Buyer's Guide:
Retail Predictive Analytics

Michelle Boucher | Vice President | Tech-Clarity

Tech-Clarity

Why Are Predictive Analytics Critical for Today's Retailers?

In the retail industry, you need to support a complex, global, omnichannel environment, while navigating a dynamic market filled with economic volatility. It is not easy, especially as consumers have become more empowered and demanding through social media and online resources. To be successful, you need to make fast decisions, identify opportunities, respond to changing trends, react to competitors, adjust to shifts in the supply chain, and more. It's complex. In many cases, margins are so thin that missing a trend, failing to spot an opportunity, or making the wrong decision can significantly hurt profitability. A few weak seasons can be disastrous for a brand.

Making things even harder, the barriers to entry have dropped. It's no longer enough to compete by becoming the biggest brand and leveraging scale. Online marketplaces have expanded the reach of start-ups and small companies. In many cases, the playing field has been leveled as resources that were only available to the largest companies are now available to everyone. This situation has further intensified the competition. Retail companies who can respond to market changes before their competitors will have the advantage.

To survive, retail companies must be nimble enough to react quickly, but they can only do that with the right insights. Information and knowledge are now competitive weapons and technology can be key to unleashing its potential. That knowledge comes from every aspect of the organization from business operations, product trends, supplier information, and more. This buyer's guide reveals how retail companies can capitalize on their knowledge and uncovers eight capabilities that will help put the right technology in place to support them.

Tech-Clarity

Challenging Times for the Retail Industry

The retail industry is facing a state of significant disruption that is driving new approaches to manage the business. Some will struggle to survive while those who can quickly adapt to changing market trends will thrive.

For those who are prepared, there is a lot of opportunity. Research from BOF and McKinsey & Company[1] found that the top 20% of fashion companies generated 144% of the industry profit. They also predict that in 2018, the fashion industry will see sales growth of 3.5% to 4.5%. Their research finds that the top challenges retail companies must address in 2018 include:

- Dealing with volatility, uncertainty, and shifts in the global economy
- Competition from online and omnichannel
- Value chain improvement and digitization
- Decreasing foot traffic and online retailing pressure

It is those that are best positioned to overcome the industry challenges that will find themselves in that top 20% and will be able to capitalize on the sales growth. Let's explore how to overcome these challenges.

Tech-Clarity

How Do Predictive Analytics Help?

The top challenges uncovered by the research conducted by BOF and McKinsey[1] reveal the importance of getting instant insights. The economic uncertainty related to events such as Brexit, a rise in protectionist policies in the US, a volatile stock market, and more can erode consumer confidence and make it even harder to predict buying trends. Key insights will help overcome some of this uncertainty. With online shopping and social media, consumers are more informed than ever, creating a need for retailers to know how they can best influence buying behavior. The right data, in context, will help. Merchandise needs to be at the right place at the right time while avoiding excess inventory. Retailers need to offer consumers the experiences that will keep them coming back, with the right products that reflect the latest trends. Again, analytics will guide those decisions.

Old ways of working will no longer be enough. Companies need to get closer to their customers and suppliers. Big data and analytics can help achieve this goal. With the right data, retailers can turn knowledge into a competitive weapon so that they can act on threats and opportunities. They can make better decisions and derive business value from the data to support innovation and improve business performance. In fact, analytics have so much potential, in 2011 McKinsey predicted that big data would help retailers achieve a 60% increase in operating margins.[2]

