# LODGING 2013

# TECHNOLOGY STUDY

## Hotel Tech in 2013:
### Fast Moving & Customer-Focused

- **Budgets & Business Drivers:** Hotels reveal spending allocations & top priorities for 2013
- **In-Room Technology:** Detailed look at HSIA pricing models & near-term investments
- **Back-of-House:** Trends in property management, labor, revenue & more
- **Payment Security:** Hotels ready for long-overdue payment overhaul

HOSPITALITY TECHNOLOGY
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# LODGING TECHNOLOGY STUDY

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# HOTEL TECH IN 2013:
# FAST MOVING & CONSUMER-FOCUSED

### With competitive pressure mounting, IT executives are tasked with meeting consumer expectations head-on

The lodging industry is in a significant period of change. A hotel guest's before-, during-, and after-stay experiences are all rapidly evolving as a result of new technologies. Mobile channel bookings, for example, increased from $160 million in 2010 to $2.6 billion in 2011, and are on track to be an $8 billion market in 2013, accounting for 6.5% of total online travel bookings (PhoCusWright). Meanwhile, consumers have come to expect a considerably more sophisticated in-room experience, with flat screen televisions and easy access to strong Wi-Fi now considered table stakes.

These rapidly evolving expectations and sophisticated technologies are putting new revenue and brand reputation pressures on the heads of hotel IT executives, with escalated timelines for making decisions. For most of the industry, a wait-and-see approach is too risky. To assist hotel executives in making their next wave of technology decisions, *Hospitality Technology* produces this Lodging Technology Study, tracking budgets, business objectives, and investment trends in hotel IT. This 2013 report is the third consecutive publication of this research, and industry pressures are making the findings of this study a critical decision-making tool. Each year's report incorporates feedback from hoteliers to produce an even more comprehensive and useful set of findings. We dove significantly deeper into trends in in-room HSIA to provide a sub-set comparison. We also queried hotel executives about IT budgets at both the corporate and property level. Across a variety of technology projects, we're now able to present both a priority level and a satisfaction level, exposing areas where technology performance is not meeting the business imperative.

Key findings from this year's research reveal that:

- Insufficient budgets are no longer considered the biggest challenge facing IT departments; instead, pressure from guests' mounting expectations is becoming the number one challenge.
- As a result, consumer-driven technologies, including in-room tech, CRM and networking, account for 50% of hotels' overall technology budgets.
- Hoteliers agree that the EMV payment security overhaul is long overdue, and that challenges with PCI compliance are not based on funding, corporate support, or knowledgeable staff.
- Hotel executives recognize the importance of mobile solutions, yet they agree that this technology is currently an underperforming area in the lodging industry and future development is needed to capitalize on its full potential.
- Networking (increasing bandwidth and wireless Internet access) and TV upgrades are the top two in-room technology projects planned within 18 months.
- For hotels using tiered pricing for Internet access, the majority (69.2%) offer free low-bandwidth Internet to all hotel guests (rather than only to loyalty program members).
- Hotels report a need for more in-house IT leadership and expertise, particularly as they seek to integrate property management technologies across the enterprise.

### ABOUT THE SURVEY

The 2013 Lodging Technology Study survey was distributed electronically in late 2012 to hotel executives in the *HT* readership pool. A total of 103 completed surveys were received, representing a total of 20,693 hotel properties. All industry segments were included in the sample, and the breakdown is as follows: upscale (33%), midscale (25.2%), multiple brands across segments (21.4%), luxury (11.7%), and economy (6.8%). Respondents included a diverse mix of professionals in information technology (41.7%), accounting & finance (9.7%), operations (7.8%), sales and marketing (7.8%), as well as general managers (14.6%), and owners/CEO (10.7%). Overall, the respondents are highly experienced in the hotel industry and well-educated. Most of the respondents had more than 20 years of industry experience (66%) and at least some college education or more (98%). They reflected perspectives and decisions at various levels: corporate-level (55%), regional (13%), and property-level (32%).

