

From Fragmentation to Force Multiplier

A Strategic Transformation Plan for NovaRetail's E-commerce Platform

The Opportunity: A 3-Year Plan to Unlock Agility and Growth

The Challenge

Our 12 independent platforms create inconsistent customer experiences, slow feature deployment (3-6 months), and high operational costs. We cannot recognize customers across borders and are competitively disadvantaged by batch processing.

The Investment

A 3-year investment of \$4-6M, executed in phases to deliver incremental value and mitigate risk.

The Solution

A unified, cloud-first microservices platform. This will enable a single view of the customer, real-time order processing, and rapid innovation across all markets.

The Payoff

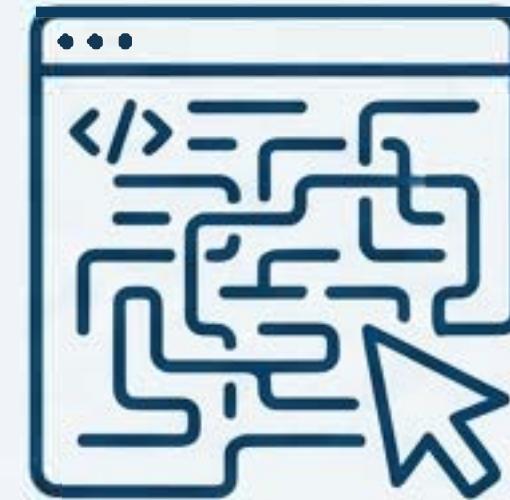
Transform our technology into a competitive advantage, leading to an 85% reduction in time-to-market, a 30% reduction in infrastructure costs, and an estimated 18-month payback period.

Our Current Architecture is an Unseen Tax on the Business



A Tax on Our Customers

- Inconsistent experience across 12 different platforms.
- Customers must re-register in each country.
- Impossible to implement global loyalty programs.
- Delayed order fulfillment (12-24 hours).



A Tax on Our Developers

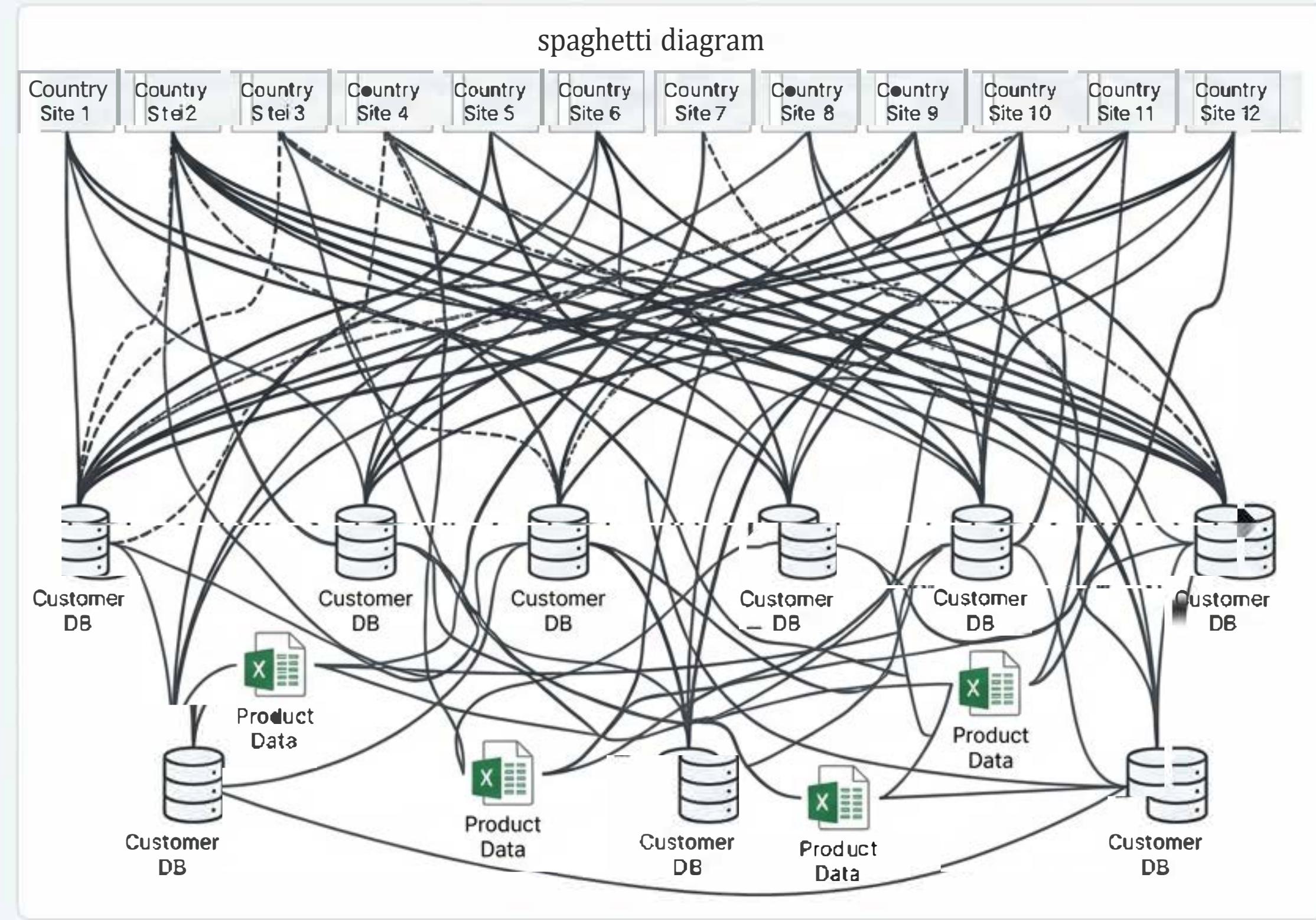
- Productivity is crippled by technical debt across four different stacks (.NET, Java, PHP, Node.js).
- Time-to-market for simple features is 3-6 months.
- Manual deployment processes lead to a change failure rate of ~20%.



