



The State of APIs in Retail

Apigee Benchmark for Digital Commerce



ABOUT THE APIGEE BENCHMARK FOR DIGITAL COMMERCE

30

Leading retailers world-wide whose API data contributes to this benchmark

Number of API requests by 30 retailers across North America, Europe, and Latin America in 2015

80B

700+

Number of APIs hosted by retail companies on the Apigee cloud

The *State of APIs in Retail Report* compiles information about digital transformation trends and the impact of APIs on retail businesses.

This digital commerce benchmark is based on the data from APIs powering digital commerce platforms for 30 leading retailers world-wide who served more than 80 billion API requests in 2015 across North America, Europe, and Latin America via 700+ APIs hosted on the Apigee cloud.

This report is one of a series of benchmarks produced by Apigee to study the state of APIs across multiple industries.

Visit apigee.com for more information.

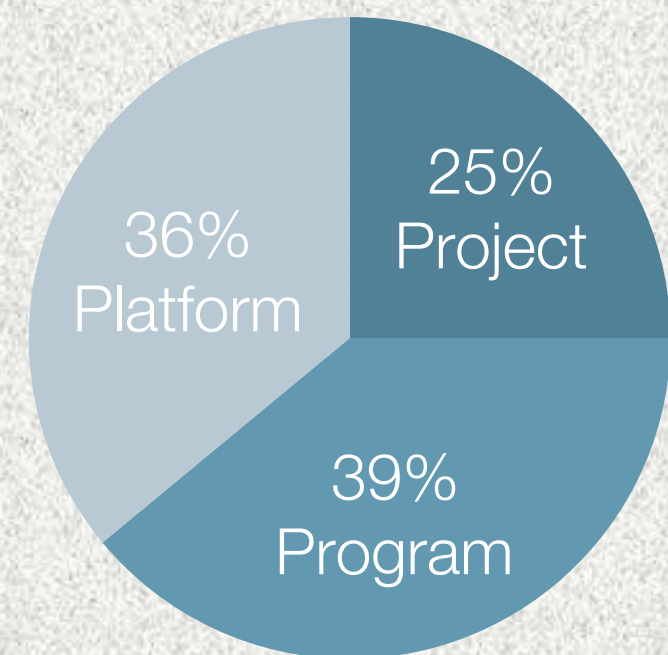
STATE OF DIGITAL COMMERCE APIs

22.8%

*Percentage of retail revenue driven by digital commerce in retail in 2015**

Percentage of retailers who plan to increase mobile spend in 2016#

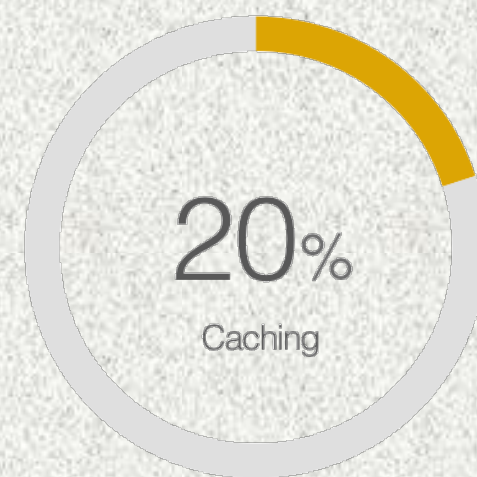
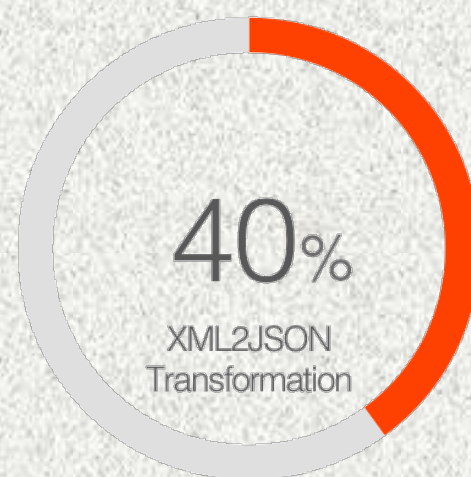
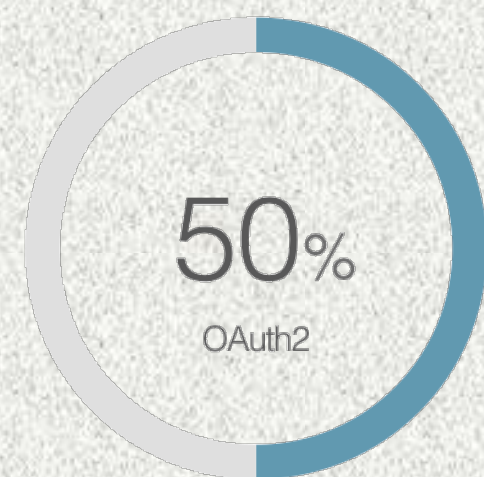
87%



Distribution of companies across stages of digital maturity

Project (<10 APIs), Program (11-30 APIs), Platform (>30 APIs)

APIs are the foundation for digital commerce, enabling retailers to evolve from web to mobile. APIs allow retailers to create services such as price check, compare and review products, get instant product availability, purchase, schedule pickup and delivery, and improve customer engagement and loyalty; all from users' mobile devices.