Abigail A. Lorden,
Editor-in-Chief,
*HOSPITALITY TECHNOLOGY*

Mehmet Erdem, PhD, CHTP
President, iHITA.org
Associate Professor,
*HOTEL COLLEGE, UNLV*

# AN INDUSTRY-WIDE PICTURE OF IT CHALLENGES & SPENDING

Consumer expectations bring mounting pressure to hotel executives, trumping concerns over budgets

As the economy continues to recover and competition for room bookings becomes increasingly intense, hotels are experiencing growing pressure to invest in technologies that give them a competitive advantage. A successful and effective approach to hotel technology investment begins with knowledge: for example, identifying industry benchmarks for IT spending, finding out what technologies rate highest on hotels' priority lists, and ultimately understanding the business goals that are driving technology investments. To help individual lodging organizations understand these and other macro-trends, we surveyed hotel technology executives about their business goals and IT budgets, and asked them to rate the importance of a variety of technology initiatives.

## BUDGETS: WHO'S SPENDING WHAT, AND WHERE

Benchmarking an industry-wide annual IT budget is a complicated task. A hotel company's IT budget is influenced by many factors, including company size (number of units) and the lodging segment(s) in which it operates. In providing budget estimations, this study makes a distinction between corporate and property-level IT budgets. Respondents were first asked to indicate their level of job responsibility (corporate-level or property-level) and then answer questions pertaining to their company's IT budgets. The data collected was further segmented based on industry segment (luxury, upscale, midscale and economy). Both mean (arithmetic average) and median (middle value) numbers were included in the analysis, along with minimum and maximum outliers (Figure

1), to provide a comprehensive picture. Not surprisingly, the reported amount of both corporate and property IT budgets increases as we move from economy to luxury segments.

At the property level, luxury hotels have the highest mean annual IT budget in the industry at $280,000, with a range between $120,000 and $400,000. For upscale hotels, the reported mean was $175,000 with a wide range between $6,000 and $375,000. The reported property IT budget decreases significantly for midscale and economy hotels. The mean value of IT budgets for mid-scale hotels was $61,250. For economy hotels it was reported to be $51,500.

At the corporate level, luxury hotel companies (those respondents who identify their organizations as being primarily in the luxury segment) had the highest

mean IT budget at $3.9 million. The mean corporate IT budgets for other segments were $2.56 million for upscale corporations, $1.15M for midscale corporations, and $114,000 for economy. The wide difference in budgets reported in this study accurately reflects the differing financial commitments of hotel companies towards technology across the industry.

The spending pattern for hotel technology in 2013 is consistent with the previous two years of this study. A large portion of technology spending continues to be consumer driven. As seen in Figure 2, guestroom technology (19.7%), property management systems (18.9%), and customer relationship management technologies (10.1%), when combined, account for almost half of hotel technology spending. The investment in networking continues to be substantial as well, accounting for 14.9% of overall tech spending. This highlights the lodging industry's continued efforts to upgrade Internet bandwidth and wireless service. The balance of reported IT budgets are dedicated to support technologies in all functional departments, including PCI compliance (9.5%), revenue management (9.3%), point of sale systems (8.7%), and workforce management (5.9%). Overall, when considering CapEx investments versus OpEx spending, respondents indicated that IT budget allocation for operational/maintenance purposes (57.3%) was marginally higher than the one for capital investment purposes (42.6%).

## BUSINESS GOALS AND CHALLENGES

Consistent with the high priority being placed on investing in consumer-driven technologies, respondents ranked "driving more revenue" and "enhancing guest services" as the top two business goals for technology investments (Figure 3).

| Figure 1: | **Technology Budgets in the Lodging Industry** | | | | | |
|---|---|---|---|---|---|---|
| | **Average Budgets Per Single Location (in US Dollars)** | | | | **Corporate-wide Averages** | |
| | **Mean** | **Median** | **Minimum** | **Maximum** | **Corp. Mean** | **Corp. Median** |
| **Luxury** | 280,000 | 300,000 | 120,000 | 400,000 | 3.9M | 4M |
| **Upscale** | 175,000 | 200,000 | 6,000 | 375,000 | 2.56M | 1.6M |
| **Midscale** | 61,250 | 30,000 | 5,000 | 250,000 | 1.15M | 250,000 |
| **Economy** | 51,500 | 20,000 | 5,000 | 123,000 | 114,000 | 67,350 |
| **Industry-wide** | 142,000 | 97,500 | 5,000 | 400,000 | 1.87M | 750,000 |

**Figure 2:** **Where IT Dollars are Spent**

| Category | Percentage |
|---|---|
| Guest Room Technology | 19.7% |
| Property Management System | 18.9% |
| Networking | 14.9% |
| Customer Relationship Management | 10.1% |
| PCI Compliance | 9.5% |
| Revenue Management | 9.3% |
| Point of Sale Systems | 8.7% |
| Workforce Management | 5.9% |
| Other | 3.1% |