A Tax on Our Operations

- High costs from maintaining fragmented on-prem and cloud infrastructure.
- Cascading failures due to tightly coupled, point-to-point integrations.
- Manual data management (Excel for products) leads to high error rates and lost revenue.

We Operate 12 Separate Businesses, Not One Unified Platform



12

Independent E-commerce Platforms

8

Separate Customer Databases

4

Disparate Technology Stacks

0

Shared Components or Services

Result: High complexity, operational inefficiency, and significant GDPR compliance risk.

Three Critical Risks Threaten Our Competitive Position

RISK: 9.5/10

No Unified Customer Identity

Impact

We cannot track the customer journey, leading to wasted marketing spend and a poor user experience. We face significant GDPR compliance risk as we cannot fulfill data deletion requests reliably.

RISK: 9.0/10

24-Hour Batch Order Processing

Impact

We cannot offer modern fulfillment (e.g., same-day delivery), inventory is inaccurate leading to overselling, and we are losing customers to real-time competitors.

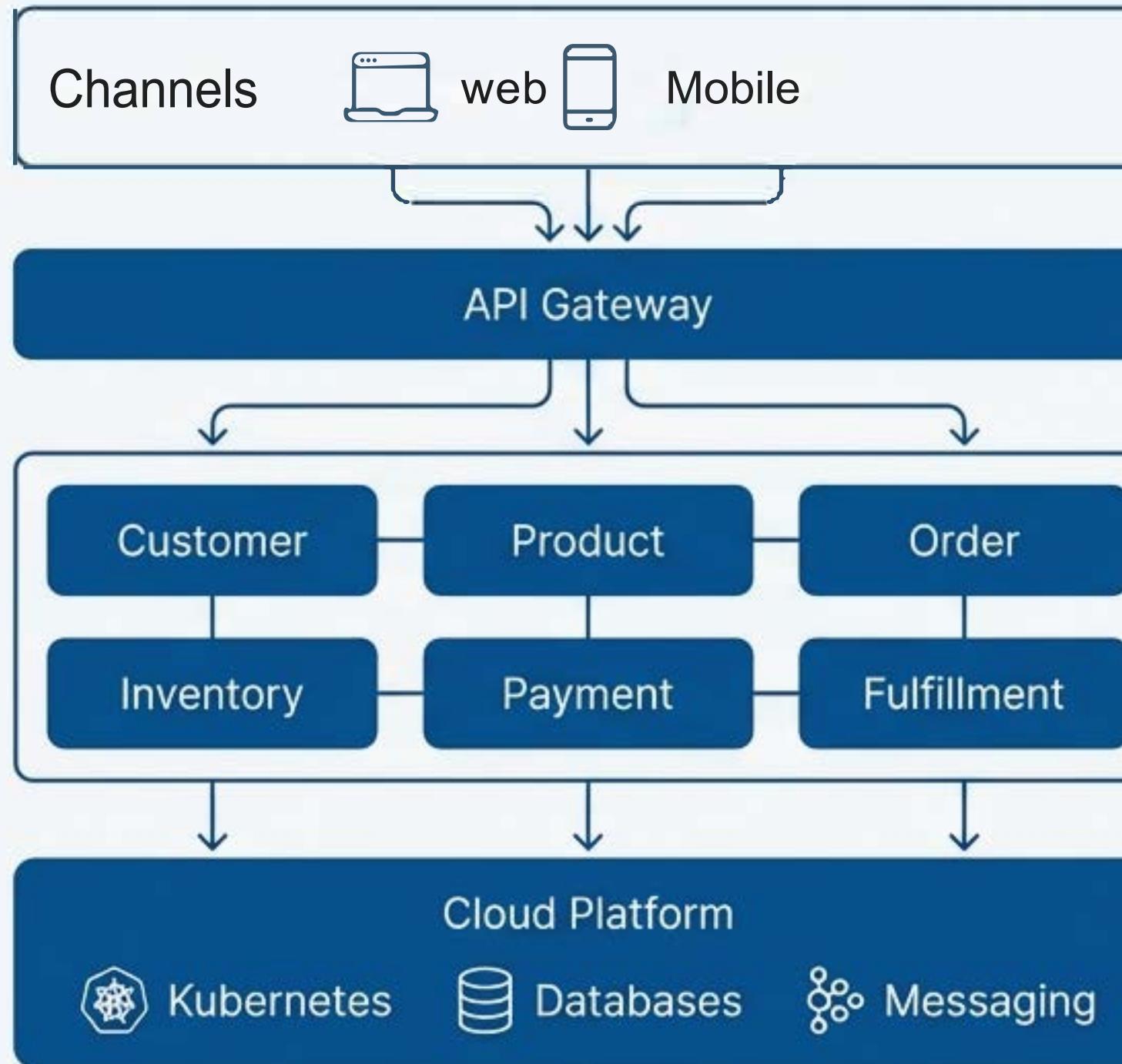
RISK: 8.5/10

Manual Product Data Management

Impact

High error rates in pricing and availability lead directly to lost revenue and customer frustration. Time-to-market for new products is weeks instead of hours.

Our North Star: A Unified OmniCommerce Platform



Core Vision

- ✓ **Unified Customer Experience**
Recognize customers and provide consistent service in every market.
- ✓ **Real-Time Operations**
Process orders in minutes, not hours, with live inventory.
- ✓ **Composable Platform**
Rapidly deploy new features and enter new markets in weeks, not months.
- ✓ **Cloud-Native Foundation**
Built for scalability, resilience (99.9% SLA), and efficiency.

Built on Proven Principles for Agility and Scale



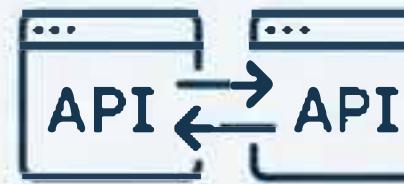
Domain-Driven Design

Organize services around business domains (Customer, Order), not tech layers.



Single Source of Truth

Each business domain owns its data, ensuring consistency.



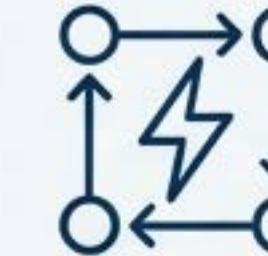
API-First Development

All services expose well-defined APIs for any channel to consume.



Autonomy with Governance

Enable country teams to innovate within standardized guardrails.



Event-Driven Integration

Use asynchronous messaging to eliminate bottlenecks and enable real-time flow.



Security by Design

Implement a zero-trust architecture, authenticating at every boundary.



