



NEXTUPLE FULFILLMENT STUDIO

# Modernize your OMS Technology Landscape

---

An incremental approach to transforming  
into a future-proof OMS  
Platform with flexibility, control & confidence.

[www.nextuple.com](http://www.nextuple.com)

# Table of Contents



01

Getting On the Same Page

02

A Significant Opportunity

03

The Problem Statement

04

Choices & Challenges

05

Our Offering: Nextuple Fulfillment Studio

06

The Solution Space: Real Cases

07

About Nextuple

# Getting On the Same Page

Omnichannel fulfillment capabilities are essential for retailers to improve their conversion rates and enhance the consumer experience. These capabilities include providing accurate availability and delivery dates during the shopping journey and visibility to every step of order fulfillment.

Retailers need to have a fine-grained visibility of their distributed inventory and capacity in order to improve delivery accuracy and save costs. However, achieving this level of maturity in omnichannel capabilities is challenging and requires both strategic business planning and advanced technology. Retailers need to transform their omnichannel technology and supply chain processes in order to keep up with market leaders and grow their market share.

Advanced omnichannel fulfillment capabilities play a critical role in improving conversion rates by enhancing the consumer experience. This is done by providing better availability, an accurate delivery date and order visibility across the buying journey. The level of maturity of omnichannel capabilities also impacts the ability to make and execute the right sourcing, allocation and fulfillment decisions, which directly impact efficiency and margins.

Having a fine-grained visibility of distributed inventory and capacity across the retailer's supply network can result in adherence and improvement to the delivery date promise and accuracy, along with enabling significant savings. While most retailers have the basic capabilities to provide this assurance down the buying funnel, at the scale of Cart and Checkout, the market leaders are better set to promise and meet an accurate delivery date from earlier on in the buying funnel at Search, Product List and Product Detail pages.

Enabling this is challenging in two primary ways:

First, from a business capability standpoint, a retailer's physical network needs to be set up strategically to provide deeper penetration of distribution closer to the consumer location, and hence, lower order delivery times to the markets. The supply chain processes to replenish and manage inventory and capacity, as well as fulfill consumer orders, also needs to be mature in order to provide a more accurate promise, and then meet it with industry leading Service Levels. This needs to happen at the right cost in order to protect and improve margins.

Second, omnichannel technology required to provide availability information at the scale of traffic on Search, Product List and Product detail pages is significantly different from what retailers have used between 2010-2020s. This is further exacerbated by the increase in the number of SKUs, inventory stocking locations (including retail stores, dark stores), fulfillment methods, carrier partners and 3rd party marketplaces.

It is imperative for retailers to transform the omnichannel fulfillment technology in order to level up in the marketplace and grow the consumer mindshare, and consequently, the market share. However, not every requirement can be addressed with just a technology change. It is important to understand and plan for business, network and performance improvements simultaneously as well.

**This white paper provides an approach to advance the technology transformation journey with control and certainty in a flexible manner.**

# A Significant Opportunity

Investing in modernizing omnichannel fulfillment technology can provide significant benefits for retailers in terms of increased revenue, improved customer and employee experience, and cost savings. However, the potential impact and cost of such an investment will vary depending on the retailer's unique situation and the maturity of their IT organization. It is important for retailers to carefully evaluate their needs and potential impact before making a significant investment in technology modernization.

Modernization of omnichannel fulfillment technology presents a valuable opportunity to increase revenue and improve consumer and employee experience, while also driving efficiency and lowering cost.

With capital being expensive in the current inflationary environment, organizations are demanding deeper evaluation of significant investment decisions.

Each retailer's situation is different. It is important to have directional guidance on the potential impact of making these investments.

Below are a set of examples of the advanced omnichannel features and the benefits that can be enabled by a scalable and modern Order Management System (OMS):



Showing a promise date across the buying funnel can have a significant impact on the consumer's decision to purchase. By certain estimates, conversion can **increase by 1-3% at cart/checkout, 2-3% at Produce Details page and 1-2% at the Product Listing Pages.**



Making and delivering to an aggressive promise can lead to **meaningful improvement in consumer lifecycle value.**



Showing Urgency Signals (e.g. Order in the next two hours to get delivery by tomorrow or Low in stock) can enable a **1-2% increase in conversion.**



Providing better quality visibility, and self-service can lead to much lower inbound to the contact center, with a potential to **reduce WISMO (Where is my order?) contacts by 5%.**



Showing dynamic promise dates by considering availability inventory, fine-grained capacity (rates & calendars) and optimizing for split reduction can **save shipping costs by up to 3%.**



Enabling store fulfillment KPIs to drive **improved fill rate and processing execution.**

On the other hand, the cost to enable a technology modernization initiative is also a function of maturity of different processes, such as Agile Development, DevOps, CI/CD, Automation of QA and Infrastructure.

The key features needed by the business, and the impact thereof, will depend on the retailer's unique situation - consumer buying patterns, traffic and order volumes and fulfillment network. It also depends on the maturity of the IT organization.

To aid evaluation of benefits for a specific retailer, a library of Omnichannel fulfillment KPIs that could be impacted is available to download here. Nextuple team can be reached here to help with evaluation:

[Click here to download](#) ↓

For a deeper conversation on your specific situation:

[Click here to reach us](#) →

# The Problem Statement

While the modernization of omnichannel fulfillment technology presents significant challenges for mid-sized retailers, it is also an opportunity to differentiate, improve efficiency, and increase customer satisfaction. By taking a strategic and long-term approach, and partnering with the right technology provider, mid-sized retailers can successfully navigate the modernization journey and gain a competitive edge in the rapidly changing retail landscape.