% of Digital Commerce API patterns implementing these policies

* Source: IDC, WW New Media Market Model IDC - 3Q15 Dec 2015

RetailMeNot, "The Rise of Mobile Marketing Spend in Retail", Mar 2016

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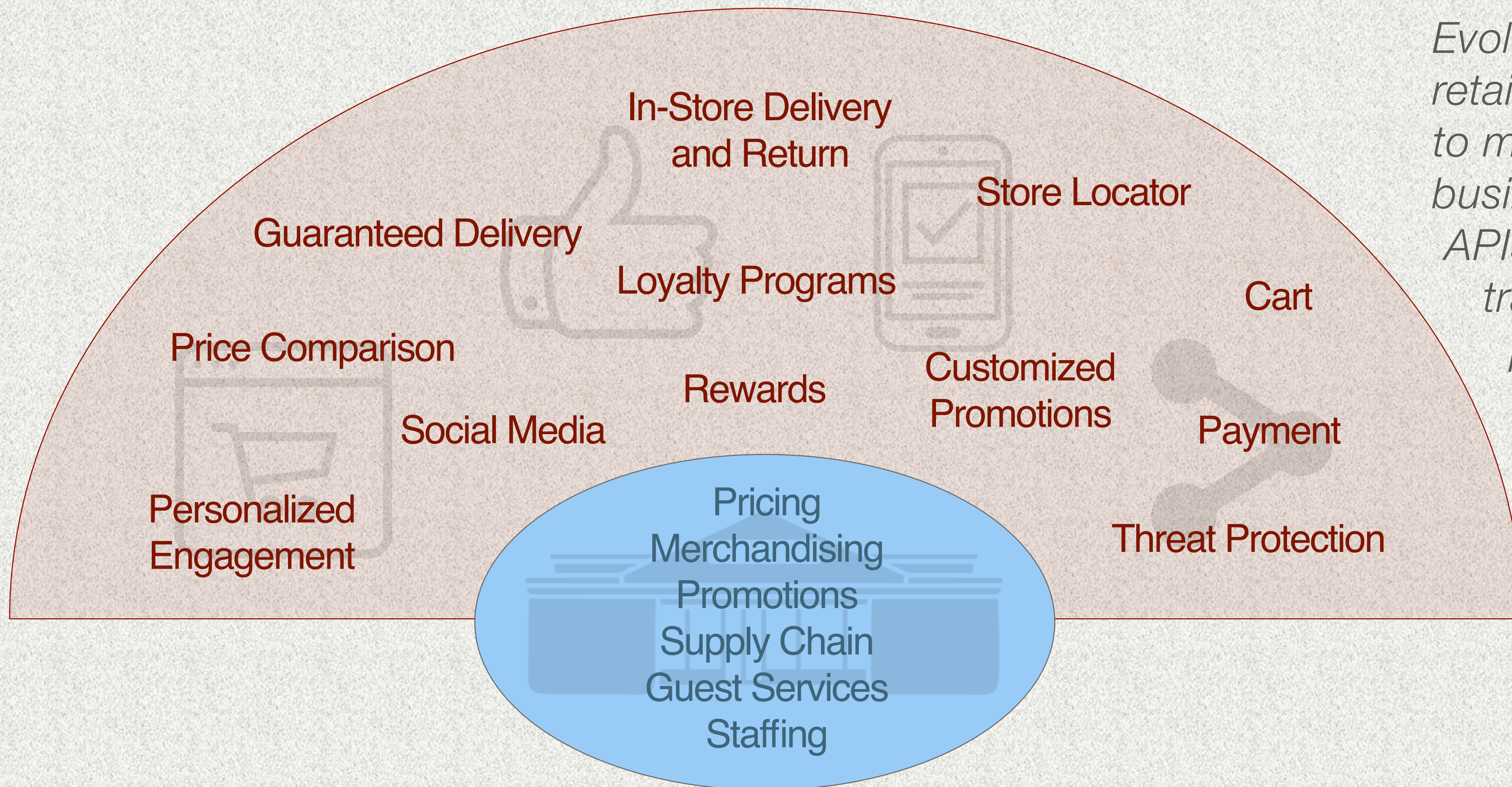
Commerce APIs

- + *Digital commerce services built on APIs*
- + *API patterns drive digital commerce use cases*

01

DIGITAL COMMERCE SERVICES BUILT ON APIS

Digital Commerce Services



Evolving from traditional retail and web commerce to mobile and omnichannel business models requires APIs that can bridge traditional business processes and modern services for richer user engagement.

API PATTERNS MAPPED TO DIGITAL COMMERCE USE CASES

API Patterns

Authentication	Product	Price	Fraud
Profile	Location	Payment	Giftcard
Cart	Fulfillment	Loyalty	Coupon
Search	Customer Care	Review	Wishlist
Promotion	Notification	Recommend	Social

The most common API patterns found among the world's leading digital commerce programs can be mapped to specific use cases that are tied to critical business initiatives for retailers.