Cloud-Native by Default

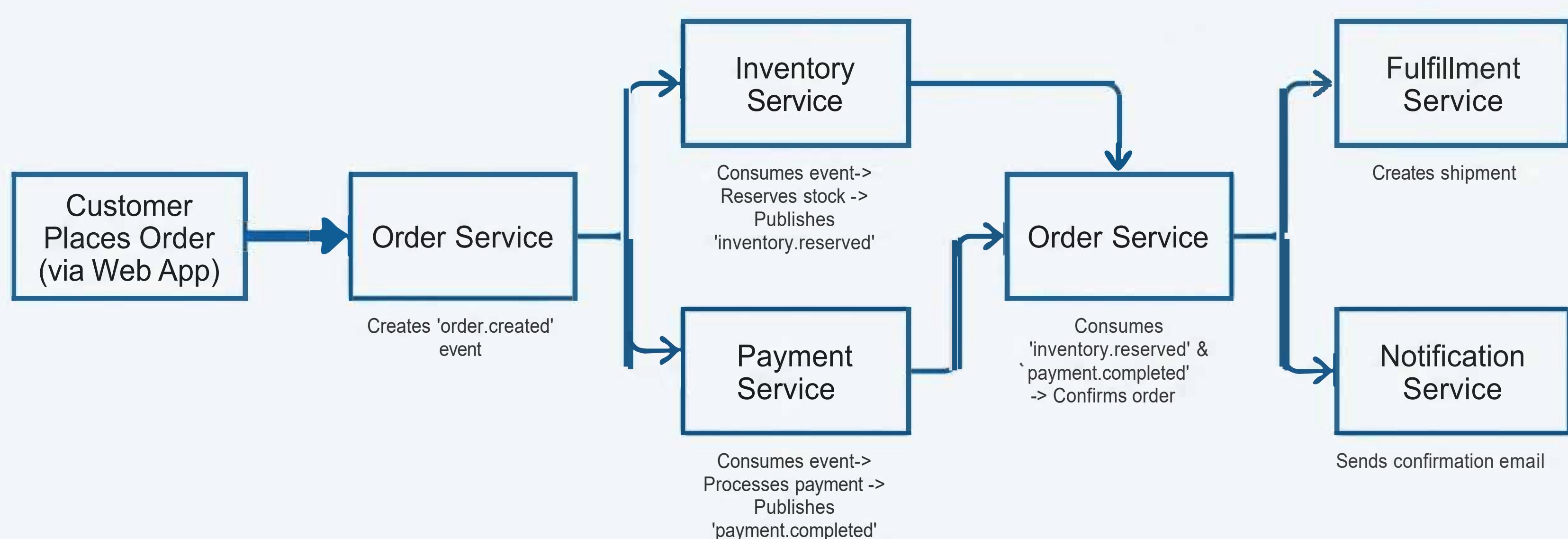
Leverage managed cloud services for scalability and resilience.



Observability First

Build in comprehensive logging, metrics, and tracing from day one.

