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Data Analytics as the Catalyst for Success.

When it comes to managing and optimizing day-to-day business operations, timely access to accurate and real-time data is crucial. In fact, it's the difference between success and failure in the retail industry. In this Mindshare, we talked to Dan Sommer, Senior Director, Market Intelligence Lead at Qlik, and Michael Schulte, Vice President, Product Management Retail Software? at Diebold Nixdorf, to share their thoughts on the importance of data analytics for retail businesses.

Dan Sommer
Senior Director, Market Intelligence Lead, Qlik

Q&A

Michael Schulte
Vice President, Product Management Retail Software, Diebold Nixdorf

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IN WHAT WAYS DO YOU SEE RETAIL ORGANIZATIONS USING DATA TO CREATE NEW BUSINESS OPPORTUNITIES TODAY?

Dan Sommer:
The way consumers buy products and interact with brands is changing forever. Data and analytics are helping to transform retail operations to be faster, smarter, and more customer centric. Today's retail transformation is being driven by four forces:
1) The Empowered Consumer – Connected, informed, and more empowered than ever, today's consumers use mobile and social media to compare and buy anywhere, anytime.
2) The Agile Supply Chain – Omni-channel retailing requires a supply chain that's efficient in both directions, so you can ship products within hours of purchase and offer flexible returns.
3) The Changing Role of the Store – While still the primary sales channel, physical stores are transforming into customer collection centers and critical supply chain hubs.
4) Ultra-fast fashion – Supply chains optimized where data and analytics are used to identify new product needs, and the possibility to produce it immediately.

Michael Schulte:
Data is becoming more and more important for retailers – global tier-one retailers are creating their own data lakes and collecting data from every kind of source. This starts with transactional data from sales but also includes supplier and technical data from intelligent IoT devices. The smart interpretation of it will be a critical success factor for them in the future. There are different use cases:
1) Data from consumer behavior is utilized to create a 360° view of the customer – this helps to identify new business opportunities by creating personalized promotions or other rewards to increase the number of store visits and the basket size in each visit.
2) Technical data, e.g., via the integration of an IoT device, is utilized to increase staff productivity.
3) Supplier data is used to negotiate specific deals to optimize sales.

WHAT CHALLENGES DO RETAIL ORGANIZATIONS FACE REGARDING DATA AND ANALYTICS?

Dan Sommer:
The data is more siloed today than it's ever been, which poses both a challenge and an opportunity. There are more than 30,000 SaaS applications, and many of them have only recently been deployed in organizations. However, harnessing more data at the edge can also give a tremendous advantage. Data platforms and fabrics will be able to harness distributed data much better, providing the right format for the right consumers, enabling data to be consumed as a product. Omni-channel retail is now the norm. From marketing to fulfillment, dozens of systems are involved in consumer engagement, distribution, and sales. To improve customer insight and marketing effectiveness, it's critical to harness the data from each of these systems and bring it together with a data integration platform. Finally, you can connect the dots between sales, returns, and customer data across all channels: store, e-commerce, call center, app, and catalog.

Michael Schulte:
One of the challenges is consumers' sensitivity to share their personal data with retailers. As consumers become more aware of the value of their data, they are less willing to share it with retailers. Consequently, retailers need to offer relevant incentives, such as rewards, in return for customers' data – this relates to the 360° view of a customer that retailers must generate to ensure that promotions and rewards are meaningful. Another challenge is that data comes from multiple sources – there is no single source of truth, so retailers must combine and analyze data from various sources. For that reason, some retailers are creating their own data lakes, even if all use cases are not known today. Lastly, retailers will need experienced data analysts to combine and interpret the data. It is essential to understand the cause-and-effect relationships when analyzing data and drawing the right conclusions.

WHAT ARE BEST PRACTICES TO ENSURE THE QUALITY AND ACCURACY OF RETAIL DATA TO DELIVER ACTIONABLE INSIGHTS?

Dan Sommer:
Data is generally considered to be of high quality when it is "fit for purpose in operations, decision making and planning." From the above, it is clear how inaccurate data can negatively impact a retailer's business performance, investments, and strategies. Here are a few practices to keep in mind to help limit data quality issues:
Database-to-database synchronization: A change data capture engine between databases can facilitate data integration between different systems or applications across the organization to ensure that data is consistent and up-to-date.
Data warehouse/data lake automation: It enables faster time to market for new data warehouses, improves data quality, enforces data governance policies, and reduces costs associated with manual administration.
Data quality and accuracy are often found when you light up the data and actually use it, so modernizing the data estate where it lives in places where people can actually consume it, will surface errors better.

