Aberdeen *Group*

A New Retail Paradigm: Solving Big Data to Enhance Real-Time Retailing

Sahir Anand

VP & Research Group Director

Retail Practice

Analyst Bio

Sahir Anand

Vice-President & Research Group Director, Retail

Aberdeen Group, a Harte-Hanks Company

- Sahir Anand focuses on technology and process management practices in retail, and the interplay between retail and consumer goods. Anand's work is related to use and adoption of technologies and processes that aid optimization and efficiencies in the multi-channel retail environment. Anand also oversees practices related to Human Capital, Global Supply, and Finance. Within retail, Anand focuses on retail customer, store & field management, and employee-facing technology and process optimization areas. Anand specializes in store and headquarter-related processes such as retail and merchant processes in the areas of store operations, payments, workforce management, promotions and pricing management, marketing relationship management, inventory and supply chain processes (forecasting, order management, fulfillment). Anand brings to Aberdeen years of experience in a wide variety of industries including fortune 500 companies. Prior to joining the Aberdeen Group, Anand was a General Manager with Staples Inc., where he was involved in customer and store & field management operations. Anand is also an avid industry blogger, speaker, and webinar contributor. Recognized amongst that top five retail industry analysts by trade publications. Also serves on the board of industry publications such as RIS.

Major Trends in Retail

- Trend 1: Expansive Channel Matrix- shoppers have no bounds (e.g. social, mobile, tablets, smart TV, and beyond)- *56% cite current initiatives*

- Trend 2: Shopping for Free- extreme couponing for deals, deals, and more deals (e.g. a whole new world of extreme online, mobile, and in-store couponing)- *50% cite current initiatives*

- Trend 3: Your Best Shopper is Changing- faster behavioral shifts than you can imagine. The next 5 years- big changes in fashion, style, size, color, and packaging- *47% cite customer is changing beyond expectations*

Big Data in Retail Definition

❑ Big Data in retail and consumer markets refers to the overall size or extent of active data an organization stores, as well as size of data sets it uses for business intelligence and analysis.

Big Data in Retail Definition

❑ Big Data is also used to describe the common difficulties with active data:

   ❑ *Size or extent* (storing and accessing the data)

   ❑ *Speed* (how fast the data must be captured, processed, analyzed and delivered)

   ❑ *Complexity* (the sophistication and level of detail in the data analysis)

   ❑ *Types* (the number of different formats the data takes).

Research Background

Three Critical Big Data Issues:

❑ **Disparate data sources and enormity of active customer data-** *solving customer Big Data and real-time sales and service challenges*

❑ **Companies find structured and unstructured data integration with other systems most challenging-** *"delayed time-to-information", and "slower time-to-decision" among customer-facing and non-customer-facing employees.*

❑ **Enhancing cross-channel merchandising, sales and marketing, and supply chain process visibility-** *one view of product, inventory, and order management data*

