The Hotel of the Future

Hotels today are spending as much time, effort, and resources on technology and improving their internal networks as they are on the quality of their linens and food service. Why?

In the past, consumers looked for a hotel with a clean room, a hot shower, and a comfortable bed. Today's hotel customer is looking for a new level of comfort and convenience that only technology can provide. Now, in addition to a good night's sleep, hotel customers also want a level of convenience and customization similar to that found in their own homes. And with seemingly every traveler equipped with laptops, tablets, and/or smart phones, they also expect their hotel room to be a place where they can 'plug in'. Indeed, according to the chief information officer for MGM Mirage, Scot Campbell, at the core of a hotel's 'cool' factor is technology. Campbell says that "we are building rooms where everything is on a network."[1]

At the same time, the hospitality industry has suffered amid a tough recession and slow recovery. According to the American Hotel & Lodging Association (AHLA), there are 50,800 hotels in the United States, many of which are facing extraordinary margin demands amidst a very tough economy. Indeed, according to AHLA, the industry's profitability fell from $25.8 billion in 2008 to $16 billion in 2009. More competition, soft demand, and increased infrastructure costs—including personnel costs—are often cited as the biggest culprits.

While technology offers hotels the ability to deliver more value-added services while keeping a handle on costs, it comes with risks. Consumers' near ubiquitous access to information has been a two-edged sword for many hotels and hotel chains. To be sure, information is a great marketing and sales opportunity for the hospitality industry—to learn more about customer preferences and what causes consumers to choose one hospitality provider over another. However, the near real-time price and occupancy competition is also coupled by near real-time consumer feedback.

As Stephen P. Joyce, president and CEO of Choice Hotels International recently put it, "Mobile information is both a huge opportunity and a huge threat. We were first with the phone app. Now there is a phone app that knows where you are and lists every hotel in the area. Nearly perfect information has never been good for the hotel industry."

According to comScore, a digital marketing intelligence firm, two-thirds of people begin their shopping experience—including hotel shopping experience—online. Almost universally, consumers are using technology to research and book accommodations and then rate their experience post-stay.

That is why hotels across the country are racing to install new technologies that will give them a competitive edge with both leisure and business travelers. A key part of competing in the new marketplace is having the technical capability to capture every consumer touch point opportunity on the hotel grounds—from the time they step into the lobby to the time they head for the airport or next destination. Here is how Hughes envisions the "hotel of the future" playing out:
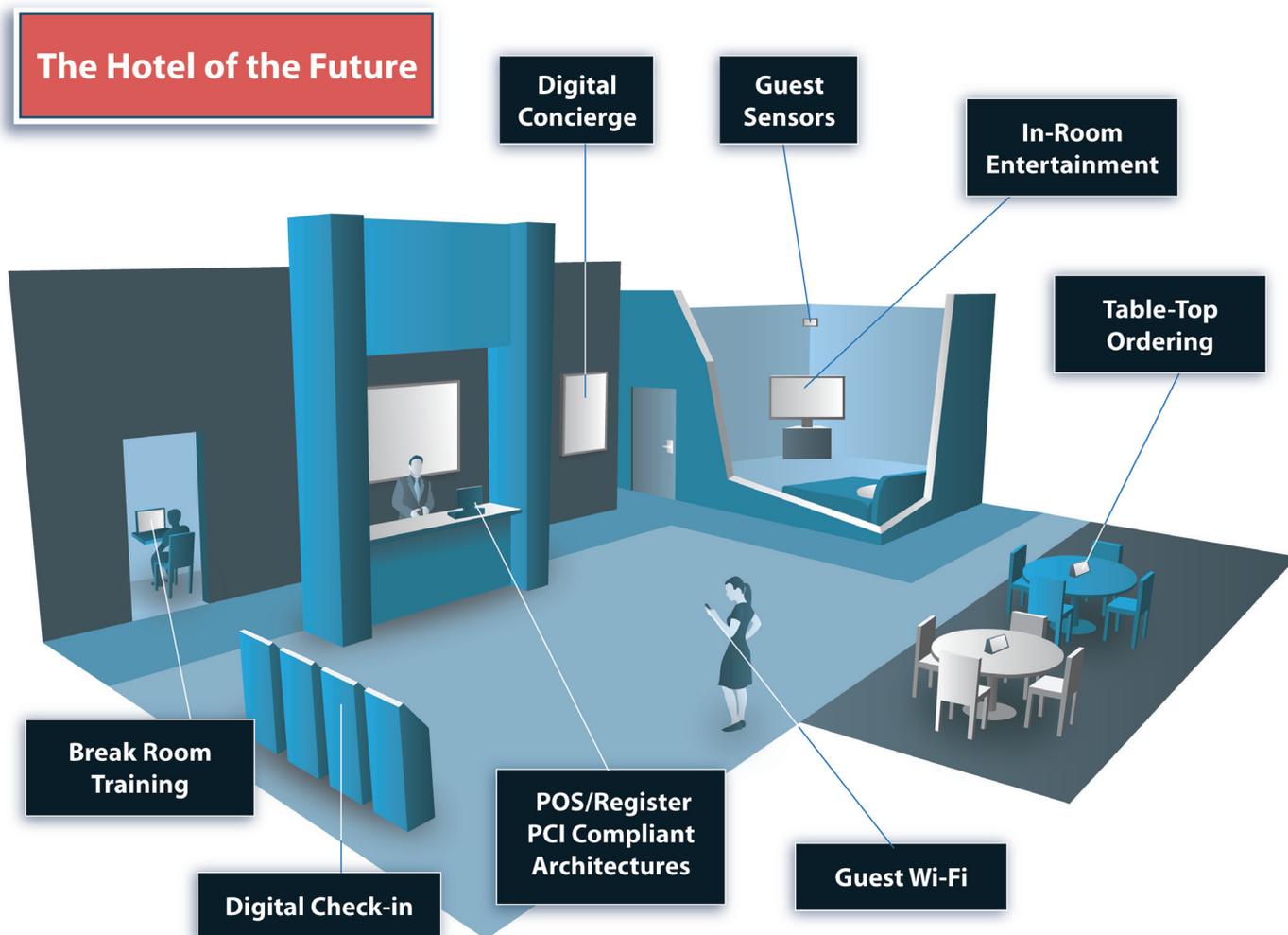
[1] Business Day, "Guests to control hotel of the future," Louisa Hearn, May 25, 2010

