Business Banking

Blueprint for Omnichannel Payments

Unifying Online, Mobile and In-Store Checkout

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Omnichannel vs. multichannel explained

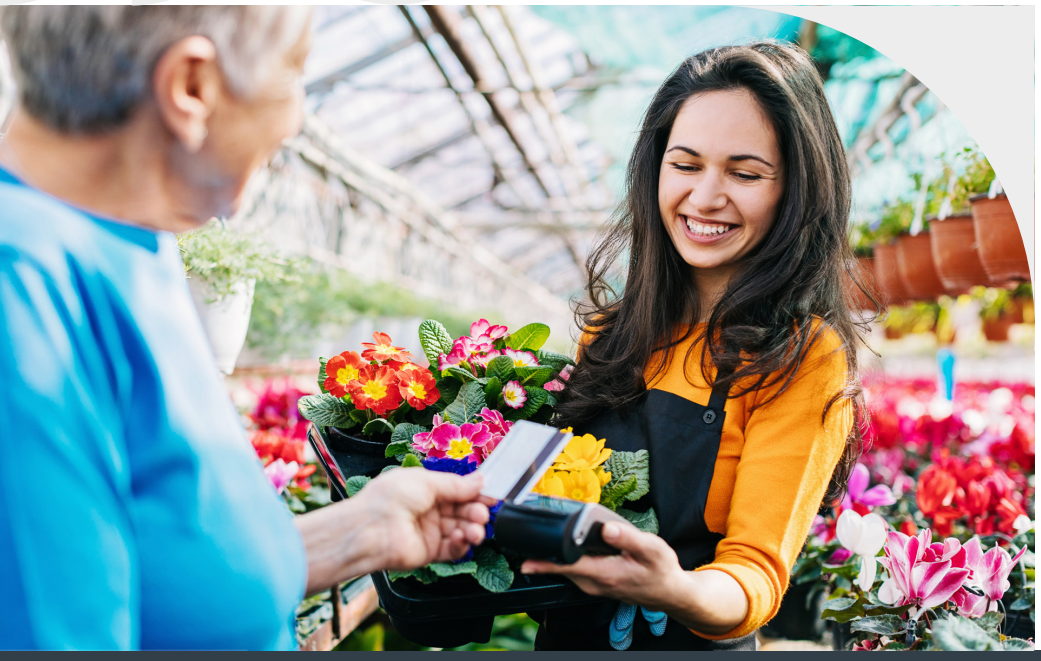
It's easy to confuse omnichannel and multichannel payments. The terms are often used interchangeably, but they describe very different ways of connecting checkout, data and customer experiences.

Understanding the distinction helps clarify why payments may begin to feel more complex as your business expands.

Multichannel: More Places to Pay, Kept Separate

Multichannel refers to multiple ways to buy and pay, such as in-store checkout, an online store, a mobile app or social commerce, with each channel operating independently. It's often the fastest way to expand reach and meet customers where they are.

For early-stage businesses, multichannel may be a practical starting point. It allows for quick access to different payment routes without the need for technical or time-consuming integrations. It may also work well in markets where customers tend to stick to a single channel.



Over time, however, the limitations of multichannel payments become more visible.

Separate systems may lead to fragmented customer data, inconsistent brand experiences and additional operational effort, especially when reconciling payments, managing refunds and **monitoring fraud and compliance risks** across channels.

Omnichannel: One Connected Experience, Everywhere

Omnichannel unifies those channels through a shared foundation. Every transaction flows through the same underlying infrastructure — no matter if it originated in-store, online or via mobile app — allowing customer orders, payments and preferences to remain connected.

Instead of managing separate touchpoints to understand user behavior, omnichannel unlocks a single view of customer activity.

In turn, businesses gain greater transparency in payments, risks and reconciliation. This connection often helps organizations better support customers as they move between channels, provide more consistent brand experiences and scale with confidence as **revenue begins to grow**.

Why omnichannel, why now?

Consumer Expectations and Consistency

Customer behavior has changed, even if their expectations haven't. Shoppers want the same brand experience wherever they engage, whether that's online, in an app or in a physical location. They also expect flexibility in how and where they complete a purchase, especially when inventory or timing shifts.

More than half of consumers (55%) say they would be more loyal to a retailer that lets them purchase an out-of-stock item in-store and have it shipped to their home, and 38% expect to shop across multiple platforms, including websites, apps and social channels.[1] At the same time, checkout isn't always the end of the journey.