Voice of the End-User

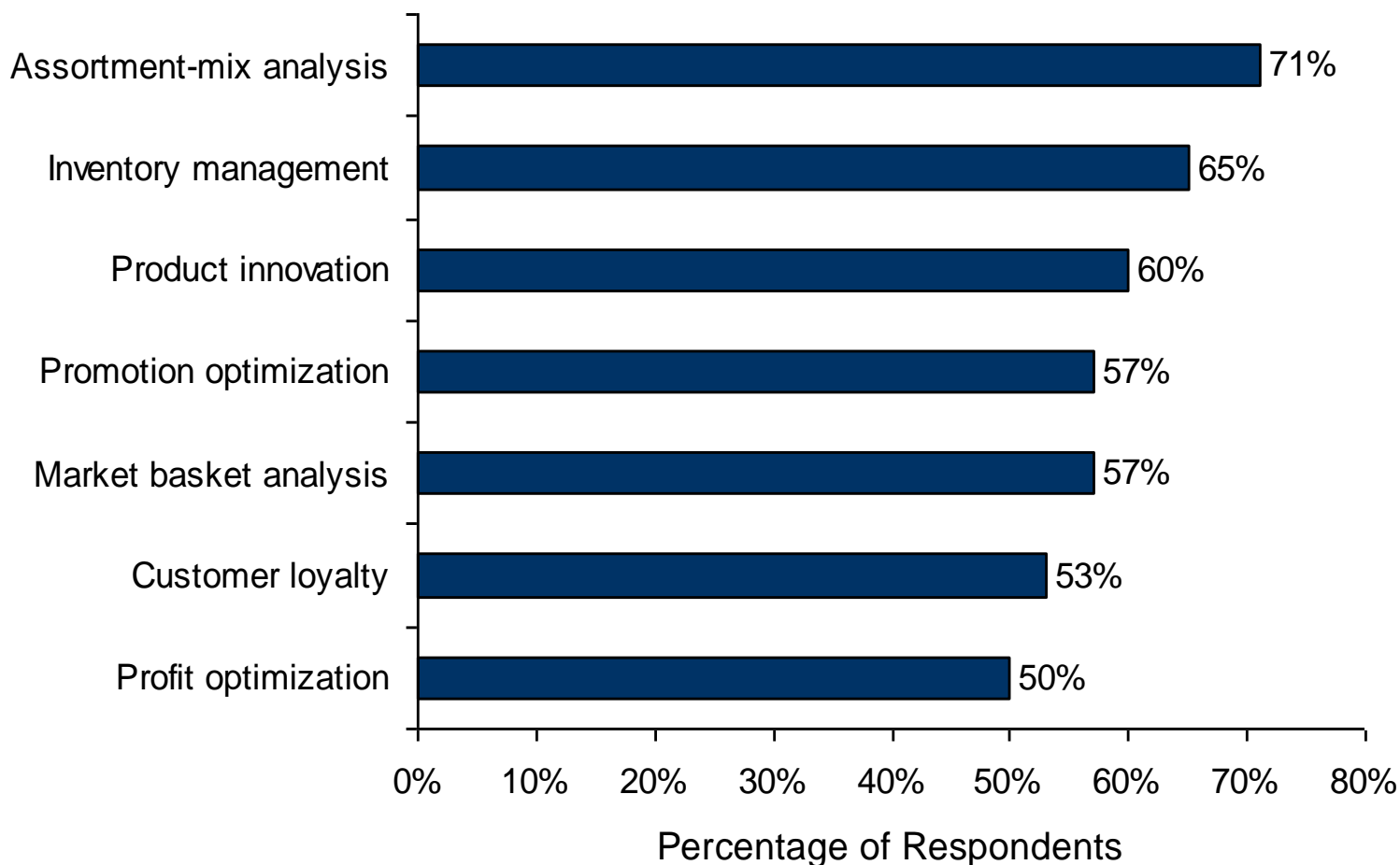"Impact is more from "lack of analysis / learning from" Big Data than from data issues themselves."

~Vice-President, Logistics, Large Apparel Retailer, North America.

Demographics

- Total Responses to Date 100 Enterprises
- Job title: Executive, CFO, CIO (9%); EVP / SVP / VP (20%); Director (14%); Manager (29%); Others (28%)
- Department / function: Logistics/supply chain (17%);IT (10%); Procurement (14%);Marketing & Sales (28%); Corporate Management (17%); Others (14%)
- Large- 41%; SMB- 41%, and Mid-Size-18%
- Geography: North America (66%); South America (3%); APAC region (13%) and EMEA (18%)

Big Data Impact on Retail Value-Chain

Big Data is a major hurdle in the way of Assortment and Inventory Optimization for a majority of Retail companies.

