SHOPTALK — TOP 9 RETAIL CHALLENGES AND SOLUTIONS

By Valentyn Kropov

SoftServe was honored to sponsor Shoptalk, one of the biggest retail conferences in the US and the world. Our best architects and analysts had the amazing chance to talk to many retail industry leaders, discussing the top challenges and issues they experience today both digitally and in general.

See below the top challenges—and suggested solutions—that we've compiled, based on feedback from retail industry experts and our own technology expertise.
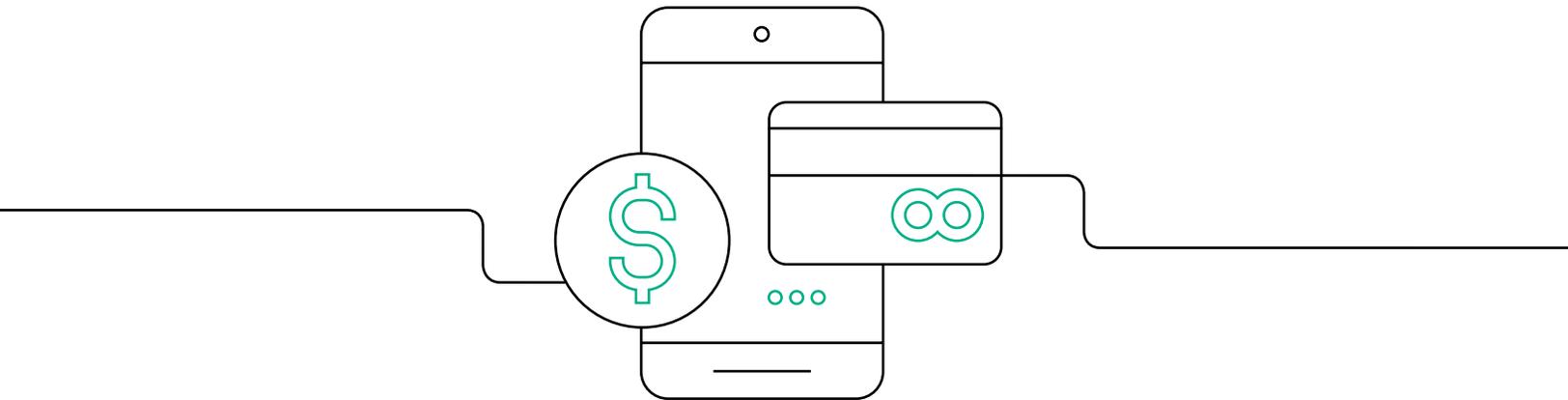
1. Competition with Amazon and the "retail apocalypse"

Challenge: It's not news: Many retailers report a general fear of tough competition with online retailers like Amazon.

Solution: It's too early to talk about the "retail apocalypse." Why? Consider the following:

- Only specific markets are bigger in e-commerce than in brick-and-mortar
- There are certain product categories that customers prefer to buy in-store rather than online
- Overall growth of e-commerce sales has slowed
- **85% of retail sales** still happen in-store

This means that it is a perfect time for both brick-and-mortar and e-commerce retailers to compete for innovations and—as a result—a bigger, more loyal, and better customer audience.

2. Leveraging in-store advantage

Challenge: Retailers of all sizes, from a single Austin boutique to international multi-thousand chains of stores, have implemented omni-channels for their businesses across brick-and-mortar, mobile, online, and more to stay relevant.

But many retailers are asking: What unprecedented experience could be offered to customers in-store? After all, brick-and-mortar stores still offer things that e-commerce cannot. Tangibility means assessing a product before buying, and in-store experience means an opportunity for social interaction while shopping.

Solution: Brick-and-mortar stores still provide the best capabilities to prove quality, size, smell, touch, play, experience, and "try before you buy."

Brick-and-mortar has unlimited capabilities to reassure buyers that they are making the right decision. For example, a British children's car seat producer put a real car into their brick-and-mortar store: customers can take any child safety seat, put it into the real car, and put their child inside to assess fit before buying.

Leveraging physical access to items in the store could be the answer to enticing customers. Multiply it with digital transformation tools like automatic size measurements, item matching, personalization, and customer journey—and you're looking at a better in-store experience.