Research shows that 43% of U.S. online shoppers have abandoned a cart because they were "just browsing" or "not ready to buy," a reminder that many purchase decisions span multiple moments, devices and channels.[2] Without continuity, that intent may not reconnect when customers return through a different channel.

Meeting customers where they are increasingly requires **payment systems** that work together, not in silos.

Cost, Risk and Operational Pressures

As payment systems grow more complex, so do the costs and risks associated with managing them. Many businesses today are navigating rising processing fees, a broader mix of payment methods, and increased exposure to fraud, often across systems that weren't designed to share data in the first place.

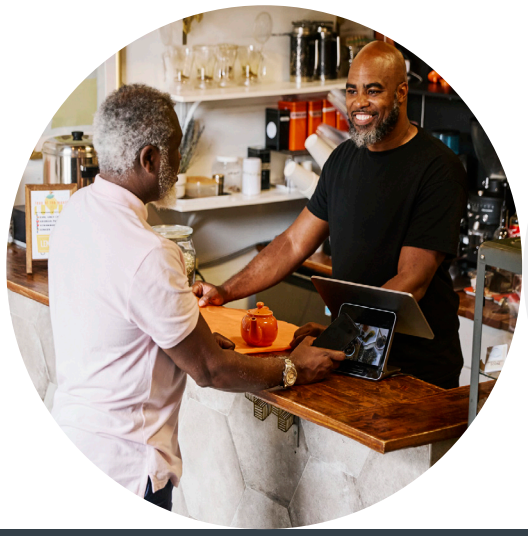
That pressure is showing up in fraud outcomes, too: 79% of organizations experienced payments fraud attacks or attempts in 2024, with fewer able to recover most of the funds lost compared to prior years.[3] Fragmented systems may make it harder to detect patterns, respond quickly or apply consistent controls across channels.

Fragmentation vs. Unification Trade-Offs

Likewise, operating with disconnected payment systems often means duplicate tokens, mismatched order IDs and inconsistent refund workflows. These gaps may increase manual effort, complicate reconciliation and limit visibility into performance across channels.

In practice, that fragmentation may carry real cost. Organizations running four or more disjointed payment platforms may see operational expenses rise by 15% to 40%, largely driven by duplication and disconnected controls.[4] Unification may offer a more sustainable alternative.

As transaction volume and channels multiply, the cost and complexity of fragmentation become harder to ignore — making an omnichannel approach a valuable solution.



The importance of connecting in-store and online sales

How Disconnected Channels Create Friction

Today's customers don't separate online and in-store shopping; they constantly switch between them. When they visit a retailer's website or mobile app, they expect to see what's available in-store, understand pickup options and continue a purchase wherever it's most convenient.

Modern customers also expect to stand in an aisle and research products in real time.[5] When those connections aren't available, shoppers often create their own workarounds, toggling between apps, search engines and checkout paths to get what they need, when they want it.

This disconnect is clear in online checkout behavior. The average documented online shopping cart abandonment rate is currently 70.22%, meaning more than 7 in 10 purchases don't make it through checkout.[2] Common reasons for abandonment include:

- 19% were asked to create an account.
- 19% didn't trust the site with their payment information.
- 18% found checkout too long or complicated.[2]

Disconnected systems often contribute to these drop-offs by forcing customers to re-enter information, repeat steps or change channels mid-purchase.

The Operational and Customer Impacts of Alignment

With consumers already shifting between channels, **connecting in-store and online sales** may help reduce barriers to purchase. Research shows that large ecommerce sites may achieve a 35.26% increase in conversion rates through a better checkout experience alone.[2]

Across last year's U.S. and EU ecommerce sales, which totaled $738 billion, that increase represents an estimated $260 billion in recoverable orders tied to a smoother, more connected checkout experience.[2] In other words, when channels work together, businesses are better positioned to convert customers, wherever they shop.

Core architecture

The unified payments stack

Basic Components of an Omnichannel Approach

An omnichannel approach brings in-store, online and mobile social commerce transactions together in a shared system. Rather than manage separate payment flows by channel, a unified payments stack leverages a set of components that keep data and controls connected, even as sales volume increases.

Explore the core components of an omnichannel payments stack.