Between the 2000–2020's, for most retailers their omnichannel fulfillment journey started with procuring and implementing one of the industry standard monolithic packaged OMS to address Order Management, Inventory visibility, sourcing and fulfillment orchestration capabilities. Retailers with large volumes, scale and investment appetite built their own OMS with similar architecture.

After many years of double digit growth in volumes and rising consumer expectations, the monolithic systems do not scale anymore to enable ongoing differentiation within a far more complex fulfillment environment.

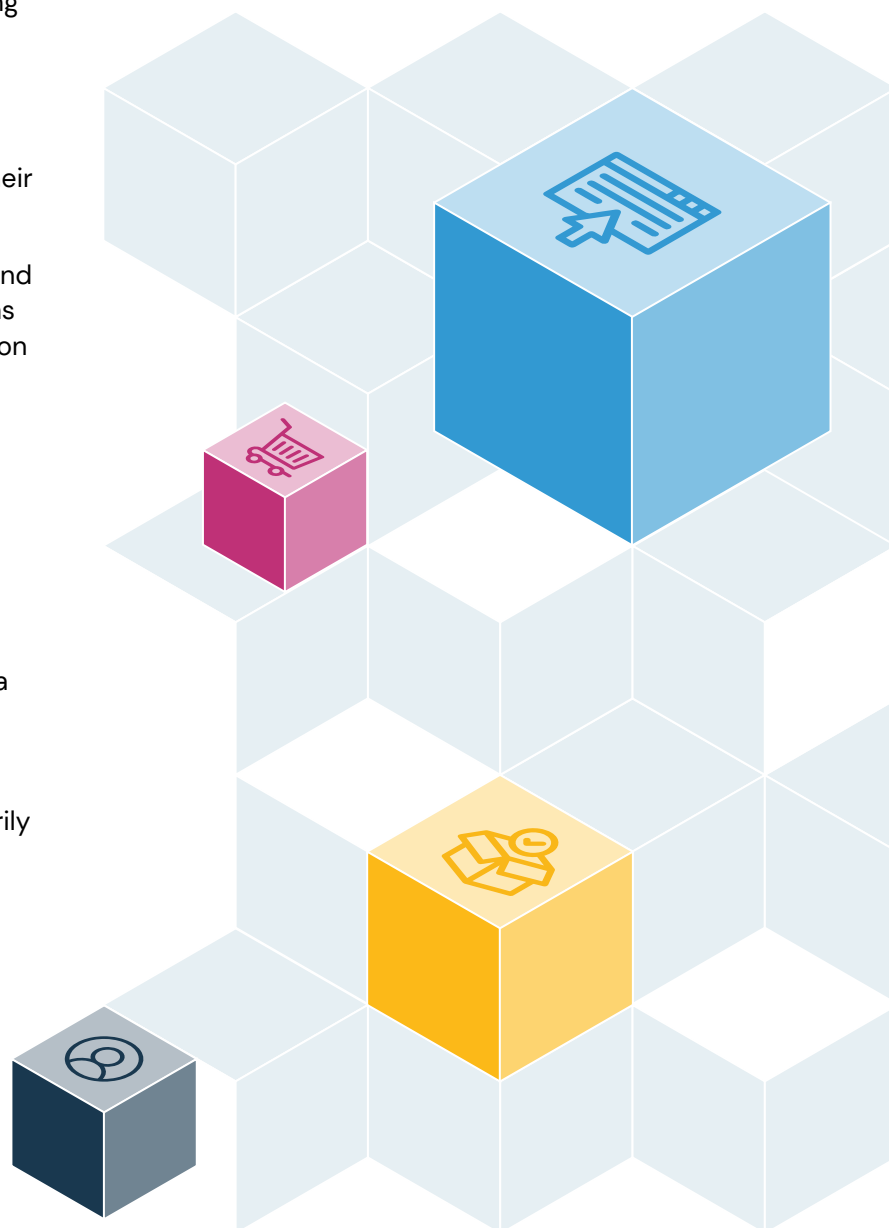
Retailers have been modernizing parts of the value chain in a piecemeal manner. Each time they strip a feature off of the package, it becomes an expensive undertaking due to the complexity in technology needed to build, deploy and iterate for that scale.

Along the way, industry leading retailers began their modernization journeys<sup>1</sup> leveraging and migrating to a microservices architecture. The microservice architecture and its benefits have been proven<sup>2</sup> in many industries and domains undergoing significant change or disruption. Within retail this started primarily in frontend ecommerce.