3. Demand prediction and inventory management

Challenge: Many retailers complained about unpredictable and sometimes uncontrolled inventory management. Some stores are overloaded with unwanted items, and some are suffering from lost revenue due to a lack of in-store items. Omni-channel and a combination of different delivery options add additional challenges, along with thousands of SKUs.

Retailers want to know how to forecast demand to match the items in their inventories, and to get real-time updates on when inventory is depleted for both in-store and online orders.

Solution: Modern machine learning and data integration techniques allow retailers to take back control over inventory. We advise:

- **Demand prediction.** Modern machine learning algorithms takes a variety of data and turns it into an advanced demand prediction model with up to 90% accuracy. Data includes in-house data, such as history of sales (PoS data), inventory history, and vendor order history, as well as external data such as seasonality, weather conditions and forecast, social sentiments, and event schedules, which can. For a look at this technology in action, **take a look at the real-time demo that SoftServe presented at Shoptalk**. The demo demonstrates a demand prediction model based on grocery store data and machine learning models we've created.
- **Anomaly detection.** Similar machine learning algorithms can keep a constant eye on sales and detect anomalies in real time for effective reaction.
- **Vendor Auto Order.** Implement a system that works together with PoS data and a demand prediction machine learning. This allows for the placing of automatic orders to vendors, or relocating the request for the items when the system is out of stock. Such a system accounts for the amount of time needed to relocate the item, or the time required by the vendor to send it. This system also accounts for the demand forecast data to ensure that the right items arrive when needed, neither understocking or overstocking.
- **Real-time Inventory Synchronization.** Inventory synchronization can be similar to relational databases: if only one item is left in-store, only one person can buy it. It can't be bought simultaneously in-store and online by two different customers, even if only a few milliseconds separate these two buying requests. Inventory synchronization ensures there is no confusion between online and brick-and-mortar stores.

4. The challenges of customer data

Problem: Many retail companies want to build a tailored experience for their customers, including custom recommendations and treatments. But proper service requires precise and accurate customer data, which is not something they will necessarily want to share.

Solution: The best source of customer data is the customer himself. Consider the following:

- If there are problems gathering data directly from customers, retailers should be prepared to provide incentives. Offering should include something that will make purchases less expensive, reduce friction, or lead to a better, more personalized experience. Consider offering discounts for information, or paperless systems that keep receipts and loyalty information in a central location.
- You also don't have to ask 100% of your customers for 100% of their information. Modern machine learning techniques such as clusterization, regression models, and k-means allow the extrapolation of precisely gathered data from 30% of your customers and applying it to the remaining 70% with up to 80-90% accuracy. Combine direct information from your customers and finding similar customers based on their history, biorhythms, feedback, and demographic information.
- **Explore another demo that SoftServe demoed at Shoptalk**, which demonstrates cutting-edge personalization based on machine learning and the OCEAN paradigm.
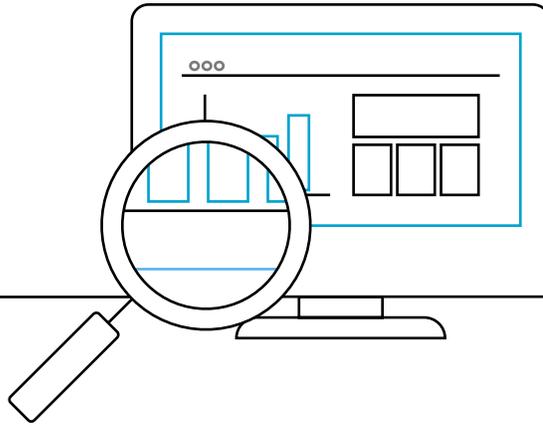
5. Product search and attribution

Challenge: If a customer can't find a product in-store, or if there are too many products to sift through in an online interface, considerable time is wasted on attribution. And if customers can't find the products—they can't buy them.