The Future of an Order: From Batch Delays to Real-Time Flow

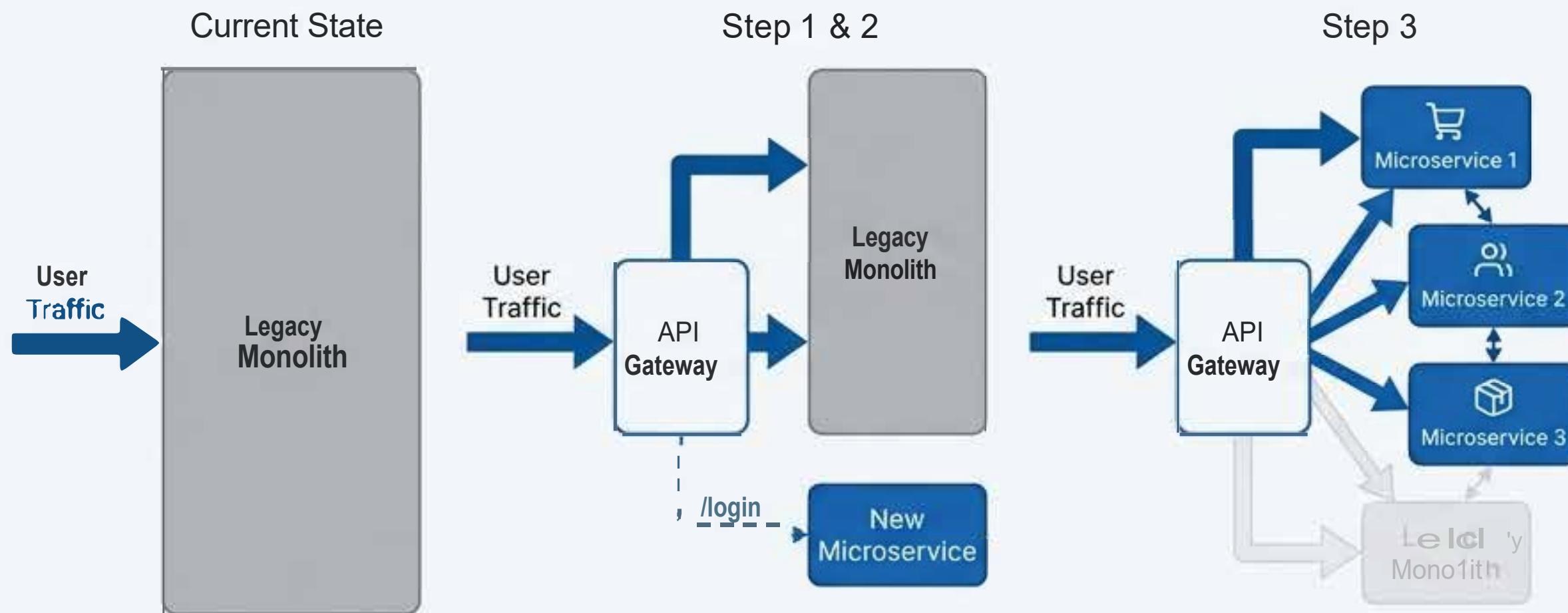


This eliminates batch processing, enabling near real-time fulfillment and accurate inventory across all channels.