---

1. Raphael Bick, Stéphane Bout, Fabian Frick, Marcus Keutel and Valerie Skinner, "[The tech transformation imperative in retail](#)", McKinsey & Company, May 20, 2022

2. "[What are the benefits of a microservices architecture?](#)", GitLab, Sep 29, 2022



### 03 THE PROBLEM STATEMENT

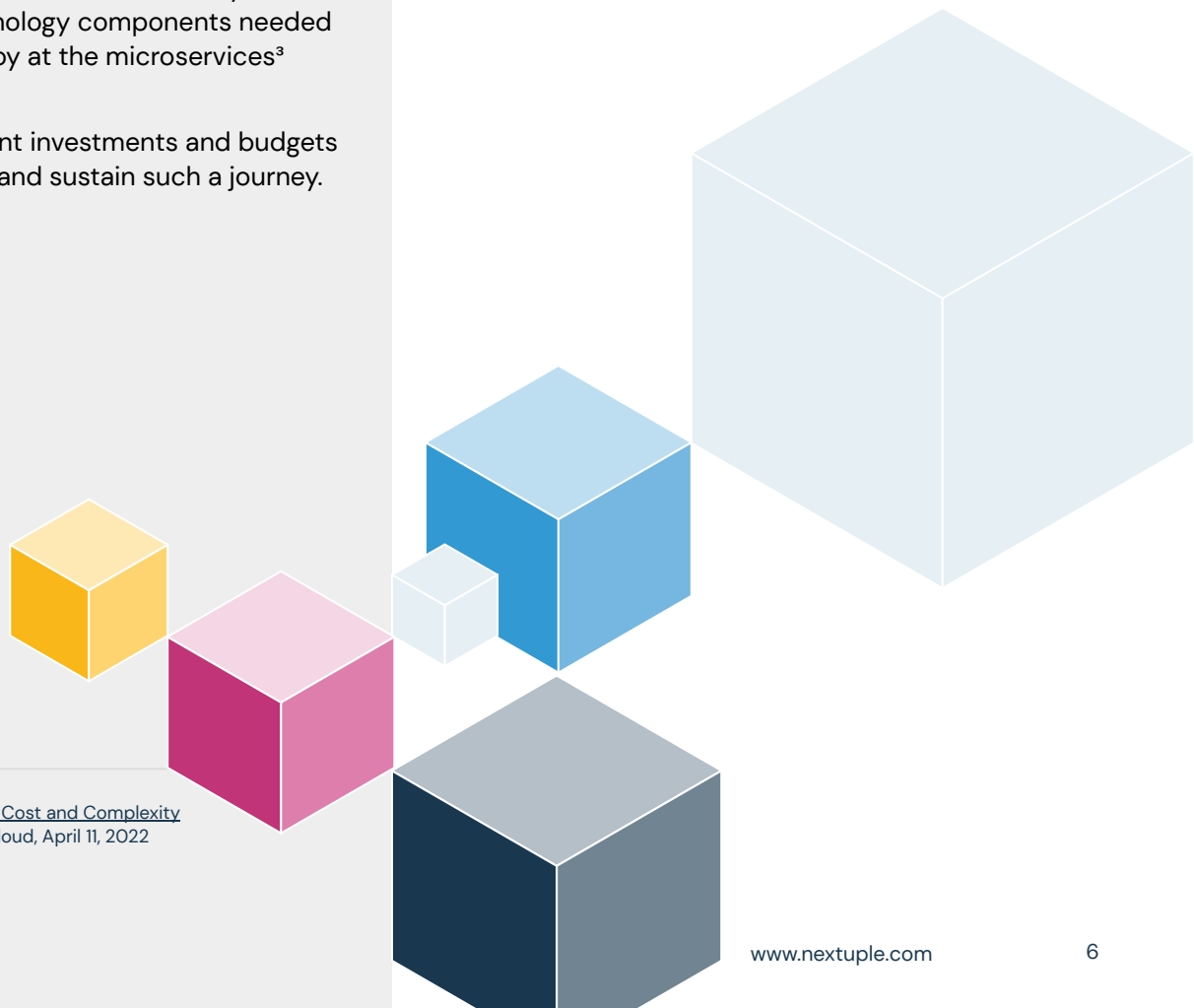
Over the years the OMS systems were heavily customized for each retailer to enable their unique business context and requirements. As retailers look to modernize their OMS systems, there are significant challenges to transforming to a microservices architecture:

- Interpreting differentiating uniqueness of your business and designing into domain driven microservices.
- Making the build-or-buy decision with considerations to control, speed of change, extent of customization, value for usage and cost to scale.
- Building a future-proof architecture that can provide millisecond response times at scale at the top of the consumer buying funnel.
- Making tech stack choices that suit the overall maturity and risk profile of your IT organization from a large set of available open source technologies.
- Finding and retaining the right talent at the intersection of domain, Product management and engineering. This is further exacerbated by the sheer number of technology components needed to construct and deploy at the microservices<sup>3</sup> scale.
- Justifying the significant investments and budgets needed to embark on and sustain such a journey.

While large organizations with a topline upwards of \$20 billion have set up engineering teams to cross the technology chasm, the small size retailers (up to \$1 billion) either continue to extend or customize the legacy packages or take a SaaS route.

However, the mid-size retailers (\$2-20 billion) are in one of the following situations:

- As an organization, they have decided or are already modernizing omnichannel fulfillment technology, completely or some parts of the Order Management System (OMS), such as Promising and Sourcing for better optimization.
- With the long term goal to own and control the code as a differentiation, they are not bent on procuring another package or SaaS offering.
- They aspire to deliver a differentiated set of capabilities at higher speed and a lower cost.
- They are still early in building core platform engineering capability in the IT organization, which makes it expensive, risky and slow.



3. Iain Ferguson, "Microservices: Does Cost and Complexity Justify Speed and Agility?", Alibaba Cloud, April 11, 2022

# 04 Choices & Challenges

As you move forward with the modernization process, it's important to create a roadmap that outlines the capabilities that will be implemented and the order in which they will be rolled out. This roadmap should be based on the organization's omnichannel fulfillment value chain, as well as its broader business goals and the maturity of its IT capabilities. It's also important to invest in process maturity and technology stack components in order to ensure a successful modernization effort.