McKinsey predicts that big data should help retailers achieve

60% increase

in operating margins

Tech-Clarity
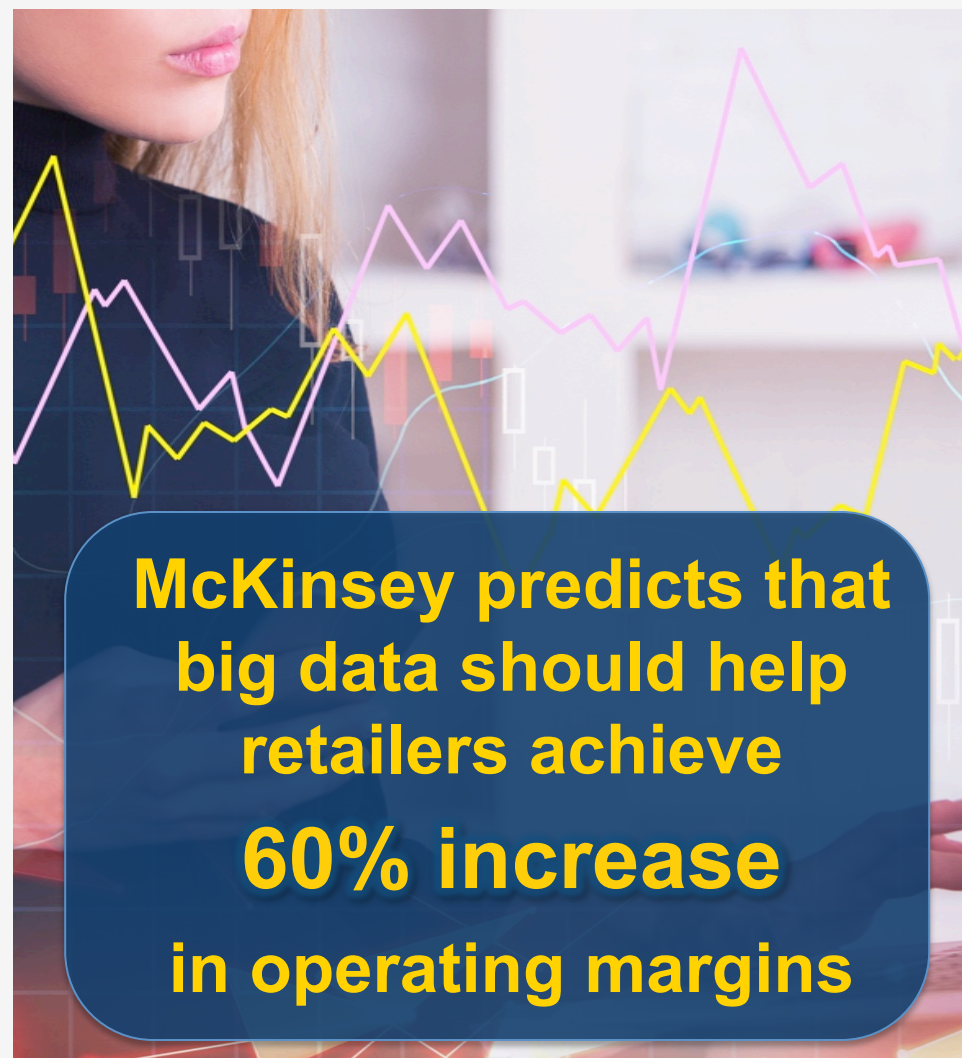
Understand the Challenges that Can Hold You Back

Analytics are so powerful, some of the world's most disruptive, innovative companies, such as Uber, have based their business models on data and analytics. However, while the promise is there, the majority of companies have not achieved the significant operating margin improvements that McKinsey predicted. In fact, McKinsey reports that US retailers have only seen a 30% to 40% improvement, rather than the 60% they anticipated, but they still believe the opportunity exists and in fact has grown over the last few years.[3]

Based on McKinsey's work as well as research conducted by Tech-Clarity, one of the biggest barriers preventing retailers from realizing more value is siloed data. To truly assess trends and capture business value, data should be viewed in context across multiple sources. Data sources include information about suppliers, transactions, and consumer behavior that together create a more complete picture.

Beyond data silos, other challenges also make it harder to realize more value. To help companies overcome these challenges, Tech-Clarity has identified eight buying criteria that will help companies select the right retail predictive analytics solution. With the right solution, retailers will be better positioned to realize the 60% operating margin improvements that McKinsey predicted.