Digital Commerce Use Cases

- Core Services
- Personalized Engagement
- Convenient Payments
- Flexible Fulfillment
- Customer Loyalty
- Data Security

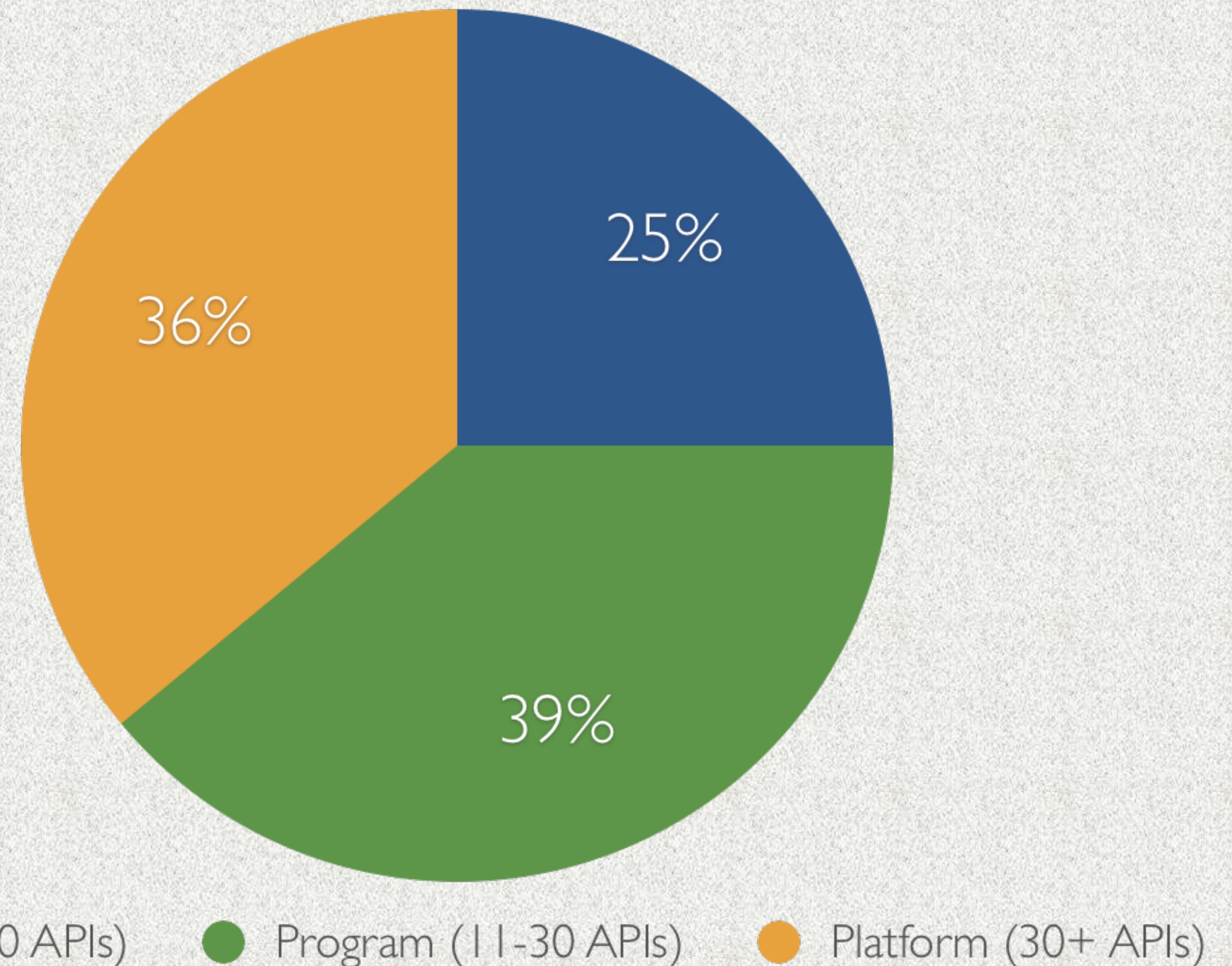
Digital Maturity

- + *Companies across stages of digital maturity*
- + *Distribution of commerce API deployments*
- + *Traffic distribution across digital commerce APIs*
- + *Policies used depend on API requirements*