Percentage of Respondents

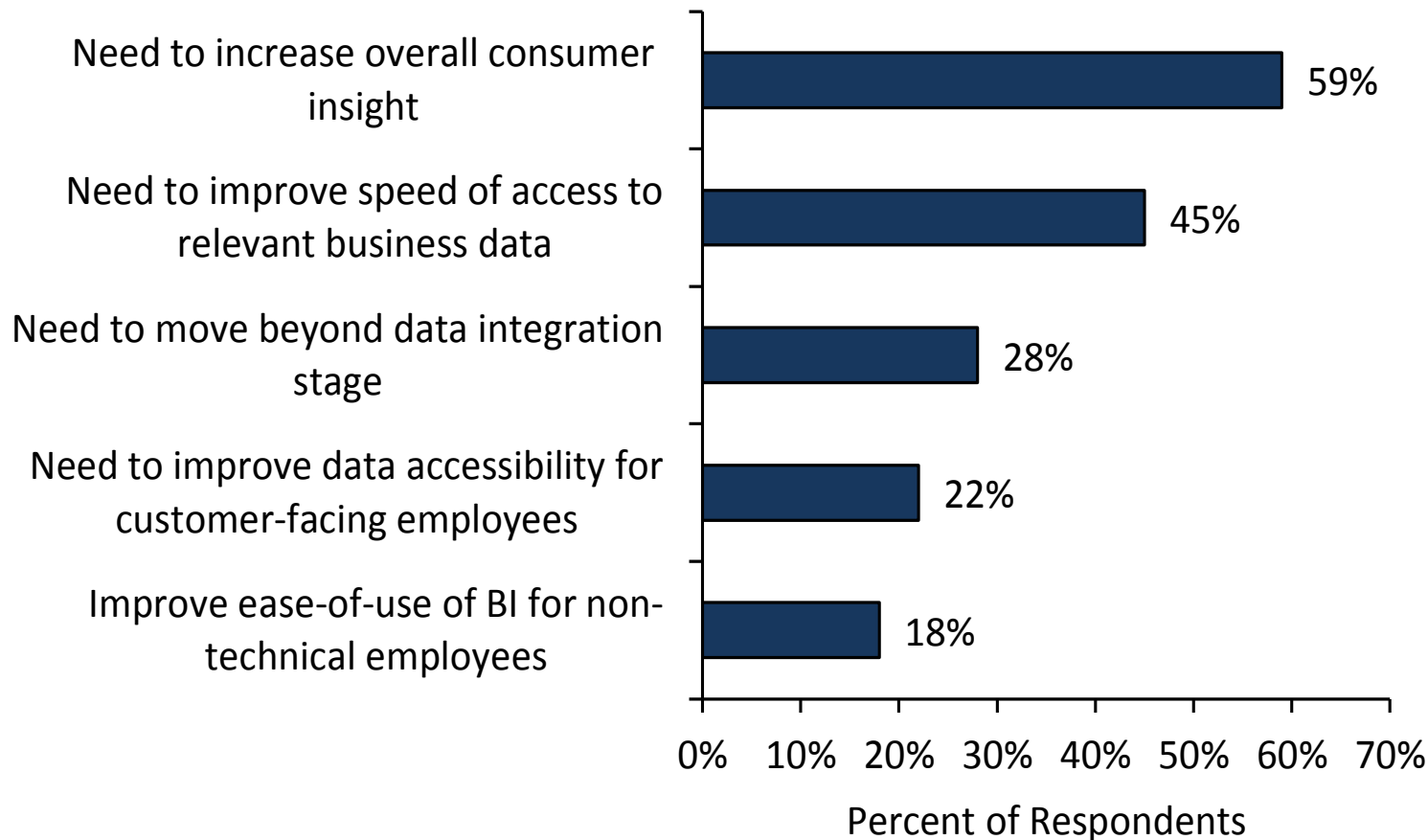| Category	Percentage
Assortment-mix analysis	71%
Inventory management	65%
Product innovation	60%
Promotion optimization	57%
Market basket analysis	57%
Customer loyalty	53%
Profit optimization	50%

Voice of the End-User

"Our biggest Big Data complexity is difficulty in matching strategy to actions and outcomes. It is very difficult to set the right KPIs and even more difficult to measure them."

~ Senior Executive, SMB Retailer, Asia-Pacific Region

❑ Aberdeen PACE (Pressures, Actions, Capabilities & Enablers)

Lack of Consumer Insights is a Top Business Pressure

Need to increase overall consumer insight — 59%

Need to improve speed of access to relevant business data — 45%

Need to move beyond data integration stage — 28%

Need to improve data accessibility for customer-facing employees — 22%

Improve ease-of-use of BI for non-technical employees — 18%

Percent of Respondents

81% of retailers are relying on increased customer insight for new customer acquisition.