Solution: For e-commerce, search functions are usually executed in one of three ways: by drilling down through categories; by using texts or voice search; or by using product, similar items or "buy together" recommendations. Text search is very dependent on the product description and attributes, but keeping and curating product descriptions and attributes can take ages and considerable overhead for retailers with a large amount of stock. Make a better search function with the following:

- Automating the process of product descriptions and attribution as much as possible to ensure customers can always easily find your items online, and to ensure minimum time to e-commerce for new items. See how a product attribution and automated machine learning algorithm works for product recommendations, based purely on the product image, **in another demo SoftServe created for Shoptalk**.
- For brick-and-mortar stores, specifically, we recommend using the attribution and product recommendations technology described above, as well as interactive mobile applications. These combine online search and in-store navigation capabilities, as well as customer experience and personalization technologies like picking size and color, augmented reality to check the overall look, compatibility, and more.

6. Pick the right price

Challenge: Many retailers approached us with questions about technology assistance, asking about the maximum possible price for the maximum revenue and profitability. How do you know when the price is right?

Solution: There are internet-scrapers and machine learning and mathematical statistic algorithms which allow retailers to gather the maximum information on existing products, competitor pricing, social sentiments, weather conditions and forecast, and many other data points. All of these data points come together to make up a reliable model which will produce an efficient price to support the required revenue and profitability.

7. Mobile experience is far from perfect

Challenge: Though there has been serious progress in mobile applications for retail, it has room to improve. Research demonstrates a tendency for customers to use mobile applications to search for the products they need, but to then switch to web pages in order to commence the buying transaction. Many customers complain mobile applications inefficiently address buying on the go (for example, the need to keep a mobile device in one hand and a credit card in the other hand to complete a transaction).

Another bad habit is the tendency to take e-commerce usage patterns built for mobile devices, and to try to duplicate them for the in-store experience. But customers are not coming to a brick-and-mortar store for a linear "search-basket-checkout" experience.

Solution: Do not blindly replicate what you already have in e-commerce solution into the mobile app. Mobile apps often require a different usage flow, and therefore a separate track of user experience workshops, user testing, and research for the exceptional mobile experience.

For mobile brick-and-mortar applications, features should be specifically designed to ease the customer journey in-store, not singularly shopping on a screen. In-store applications should features accents such as in-store navigation, or augmented reality functions to test the items in full action or in different colors, to experiment with product matchers, and more.

## 8. Glean actionable insights from on-hand data

Challenge: The amount of data being gathered and analyzed is growing exponentially. This has a direct impact on the ability of employees to glean actionable insights from data such as anomalies, trends, correlations, and more. It is greatly reducing root cause analysis capabilities and leaves many issues undiscovered.

The reason for this is that most companies concentrate on employee-controlled reports and dashboards to find reasonable business intelligence (BI) insights. But people are limited in their capability to analyze more than several combined parameters, or to "slice and dice" data against all possible filters.

Solution: Augmented analytics are a great alternative to traditional BI. Imagine an algorithm based on machine learning models that validates anomalies and correlations across all possible filters. Such an algorithm can slice and dice the data and then suggest data views which highlight areas that require validation from an analyst.

Augmented analytics dramatically reduces the amount of undiscovered problematic areas and the time required to find them. This allows the business to concentrate on resolution and value rather than searching.

Example: Imagine researching whether there's a correlation between a product category and store parameters (size, location, years in business, etc). If there are several hundred product categories, and dozens of store parameters, manually checking correlations and actionable insights would take a significant amount of time. The same work could be done in minutes by anomaly detection algorithms. The image below demonstrates the correlation between different store parameters and the success rate for different product categories. The data is highly visual and easy to explore using drill-down capabilities, shifting you from a general view to the specific details of the data.