1. Data Model and IDs

The foundation of an omnichannel payment system structures customer and order details consistently, regardless of where a transaction begins. Instead of creating separate experiences for each channel, unified systems rely on mechanisms that follow activity across the customer journey:

- Activity can be tracked across POS, ecommerce and mobile apps marketplaces, helping businesses recognize returning customers.
- Purchase, refund and exchange adjustments can be connected, even when they occur in different locations or at different times.
- Channel attributes describe where and how a transaction was completed, such as the device type, store location or staff member involved.
- Shared Payment Tokens (network or vaulted) represent stored payment credentials that may be reused across online and in-store transactions.
- Unified records may help to reduce duplication and simplify reconciliation by aligning financial and operational data in one place.

2. Shared Tokenization

Tokenization allows payment credentials to be stored securely and reused across channels, reducing the need to re-enter card details for repeat purchases. Though some retailers refer to this as “one-click checkout,” the process involves multiple steps that occur automatically behind the scenes:

- Tokenization replaces card data with a secure token that represents each user’s payment credentials.
- Token reuse across channels supports consistent payment handling online, in-app and in-store.
- Token vaults (processor-managed or third-party) store credentials securely and safeguard how data is handled.
- Network tokenization supports life-cycle management, including automatic updates, often leading to higher authorization rates and lower fraud risk.

3. Centralized Risk and Decisioning

In a unified payment system, fraud checks and security rules are managed centrally versus by channel. A single rules engine allows risk signals to be evaluated equally across in-store, online, in-app and other payment touchpoints, based on:

- Velocity checks that monitor transaction frequency and patterns across channels
- Device and behavioral signals that help identify unusual activity, no matter where a transaction originates
- Step-up authentication, such as 3D Secure, that may be triggered based on pre-defined risk thresholds
- Allow and deny lists and tiered policies that adjust controls based on transaction size, risk score or payment type.

4. Real-Time Settlement Visibility

Real-time settlement visibility provides a current view of payment activity as transactions move from authorization through settlement and deposit:

- Status tracking illustrates when payments are approved, captured, settled and deposited into business accounts.
- Prior-day and intraday reporting shows captures, fees, chargebacks and refunds, normalized by channel.
- Event streams or webhooks feed payment activity into finance or accounting systems to support reconciliation.