02

RETAILERS ARE IN EARLY STAGES OF DIGITAL MATURITY

Distribution of Companies Across Stages of Digital Maturity

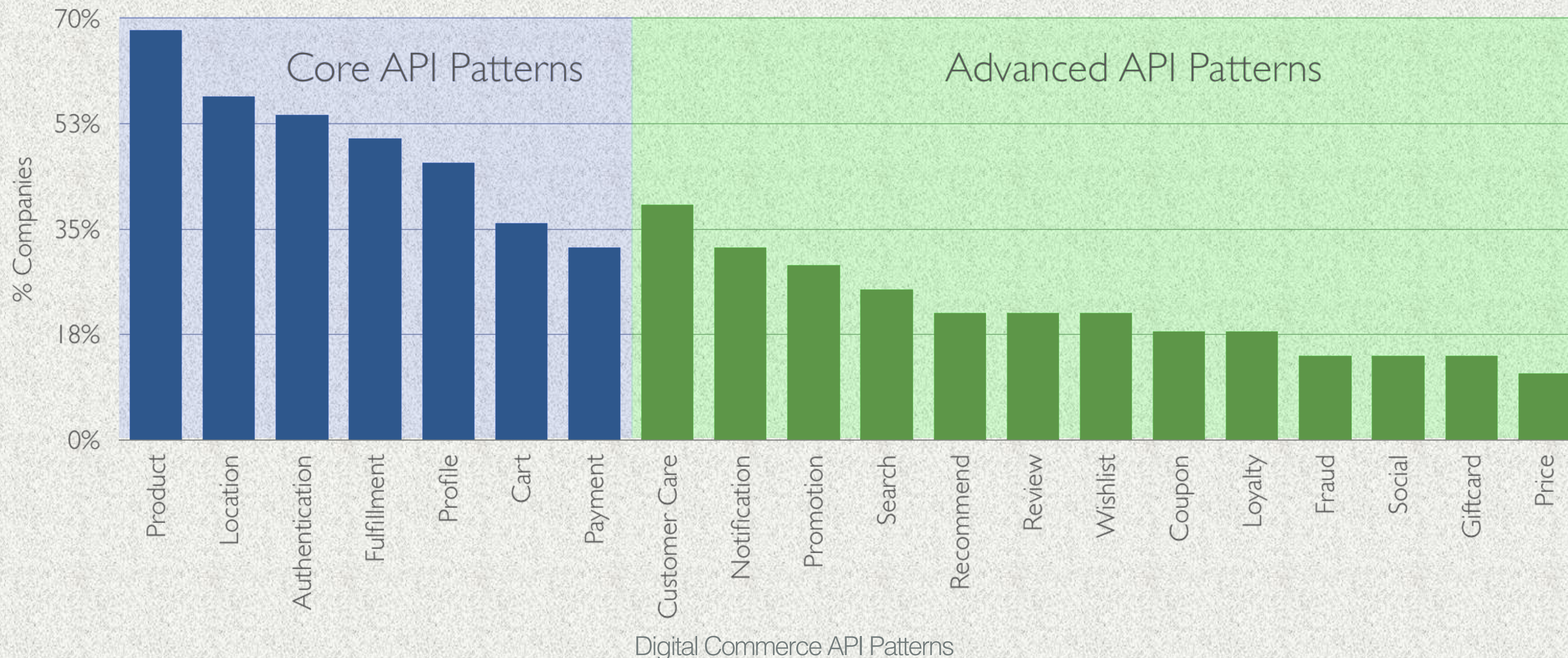


We measured the maturity of a digital commerce program based on the number and variety of APIs deployed within their environments.

While many retail companies have deployed more than 30 different APIs, almost two-thirds of retailers are still in the early stages of digital commerce maturity.

RETAILERS EXPAND BEYOND CORE APIS TO BUILD DIGITAL COMMERCE SERVICES

Distribution of Digital Commerce API Pattern Deployments

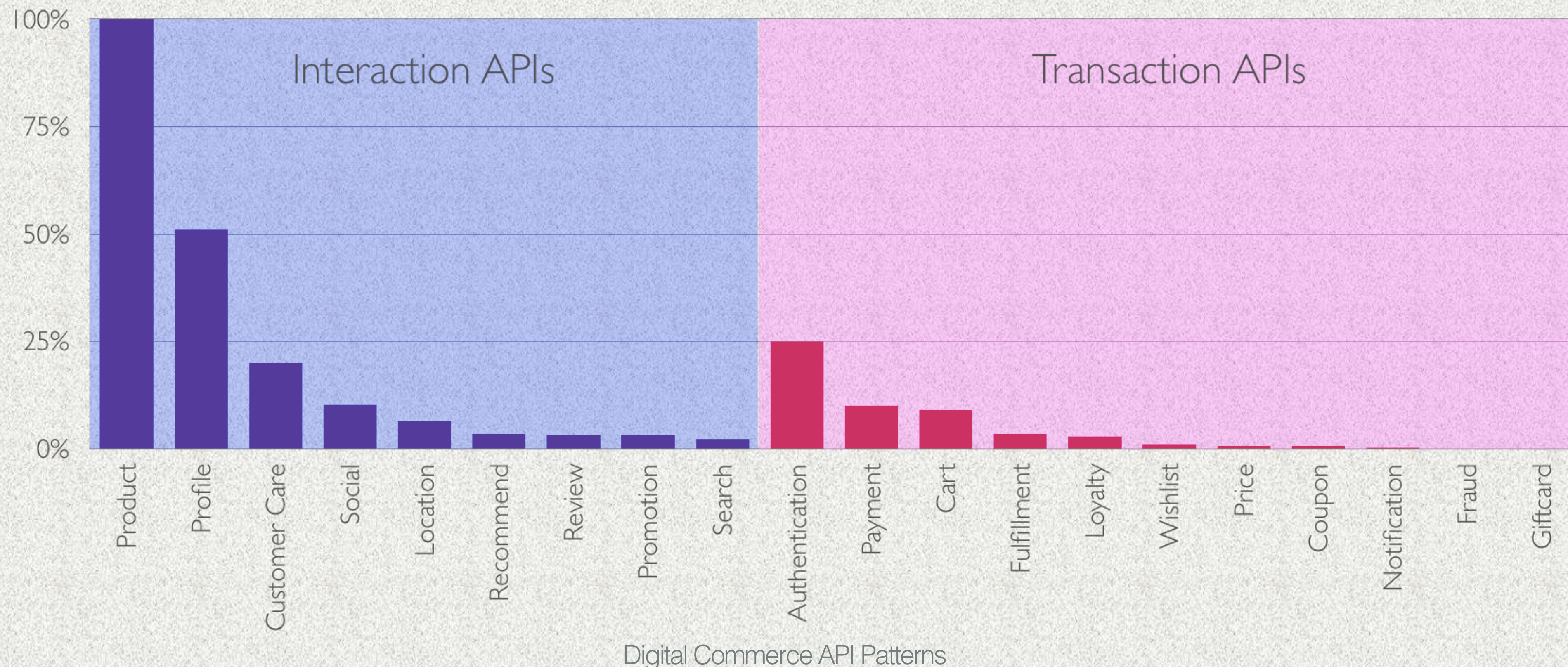


Digital commerce programs typically begin by implementing a core set of API patterns.