## PHASE ONE: Starting the Journey

The need for modernization of omnichannel typically begins when a business has new requirements, such as a new channel, new fulfillment methods, or need to scale performance upstream the buying journey. Some of these needs are not easily met by the existing legacy solution without extensive customization and/or a high cost and time to deliver.

Typically at this stage the organization neither has commitment to overall technology replatforming nor a long term business case. Here are some considerations across the business, technology and organizational domains.



### Business Case

While evaluating whether to embark on a long term modernization or delivering a one-off package or SaaS solution, what are the specific problems that lead you to think outside the monolithic legacy software?

- ◆ Is it the roadmap of packaged software vis-a-vis the need at play?
- ◆ Is it the additional features that the business needs to be delivered rapidly?
- ◆ High cost of continuing with the existing solution due to usage and legacy debt?

In that light, retailers should consider evaluating a long term business case with the goal of optimizing the total cost of ownership (TCO) of operating technology for existing capabilities, and building new omnichannel capabilities. In addition, consider the flexibility and control that can come from owning the direction and velocity of the solution that will differentiate the consumer experience in the marketplace.



### Technology

Re-platforming is usually an extensive undertaking for any IT organization. While, modernizing the microservices based applications, it is important to evaluate choices such as:

- ◆ Is this your first venture into building microservices or someone elsewhere in the organization has been through it?
- ◆ Do you have a target technology stack for building microservice applications in-house? With the proliferation of choices for each component, this can be a very extensive exercise.
- ◆ Should you build and deploy code on infrastructure that you control to begin with, or get a SaaS solution in the interim and then transition to an in-house managed solution? What will be the cost of transitioning?
- ◆ Do you have the tool set to build, deploy, monitor and operate the technology stage needed for a modern solution?



### Organization

Tier 1 retailers have come a long way in building technology organizations that can both run the business and transform the business at scale. For tier 2 retailers, before embarking on such a modernization journey, it is important to ascertain the maturity of process and talent to handle a diverse long tail of technology components and teams. This includes the maturity of teams responsible for areas such as Product Management, Agile Delivery, DevOps, QA Automation, Performance Engineering and Monitoring. Based on the maturity in-house, retailers should consider getting a specialist company to build the solution on a turnkey or a build-operate-transfer basis.





# PHASE TWO: Building a Longer Term Roadmap

After a few successful releases, and once the business has gained confidence in the ability of the new stack for real business benefits, it is time to start creating a long term roadmap. In this phase, it is recommended to discover and prioritize business capabilities and also assess and plan improvement of foundational engineering capabilities within the IT team. There are many considerations.



## Business Capability Discovery

To start with, it is recommended to review the organization's omnichannel fulfillment value chain; look deeper into the capabilities that will need to be re-implemented with the new stack. Also, it is important to envision the differentiating future consumer buying journey and order lifecycle capabilities. This is at two levels:

- ◆ At a broader level, in many cases, this translates into modernizing **inventory** and **capacity** to improve the visibility and management, followed by building capabilities to promise at scale and then **sourcing capabilities**. This then leads to a modernizing mix of **order orchestration** and **fulfillment** features.
- ◆ And then, at a granular level, each of these capabilities should be prioritized and rolled out leveraging a staggered approach.



## Business Capabilities Prioritization

It's imperative to identify the business objectives and key metrics that can be achieved by delivering differentiating business capabilities. Understanding how the benefits will accrue over the next 2-3 years will help enable incremental funding to keep the transformation program alive. Here is an example of how we helped one of our customers create a staggered roadmap for modernization of Sourcing with a crawl/walk/run approach:

Roadmap for Sourcing (A Sample)

	CRAW	WALK	RUN
Sourcing Services	<ul style="list-style-type: none"> <li>→ Select Node</li> <li>→ Select Node, Carrier, Carrier Service</li> </ul>	<ul style="list-style-type: none"> <li>→ Box Recommendation</li> <li>→ Determine Carrier + Service at Node</li> <li>→ Pack time Carrier determination</li> </ul>	<ul style="list-style-type: none"> <li>→ Upgrades/Downgrades</li> <li>→ Batched order Sourcing</li> </ul>
Sourcing Inputs	<ul style="list-style-type: none"> <li>→ Inventory</li> <li>→ Node, Carrier Eligibility</li> <li>→ Calendars</li> <li>→ Buffers &amp; Exceptions</li> <li>→ Processing Times &amp; Cutoffs</li> <li>→ Node Capacity Availability</li> </ul>	<ul style="list-style-type: none"> <li>→ Node Capacity Utilization</li> <li>→ Carrier Rate Cards</li> <li>→ Item Velocity</li> <li>→ Days of Supply</li> <li>→ Inventory Age</li> </ul>	<ul style="list-style-type: none"> <li>→ Carrier Capacity/Lane Capacity</li> <li>→ Negotiated Carrier Volumes</li> <li>→ Node Performance</li> <li>→ Carrier Performance</li> </ul>
Business Controls	<ul style="list-style-type: none"> <li>→ Node priorities</li> <li>→ Sourcing Hierarchy</li> <li>→ Weightage for Speed v/s Cost</li> <li>→ Late penalties</li> </ul>	<ul style="list-style-type: none"> <li>→ Capacity Utilization Goals</li> <li>→ Markdown Avoidance Settings</li> <li>→ Inventory Utilization Goals</li> </ul>	<ul style="list-style-type: none"> <li>→ Carrier Utilization Goals</li> <li>→ Sourcing Confidence Threshold</li> </ul>
Algorithm	<ul style="list-style-type: none"> <li>→ Node/Node Group Priorities</li> <li>→ Split Reduction</li> <li>→ Conform to Promise Date</li> <li>→ Capacity Aware Sourcing</li> <li>→ Minimize shipping zones</li> </ul>	<ul style="list-style-type: none"> <li>→ Cost Base Optimization</li> <li>→ Network Load Balancing</li> <li>→ Days of Supply &amp; Markdown aware</li> <li>→ Inventory Utilization Goals</li> </ul>	<ul style="list-style-type: none"> <li>→ Multi-Objective Optimization</li> <li>→ Decision &gt; confidence threshold</li> <li>→ Feedback loops</li> </ul>
Visibility/ Simulations	<ul style="list-style-type: none"> <li>→ Decision Trace (Order)</li> <li>→ Decision Trace (What-if config)</li> </ul>	<ul style="list-style-type: none"> <li>→ Replay Historical Orders to simulate sourcing configs</li> <li>→ KPIs for simulation runs</li> </ul>	<ul style="list-style-type: none"> <li>→ A/B Test mode - percentage traffic to new sourcing engine</li> </ul>