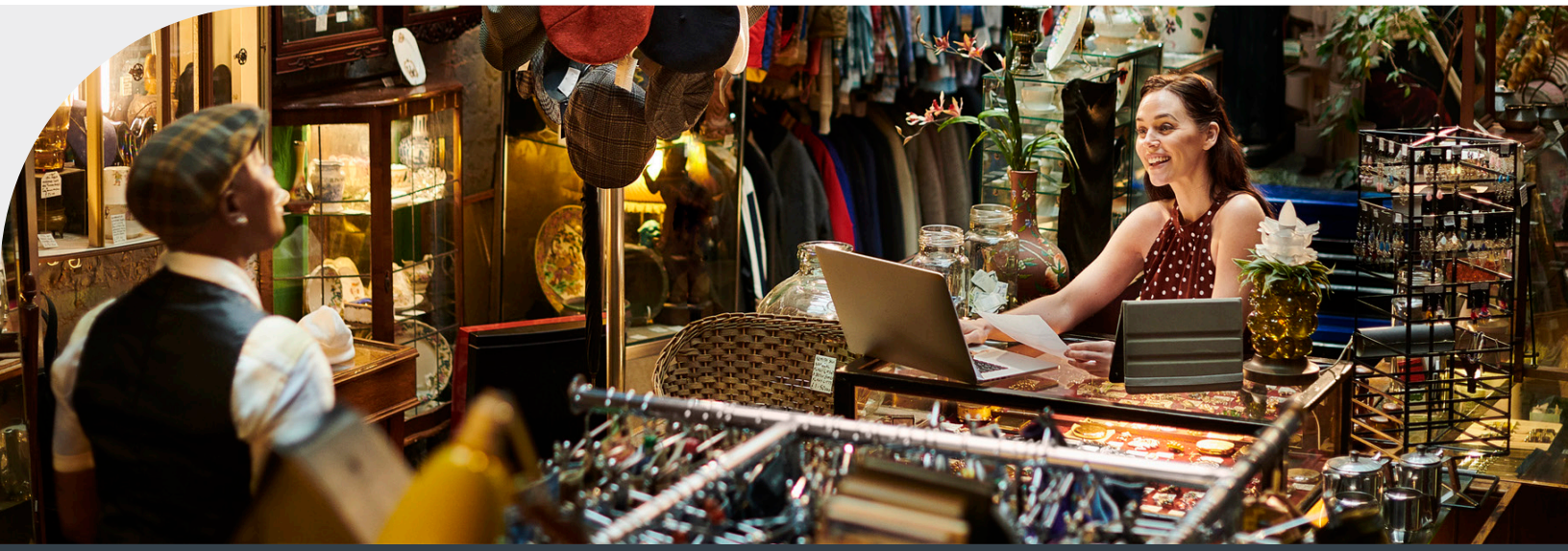
5. Orchestration Layer

The orchestration layer is where an omnichannel system becomes truly connected. It acts as the traffic controller for payments, determining how each transaction is routed behind the scenes — without manual effort. Rather than relying on a single processor or payment rail, it applies uniform logic to each transaction based on predefined criteria.

Here's how that process may look in practice:

- Transaction routing selects the appropriate payment rail, such as card, digital wallet, ACH or RTP® (Real-Time Payment), based on factors like cost, risk profile or service-level requirements.
- Policy-based decisioning applies routing rules consistently across channels instead of managing them separately by system.
- Fallback logic automatically reroutes transactions if a processor or rail is unavailable, which may help avoid failed checkouts.
- Centralized controls allow routing updates to be made in one place rather than reconfigured across multiple systems.

By managing risks and routing centrally, orchestration in an omnichannel system works to maintain continuity as payment volume increases.



Integration patterns by channel

Common Unified Payment Integration Patterns

Omnichannel payments rarely follow a one-size-fits-all model. Instead, many businesses adopt integration patterns that align with how their customers shop, how their systems are connected, and how their payments flow between channels.

The following patterns reflect how the average business connects customer data, checkout workflows and payment credentials across channels.

1. POS and E-Commerce "Same-Token" Pattern

This pattern connects in-store and online purchases through a shared customer ID and payment token, allowing activity in one channel to carry into the next. An in-store purchase may enable a one-click "buy again" experience online without requiring customers to re-enter payment details.

Receipts or QR codes are often used to link guest POS transactions to customer accounts after the fact, on an opt-in basis. This approach aligns with how many customers already shop: 44% still prefer in-store retail but expect seamless digital integration, including personalized offers that reflect their full purchase history.[1]

2. Mobile App "Loyalty-First" Pattern

For many shoppers, mobile apps have become the most convenient way to make a purchase. Nearly 4 in 10 U.S. consumers (39.3%) are expected to use **proximity mobile payments** like Apple Pay this year, tapping their phone at checkout instead of using a physical card,[6] so it's no surprise that many retailers have adopted a mobile-first integration pattern.

In this pattern, payment credentials are stored securely on a digital wallet, often supported by network tokens. Biometric step-up, such as Face ID or fingerprint authentication, enables one-click reorders. For curbside pickup orders, payments are typically pre-authorized in-app and captured at pickup, with transactions synced with the in-store POS.

3. Marketplace and Social Commerce Pattern

Like mobile payments, the penetration rate of social and marketplace shopping is also expected to rise, reaching a new high of 31% in 2025.[7] As customers increasingly buy through third-party marketplaces and social media platforms, businesses need a way to manage those transactions alongside direct sales.

In the marketplace and social commerce pattern, payments from multiple sellers, channels or external platforms flow through a single system for reporting and reconciliation. External fees and payouts are normalized into a consistent settlement model using order- and line-item attributes. Refunds and returns may also be initiated centrally, even when the original sale was external.

4. BOPIS/BORIS and Endless Aisle Pattern

Buy online; pick up in store (BOPIS); and buy online, return in store (BORIS) continue to gain traction as customers merge digital ordering with in-person fulfillment. In the U.S., the BOPIS market is expected to grow at a 16.45% compound annual rate between 2025 and 2033, reaching more than $500 billion in total value.[8]

As that growth continues, businesses require payment systems that support flexible fulfillment without fragmenting transactions.

That's why in the endless aisle integration pattern, inventory holds, pickups, returns and exchanges are managed under the same order ID. Split tenders, partial refunds and in-store returns may be uniformly processed, even when the original purchase occurred online or inventory was sourced from another location.