Combinations of Categories: Top best, Top worst
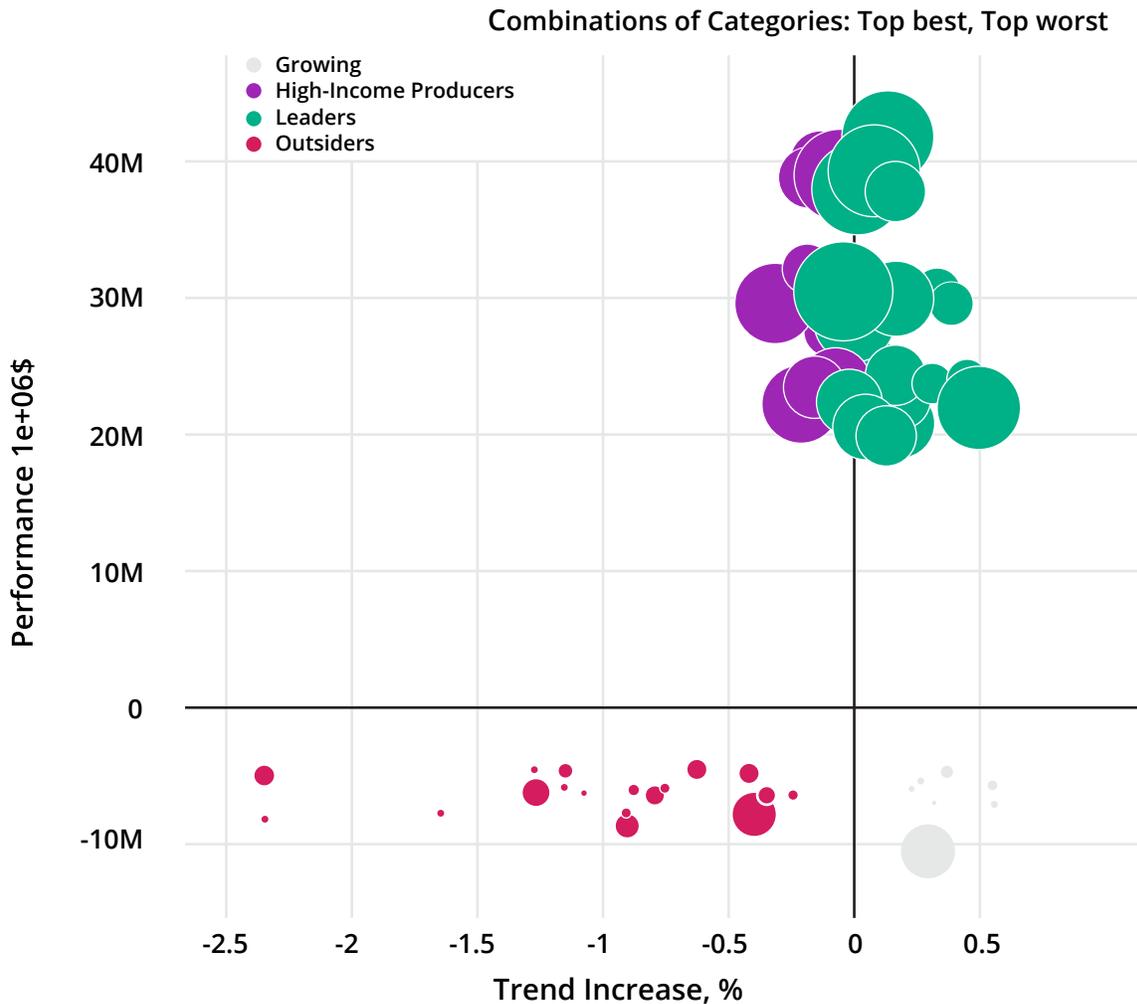
9. Successful innovation projects

Challenge: Retailers want to know where to start and how to make sure they succeed with retail innovations project. But there are so many directions in which to go when it comes to innovation—how should retailers decide the best path?

Solution: Look at some of the key points SoftServe uses during project implementation for retail companies:

"Why" before "how"

Many participants admitted that their companies jump on data project implementation before they understand the details of what they are trying to achieve. This leads them to discover their goals in the middle of implementation, costing extra time and money.

Establish the "why" before the "how." A Design Thinking Workshop (also known as an Experience Design Workshop) is a way of approaching the data problem by placing personas and their needs, restrictions, and advantages at the center of the discussion. It allows for focus on specific company differentiators and target audience rather than copying competitors.

Design Thinking Workshops ideally involve all parties related to the problem being resolved. This allows different parts of your business to communicate more efficiently and to understand each other's needs and pain points in an open, respectful, and trusted discussion. A Design Thinking Workshop results in the answers to who, what, where, when, why, and how. It is also able to justify the usage of specific approaches, techniques, and technologies, and when to gather more information before diving in and wasting revenue.