ES NETWORK SYSTEMS, LLC (HUGHES) IS THE GLOBAL LEADER IN PROVIDING BROADBAND SATELLITE NETWORKS, SERVICES, AND PRODUCTS FOR LARGE ENTERPRISES, SERVICE PROVIDERS, GOVERNMENTS, SMALL BUSINESSES
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White Paper

The customer walks into the lobby and goes straight to a personalized touch screen check-in kiosk. After entering a credit card for identification purposes, the customer sees a layout of the hotel and his or her room. Next to the room are optional upgrades. Questions on the screen appear such as, "Would you like a suite?" and "Would you like room with a view?" Each option is displayed along with the associated costs. After selecting (or changing) his/her room, the customer has the option of ordering everything from a movie, mixed drinks, spa treatments, or even a wake-up call. A final check-in translates the room number and duration of the customer's stay into a downloadable bar code for smart phones, or a blank plastic room key to swipe at the touch screen's prompt.

That bar code or room key allows access to the room. There, the television or flat panel display becomes the customer's personal control center. Sample activities and actions include the ability to order room service, schedule laundry pick-up, get a wake-up call, check on local events, and make restaurant or entertainment reservations.

Lighting, temperature, and music settings are adjustable via the television console. Upon departure, the room automatically 'shuts down' to minimize energy expenditure and 'awakens' upon the customer's return. Throughout the hotel there is digital signage that promotes the hotel's latest menu and entertainment options, also pushed to the customer's smart phone for mobile ordering.

The Hotel of the Future

Digital Concierge

Guest Sensors

In-Room Entertainment

Table-Top Ordering

Break Room Training

POS/Register PCI Compliant Architectures

Digital Check-in

Guest Wi-Fi

Managing that type of critical information flow will not be easy. It requires a network that is:

- **Always available** – Once the hotel experience becomes network dependent it will be more important than ever to make sure that network is always available.

- **High performance** – The network will need to be as available and reliable as the telephone in the room. Performance needs to be fast and efficient.

- **Safe and secure** – With so much information passing through the network, customers will demand complete security in how information is categorized, processed, and stored.

Here are the primary hotel services that technology will have to support:

- **Digital check-in** – Checking into a hotel room will resemble checking into an airline flight. Airlines successfully transitioned their customers from checking in with an agent to self-service using a kiosk to be more efficient and reduce passenger processing costs. According to Forrester, 86 percent of airline passengers use self-service check-in. What is common now at airports will soon be common at hotels. Hotels will likely quickly pass the airport in terms of customization options as well; at the self-serve check-in, guests will be able to see their hotel rooms and upgrade them, if they wish. Guests will also be able to order services and make special service requests.