## 04 CHOICES & CHALLENGES



### Foundational Engineering Capabilities

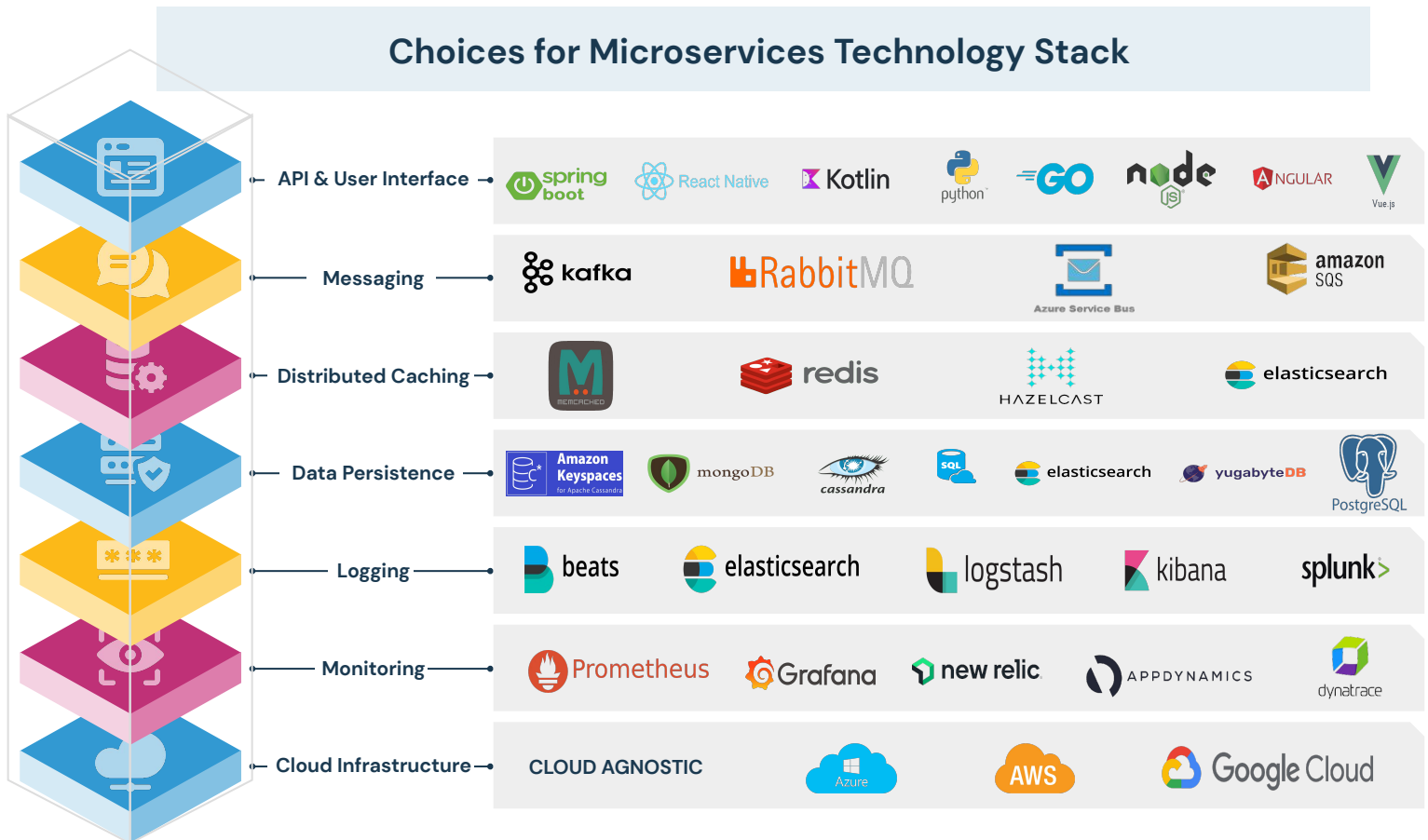
Finally, the velocity and cost to execute modernization in incremental releases depends on the maturity of foundational IT capabilities. This includes areas such as DevOps, Infrastructure Provisioning and Performance Engineering.