Checkout UX that lifts conversion and lowers cost

Reduce Friction at Checkout, Remove Barriers to Sales

Checkout experience has a measurable impact on customer behavior. Research from Cornell University found that after customers enrolled in a retailer's one-click checkout experience, they increased spending by 28.5%, purchased 43% more frequently and bought 36% more items over time.[9]

These gains point to a consistent theme: When checkout feels easier, customers are more likely to complete purchases — over and over again.

The other lesson here? For businesses, improving checkout UX is less about adding features and more about removing unnecessary steps. Streamlining how customers pay and applying strategic controls to transactions may help support higher conversion and help teams manage operations more efficiently.

Fast Paths

These techniques are designed to help customers complete purchases quickly, especially for low-risk transactions:

- Enable guest checkout so customers aren't required to create an account before paying.
- Prioritize digital wallets to reduce manual payment credential entry.
- Use address autofill and stored credentials for returning customers.
- Support one-click reorders using network tokens across channels.

Fewer Keystrokes

These approaches may help to reduce manual input, particularly for repeat purchases:

- Offer pay-by-link for phone, chat or assisted sales.
- Carry order and contact details across channels.
- Defer account creation until after payment.

Smart Authentication

These controls help balance security with customer experience by applying friction only when needed:

- Use risk-based 3D Secure 2 instead of blanket authentication.
- Trigger step-up challenges only when risk thresholds are met.
- Apply uniform authentication logic across channels.

Cost Control

These practices may help businesses manage payment costs without disrupting checkout flows:

- Route larger invoices to lower-cost rails, such as ACH.
- Use cards and wallets where speed and acceptance matter most.
- Apply intelligence retries and account updater tools to reduce failed payments.
- Manage network token life cycles to support authorization reliability.

Fraud, trust and safety controls

Managing Risk Without Slowing Checkout Flows

As payments span more channels, fraud controls must work across the entire customer journey — not just at the point of checkout. Omnichannel systems centralize risk signals and guardrails, enabling businesses to protect transactions and avoid unnecessary friction for legitimate customers.

Central Risk Graph

A centralized risk graph connects activity across channels to recognize patterns that may go undetected in silos:

- Links devices, email addresses, payment credentials and shipping locations across transactions
- Identifies return abuse, refund manipulation and triangulation behavior across channels
- Applies consistent risk logic, regardless of where a transaction was completed

CNP and Curbside Attacks

Card-not-present (CNP) and curbside transactions introduce unique risks that may benefit from cross-channel actions, such as:

- Performing pre-authorization checks before inventory is reserved or released
- Monitoring velocity across online, mobile and in-store channels
- Capturing proof-of-pick artifacts, such as signed receipts, to validate fulfillment

In-Store Workflows

Risk controls may even extend beyond checkout to include how staff interact with payments and refunds, including:

- Defining staff roles and permissions for refunds and overrides
- Requiring approvals for high-value or repeat refunds
- Linking register activity to order IDs for tracking

Evidence Packs for Disputes

Standardized evidence may support faster, more consistent dispute handling by:

- Using uniform transaction descriptors across channels
- Including item-level details, timestamps and geolocation data
- Maintaining refund and adjustment logs to reduce chargebacks

Returns and refunds that work across channels

Simplify Operations with Unified Return Logic

Though it varies by industry, returns and refunds are often where disconnected systems create the most headaches for business owners. In an omnichannel approach, unified return logic applies the same rules and timing, regardless of where a purchase originates or how it was returned.

This consistency tends to help teams process refunds faster and with fewer exceptions. In practice, unified return logic may look like:

- Single refund policy applied across online, mobile and in-store channels
- Consistent refund timing and eligibility rules, regardless of return location
- Support for cross-channel returns, such as BORIS
- Order ID–based processing to connect returns, exchanges and adjustments

Leverage Speed, Liquidity and Abuse Controls

Refunds also impact cash flow, customer trust and fraud exposure. Omnichannel systems are designed to support multiple refund methods and controls, so businesses may respond quickly without sacrificing oversight:

- Instant refunds routed through RTP® or same-day ACH for speed-sensitive cases
- Card reversals used where required to align with original payment methods
- Inventory and accounting sync using return reasons codes to inform forecasting
- Same-day settlement of refunds into the primary deposits account or a dedicated refunds Zero Balance Account (ZBA) to **help protect liquidity**
- Abuse controls, including refund velocity alerts, identity verification and store-credit rules for edge cases

Treasury, reconciliation and cash positioning

Connecting Customer Payments to Cash Flow

As payments move faster and across more channels, treasury visibility becomes just as important as checkout performance. An omnichannel payment stack often works best when acceptance, settlement and cash positioning are connected end to end, giving finance teams a clearer view of where funds are — and when they're available.

