

# BIG DATA, HAPPY GUESTS: USING ANALYTICS TO ENHANCE HOTEL OPERATIONS

**The power of big data has proven itself in many industries, helping companies save money, increase efficiencies and make more informed decisions based on actionable insights. Retail, health care, manufacturing, government agencies and others are utilizing big data to the benefit of their customers and their bottom line.**

With its focus on providing outstanding customer service, the hospitality industry has much to gain from big data. A growing number of hoteliers and lodging providers are harnessing big data's abilities to cull relevant information from multiple sources to uncover trends, plan proactively to address market conditions such as expected energy cost increases or anticipated shortages in certain foods or supplies, and anticipate and cater to guests' needs.

To gain the most from big data, hospitality providers need a network powerful enough to support the systems and software necessary to collect and analyze data. A connectivity portfolio that includes a mix of both wired and wireless technologies can enable a seamless, exceptional user experience for both providers and their guests while providing the connectivity necessary to power big data software and services. Having the right connectivity portfolio that meets all needs is a must for hotels that want to employ the power of big data to delight their guests and stay relevant in the face of increased competition.

## **USING BIG DATA BEHIND THE SCENES**

The hospitality industry is rich in data, from how rooms are booked (online versus phone reservations, directly versus hotel sites or travel agents), to the TV channels guests watch the most, to the number of times guests travel for business and for pleasure. Traditionally, this information has been of little use to hoteliers. But thanks to big data analytics, hoteliers can use this data, as well as information gathered from outside sources, to uncover opportunities and define new, more intelligent ways of conducting business.

## **TREND SPOTTING**

Hotels are using information gathered from sources both inside and outside their four walls to make decisions ranging from pricing rooms to extending its shuttle service hours. They're also using such information to spot trends that have the potential to impact their business. Demographics such as the types of travelers visiting at certain times of year—more business travelers visiting during the month of October, for example—can help hotels set their room prices accord-

ingly and order additional stocks of certain foods and beverages. Alternatively, hotels can plan for less housekeeping services, as business travelers tend to be less messy and use fewer in-room amenities than families.

Factors such as weather patterns and local or regional events can be helpful to hotels in their decision-making. Understanding and preparing for inclement weather that could leave existing guests stranded and travelers scrambling for rooms can give hotels an edge in planning, even preparing for overflow situations during worst-case scenarios or emergency situations. And knowing which events will bring in large crowds—and the types of attendees—can help hotels accommodate and have the right amenities at the ready. Such information also can be critical in setting room prices—and changing them when conditions merit an adjustment.

Even within the hotel, big data can help a hotel provide the best accommodations for certain populations of guests. Those booked as guests attending a wedding, for example, could be

housed on certain floors of the hotel to reduce the level of disruption created by these revelers as they make their way to their rooms after the festivities. Guests who are not attendees of the wedding, meanwhile, are placed on different floors and can be assured of a quiet, uninterrupted night of sleep.

Big data, too, can help hoteliers recognize which services and amenities are used more often by certain types of travelers and at certain times of the year. While it's apparent that families traveling during the summer almost certainly will go for a dip in the pool, it may be less apparent to the hotel that the parent or parents would enjoy an hour to visit the exercise room but are unable to because no one is available to babysit. Knowing that, and adding short-term childcare to its list of offered services, would be a strong selling point for the hotel.

Conversely, business travelers tend to frequent hotel restaurants and bars more often than families, while families and other

pleasure travelers tend to go offsite for their meals. Extending restaurant and lounge hours during those times when business travelers outnumber pleasure travelers can help the hotel provide a needed service to guests arriving at odd hours while increasing its highly lucrative food and beverage revenue stream.

Outside the hotel, big data can help hoteliers spot trends in food and beverages or other lifestyle trends, enabling them to add up-to-the-minute dishes and drinks to their menu, augment their spa services or purchase equipment for the exercise of the moment, for example. Such attention to trends adds to the appeal of a hotel for guests—especially those who book rooms based on the “cool factor” of a hotel.

## **MARKETING CAMPAIGNS CAN BE BASED ON GUEST DATA RANGING FROM HOW FAR THEY TRAVELED TO HOW THEY LIKE THEIR BURGER COOKED, HOW OFTEN THEY USE IN-HOTEL SPA SERVICES AND WHETHER THEY TAKE ADVANTAGE OF LATE CHECK-OUT.**

### **MARKETING**

Big data is perhaps most widely used to create more influential targeted marketing campaigns based on past customer interactions. In the hospitality space, marketing campaigns can be based on guest data ranging from how far they traveled to how they like their burger cooked,

how often they use in-hotel spa services and whether they take advantage of late check-out.

Take, for example, a non-gambling business traveler who visits Las Vegas multiple times a year to attend various conferences. Knowing the traveler makes multiple return visits to the city, a Las Vegas hotel can create a targeted marketing campaign to entice the traveler to stay at that property during each visit. Special room rates based on multiple visits, free spa services, extended checkouts and even providing a way to get to the hotel room without having to set foot on the gaming floor all could be offered as incentives to bring the traveler back to the hotel each visit.

Hoteliers also could utilize big data analytics to improve their accommodations, amenities and services based on customer opinions. Past guests who complain on booking sites about the level of noise coming from guests at the swimming pool after 10 p.m., for example, may sway potential guests with small children or light sleepers who may be disturbed away from the property. Or those who rave about the high quality of in-room coffee or jetted bathtub, conversely, may persuade others to book a room. Hotels can gain much insight from the information gleaned from customer satisfaction surveys, check-out questionnaires and even comments made on social media, all possible through big data analytics.