Our Bridge to the Future: A Low-Risk, Incremental Migration

Core Strategy: The Strangler Fig Pattern

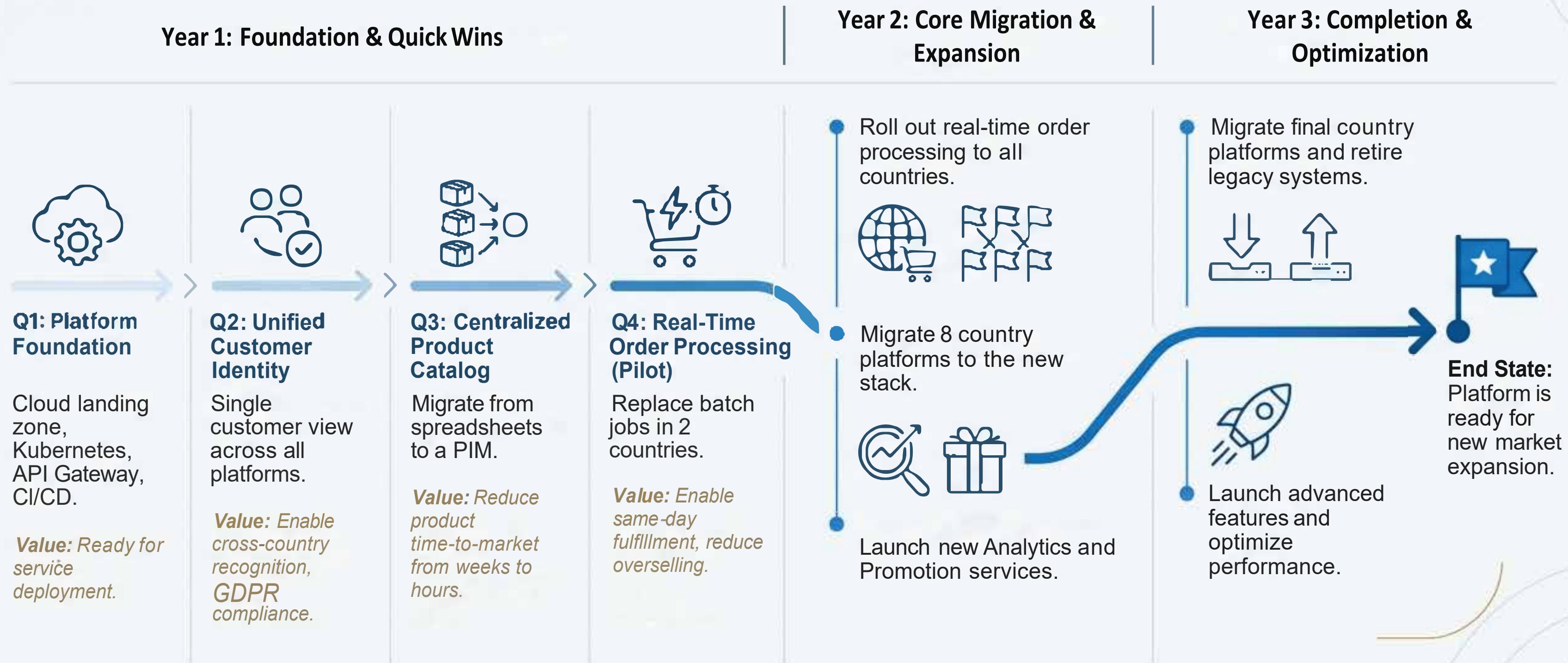
How it Works



Why This Approach?

