ARC BRIEF

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Walgreens' Digital Commerce Evolution

By Steve Banker

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Summary

The term "digital transformation" is ubiquitous and means different things to different people. But one meaning that is the common denominator is putting in new applications where none exist, or perhaps more often, tearing out old legacy applications and replacing them with more modern software platforms. But rip and replace is expensive, time consuming, and risky. Explaining this, Brian Amend, the Senior Director of Supply Chain Systems at Walgreens briefed ARC Advisory Group about the company's digital "evolution."

Brian Amend, the Senior Director of Supply Chain Systems at Walgreens briefed ARC Advisory Group about the company's digital "evolution" and the benefits realized after implementing Blue Yonder's solutions.

Walgreens, like many other retailers, has embraced omnichannel. But the scale of the company does add complications. They serve 9 million customers daily and have over 200 million item/store combinations. The sheer scale makes accurate order promising to online customers difficult. To get the capabilities they needed quickly, Walgreens could not rip out the legacy order management system and spend three years implementing a new one. Considering all these aspects, Walgreens approached Blue Yonder, a leading provider of supply chain and retail software solutions. The key benefits that ensued:

- Instead of rip and replace an existing solution was augmented.
- Improved algorithms on how to best fulfil an order based on type of order.
- Growth in digital sales.
- Functionality for better integration of inventory planning with order fulfilment.

The Backdrop

Walgreens, a large drug store chain, sells a wide variety of goods besides just healthcare items. This is a large public company with 8,900 stores in the US, Puerto Rico, and US Virgin Islands. They generated $132.5 billion in sales in their last fiscal year.

Today's world is neatly divided into *before* and *after* COVID. Prior to COVID, the company had a three-year plan to add omnichannel order flows by adding buy online/pick up in store and curbside pickup to support a better, more seamless experience across in store and online shopping. They also wanted to reduce costs in the ecommerce and omnichannel fulfillment areas. The giant retailer was contemplating a full rip and replace of their legacy distributed order management solution – the key solution that supports omnichannel order fulfillment.

Brian Amend, Walgreens

"Then COVID hit," Brian Amend said, and overnight customer expectations changed. The company needed to accelerate its omnichannel roadmap. Mr. Amend said that Walgreens had curbside pickups seven years ago, but it was discontinued because there was no demand for the service. But after COVID hit, demand escalated and it was full speed ahead.

Walgreens Embraces a Microservices Solution

Walgreens decided that the existing solution had good workflow and pick and pack capabilities, but what was needed was better availability to promised capabilities. Instead of rip and replace, they thought of augmenting the existing solution; but if augmentation meant adding custom code to the solution, that would take too long and be too risky. Hence, a microservices solution was deployed.

What is a Microservices Solution?

However, technology has progressed and today there are solutions built on microservices. A microservice architecture arranges an application as a collection of "loosely-coupled" services. "Loosely coupled" means changes in one component don't affect the performance of another component. This means a microservices component can be brought to life independent of others. Loose coupling reduces all types of dependencies and the complexities around adding new functionality to an existing application or integrating that solution with other solutions from other vendors.

The ability to install a microservice to improve a legacy application does require deep domain knowledge of that application. But Blue Yonder, based on their acquisition of Yantriks in 2020, has the know-how.

Walgreens decided to implement a microservices solution from Blue Yonder called Luminate Commerce to augment their existing solution. Blue Yonder informed Walgreens they could get the advanced functionality needed implemented in 6 months; the timeline seemed unachievable. However, the pilot was implemented in 5 months and by the end of 7 months, the solution was implemented across the chain of stores. Mr. Amend praised the Blue Yonder team that supported them in their implementation.

The Outcome

Walgreens is ahead of most other retailers in the service commitments they make to online customers. If a customer agrees to pick up the order in the store, Walgreens promises to have the items available 30 minutes after the customer hits "buy." For home deliveries, Walgreens is delivering goods in as little as 1 hour for orders placed during a store's business hours.

The Blue Yonder solution had improved algorithms on how to best fulfill an order based on the type of order – curbside pickup, pick up in store, ship from store, ship from ecommerce distribution center, or drop shipping – where the inventory to fulfill the order was and whether all the inventory for the entire order was present, and whether there was enough time to fulfill the order on time from a fulfillment location.

These new capabilities helped Walgreens grow their digital sales by 116 percent over the past two years. While fears of being infected have eased and people do not fear visiting stores, Mr. Amend does not expect digital sales growth to slow as customers are now used to the convenience. Customers also check online about product availability to avoid a wasted trip to the store; once online, they tend to just go ahead and buy it.

Conclusion: Aiming for Inventory Accuracy

Order management systems are real-time systems. But the inventory planning systems that forecast where inventory will be needed are not, and no forecast is perfect. This means that orders are often not fulfilled by the ideal

location. The problem with this is that forecasts are based on history. If the order is fulfilled by a suboptimal fulfillment location, it looks to the demand planning application like the demand originated from that location. Walgreens' focus is on functionality that better integrates inventory planning with order fulfillment. Over time, this functionality will improve inventory placement to support omnicommerce.

Secondly, inventory accuracy at stores is never as accurate as inventory accuracy at warehouses. That is because inventory at a store might be in a customer's cart and because of theft. Shrinkage is much greater in stores, and recent articles suggest this problem worsened during COVID. The result is that a store does not promise all the inventory in the store. The order management system will not promise the last two items it believes the inventory system shows because it assumes that inventory may not really be available. But this buffer stock number is often somewhat arbitrary. Walgreens is interested in using machine learning from Blue Yonder to calculate an optimal buffer stock number by item and by store that better reflects the ground realities.

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