With the right banking professional, those connections extend beyond payments alone. PNC Business Banking supports omnichannel sales through **our Merchant Services**, helping businesses accept card and digital wallet payments while keeping reporting and settlement closely aligned with treasury operations. Here's a look at how that works.

Settlement Normalization and Reconciliation

Unified settlement simplifies how payment activity is tracked once transactions move beyond checkout:

- Normalized settlement files align transactions, fees and refunds into a consistent structure.
- Order- and line-item–level detail supports faster reconciliation and fewer manual adjustments.
- Payment orchestration and tokenization support help maintain continuity across processors and rails.

Cash Visibility and Positioning

Clear visibility into inflows and outflows **helps businesses manage cash** more proactively:

- Same-day and real-time payout options, including RTP®, provide faster access to cleared funds.
- **PINACLE®** banking solution offers centralized views of balances, deposits and payment activity.
- Alerts and reporting tools help teams monitor cash positioning as sales fluctuate.

Liquidity Protection During Refunds

Refunds may introduce gaps between cash outflows and incoming settlements, but **the right treasury management support** may offer timely buffers:

- Refunds may settle into operating accounts or dedicated refunds ZBAs to limit cash impact.
- Faster payout options may help reduce lags between refunds issued and funds replenished.
- Treasury visibility may help enhance liquidity planning during high-return periods.

Implementation road map for omnichannel payments

Blueprint for a Unified Payments Stack

Developing an omnichannel payment stack may feel intimidating at first. Many businesses approach it in stages, building out capabilities as systems and teams are ready. The phases below reflect how some organizations move from setting a unified foundation to scaling payment channels over time.

Phase 1: Laying the Foundation

Once the need for omnichannel payments arises, early efforts typically focus on aligning core payment and data elements, such as:

- Establishing shared customer and order IDs to sync activity across channels
- Implementing tokenization to allow customers to reuse payment credentials
- Centralizing risk logic so fraud and policy decisions remain consistent

Phase 2: Integrating Channels and UX

After the foundation is in place, organizations tend to focus on how customers experience checkout across channels. In practice, that may look like:

- Identifying the integration pattern that best fits the business model
- Tailoring experiences by industry, such as offering QR-checkout in retail or food and beverage businesses
- Extending shared credentials and order context over in-store, online and mobile transactions to reduce repeat steps

Phase 3: Finalizing Orchestration and Treasury

As transaction volume grows, many businesses prioritize orchestration between channels and treasury connections, often beginning with:

- Applying policy-based decisioning and centralized controls
- Introducing transaction routing across processors and payment rails
- Aligning settlement and treasury workflows to support liquidity and reconciliation

Some organizations also choose to work alongside a banking partner to help bring structure to the process. For instance, PNC Merchant Services® specialists help support businesses as transaction channels are brought together, coordinating payments, refunds and inventory with treasury visibility.

Phase 4: Tracking KPIs and Optimizing Over Time

With systems connected, many businesses shift focus from manual oversight to automatically monitoring performance and making adjustments. Common key performance indicators to track and optimize include:

- Authorization and acceptance rates
- Fraud and chargeback trends
- Acceptance and processing costs
- Time to refund and settlement visibility

Over time, these signals may help teams fine-tune how omnichannel payments perform as the business grows, without constant hands-on effort.

Take the next steps forward, together

Today's customers expect to move effortlessly from cart to curbside to counter to cashier, without starting over at each step. Omnichannel payments bring that checkout experience together, helping businesses meet customers wherever they choose to buy.

Many organizations begin by aligning the fundamentals — shared payment tokens, customer and order IDs, centralized risk controls, and consistent settlement reporting. From there, they may expand into channel-specific orchestration as transaction volume increases.

PNC Business Banking helps support that evolution.

Through **PNC Merchant Services**, businesses may accept cards and digital wallets, enable real-time payments for faster refunds or disbursements, easily set up orchestration and reporting, and connect treasury tools for reconciliation and liquidity at a glance.

Connect with PNC Merchant Services to start building a payments stack designed to grow with your business, wherever it takes you.

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