- **Secure, reliable, and scalable Wi-Fi connections throughout** – Americans are becoming increasingly dependent on Wi-Fi. According to the Pew Internet and American Life Project's Mobile Access 2010 report, a majority of Americans—59 percent—now access the Internet wirelessly using either a laptop or cell phone. Wi-Fi is also now a deciding factor for travelers in determining where they stay. Wi-Fi access needs to be easy, reliable, and secure—while being compliant with an increasing number of Federal and state law enforcement requirements (e.g. the Communications Assistance to Law Enforcement Act). And with the exponential growth of rich media flowing through the Internet, hotels will begin packaging Wi-Fi in tiers to accommodate someone who just wants to check email and the news, as well as to accommodate the person who wants to run multiple video and audio streams into his or her hotel room.

- **The smart phone operated hotel** – Smart phones will serve multiple functions for the future traveler. Just as smart phones are now replacing boarding passes for air travel, they soon will be a replacement for the traditional room key. Room numbers and entry codes will be sent directly to your cell phone for easy, keyless entry. Not only is this a solution to guests losing their keys, it also prevents serious security risks that come with magnetic key strips that store personal information such as social security and credit card numbers. And without keys to return, guests can check out using their phones. Smart phones will also be the vehicle to both book hotel stays and process receipts and paperwork. For example, Marriott Hotels booked $1 million in revenues in the first 100 days after the launch of its mobile Web site in 2009. Mobile bookings were particularly important in supporting last minute bookings and moving expiring inventory, as about one-third of the mobile bookings were for same-night stays.

- **The television as in-room control center** – In addition to the mobile device, the hotel room's television or flat panel display will replace the traditional telephone as the traveler's control center. It will be everything from the customer's alarm clock to his/her entertainment center and source for hotel information. For example, the in-room display will help find and book everything from restaurant reservations to show tickets and double as an online hotel shopping center where customers can buy branded items and have them shipped and waiting when they arrive home. The in-room display will even allow customers to set preferences for lighting and temperature.

- **Guest sensors** – Energy efficiency is important—both to the environmentally conscious consumer, as well as the economically conscious hotel manager. The majority of hotels in the future will have room sensors that detect when people are in the room and when they are not. When the room is empty, hotel room settings will adjust—from lighting to cooling—to make sure that the hotel is not wasting energy and dollars. For example, The Aria Resort & Casino in Las Vegas has already installed this technology in all its guest rooms. Not coincidentally, the Aria has received the highest certification from Leadership in Energy and Environmental Design (LEED) and 5 Green Keys from the Green-Key Eco Rating Program.

- **Restaurant display ordering** – Just as the flat panel display will be the travelers' control panel inside the room, hotels will increasingly use these devices—and the growing use of tablets and mobile applications made for them—to assist travelers throughout their stay. This will be particularly true at hotel restaurants. Touch screen ordering in hotel restaurants will soon be a standard option. Using touch screens in restaurants increases efficiency of staff and being able to use dynamic graphics and displays enables the chef to promote specials and upsell on orders. This is already available in places like the Rydges World Square Hotel in Sydney, Australia where they have, "scrapped paper menus in favor of the touch-screen tablet, empowering diners to browse what's available, order food and drinks, view photos of each dish, detail how they'd like their steak cooked, and learn which wines go best with each dish."[2]

- **Digital employee communications** – The hotel network is just as important to internal hotel operations as it is to customer-facing applications. The "hotel of the future" will use digital learning to keep employees informed about everything from shift responsibilities to updates on occupancy rates to the next wave of convention attendees and security needs. They can also be taught procedures and company policies through podcasts that they can download to their phones or iPods. Hotel brands—including Hilton Garden Inn, Aloft, Homewood Suites, and SpringHill Suites—are using devices like iPods and the Sony PlayStations as staff training tools. This has proven to be a great way to train employees while cutting costs. Homewood Suites is using interactive DVDs and videos as a key training tool. These 20-minute audio and video modules can be viewed in the hotel or on mobile devices, and because they are video-based, they are inexpensive to update and translate into languages other than English.

- **Multiple data, running through multiple networks that can be both secure and shared** – All these new technologies and mobile devices will put significantly increased demands on the network requiring additional capacity. Each of these data streams will need to be highly available—that is, a hotel cannot afford to have the system 'go down.' Network performance will have to be optimal as travelers will expect transactions to happen in real time. And most important, all this data will need to be secure. Payment Card Industry (PCI) compliance requires a high level of security for each transaction. Information needs to be able to flow securely and efficiently with built-in redundancy. Self-configuring VPNs and firewalls using intelligent routers will make the whole process (network headache) of becoming and remaining PCI compliant easier.

At Hughes, we're working with many of the leading names in the hotel business, enabling them to use their networks and supporting technology as sales, training, and brand building tools. To be sure, a clean room, hot shower, and good service will always be important for any hotel. We are working with the leaders in hospitality to go beyond that and make intelligent use and management of technology that directly improves the customer experience.

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[2] The Suite Life by Perfect Escapes, "High Tech Hotels of the Future, Today", June 23, 2010

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