Process and Organization Capabilities- Current & Planned

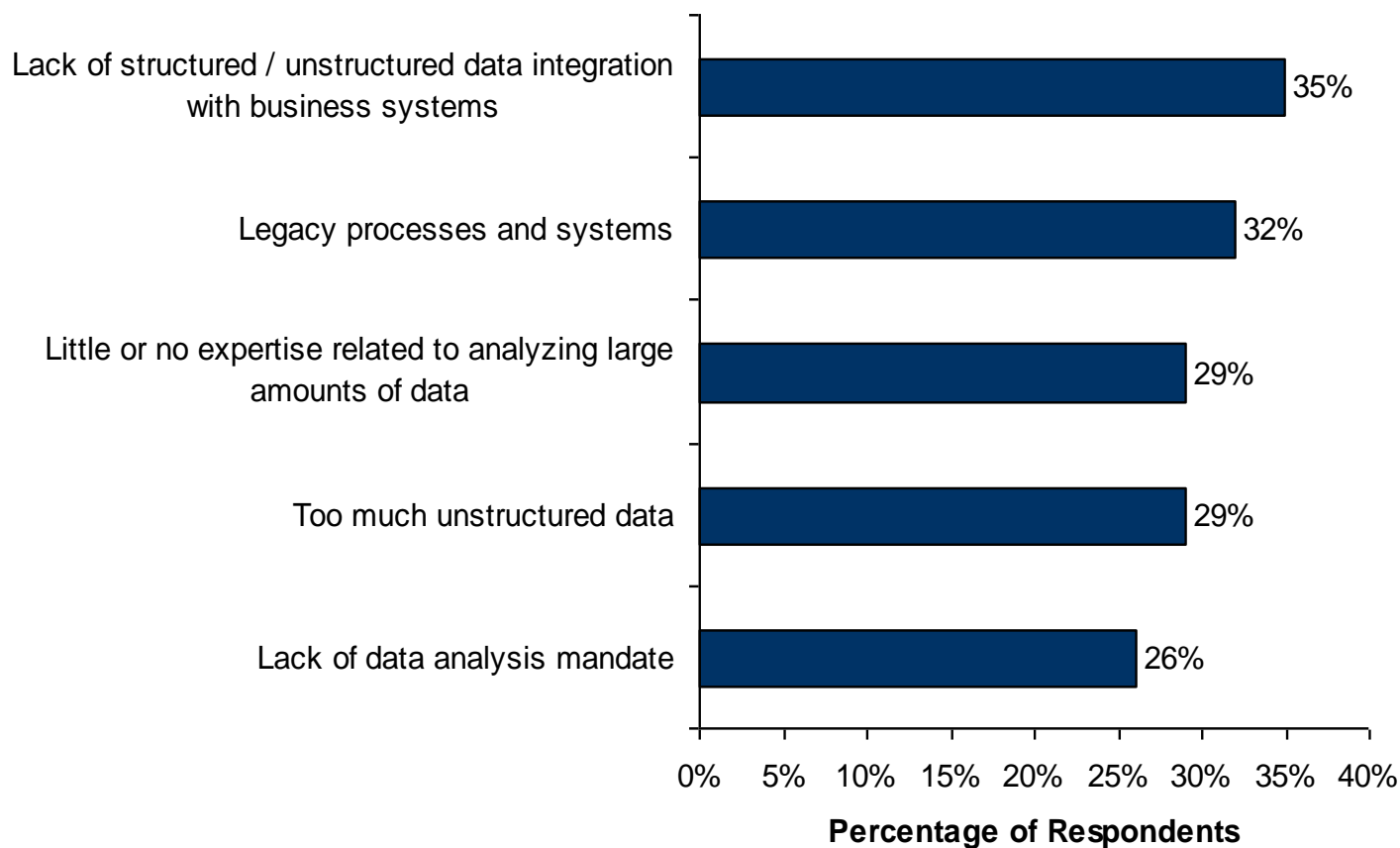| Data Summary	Currently Use	Plan to Use
Established data gathering and assembly guidelines	54%	43%
Guidelines for external data sharing (e.g. EDI) with suppliers and trading partners	52%	30%
Guidelines for data security, privacy, and consumer / client rights protection	48%	48%
Alignment of new product releases with customer preference and affinity	21%	59%
Job-role based access to customer behavior and purchase trends	36%	49%
IT expertise to solve Big Data analyses, quantitative / statistical analytics or dashboards and drill downs	31%	55%
The ability to provide performance data at the associate level	15%	55%