Growing competition and requirements to increase margins from digital channels drive the need for advanced API patterns that enable more sophisticated digital solutions.

INTERACTION APIS DRIVE 4X MORE TRAFFIC COMPARED TO TRANSACTION APIS

Relative Traffic Distribution Across Digital Commerce API Patterns

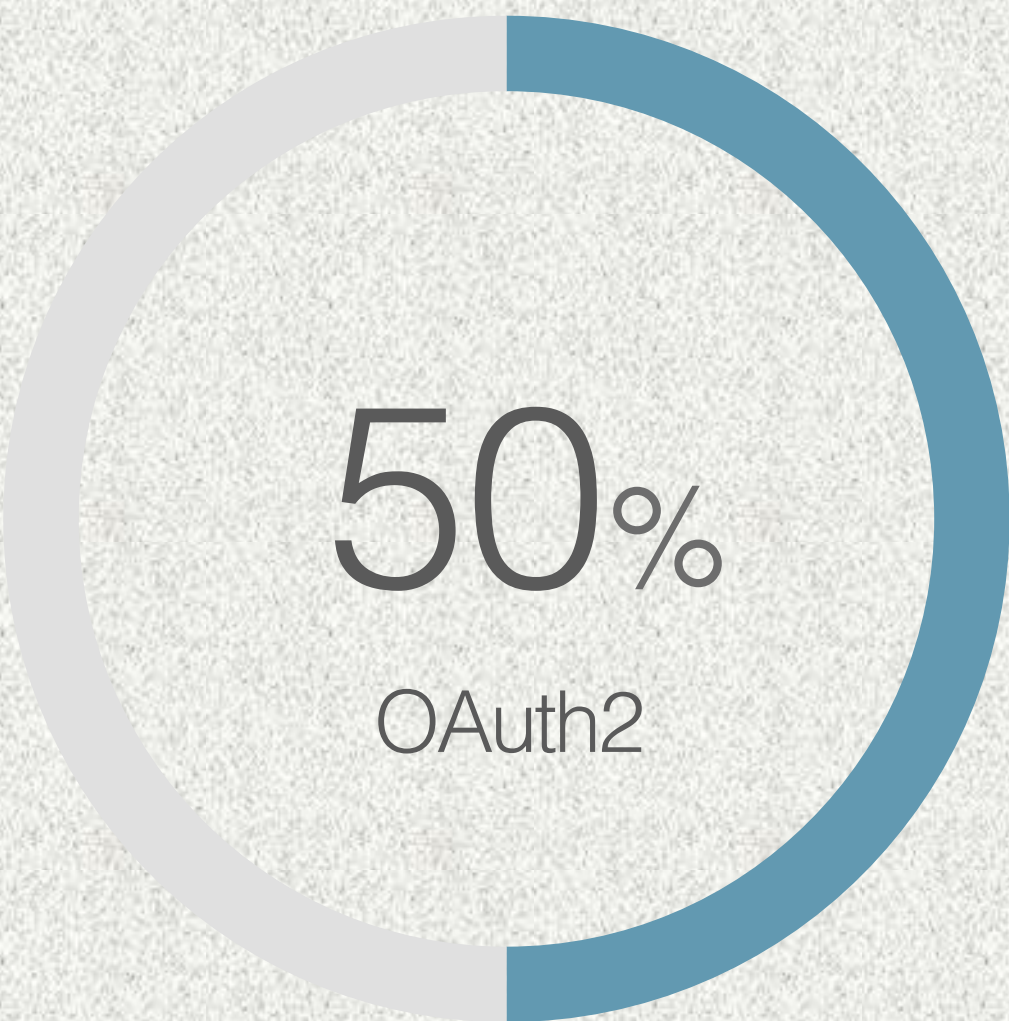


Interaction APIs drive 80% of all traffic through user engagement.

Transaction APIs deliver greater value through closed sales and user retention.

