

# HARNESSING BIG DATA TO IMPROVE CLIENT EXPERIENCE



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## Targeting Individual Preferences thru Data Mining

Data is the basic building block of information – first you gather data, then you form insights which evolve into information. Historically, in the **retail, hospitality and tourism sector, this collection and assessment of data** has been an intensely manual effort. Customer preferences must be understood to meet expectations.

Big Data is defined as a collection of data sets so large and complex it is difficult to process using classic database management tools. Big Data's collection technologies, including Internet of Things (IoT), 5G wireless network, distributed computing clusters and elegant reporting tools gather structured and unstructured data elements. Big Data differs significantly in three ways; volume, velocity, and variety. Capture, transmission, bundling, and reporting of big data (volume) in real time status (velocity), and from multiple data types and sources, such as numbers and pictures (variety) enables immediate and significantly impactful reporting.

Analysis segments and standardizes elements, then repackages and mines, to glean essential insights into client preferences and improved decision making capabilities.

## Labor Force Takeaway

Associates must be both data and reporting literate to assist businesses as they begin to take full and immediate advantage of data mining opportunities.

CompTIA A+, and Fundamentals certifications, aimed at the IT beginner, are an excellent starting point for associates to gain knowledge in the area. Intermediate associates can delve deeper into the discipline with certifications in Cisco Network Administration (CCNA), CompTIA Server+, IBM Certified Specialist, and others like OCA, OCP, VCP, and MCSA.

Advanced certifications like MCSE and CCNP prove valuable for associates running a data shop full time, and expert level certifications like ASE/CSE and OCM render associates fully capable of not only gathering, concatenating and interpreting data, but also managing large network installations as well. In-state major universities, like NJIT and Rutgers, also offer advanced degrees in Big Data Science for intensive practitioners.

# Understanding and Capitalizing on Purchasing Patterns

The retail, hospitality and tourism (RHT) sector may be the largest gatherer of data information of all industry sectors. RHT makes extensive use of commonly used structured data (numbers, words) as well as unstructured data (pictures, social media). This information is all relevant to understanding customer preferences, actions and geolocation – critical knowledge elements to pushing relevant opportunities to promising buyers.

Big Data requires the deployment of very specific platforms for data management. **Hadoop** is the de facto standard that facilitates the distributed processing of large datasets economically across clusters of commodity computers using a simple programming model. It is flexible, reliable, economical and scalable, and allows users to amass, segment and repackage data for reporting needs and insight/trend development.

**Technology adoption and constant innovation are essential for operators in the retail, hospitality and tourism sector to sustain and grow their business.**

The trend towards more individualized, or **niche marketing**, requires destination data mining. Personalized experiences from clients/potential-clients can be analyzed to develop custom packages. Customer acquisition is another application. By identifying the activities of non-clients, packages can be developed to meet their specific needs. Real-time pricing of add-on services is another application. A client at a property who has purchased spa services during past stays can be courted with coupons and a concierge-appointment-setting.

According to **Forbes**, three major benefits can be obtained by implementing a Big Data enhanced marketing strategy:

- **Meeting Individual Client Expectations** – Through the analysis of massive amounts of personal data, client preferences can be better understood and products/services, customized to enhance the client experience.
- **Identifying the clients with a Higher Overall Lifetime Value** – Clients who come for a big spend for a once in a lifetime event have a set value. A client who comes regularly, but who spends little, might have a higher lifetime value owing to frequency. Big Data can distinguish these users.
- **Yield Management** – Effective couponing or discounting can produce higher overall yields.

**Challenges** to consider when using Big Data in planning:

- **Interpreting Unstructured Data** – Social media, pictures, tweets, and other forms of data need to be correctly assessed for meaning and grouped into actionable data. This is often difficult and subjective.
- **Intrusiveness of Data Gathering** – Clients do not like to be endlessly questioned about preferences and personal information for profile compilation. There's a breakeven point where the value of additional data exceeds client comfortability.
- **Privacy and Security** – Customer confidence is always a concern that requires compliance and trust management when dealing with personal information.

In summary, the prevailing research shows that the future belongs to those establishments that are best able to anticipate, shape and deliver the customized preferences of the consumer. Big Data cannot replace creativity, though it can augment and aid in its operation. It still takes human imagination to turn Big Data insights into real competitive advantages.