Tech-Clarity

1. Platform that Quickly Connects to Everything

The average retailer has dozens of siloed systems. Data from these systems must be brought together to get a complete view of business operations and trends. Accessing required data across these systems becomes tedious and time consuming, but it is necessary to obtain needed insights. Connecting these systems by building services such as REST (representational state transfer) can drain IT resources. Plus, developing these services takes time, which means it takes longer to get needed insights. There is also little flexibility to add new sources of data that will be useful to the business without further consuming limited IT resources.

Solutions that rapidly connect to any data type, in any system, give you quick access to what you need, when you need it, from a single location. Solutions built on a connectivity platform will offer this functionality so that data from PLM, ERP, CRM, sales transactions, spreadsheets, supplier management, social media, and more, can all be viewed together, in context. Connecting everything is a key way to overcome a top challenge preventing retailers from seeing the predicted 60% increase in operating margins.

Tech-Clarity

2. Reduced Dependence on IT

Business leaders need timely access to insights and depend on IT to produce required reports. Unfortunately, IT resource capacity can be a bottleneck. IT can have a large backlog, and it takes time for projects to move to the front of the list; time that delays access to needed analytics. Plus, lack of flexibility means ad hoc or unplanned data requests either get buried in the IT backlog or delay other requests.

Platforms that empower non-technical users to build their own analytics dashboards overcome this and support more informed and timely decisions. Features such as a drag and drop user interface make it easy for non-technical users to build exactly what they need, without waiting for IT. You can then quickly respond to competitive threats and market opportunities as well as changes in your value chain.

Tech-Clarity

© Tech-Clarity 2018

3. Machine Learning Applied to Analytics

Finding insights within vast datasets is virtually impossible without help. Machine learning can sift through millions of records and thousands of variables to quickly identify previously unseen patterns, trends, and insights that will give you a competitive advantage.

Machine learning generates prescriptive models that adapt as more data records are added. Retail companies may find this especially helpful because an extra couple of weeks of sales data could be enough for the technology to recognize a significant shift in consumer behavior. This gives you early insight so that you can shift strategies, perhaps weeks or even months before competitors.

There are many more potential applications of machine learning in retail. For example, it can help forecast demand for a product which will guide supply chain, merchandising, and pricing strategies. It can also identify which product features will drive demand within different customer segments. It can even help with personalized advertising and offers.

By using a solution that applies machine learning to analytics, you will be better positioned to identify opportunities, react to trends, and plan for changing demand. From there, you can adjust as needed for any market uncertainty.

Tech-Clarity

4. Automated Recommendations

The insights from predictive analytics can be invaluable, but sometimes it is not obvious how to act on them. Beyond just presenting and analyzing data, solutions that apply business rules and offer recommendations based on the data can further accelerate the decision process.

Automated recommendations provide guidance and suggestions to help you make the most of the insights from predictive analytics. These recommendations can be especially helpful for newer employees who have not yet developed the needed expertise to know how to respond to a given trend. As an example, recommendations may include suggestions for shelf placement or a merchandising strategy, which can help to get the most out of limited foot traffic or drive customers to your website.

Tech-Clarity

5. Bi-Directional Data Transfers

Business intelligence (BI) applications possess a diverse set of data display options that make it easy for users to visualize data across multiple systems. While data visualization is powerful, most BI applications do not provide the ability for users to make data changes to the underlying datasets.

Retailers often rely on these BI applications to help them analyze "what-if" scenarios. For example, retail marketers may use these tools to analyze the impact of a specific advertising plan on channel sales. Merchants may want to see how small changes to their assortment plans impact profitability.

Software with bi-directional functionality enables you to make data changes or additional calculations in real time and pass them directly back to the native systems. Plus, this supports a single source of truth, which ensures data accuracy and overcomes data silos. When you know all of your data is always in sync, you know you can trust it and have confidence in your decisions.

