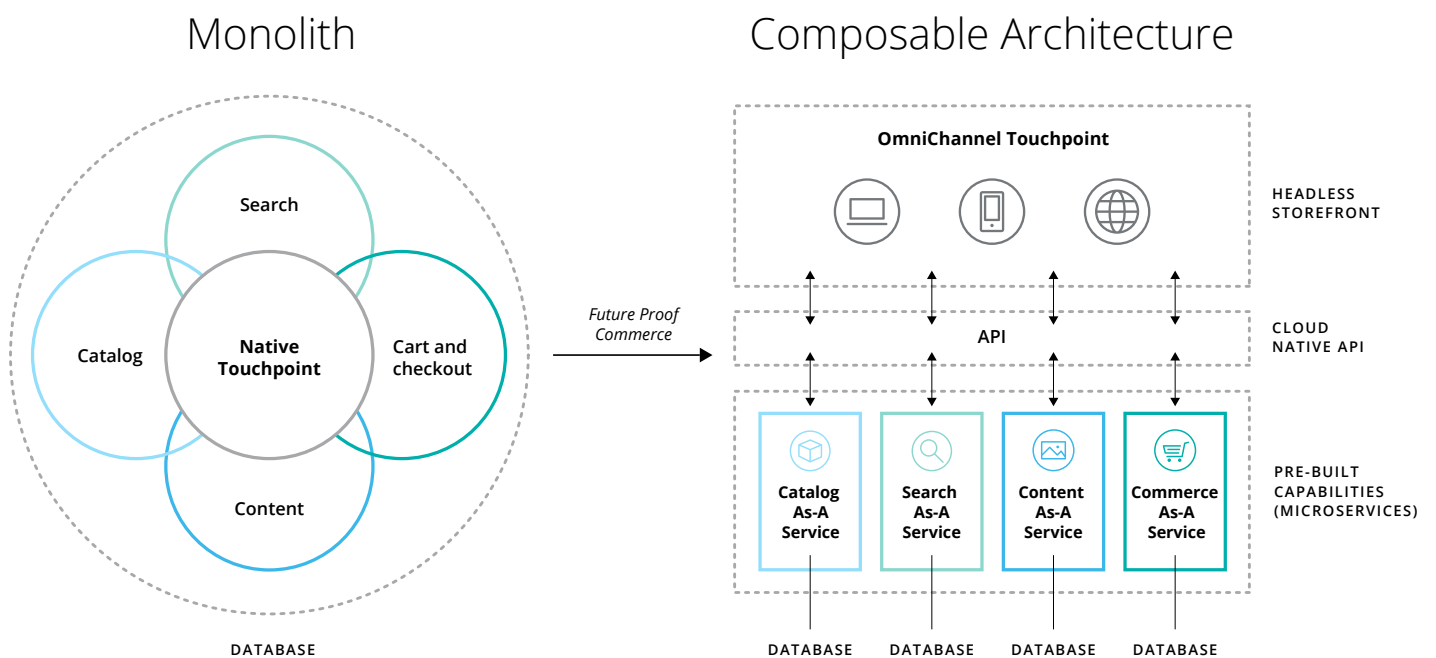**Building a composable e-commerce storefront with Salesforce**

Composable commerce at its core is an e-commerce architecture model—in which various modular components of an e-commerce storefront have integration levers and are loosely coupled, allowing businesses to assemble many best-in-class solutions to create their storefront. The building blocks of composable commerce lie in its modular structure, comprising of microservices, APIs, and headless architecture.

1 **Microservices enable business critical functionalities**

2 **APIs facilitate seamless communication**

3 **Headless architecture empowers dynamic front-end experiences**

This modular composition empowers organizations to rapidly choose and integrate specialized components and services from specialized players into their digital ecosystem with little to no disruption.

Monolith

Composable Architecture

Search

Catalog

Native Touchpoint

Cart and checkout

Content

DATABASE

Future Proof Commerce

OmniChannel Touchpoint

HEADLESS STOREFRONT

API

CLOUD NATIVE API

Catalog As-A Service

Search As-A Service

Content As-A Service

Commerce As-A Service

PRE-BUILT CAPABILITIES (MICROSERVICES)