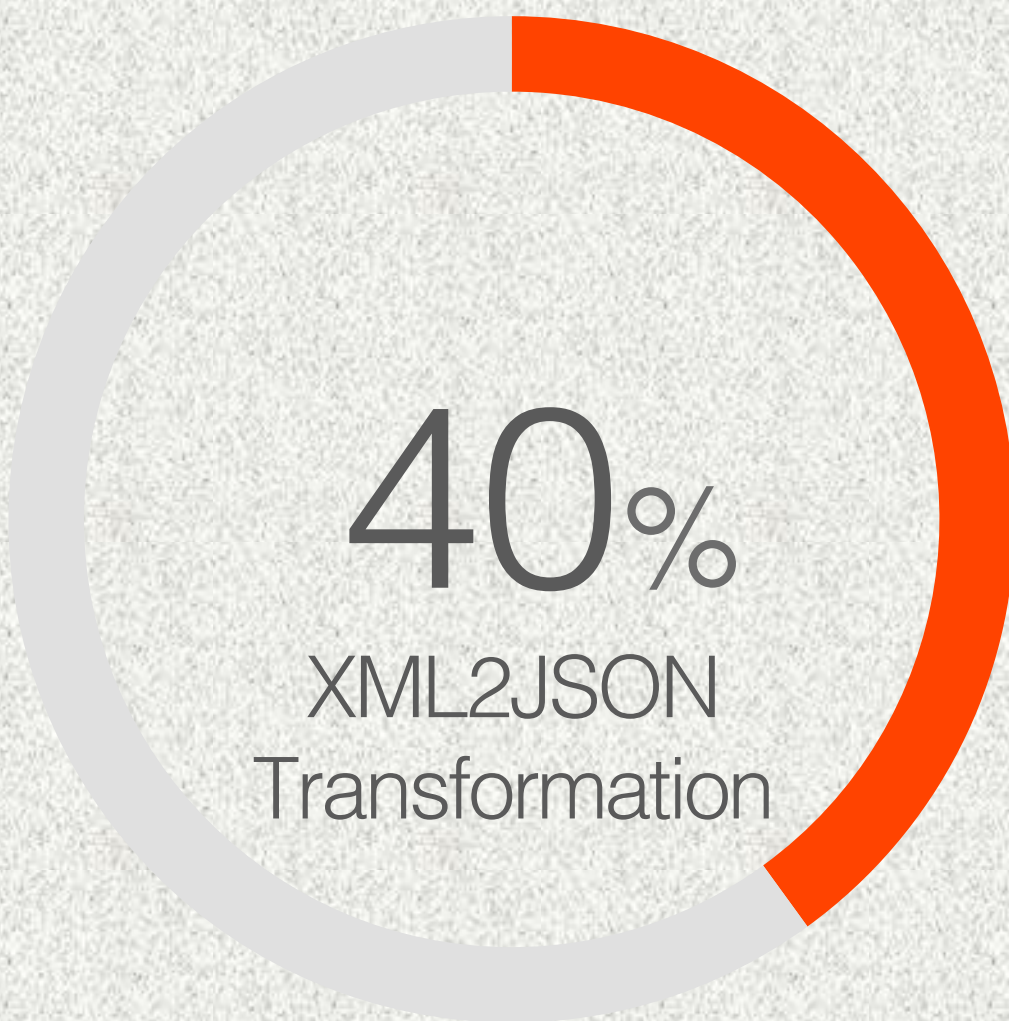
COMMON API POLICY PATTERNS FOUND ACROSS RETAILERS

% of Digital Commerce API Patterns Implementing These Policies



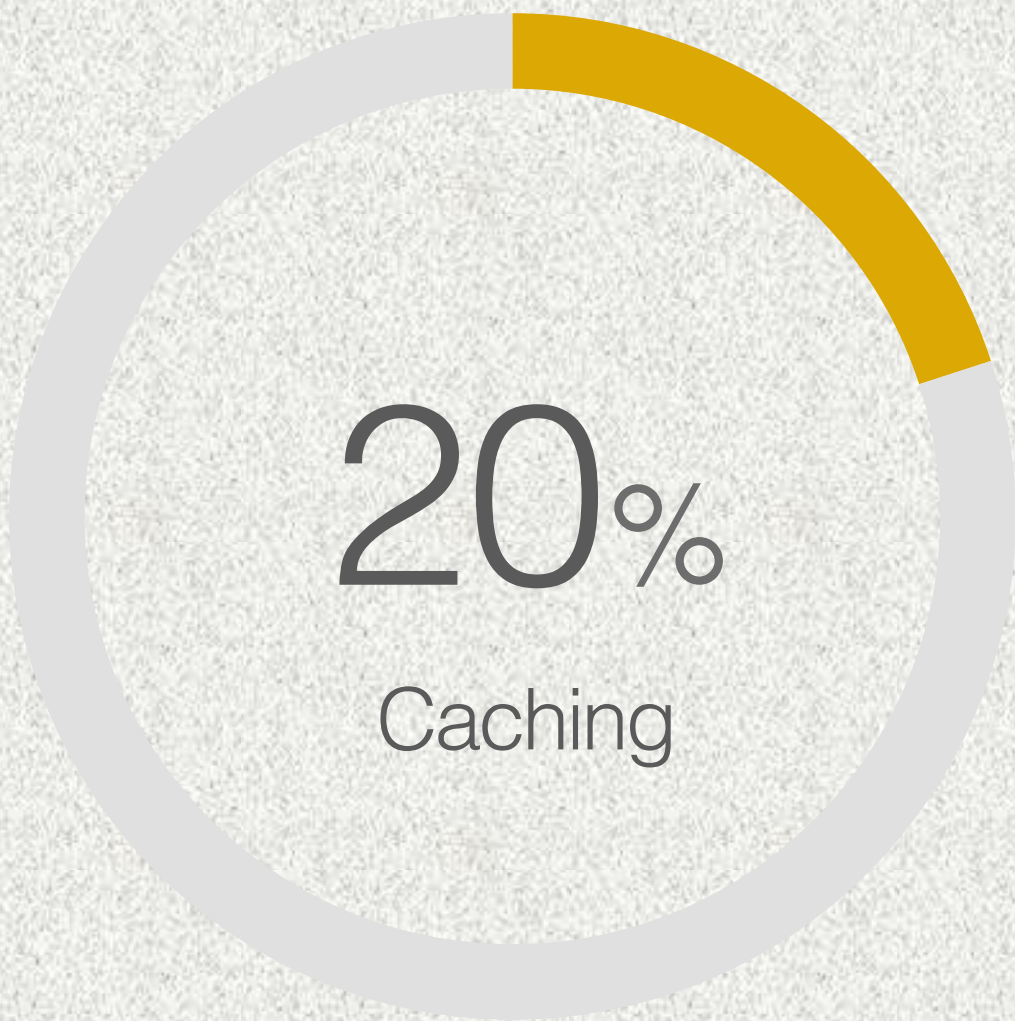
API patterns using OAuth2 to authenticate users