- Delivers Value Immediately:** Benefits start in Q2 of Year 1, not after 3 years.
- Mitigates Risk:** We can pause or adjust based on learnings. No "big bang" cutover.
- Ensures Business Continuity:** Legacy systems remain operational during the transition.
- Proven at Scale:** The same pattern used by Amazon, Netflix, and Spotify.

A Phased 3-Year Roadmap to Value



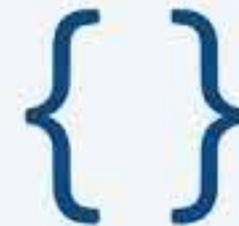
Our Technology Blueprint: Standardization with Flexibility

Cloud & Infrastructure



- **Primary Cloud:** Azure (for .NET integration, managed services)
- **Disaster Recovery:** AWS (Warm Standby, RTO < 4 hours)
- **Orchestration:** Kubernetes (Azure AKS / AWS EKS)
- **Infrastructure as Code:** Terraform

Backend Languages



- **Primary:** .NET 10 (for new Azure-native services)
- **Alternative:** Java 17+ (Spring Boot) (leveraging existing team expertise)
- **Specialized:** Node.js (BFFs), Python (Data/ML)

Data & Messaging



- **Transactional:** Azure PostgreSQL
- **Product Catalog:** Azure Cosmos DB
- **Event Streaming:** Azure Event Hubs / Kafka
- **Caching:** Azure Cache for Redis

API & Observability



- **Gateway:** Azure API Management
- **Service Mesh:** Istio
- **Standards:** OpenAPI 3.0, OpenTelemetry

The Investment and The Return

The Investment - \$5.98M Over 3 Years



- Additional Staff: \$2.1M (35%)
- Cloud Infrastructure: \$1.5M (25%)
- Contingency (15%): \$779K (13%)
- Professional Services: \$600K (10%)
- Software Licenses: \$550K (9%)
- Training & Enablement: \$450K (8%)

The Return - Estimated 18-Month Payback

~\$800K

Infrastructure Cost Reduction

Annually from cloud optimization and decommissioning legacy hardware.

~\$1.2M

Improved Developer Productivity

Annually in recaptured opportunity cost (50% productivity gain for 80 developers).

\$2M+

Direct Revenue Increase

Annually from a projected 10% conversion rate lift and reduced cart abandonment.

Measuring Our Transformation: From Lagging to Leading

Metric	Current State	Target State (Year 3)	
--- Business Impact ---			
Time to Market (New Features) New Market Launch	3-6 months	2-4 weeks	↗
Time Customer Data Accuracy	6 months	6 weeks 95%+	↗
Conversion Rate	~60% (fragmented)	(unified) +10%	↗
--- Technical Excellence ---			
System Availability Deployment Frequency	95% average Monthly	99.9% SLA Daily (multiple per day) <	↗
Mean Time to Recovery (MTTR)	4+ hours	1 hour	↗
Change Failure Rate	~20%	<5%	↗

Ensuring Long-Term Success Through Governance

Architecture Review Board (ARB)

NovaRetail blue Inter SemiBold



Purpose

To ensure consistency, quality, and adherence to standards for all new services.

Composition

Principal Architect (Chair), Domain Architects, Security, Platform, and Engineering Leadership.

Responsibility

Review new designs, maintain standards, and conduct quarterly health assessments.

Service Ownership & Operating Model

NovaRetail blue Inter SemiBold



"Two-Pizza Team" Model

Each microservice is owned end-to-end (build, deploy, operate) by a dedicated team.

DevOps Culture

Teams have autonomy within architecture guardrails, supported by automated CI/CD pipelines.

Clear Change Management

Differentiated processes for standard, normal, and high-risk changes.

The Path Forward Begins Today

This transformation will create a sustainable competitive advantage for NovaRetail, enabling rapid innovation and exceptional customer experiences across all markets.

Key Success Factors



Sustained Executive Commitment



Focus on Incremental Value Delivery



Comprehensive Team Enablement

Immediate Next Steps



Weeks 1-2: Secure funding approval and finalize core team charter.



Weeks 3-4: Assemble platform engineering team and initiate developer training program.



Weeks 5-8: Begin cloud infrastructure setup (Q1 deliverable).



Week 9: Kick off development of the unified Customer Identity Service.