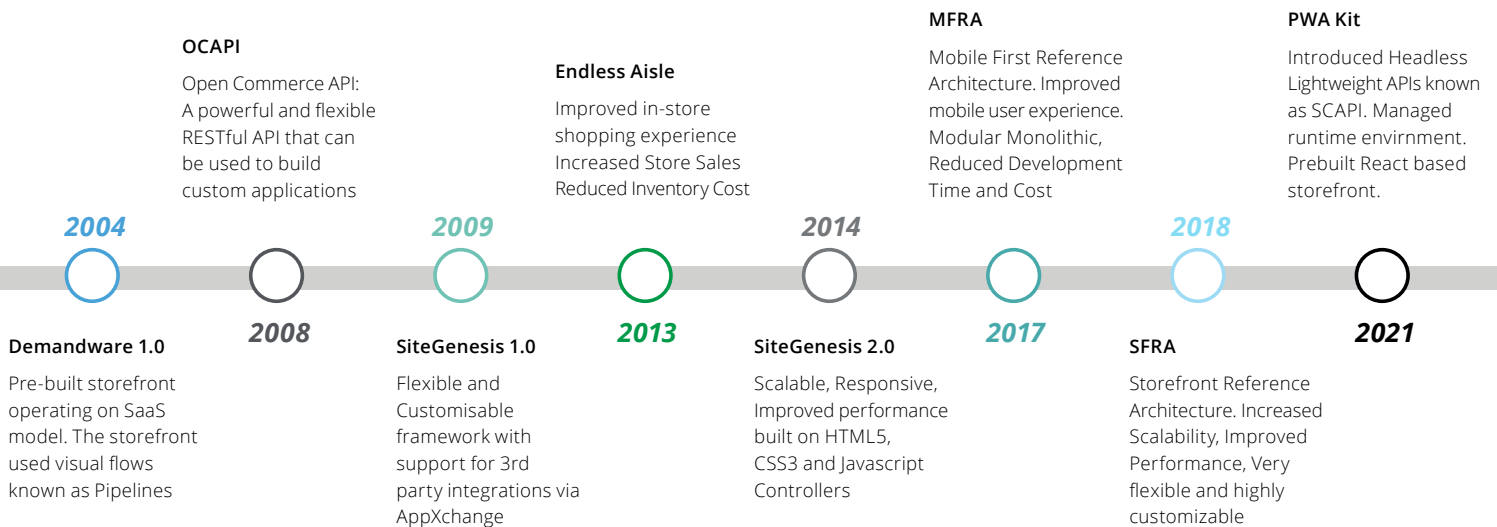DATABASE   DATABASE   DATABASE   DATABASE

A compelling case for composable commerce

Composable commerce supercharges retailers with agility. Retailers can effortlessly integrate new and innovative technologies into their digital storefront with minimal disruption, ensuring that they stay ahead in a rapidly evolving and competitive market. The composable architecture facilitates personalized customer experiences by leveraging data insights and dynamic data integration. Retailers also benefit from the renewed

adaptability to market changes and technological advancements that composable commerce offers, fostering sustained success. Embracing composable commerce isn't just a strategy—it's a future-proofing investment that propels businesses toward continued success in the dynamic realm of digital commerce.

Salesforce Commerce and its evolutions

OCAPI

Open Commerce API: A powerful and flexible RESTful API that can be used to build custom applications

Endless Aisle

Improved in-store shopping experience Increased Store Sales Reduced Inventory Cost

MFRA

Mobile First Reference Architecture. Improved mobile user experience. Modular Monolithic, Reduced Development Time and Cost

PWA Kit

Introduced Headless Lightweight APIs known as SCAPI. Managed runtime envirnment. Prebuilt React based storefront.

2004   *2009*   *2014*   *2018*

2008   *2013*   *2017*   *2021*

Demandware 1.0

Pre-built storefront operating on SaaS model. The storefront used visual flows known as Pipelines

SiteGenesis 1.0

Flexible and Customisable framework with support for 3rd party integrations via AppXchange

SiteGenesis 2.0

Scalable, Responsive, Improved performance built on HTML5, CSS3 and Javascript Controllers

SFRA

Storefront Reference Architecture. Increased Scalability, Improved Performance, Very flexible and highly customizable

Salesforce Commerce has undergone a series of transformative evolutions to meet the ever-changing landscape of e-commerce. The journey began with foundational frameworks like SiteGenesis (Pipelines and Controllers), built on a Blueprint architecture, which served as a solid starting point for online retailers. However, recognizing the need for greater flexibility, responsiveness, and scalability, Salesforce introduced SFRA (Storefront Reference Architecture). SFRA, with its modular structure and emphasis on responsive design, marked a significant shift towards modern e-commerce development practices.

Furthermore, the advent of controller-based development brought a more balanced approach, distributing logic between server and client. The advancement in OCAPI in parallel to SFRA established a significant foray in the headless and API-centric storefronts. In their latest composable commerce transformation, Salesforce has embraced a modular and headless approach to create modern API native storefronts by leveraging solutions like Managed Runtime, Mobify PWA starter kit, and powerful Salesforce Commerce APIs (SCAPI).

