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TO SURVIVE DIGITAL DISRUPTION, RETAILERS RETHINK THE DECISION-MAKING PROCESS

A successful analytics practice supports all job functions and guides all activities

Data-Driven Decisions in Retail

Leaders in the retail industry have embraced the practice of data-driven decision-making by investing in analytics packages—and along with them, analysts who perform queries to answer strategic questions. Retailers are gaining a competitive edge by applying analytics to functional areas, such as marketing, operations, and customer intelligence. Analytics can help retailers stock popular items based on real-time trends, know when to run promotions, and match customers to the most relevant products. In a recent study, 73 percent of retailers ranked big data initiatives as "important" or "very important" to competitiveness.[1] Analytics as a formal line of business has even broken into the C-suite with more chief data and analytics officers reporting directly to the CEO.

But what does a data-driven decision-making culture look like? Ideally, every person in the organization is trained in the practice of using data and equipped with the appropriate tools to inform their tasks. This applies equally to every role, from the category manager who optimizes planograms to the store associate who restocks shelves. To limit data-driven decision-making to only high-end analytics will hamper your ability to compete with digital-native retailers and survive digital disruption. Analytics teams must both improve their craft as specialists and implement automated tools, such as dashboards and alerts, for lay personnel. This cannot be accomplished overnight. Rather, data-driven decision-making is a journey with milestones that include assessment, cultural adoption, and the application of usage models.

Assessing Your Capabilities

The first step in developing a successful analytics program is assessing your organization's analytical capabilities. Knowing where to focus your efforts is critical. Many organizations invest in sophisticated hardware and software tools, only to find their efforts thwarted by a company culture unfamiliar with the data-driven decision-making process.

	Category	Description	Examples of Competencies
The International Institute for Analytics developed its DELTA* model to identify competencies that drive toward data program maturity.	**Data**	Data must be clean, common, integrated, and accessible.	• Data capture and quality • Use of "big data"
	Enterprise	The organization takes an enterprise approach to managing systems, data, and people	• Enterprise technology management • Data scalability
	Leadership	Leaders embrace analytics and move the company culture toward data-driven decision-making.	• Strategic input • Executive advocacy
	Target	Analytics must be aligned with specific, strategic targets and corporate objectives.	• Predictive modeling • Goal setting
	Analysts	Talent ranges from employees capable of creating basic spreadsheets to accomplished data scientists.	• Business skills • Data science skills

Creating a Data-Driven Culture

From the marketing department to human resources, most employees are used to making decisions based on intuition. Rather than simply collect more data, the goal of the analytics team should be to raise the average skill level for decision-making. This doesn't mean gut instincts and prior experience should be left at the door. Instead, analytics should narrow the number of actionable paths down to two or three—an efficient strategy that leaves room for a human touch.

The International Institute for Analytics recommends this basic framework for making business decisions based on data:

1. Frame the opportunity. Before running analytics, state the business opportunity in a way that can be supported by data.

2. Work with data. Explore how to identify, scope, and validate data in a way that focuses on the business outcome.

3. Guide the analysis. Interpret data to understand how it addresses the framed business opportunity.

4. Tell a story. Deliver a persuasive, data-driven story that provides actionable insights related to the business opportunity.

ANALYTICS 101

Advanced analytics uses sophisticated quantitative methods, such as statistics, data mining, and simulation, to produce insights that go beyond traditional business intelligence. Here are a few basics.

DATA COMES IN TWO TYPES

Structured
This information comes from transactional records and loyalty programs. Examples include a customer's name, address, and purchase history.

Unstructured
This wide-ranging data includes social media content, customer feedback, location-based data, and much more.

THREE PHASES OF BUSINESS ANALYTICS

Descriptive analytics explores what happened and why by looking at past performance.

Predictive analytics explores what will happen in the future based on historical data, algorithms, and external data.

Prescriptive analytics anticipates what will happen, when, and why, while suggesting decision options related to a future opportunity.

Key Usage Models in Retail

There's no one-size-fits-all approach to data-driven decision-making. Each usage model has its own unique formula of data input, processing, and output. Specialized training in statistics is necessary for complicated questions, while automated alerts are more suitable for store floor personnel. The following table highlights select application areas that span the spectrum, from craft analytics to automated analytics.

Function	Craft/Specialist Analytics ⟶		Automated Analytics
Customer intelligence	Customer loyalty	Heat mapping	Proximity/entry alerts
	Customer segmentation	Clienteling	POS queue times
Marketing	Campaign optimization	Product recommendations	Fit recommendations
	Media mix optimization	Customer journey mapping	Shelf velocity alerts
Merchandising	Assortment planning	Shelf compliance	Misplaced item alerts
	Allocation optimization	Replenishment reports	Out-of-stock alerts
Pricing	Price optimization	Negotiation parameters	Dynamic pricing
	Promotion optimization	Localized pricing	Competitor sales alerts
Operations	Fraud prevention	Surveillance	Theft alerts
	Sourcing optimization	Route optimization	Maintenance alerts
HR/workforce	Staff scheduling	Revenue dashboards	Task management

Moving Analytics Forward

Building a mature and effective data-driven enterprise is a journey. Intel works closely with retail organizations to help them assess their analytics capabilities, identify business goals, and determine how Intel® architecture can best support the analytics environment.

To learn more about how Intel can support your team, contact your Intel representative or visit intel.com/retail.

Learn more about the International Institute for Analytics and its DELTA model at iianalytics.com.