Microservice stack brings a large number of discrete technology components to the IT landscape. These include – tools for API & UI, Messaging, Caching, Logging and Monitoring amongst many others. It is important to have parallel work streams to evaluate and pilot technologies, and also build competencies. In addition, it is imperative to invest in process maturity in areas like automation of QA, cloud resource provisioning and performance testing.

For instance, the turnaround time SLA for foundational capabilities will determine the pace of transformation. How quickly are we able to provision and deprovision new performance testing environments? How automated is the process to move code to progressive environments? Do we have the right monitoring tools in place to monitor the multitude of stack components brought in with the microservices project?

Not thinking through in advance will likely lead to both additional direct cost to augment staffing as well as delays leading to opportunity cost forgone.

The transformation planning should include maturity assessment, gaps and a plan to address and fill the gaps alongside the core architecture transformation. Here is a sample on technology choices while embarking on a modernization initiative:





## PHASE THREE: Sustaining Transformation & Measuring Progress

*"If you can't measure, it does not exist"*

Like with any program, it is imperative to measure the outcome, created as a result of this transformation, to ensure continued investments. There are multiple aspects that are important to be measured



### Return on investment

Baselining and instrumenting the operations to measure the impact of the microservice for each phase and release. When the microservice is used for creating new capabilities, such as a new sourcing strategy or enabling urgency signals on the Search Results page, it is also important to leverage techniques like A/B testing to evaluate the incremental benefit the additional technology creates.



### Total cost of ownership

Since the overall transformation may run into multiple years, it is important to understand the flexibility of re-negotiating licensing of the legacy technology as capabilities are moved out. The current licensing may be based on modules or volumes, and that impacts how one might want to structure the program. As an example, if it is linked to overall volume, it will not reduce till the legacy is sunsetted.



### Creating and retaining talent and skills

Talent is the most important equation for modernization programs. It is imperative to ascertain the skill-mix needed to execute the transformation. It is also important to have a clean vision on the skills and competencies that should be built internally v/s sourced externally, and then use the information to plan learning and skill-augmentation initiatives.

# Our Offering: Nextuple Fulfillment Studio



As you move forward with the modernization process, it's important to create a roadmap that outlines the capabilities that will be implemented and the order in which they will be rolled out. This roadmap should be based on the organization's omnichannel fulfillment value chain, as well as its broader business goals and the maturity of its IT capabilities. It's also important to invest in process maturity and technology stack components in order to ensure a successful modernization effort.

## Domain Driven Design

Leveraging deep industry expertise in the omnichannel domain, the Nextuple team has designed microservices leveraging a domain-centric approach. Nextuple's vision translates into three Tuples that include a set of microservices and components that can be composed to deliver a specific omnichannel solution or capability for the retailer.

### The Promise Tuple

Inventory, Capacity, Promise Engine & Sourcing

### The Orchestrate Tuple

Order State Engine, Omni Order Store & Omni Control Center

### The Fulfill Tuple

Digital Order Queue, Picking, Staging, Packing, Shipping & Dispense Microservices

## Modern Engineering Stack

With the increased adoption of the microservices architecture across industries, there are several choices available for each technology component needed to build a microservices driven application. Nextuple has carried out extensive evaluation and analysis, and pre-selected a choice of components to enable architecture patterns relevant to domain driven Tuples.



### The Platform Tuple

Leverage purpose-built components & frameworks like - Identity Management, Notifications, UI Framework, Integration Framework.

### Open & Scalable Stack

NFS is based on open source technologies, available with cloud native and cloud agnostic options that offer unlimited scalability and reliability.

### Seamless Flexibility & Extensibility

Offer new functions, add-ons, and extensions without requiring new systems.

### Robust Security

NFS is SOC2 Type II certified.

### Flexible Ownership & Deployment patterns

Nextuple provides a unique & flexible Licensing Model, where the retailer can chose to own, rent or rent to own software on flexible terms.



#### Deployment

The Nextuple Fulfillment Studio can be deployed on-premise or in cloud by retailers. It can also be delivered as SaaS.



#### Developer Centric

Developers can readily access source code and API documentation via the NFS API portal. Retailers own engineering teams or System Integrators can own, deploy and maintain these microservices.



#### Access to Expertise

Nextuple's engineering and product management expertise is available to enable retailers onboard and build the platform further.

### Flexible Engagement Models

Nextuple provides a set of flexible engagement models. We can help deliver microservices-based applications on a Turnkey, Build-Operate-Transfer as well as Co-Development basis.



#### Product Pod

Nextuple can take full responsibility of Product Management including requirements and roadmapping decisions, architecture, design and build of the microservice.



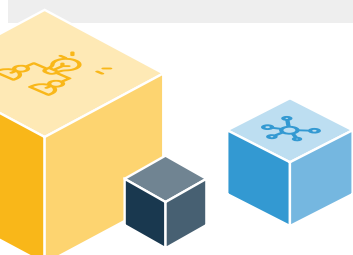
#### Engineering Pod

Nextuple owns the architecture, delivery and build, and works together with the customer owning the product management and design.