Tech-Clarity

6. Easy to Use

While analytics are very powerful, users will be resistant to adopt a solution unless it is easy to use. If the interface is difficult to learn or it takes too much time to figure out how to access needed information, people won't use it, and you will not see the expected return.

Capabilities that enhance the user experience include interactivity, advanced visualizations, and support for existing user workflows. Software that incorporates modern approaches to the user experience and the latest user interface design concepts will reflect the newest research on ease of use.

7. Rapid Prototyping

It is often hard to know what you want until you see it. Consequently, it usually takes several iterations of a dashboard or report before it fully meets end user needs. This takes time and means you have to wait even longer to get value, especially if you are dependent on IT to design the dashboard.

With rapid prototyping, you can get iterations in front of users in days rather than weeks or months. You can then solicit feedback from users and quickly iterate to get exactly what's needed, reducing needed development time so that you start seeing value sooner.

Tech-Clarity

8. Good Vendor Support

While selecting the right solution with the right capabilities is critical, you also want to ensure you choose a vendor who will be a trusted partner. Beyond having a track record of successful implementations, your vendor should ensure users have timely access to resources, should they need help. The vendor should provide the training and support so that you can develop and implement analytics dashboards on your own. Get an understanding of expected response times from technical support and verify they will be available during the hours you will need them. This way, you will minimize delays due to questions about the software's capabilities. Confirm training resources are available so that users will be able to develop their expertise. Training may be offered online or in person so make sure the offering will work for your business.

Tech-Clarity

Select the Right Retail Predictive Analytics Solution for Your Needs

The right retail predictive analytics solution can be a powerful tool to improve operating margins. To help you with your selection, Tech-Clarity offers the following recommendations:

- Overcome data silos with a platform that supports quick connectivity.
- Reduce dependence on IT with an easy to use solution that supports rapid prototypes and will empower users to create their own dashboards.
- Increase the value of your insights with machine learning and automated recommendations.
- Select a good partner who will be there for you throughout implementation and adoption.

By selecting the right software, you should get timely insights to help you bring the right products to market, optimize the management of supply chains, influence buying behavior and more. These needed insights will help you make smarter decisions which should lead to better operating margins.

For more information, download Tech-Clarity's:
Top 8 Criteria to Look for in a Retail Predictive Analytics Solution

References:

1. Imran Amed, Achim Berg, Sara Kappelmark, Saskia Hedrich, Joanna Anderson, and Martine Drageset, "The State of Fashion 2018," *BOF and McKinsey & Company*, December 2017.

2. James Manyika, Michael Chui, Brad Brown, Jacques Bughin, Richard Dobbs, Charles Roxburgh, and Angela Hug Byers, "Big data: The Next Frontier for Innovation, Competition, and Productivity," *McKinsey Global Institute*, May 2011.

3. Nicolaus Henke, Jacques Bughin, Michael Chui, James Manyika, Tamim Saleh, Bill Wiseman, and Guru Sethupathy, "The Age of Analytics: Competing in a Data-Driven World," *McKinsey & Company*, December 2016.

www.tech-clarity.com

clarityonplm.com

@michboucher

TechClarity.inc

Buyer's Guide: Retail Predictive Analytics

This eBook is licensed for distribution by PTC
www.ptc.com

About the Author

Michelle Boucher is the Vice President of Research for Engineering Software for research firm Tech-Clarity, an independent research and consulting firm that specializes in analyzing the business value of software technology and services. Michelle has spent over 20 years in various roles in engineering, marketing, management, and as an analyst.

Michelle has broad experience with topics such as product design, simulation, systems engineering, mechatronics, embedded systems, PCB design, improving product performance, process improvement, and mass customization. She graduated magna cum laude with an MBA from Babson College and earned a BS in Mechanical Engineering, with distinction, from Worcester Polytechnic Institute.

Michelle is an experienced researcher and author. She has benchmarked over 7000 product development professionals and published over 90 reports on product development best practices. She focuses on helping companies manage the complexity of today's products, markets, design environments, and value chains to achieve higher profitability.

Tech-Clarity