Michael Schulte:
It starts with the design of any software solution. At the beginning of the software project, developers should consider how the data will be used for analytics purposes.
Secondly, in today´s complex IT environment, open standards for the integration of different solutions should be used to make sure data is being transferred accurately between systems. In addition, it is necessary to define a leading system that has clear formatting rules for new data sets (e.g., material numbers) that are then inherited to systems that are being integrated. This approach improves the accuracy of the data sets being created as part of the end-to-end business process – this leads to the next conclusion of the requirement to have an end-to-end view of your business processes instead of solely focusing on the functionality of a single system.
Lastly, it is important to have a powerful analytics tool that is user-friendly and has an intuitive design.

WHAT DOES IT TAKE FOR RETAILERS TO TRANSFORM THEIR BUSINESS INTO A DATA-DRIVEN ONE?

Dan Sommer:
I often refer to the "DALAI model" here, which looks at the data, people and applications aspects. Ensure that the DATA is used where you have different tiers of governance based on how sensitive the data is. Utilize the skills of your data ACTIVISTS. This is the best and most skilled data and analytics people in your organization. Focus on LITERACY of data for the people who are less skilled, with a clear path towards becoming more skilled and informed on how to use data. Education is important here. Build a lot of APPLICATIONS, even if some of them won't survive, some of them will. Applications of data can look very different for different roles. Finally, let IDEAS flow. The biggest data-driven innovation often comes from the fringes of organizations. Then put hoops in place to certify and govern that innovation the more people utilize it.

Michael Schulte:
This is a strategic decision that needs a top-down approach from senior management. This is not only a financial investment into a new tool, but also requires a mindset change of the whole organization. Utilizing data in the right way means there will be significantly higher transparency on the performance of single stores, sales regions or even countries up to the global organization. The cultural change required is that the organization needs to perceive these data insights as an opportunity to improve their business and identify new opportunities for growth and not as a thread. A data-driven organization will be able to make informed decisions. Concretely, retailers need to adopt new standards like the GS1 2D Barcode to be compliant with regulations and also offer new services to their customers like the digital link that is based on the 2D barcode. This creates another opportunity for growth.

WHAT OTHER USE CASES DO YOU FORESEE FOR RETAILERS IN WHICH DATA PLAYS A FUNDAMENTAL ROLE WITH REGARD TO AI AND MACHINE LEARNING?

Dan Sommer:
When AI and machine learning are available at a foundational level in a data analytics platform, they enable a full range of augmented analytics capabilities for all types of users, enabling more people to derive far more value from data. These are just a few examples:
Search and Conversational Analytics – Users can ask questions in natural language, and the system understands the intent and context, analyzing the data to generate the right responses.
Advanced Analytics and Machine Learning – More and more organizations adopt capabilities such as advanced clustering, forecasting, prediction, and modeling. Retailers can predict customer demand, optimize staffing levels and address supply chain disruptions. More virtual reality-type applications, where you can point your device towards physical products and get a dashboard on key metrics pertaining to that product, or where you can virtually go into a logistics warehouse to explore where different products are.

Michael Schulte:
There is a saying that data is the gold of the 21st century – when combined with machine learning and AI, data plays a fundamental role in the future. From a service point of view, we will see "intelligent" machines creating incidents to get repaired even before they go out of service – based on machine learning and AI that combines failure data from thousands of machines globally. As a result, outages will be reduced, leading to better customer experiences. In self-service, personalized offers will become more common. For example, when ordering meals in a Quick Service Restaurant, consumers will be identified at the beginning of their journey and then receive personalized recommendations based on their past buying patterns and other influencing factors from external systems, such as weather or social media trends. Shrink reduction will be significantly impacted by AI. Intelligent cameras will detect fraudulent behavior by analyzing data from millions of transactions.

THE TAKEAWAY

In today's retail landscape, data unlocks unprecedented business opportunities and plays a key role for insights-driven enterprises. Ensuring the quality and accuracy of data is critical, as insights derived from it are foundational for businesses. Especially in the retail sector, the integrity of data becomes even more critical as market strategies and customer engagement rely on it. Therefore, to thrive in this environment, retailers should prioritize working with software solutions that not only facilitate easy interpretation and visualization of data, but also empower them to make efficient and informed data-driven decisions.