#### Co-Development

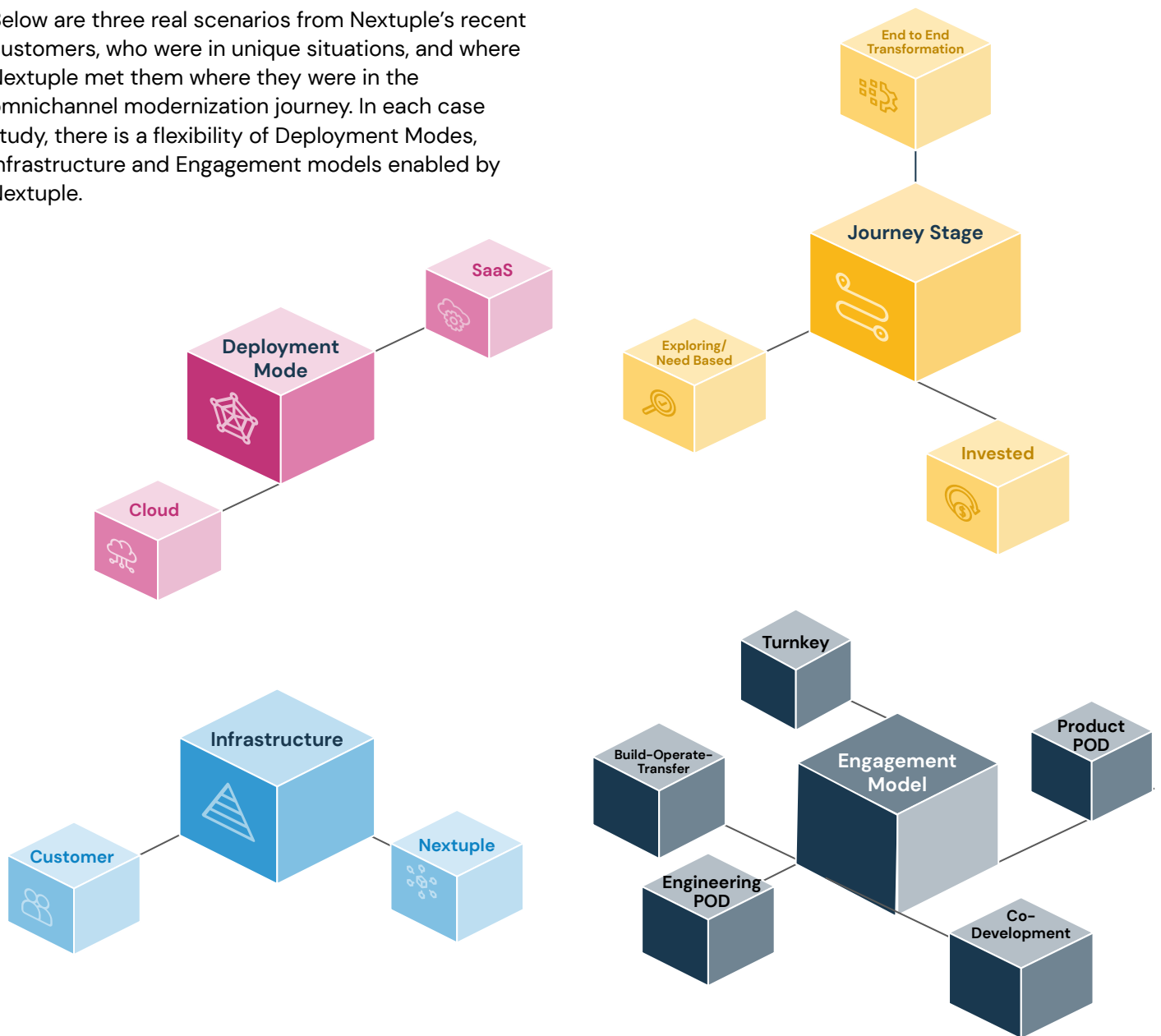
Where the retailer is building an internal engineering team and leverages Nextuple's omnichannel expertise to design, build and deploy in a collaborative manner.



# The Solution Space: Real Cases

The solution to an omnichannel technology transformation problem is not the end state. It is in fact an approach and a way to start transforming in the right direction, with the right foundation; going in with eyes wide open, aware of your organization's capability, capacity and investment appetite on one hand, and benefits and return-on-investment equation on the other.

Below are three real scenarios from Nextuple's recent customers, who were in unique situations, and where Nextuple met them where they were in the omnichannel modernization journey. In each case study, there is a flexibility of Deployment Modes, Infrastructure and Engagement models enabled by Nextuple.



## 05 THE SOLUTION SPACE: REAL CASES



### CASE ONE: Promising at Scale



#### A Leading North American Department Store

A new microservice to replace and improve upon legacy promising capabilities for the e-commerce channel.

Deployment: **Cloud**

Infrastructure: **Customer**

Journey Stage: **Invested**

Engagement Model: **BOT**



#### Problem/Opportunity

- The customer was unable to leverage its legacy OMS in order to promise and provide an accurate delivery date during the customer journey.
- Promise delivery dates were being provided very late in the customer journey during the checkout flow.
- Promise delivery dates were very conservative at a state-to-state shipment basis, with no further granularity, and did not reflect the true delivery dates, resulting in low conversion rates at the Product Detail Page (PDP) & Cart stages of the buying journey conversion rates.



#### Outcomes

##### Business

- Faster and accurate delivery dates provided to consumers across the PDP, Cart, Checkout
- Manual EDD override capability using item processing and transit time buffers.
- Enabled 'Get It Fast (Same Day/Next Day) Filter' on the product list pages to improve conversions.
- Promise Engine configuration UIs to enable business users to manage configuration in real-time.