Knowledge Capabilities- Real-Time Retail?

Data Summary	Currently Use	Plan to Use
Real-time customer data capture at the point of service (POS)	55%	29%
Real-time customer data capture at the call center	44%	30%
Real-time customer data capture at the website	44%	50%
Real-time customer data capture at the headquarters	37%	45%
Real-time customer data capture within online communities	27%	54%

Voice of the End-User

"Detailed knowledge of how customers perceive our products, our services, our promotions, and the brands in all channels give us the most important facts to decide how to be closely personal with our customers."

~Director of Marketing, Large Specialty Retailer, North America

Technology Enablers- Challenges

48% of retailers store customer and business data in 2-5 disparate systems. Another 20% of retailers store data in 6-15 distinct systems.

Variety of Big Data Formats in Retail

- ❏ Pricing data- 68%
- ❏ Point-of-sale transaction data (in-store, online, call center, and other channels)- 65%
- ❏ Supplier community business-to-business data (e.g. EDI)- 65%
- ❏ Shipping data- 55%
- ❏ Text resulting from business activities- 55%
- ❏ Merchandising data- 45%
- ❏ Other data sources- 43%
- ❏ Social media data- 39%
- ❏ Human resources data- 30%

Voice of End-User

"Too much unstructured data causes delays in compiling actionable information in needed time frames. This relates to CRM, customer data/view; competitive analysis; social engagement; product line evaluation and sales promotional programs."

~Vice-President, Marketing, Mid-Market Retailer, North America.

Technology Enablers

Data Summary	Currently Use	Plan to Use
In-memory computing processes/analytics	35%	36%
Data cleansing tools	24%	55%
Customer segmentation application	32%	52%

Big Data Strategies-Realized and Unrealized Benefits

Data Summary	Expected Benefit	Actual Benefit
Agile business execution value as information is easily available	90%	23%
Improved product and service innovation	89%	22%
Agile business forecasting value as information is transparent	87%	19%
Enhanced predicting capabilities related to product and customer problems	86%	17%
Detailed performance information available for rectifying errors	79%	36%
Possibilities for deeper customer segmentation	77%	42%
Assistance with development of one view of product information	72%	34%

End-User Use Case Example

❑ **Large Food & Beverage Co. & Retailer**
  This company is a leading global beverage company. This companies products are sold in over 200 countries. They have shown adaptation and growth through their 126 years in business. This company collects vast amounts of data from a variety of sources including pricing, merchandising, and social media. They are facing challenges with regard to Big Data issues such as volume, variety, and speed. The data is too unstructured and they do not have expertise related to analyzing the data. From their collection of Big Data and the use of in-memory computing solutions, this company has seen improved innovation of products and an ability to further segment their customers.

Conclusion & Takeaways

☐ **A roadmap for addressing complex unstructured and structured data integration with business systems**

☐ **Align top enterprise-wide productivity needs to specific data processing and intelligence processes**

☐ **Predicting customer purchasing behavior speaks to the very essence of cross-channel sales and service models**

☐ **A robust relationship between line of business and IT to increase customer analyses and operational visibility**

☐ **Deeper business insights to employees for improving customer, inventory, and merchandise assortment-related decision making**

☐ **Consider in-memory computing processes that help support real-time data processing and delivery of intelligence**

Contacts

❑ Sahir Anand

Sahir.anand@aberdeen.com

617-854-5271