Run an MVP or PoC

A well-planned project breaks against a wall of technical or business limitations which were not obvious during the planning phase, but which became obvious during implementation. But a simple and inexpensive PoC (proof of concept) or MVP (minimum viable product) project can save you money and effort by increasing the quality of requirements and decreasing the risk of choosing a wrong approach or technology.
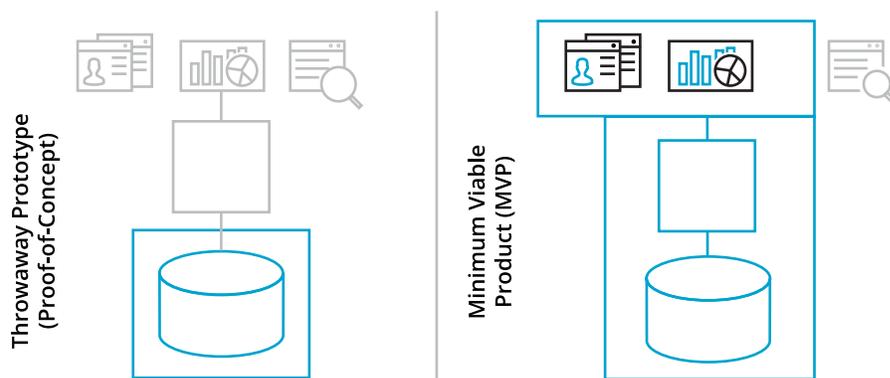
Validate through continuous results

Any great idea can be ruined during the production usage. Ensure that every iteration is made in the right direction: Validate your ideas in the early stages, even before your project starts, by researching the need, making surveys, and more. Use A/B testing everywhere you can after implementing every functionality. And A/B testing doesn't have to start from real customers: Use employees, colleagues, friends, or even paid research—anything that gives you a good validation of your ideas and approach.

Bring early value

Enterprise-level projects often require six, nine, or 12 months and longer to be implemented. Traditionally, projects had to be completed before using the resultant systems and getting tangible results. Not only does this cause a gap between ideation and results, but it is also becoming harder to get sign-off for starting implementation projects in uncertain conditions.

Regardless of the size and the nature of the project, bring value as soon as you can. Once you establish value, convince your business of the efficiency of this approach and expand. Even small functionality can lead to increased business efficiency, overall data project success, and early adoption. Use cloud solutions and infrastructure as code, framework, and accelerators to concentrate on building value rather than infrastructure and baseline. Use an agile approach, where value is being delivered every sprint (usually every week or two) to get early value, early approach adjustment, close feedback from end users, and decreased time and cost required to make adjustments.

Conclusion:
The battle for retail is not lost.

Despite popular opinion to the contrary, traditional brick-and-mortar stores still account for a majority of transactions across the globe. However, in order to stay competitive, it's important to stay in touch with the needs and expectations of customers. Implementing sensible solutions is the first step to perfecting the omni-channel experience, reaching customers directly, and delivering what it is that they are looking for.

Bridge the gap between digital and traditional. **<u>Contact SoftServe</u>** to get started today.

ABOUT US

SoftServe is a global digital authority and consulting company, operating at the cutting edge of technology. We reveal, transform, accelerate, and optimize the way large enterprises and software companies do business. With expertise across healthcare, retail, media, financial services, software, and more, we implement end-to-end solutions to deliver the innovation, quality, and speed that our clients' users expect.

SoftServe delivers open innovation – from generating compelling new ideas, to developing and implementing transformational products and services. Our work and client experience is built on a foundation of empathetic, human-focused experience design that ensures continuity from concept to release.

Ultimately, we empower businesses to re-identify their differentiation, accelerate market position, and vigorously compete in today's digital, global economy.

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USA HQ

201 W 5th Street, Suite 1550
Austin, TX 75703
+1 866 687 3588

EUROPEAN HQ

One Canada Square
Canary Wharf
London E14 5AB
+44 (0)800 302 9436

info@softserveinc.com
www.softserveinc.com

softserve