Salesforce's continuous evolution in composable commerce reflects a commitment to staying ahead in the rapidly evolving digital commerce landscape, offering a versatile platform that meets the diverse needs of modern digital businesses.

Building a headless composable storefront with Salesforce Mobify and SFCC APIs

Salesforce Commerce B2C provides a comprehensive toolset for building composable storefront. Salesforce Commerce Cloud (SFCC B2C) provides:
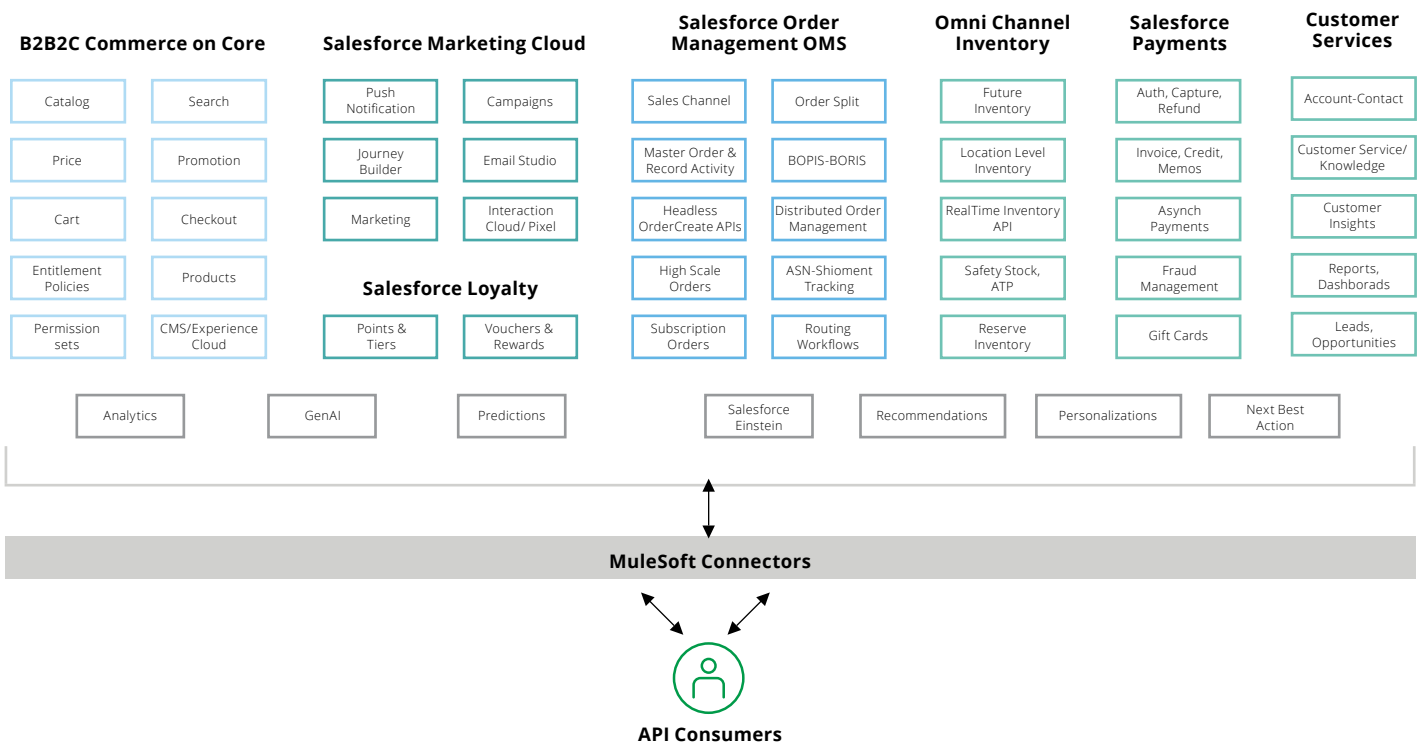
1 **A robust suite of APIs that enable businesses to decouple their front-end and back-end, allowing for greater flexibility and scalability**

2 **A headless react native Mobify powered PWA starter storefront**

3 **A managed runtime that provides an infrastructure that can host the Mobify headless storefront**

Apart from Salesforce Commerce, auxiliary services are also available in spaces such as CRM/Sales/Service for customer insights and service, Content Management System for syndicating content across channels, MuleSoft for API integration, Order Management System for servicing the order through its lifecycle, Marketing Cloud for marketing and campaign management, Einstein AI for personalization, and Data Cloud to aggregate and harmonize data across multiple systems to drive meaningful customer insights and marketing.