#### Successes Achieved

- Unparalleled Quality: Delivered **four** Promise Engine releases (on an AWS stack) in seven months with **zero** P1/P2 defects after go-live.
- Pin-point Ship Node Accuracy: Exceeded Ship-Node Accuracy (ship node before/after purchase) expectations (>90%).
- High Performance: Surpassed EDD round trip SLA (P95 response time <=350ms) expectations by ~200% - Achieved P95 response time ~110ms with 5 times the expected peak holiday load.
- Aggressive EDD: With a more aggressive yet accurate EDD being displayed to consumers, resulting in increased conversion rates.

##### Technology

- Enabled the retailer to own the code and modernization of "Promise" capability.
- Accelerated deployments with automated Infrastructure provisioning, leveraging NFS Platform Tuple.
- Resulted in issue-free holiday season, leveraging Performance Engineering template for pressure testing at 5x production scale.



#### Nextuple Offerings

- Promise Engine microservice, which is a part of Nextuple Fulfillment Studio Promise Tuple was implemented for the customer's e-commerce channel.



# CASE TWO: Same Day Delivery



## Luxury Multi-Brand Retailer

A set of microservices surround the core OMS deployed as fully managed SaaS

Deployment: **Cloud**

Infrastructure: **Customer**

Journey Stage: **Invested**

Engagement Model: **BOT**



### Problem/Opportunity

- A growing demand for express/same day delivery services for high-end luxury items could not be met through the traditional parcel shipping channel. An opportunity was identified to engage with gig delivery providers, such as Roadie and Doordash, to provide same day delivery services from the store locations.



### Challenges

- The retailer wanted the flexibility to engage with different delivery providers depending on their geographic coverage and pricing, but wanted to avoid having to create point integrations with each of these services.
- Nextuple Same Day Delivery Orchestration service offered a single integration point for the retailer to connect to an array of delivery providers, and a standard process to track deliveries and communicate with the consumer.



### Successes Achieved/Benefits

#### Business

- **Rapid Rollout:** Same Day Delivery rolled out across multiple banners, across 2000+ stores in the United States within 8 weeks.
- **Process Centric:** Automated delivery booking taking into account the store hours and proof of delivery tracking via photographs.
- **Data-Driven Solution :** Dashboards for delivery tracking – available to consumers as well as customer care.

#### Technology

- Single interface with NFS microservices serves as a gateway to multiple delivery providers.
- Track and trace capabilities to troubleshoot delivery exceptions.
- REST API and Webhook based integrations for delivery booking and status updates, and support tools for rebooking deliveries.



### Nextuple Offerings

- Nextuple Fulfillment Studio
- Same Day Delivery microservice as SaaS



## 05 THE SOLUTION SPACE: REAL CASES



# CASE THREE: Engineering Partnership



## National Sports Retailer

A co-development partner enabling Product and Engineering PODs to accelerate order management modernization

Deployment: **Cloud**

Infrastructure: **Customer**

Journey Stage: **Invested**

Engagement Model: **BOT**



### Degree of Services

- Nextuple Fulfillment Studio - Capacity microservice
- Product POD for fulfillment hub solution
- Engineering POD for store fulfillment modernization



### Problem/Opportunity

- Fulfillment hub UI to provide a consolidated troubleshooting view across fulfillment systems and ability to manage inventory availability as well as orders and fulfillment requests.
- Limitations on capacity management features caused a need to transition from Manhattan DOM to a microservice based architecture that could support the requirements.
- Define target blueprint and technical roadmap for store fulfillment towards building a flexible and extendable architecture.



### Successes Achieved/Benefits

#### Fulfillment Hub

- Enabled multi-domain teams to operate independently using micro front end architecture.
- Improved associate experience and productivity by providing a consolidated view on inventory availability, eligibility and override rules.
- One-stop shop for search, view and managing customer order and fulfillment requests.

#### Capacity Microservice

- Improved associate experience and productivity with centralized real time view and editing of capacity data.
- Enabled ability to accurately and reliably schedule capacity forecast updates ahead of the planned effective date.
- Enabled improved sourcing and allocation logic with real time view of worked & unworked capacity units.

#### Store Fulfillment Modernization

- Improve cost to serve/profitability of store fulfillment operations (> 30% reduction in cost to serve).
- Increase store teammate productivity and efficiency (up to 50% increase in efficiency).



### Nextuple Offerings

- Nextuple Fulfillment Studio: Capacity Microservice, Fulfill Tuple
- Nextuple Product POD & Engineering POD

# About Nextuple



Nextuple helps customer-centric retailers create and transform omnichannel fulfillment by using a microservices architecture approach. The Nextuple Fulfillment Studio enables retailers to quickly build and scale new fulfillment experiences to delight customers, create more omnichannel agility and accelerate time-to-value. Nextuple's customers include Tier 1 retailers such as Kroger, Hudson's Bay, Party City, Tapestry, Dicks Sporting Goods, SPARC Group and Signet Jewellers.

Nextuple has offices in Massachusetts, U.S., Ontario, Canada, and Bangalore, India. To learn more, visit us at [www.Nextuple.com](http://www.Nextuple.com) or follow us on LinkedIn.

## Level the Playing Field

To learn more, visit us at

[www.nextuple.com](http://www.nextuple.com) →

Follow us on LinkedIn.



[www.nextuple.com](http://www.nextuple.com)

**Modernize your OMS Technology  
Landscape**