Product, Fulfillment, Profile, Location, Authentication, Notification, Payment, Cart, Coupon, Wishlist



API patterns connecting to legacy systems vs. cloud services

Product, Fulfillment, Profile, Location, Authentication, Payment, Promotion, Coupon



API patterns using caching to improve app performance

Product, Fulfillment, Profile, Location

Use Cases

+ API blueprints at various stages of digital maturity

+ Project

+ Program

+ Platform

03

PROJECTS FOCUSED ON CORE API PATTERNS

Apparel Manufacturer

Core Services	Personalized Engagement	Customer Loyalty	Convenient Payments	Flexible Fulfillment	Data Security
Product	Product	Profile	Authentication	Product	Authentication
Location	Profile	Customer Care	Profile	Location	Profile
Authentication	Customer Care	Coupon	Payment	Fulfillment	Fraud
Fulfillment	Notification	Loyalty	Coupon	Profile	Price
Profile	Promotion	Recommend	Loyalty	Payment	Payment
Cart	Search	Review	Giftcard		
Price	Recommend	Wishlist	Price		
	Review	Social			
	Social				

Companies in early stages of their digital commerce journey typically start off by implementing a set of core API patterns that enable mobile apps to connect to legacy systems and web applications in a standardized way without resorting to screen scraping.*

* API names in the table represent the digital commerce APIs corresponding to the specified use cases

PROGRAMS BUILD APIS TO ADDRESS MULTIPLE USE CASES

Grocery Chain

Core Services	Personalized Engagement	Customer Loyalty	Convenient Payments	Flexible Fulfillment	Data Security
Product	Product	Profile	Authentication	Product	Authentication
Location	Profile	Customer Care	Profile	Location	Profile
Authentication	Customer Care	Coupon	Payment	Fulfillment	Fraud
Fulfillment	Notification	Loyalty	Coupon	Profile	Price
Profile	Promotion	Recommend	Loyalty	Payment	Payment
Cart	Search	Review	Giftcard		
Price	Recommend	Wishlist	Price		
	Review	Social			
	Social				

Big Box Retailer

Core Services	Personalized Engagement	Customer Loyalty	Convenient Payments	Flexible Fulfillment	Data Security
Product	Product	Profile	Authentication	Product	Authentication
Location	Profile	Customer Care	Profile	Location	Profile
Authentication	Customer Care	Coupon	Payment	Fulfillment	Fraud
Fulfillment	Notification	Loyalty	Coupon	Profile	Price
Profile	Promotion	Recommend	Loyalty	Payment	Payment
Cart	Search	Review	Giftcard		
Price	Recommend	Wishlist	Price		
	Review	Social			
	Social				

Department Stores

Core Services	Personalized Engagement	Customer Loyalty	Convenient Payments	Flexible Fulfillment	Data Security
Product	Product	Profile	Authentication	Product	Authentication
Location	Profile	Customer Care	Profile	Location	Profile
Authentication	Customer Care	Coupon	Payment	Fulfillment	Fraud
Fulfillment	Notification	Loyalty	Coupon	Profile	Price
Profile	Promotion	Recommend	Loyalty	Payment	Payment
Cart	Search	Review	Giftcard		
Price	Recommend	Wishlist	Price		
	Review	Social			
	Social				

Depending on business requirements, companies have built API patterns* that enable them to address different subsets of digital commerce use cases.

- API names in the tables represent the digital commerce APIs corresponding to the specified use cases

PLATFORMS ADDRESS ALL DIGITAL COMMERCE SERVICES

Branded Apparel Retailer

Core Services	Personalized Engagement	Customer Loyalty	Convenient Payments	Flexible Fulfillment	Data Security
Product	Product	Profile	Authentication	Product	Authentication
Location	Profile	Customer Care	Profile	Location	Profile
Authentication	Customer Care	Coupon	Payment	Fulfillment	Fraud
Fulfillment	Notification	Loyalty	Coupon	Profile	Price
Profile	Promotion	Recommend	Loyalty	Payment	Payment
Cart	Search	Review	Giftcard		
Price	Recommend	Wishlist	Price		
	Review	Social			
	Social				

Department Stores

Core Services	Personalized Engagement	Customer Loyalty	Convenient Payments	Flexible Fulfillment	Data Security
Product	Product	Profile	Authentication	Product	Authentication
Location	Profile	Customer Care	Profile	Location	Profile
Authentication	Customer Care	Coupon	Payment	Fulfillment	Fraud
Fulfillment	Notification	Loyalty	Coupon	Profile	Price
Profile	Promotion	Recommend	Loyalty	Payment	Payment
Cart	Search	Review	Giftcard		
Price	Recommend	Wishlist	Price		
	Review	Social			
	Social				