Salesforce Ecosystem

B2B2C Commerce on Core		Salesforce Marketing Cloud		Salesforce Order Management OMS		Omni Channel Inventory	Salesforce Payments	Customer Services
Catalog	Search	Push Notification	Campaigns	Sales Channel	Order Split	Future Inventory	Auth, Capture, Refund	Account-Contact
Price	Promotion	Journey Builder	Email Studio	Master Order & Record Activity	BOPIS-BORIS	Location Level Inventory	Invoice, Credit, Memos	Customer Service/ Knowledge
Cart	Checkout	Marketing	Interaction Cloud/ Pixel	Headless OrderCreate APIs	Distributed Order Management	RealTime Inventory API	Asynch Payments	Customer Insights
Entitlement Policies	Products	**Salesforce Loyalty**		High Scale Orders	ASN-Shioment Tracking	Safety Stock, ATP	Fraud Management	Reports, Dashborads
Permission sets	CMS/Experience Cloud	Points & Tiers	Vouchers & Rewards	Subscription Orders	Routing Workflows	Reserve Inventory	Gift Cards	Leads, Opportunities

Analytics	GenAI	Predictions	Salesforce Einstein	Recommendations	Personalizations	Next Best Action

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MuleSoft Connectors

API Consumers

These services may or may not be leveraged to build your digital ecosystem. But the option to single source all of the required services from a single provider in Salesforce can be a major advantage and market differentiator in the space.

A path to composable commerce in Salesforce

Organizations can achieve composability in their storefront via two major ways. Each comes with their own pro(s) and con(s).

Big bang approach: The big bang approach is a complete transformation and rebuild of an existing storefront onto a new composable architecture, realizing all of the potential benefits at the same time. Although this is a high-risk approach due to the comprehensive changes involved, it can benefit organizations by allowing them to only need to keep track of a single architecture stack.

Progressive approach: The progressive approach allows for incremental changes—starting preferably with top-of-funnel changes in Home and Product pages, reducing the risk of a large-scale failure. This approach also offers flexibility to prioritize migration based on business priorities. Critical components can be migrated first, allowing for a realization of the potential benefits earlier.

The choice between big bang and a progressive migration approach depends on several factors such as the complexity of the existing system, business priorities, and risk tolerance. A progressive, phased approach is often preferred for its risk mitigation and flexibility, allowing organizations to adapt to prioritize and change gradually. However, a big bang migration approach can prove more suitable for organizations seeking rapid transformation and immediate benefits.

Our recommendation for a phased transition to composability for SiteGenesis and SFRA storefronts

There are thousands of storefronts that still remain on SiteGenesis and SFRA. Organizations who are currently on SiteGenesis / SFRA and that are seeking composable storefronts are in fact not very far away from being composable. They can adapt a swift transition to composable commerce by adapting a progressive migration approach.

Our recommended approach involves migrating the Product Catalog related pages first, which sit at the top of the funnel—the Product Listing Page (PLP) and the Product Detail Page (PDP). These two pages tend to contain the highest visitor traffic, most of the features that affect buying decisions, and minimal reliance on marketing content from the CMS. Now that the architecture has two different code architectures and infrastructures executing business logic and rendering pages, we can leverage a Salesforce Session bridge to maintain user state and session as we transition between composable and legacy pages. A Session bridge helps store and exchange cookie and JWT token information—thus helping to maintain user state. Once we can successfully migrate top-of-funnel pages and establish structure, we can begin with the rest of the pages.

Transitioning content pages to composable is a logical next step. An API native CMS can be assimilated into the ecosystem or leverage the Salesforce-provided Page Designer tool by using content APIs to deliver serialized data to composable front ends. Existing storefronts utilizing Page Designer can also be migrated using the API pattern to the storefront.

In subsequent future releases, organizations can consider moving Account, Cart and Checkout pages. The depth and length of these integrations can be quite tedious and requires organizations to implement meticulous planning that involves long-term architectural assessment, migration, and organization-wide adoption.

Existing job frameworks that feed to commerce and other business manager functions can be retained, or changes can be made as part of the proceeding releases. As a page is migrated to composable, corresponding third-party integrations in the page are also migrated in tandem.

Legend: ■ Monolithic ■ Composable ⟳ Page Specific Integrations ⊙ OCAPI Session Bridge

Looking ahead

Transitioning to a headless, composable storefront with Salesforce Commerce APIs on SFCC is a highly technical but rewarding endeavor. By following this phased approach, businesses can unlock the full potential of headless commerce and offer a seamless and engaging shopping experience across diverse channels. Key enterprise services like Search, Recommendation, Personalization, Product and Content enrichment have all become API-centric SaaS services and can be licensed individually. Embrace the technical flexibility and scalability that headless commerce provides and embark on a transformative journey that aligns your e-commerce platform with the future of digital commerce.

If you'd like to learn more or want to set up a call with our Salesforce professionals, please do not hesitate to reach out.

Get in touch

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