What's more, hoteliers can use big data to more effectively spend their marketing dollars. With big data, hotels no longer need to spend big budgets on blanket marketing programs that produce little results. Instead, hotels can create campaigns that target certain demographics at certain times of the year or particular groups scheduled to attend local events, for example. Those campaigns can be targeted further to offer incentives to past guests or loyalty club members of the hotel chain, such as meal vouchers or free shuttle service from and to the airport.

## **OPERATIONS**

Back-office functions, too, can take advantage of the benefits big data can provide, as hoteliers can use the technology to streamline processes such as check-in/check-out and make more meaningful decisions on operational activities such as staffing, inventory control, maintenance and even renovations.

Traditional check-in/check-out processes can be time-consuming and frustrating for guests who just want to grab their room key or their bill and be on their way. The power of big data can make that happen: Using various guest information gleaned from previous visits, visits to other hotels in the chain and loyalty program data, hotel employees can use mobile devices to check guests in or out without making them stand in line. Alternatively, guests can use mobile kiosks to check in, with the system selecting and rooms that meet their preference (away from the elevator, south-facing view, etc.) and readying the room with the guest's desired lighting and temperature. Guests can use mobile apps to unlock their room door and set various preferences, such as wake-up calls, requests for extra towels or English breakfast teabags instead of morning coffee—all of which can be saved by the system and used for future stays.

Indeed, knowing and addressing customer preferences can create an exceptional guest experience, but they also can create operational efficiencies. If a guest consistently asks for additional towels every time he checks in, understanding that customer preference can help the hotel be more efficient by automatically stocking extra towels in the guest's room before he arrives. In the same vein, a guest who craves a quiet environment will ask to change rooms if placed next

door to a family with children. Using big data, hoteliers know to place that guest in a secluded area of the hotel with as little outside noise as possible to avoid room changes—and the subsequent tidying of the room the guest moved from—later on.

Big data also can be useful in helping hotels determine the value of facility upgrades. Based on various factors including customer feedback gleaned from online sites, the amount of maintenance performed over a particular time period and even the current trends in form and functionality, hoteliers can make informed decisions on whether to spend on infrastructure or facilities upgrades. A lobby featuring work tables with multiple power and USB outlets would appeal

greatly to business travelers or guests who don't want to spend all their time in their rooms. Big data analytics can help hoteliers understand whether their customer base would appreciate—or even care about—such a feature. Conversely, updating the look and style of a hotel room could be done in a few rooms, with hoteliers making decisions on the final look and feel based on customer feedback (both solicited and unsolicited). Such an exercise also could help the hotelier save money by ensuring the design is appealing to the greatest number of guests rather than guessing—and possibly ending up losing guests who don't like the new look.

In the same vein as facilities upgrades, big data can help hoteliers more efficiently maintain their existing facilities, and do so proactively. Through the use of sensors that send out alerts when systems aren't working properly or equipment is close to breaking down, hoteliers can stay on top of maintenance and reduce the amount of system failure.

As an example, consider something as simple as a lightbulb.

Currently, short of testing each light daily, maintenance workers have no way of knowing when a bulb has burned out until a guest notifies the front desk. But, by using sensors, maintenance personnel can be alerted automatically when a bulb is close to burning or has burned out and can change it before it is discovered by the guest.

#### **THE NETWORK IS THE KEY**

Big data helps bring about multitudes of operational efficiencies for hotels, all of which circle back to providing stellar guest experiences for all types of travelers. But big data's influence relies heavily on the underlying network, which must be robust enough to support not only the hotel's daily systems and software but also the technologies necessary to collect and analyze enormous amounts of data coming from numerous sources. The network also must provide both wired and wireless customer connectivity—a must-have functionality for hotels of every type.

Wi-Fi networks are a critical element of a hotel's network infrastructure for big data, as the information gleaned from guests using Wi-Fi networks on property is a critical piece of the big data puzzle for hotels. In addition to providing a service today's guests expect, hotels that offer Wi-Fi can collect valuable user data such as the locations a guest visited on property and how long the guest stayed at each location, for example.

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Hotels using big data might consider two Wi-Fi networks to separate guest service traffic from back office traffic. This helps to mitigate potential security breaches and ensure guests have an optimal connectivity experience.

What's more, a hotel's network should be flexible enough to increase or decrease in bandwidth to help the hotel keep up with the needs of its systems and its guests during peak usage times.

The right network depends also on a provider that understands the dynamic nature of big data and its importance to the customer experience. As such, hotels should look for a network service provider that can deliver the technology and expertise to effectively manage an infrastructure capable of handling the needs of big data as well as the other systems and software critical to delivering top-level service.

## **CONCLUSION**

Big data has the potential to help hoteliers take their operations to the next level. As a growing number of hoteliers embrace big data to uncover relevant information from multiple sources to uncover trends, plan proactively to address conditions that might impact its operations, better target its marketing efforts and anticipate and cater to guests' needs, much depends on the strength, stability and flexibility of their network. It is critical hotels work with a network service provider that can meet the needs of big data as well as day-to-day systems that contribute to providing a stellar guest experience. ■