Big Box Retailer

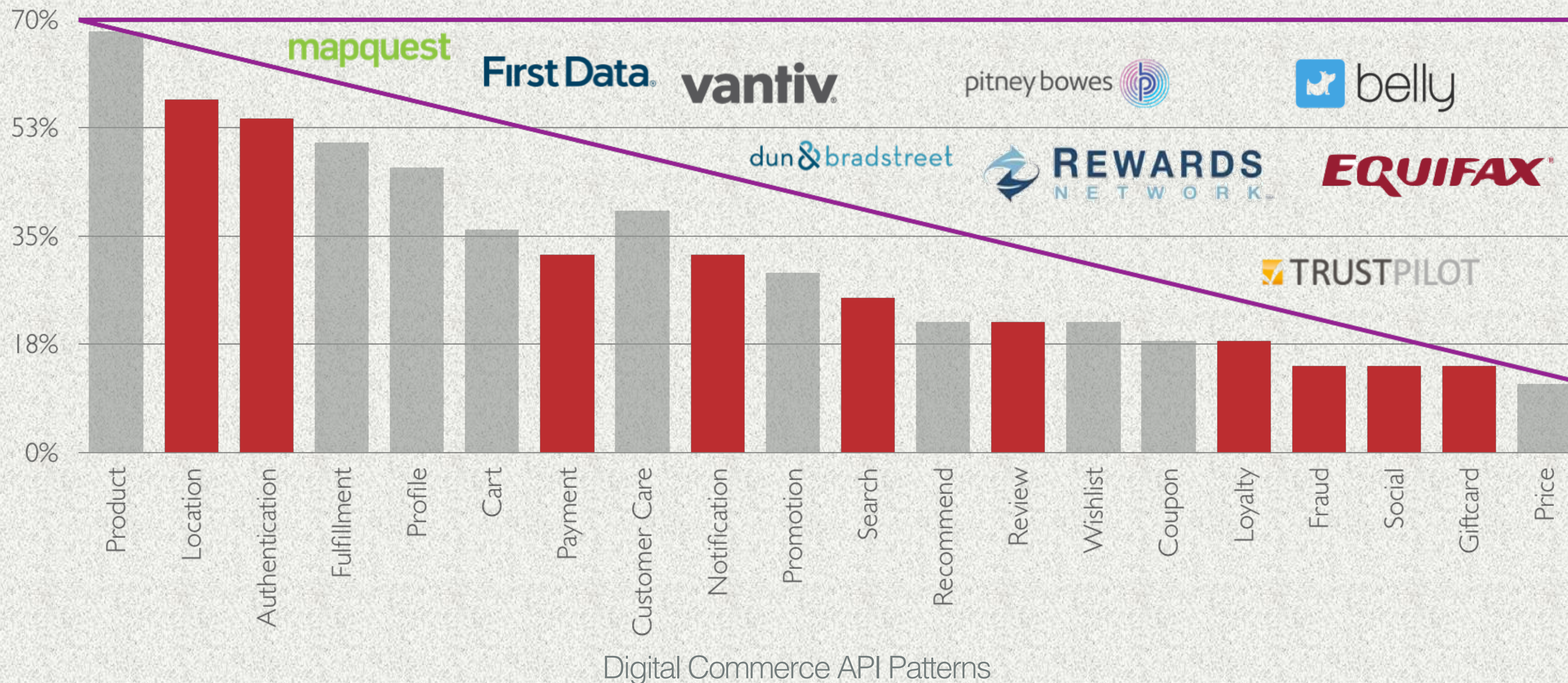
Core Services	Personalized Engagement	Customer Loyalty	Convenient Payments	Flexible Fulfillment	Data Security
Product	Product	Profile	Authentication	Product	Authentication
Location	Profile	Customer Care	Profile	Location	Profile
Authentication	Customer Care	Coupon	Payment	Fulfillment	Fraud
Fulfillment	Notification	Loyalty	Coupon	Profile	Price
Profile	Promotion	Recommend	Loyalty	Payment	Payment
Cart	Search	Review	Giftcard		
Price	Recommend	Wishlist	Price		
	Review	Social			
	Social				

Early movers have spent the time to learn and build out a broad portfolio of API patterns* to comprehensively address all aspects of digital commerce use cases.

- API names in the tables represent the digital commerce APIs corresponding to the specified use cases

DIGITAL COMMERCE SERVICES BUILT ON APIGEE

Cloud Services Complementing Digital Commerce APIs



Digital commerce solutions are built on an ecosystem of multiple cloud services to complement legacy integrations.

The Apigee cloud native API platform hosts and manages many of the worlds leading services for digital commerce.

Contact Us

- + *Benchmark your own digital commerce APIs*
- + *Learn about our other State of APIs reports*

BENCHMARK YOUR OWN DIGITAL COMMERCE APIS

How do you measure up?

Successful digital businesses are leaving their competition far behind. An API-centric approach is the only way to accelerate your digital commerce initiatives.

Want to compare your own APIs against the best practices of the world's leading retailers?

Try the [Apigee Benchmark for Digital Commerce](https://apigee.com/about/solutions/retail/retail-api-benchmark) now.

apigee.com/about/solutions/retail/retail-api-benchmark

About this Report

The *State of APIs in Retail Report* compiles information about digital transformation trends, the impact of APIs on businesses, and best practices across API-driven businesses.

Unless otherwise noted, findings in this report are based on 700+ APIs that served over 80 billions API calls from 30 customers in the retail sector across North America, Europe, and Latin America made through the Apigee cloud and distributed across Apigee's global network of 24 data centers.

If you have questions regarding the report or its findings, please email info@apigee.com or tweet [@apigee](https://twitter.com/apigee).

About Apigee

Apigee® (NASDAQ: APIC) provides a cloud native API platform for digital business. Many of the world's largest organizations select Apigee to enable their digital business, including 33 percent of the Fortune 100, four of the top five Global 2000 retail companies, and five of the top 10 global telecommunications companies. Apigee customers include global enterprises such as Walgreens, Burberry, Morningstar, and First Data. Apigee is headquartered in San Jose, California. For more information, go to apigee.com.