**Figure 3:** **Top 5 Reasons for Tech Investments (2011-2013)**

| | 2013 | 2012 | 2011 |
|---|---|---|---|
| Driving more revenue | 1 | 1 | 1 |
| Enhancing guest services | 2 | 2 | 2 |
| Improving operational efficiency (Boosting productivity) | 3 | 5 | 5 |
| Cost saving | 4 | 4 | 3 |
| Gaining competitive advantage | 5 | 3 | 4 |

The importance of these two goals was also confirmed in the 2011 and 2012 publications of the *Lodging Technology Study*. "Improving operational efficiency" was ranked as the third most important business goal, moving up from its last-place ranking in the previous two years. The rankings of "cost saving measures" and "gaining competitive advantage"

**For the first time in several years, insufficient IT budgets are no longer considered the biggest challenge facing hotel technology executives.**

slightly decreased as compared to the last two years. Continued economic recovery is allowing hoteliers to focus on improving the customer experience and

on operational efficiency, rather than scaling back costs. The need to get creative in driving revenue and the focus on enhancing guest services via technology is clearly recognized across the industry.

Respondents were asked to report on the biggest challenge facing their IT departments (Figure 4). For the first time in several years, insufficient IT budgets are no longer considered the biggest challenge facing hotel technology executives. Instead, rising pressure from consumer expectations coupled with limited technology talent (i.e., employees) to meet those expectations are becoming larger concerns. Approximately 25% of respondents considered lack of budget as the premier challenge in the 2013 study, down from 39% in 2011. Meanwhile,

there's an increase in the concern that "guests' expectations are greater than the industry can keep up with" (topping this year's list of challenges at 26.4%). Staffing/experienced talent is the top concern for 24.2% of executives in 2013, up noticeably from 17% in 2011.

Organizational ecologists describe a pattern in business coined as "liability of obsolescence," in which there exists a growing mismatch between an organization's inherent product strategy and its operating environment over time. The hotel industry must be watchful to guard against internal misalignment and/or an inability to adapt to changing customer expectations. Contemporary, knowledgeable talent are an important resource in preventing this.

Only a small portion of respondents expressed concern over their companies' willingness to upgrade technology (14.3%); and just 9.9% pointed to the technology itself as being insufficient to meet the company's needs. It should still be noted, however, that in comparison to 2011, more hoteliers in 2013 expect that existing technology will be insufficient to meet their respective companies' needs.

Indeed, hotels are willing to invest in new technology; but given the rapid pace of change, the question remains: where to invest for the best chance of future success? The technology landscape and consumer expectations may be changing too rapidly to precisely plan for the future. Adopting a strategy that is flexible enough to respond to market changes will likely provide the best course for IT investments.

### TECH PROJECTS IN 2013: IMPORTANCE HIGH, SATISFACTION LOW

In order to form an effective IT strategy, it is imperative for hotel companies to evaluate the performance of current IT projects and prioritize their investments. Respondents were asked to rate both the importance of and their satisfaction with 16 key IT projects on a scale from 1 to 5, with 1 being extremely unimportant and/or extremely dissatisfied, and 5 representing extremely

important and/or extremely satisfied. This comparison allows us to see discrepancies in importance and satisfaction, and thereby expose areas that need greater innovation on the part of technology suppliers (i.e., projects that are extremely important, but current solutions are not satisfying hoteliers' needs). In all cases, the mean average for importance of a project scored higher than the mean average for satisfaction. Detailed results are presented in Figure 5.

The top five initiatives on the importance scale are: PCI Compliance, prop-erty management solutions, guest room technology, customer relationship management solutions, and website enhancements. On the satisfaction scale, only PCI Compliance also falls in the top five initiatives currently earning high satisfaction marks. These findings suggest a meaningful shortfall between hotel IT executives' top 5 priorities, and the current performance levels of those same solutions.

A significant discrepancy in importance and satisfaction is revealed with mobile solutions. Consumers are increasingly using mobile devices for access to travel-related content. According to ComScore Inc. (www.comscore.com), almost 40 million consumers use smartphones to access travel sites or apps. Hoteliers rank mobile solutions as the ninth most important IT project (3.71). However, the current performance of mobile solutions was ranked lowest on the satisfaction scale (2.96). This discrepancy indicates that hotel operators have a strong desire to invest in mobile solutions that can harness the full potential of this technology, and that current solutions are not delivering on that potential.

Similar satisfaction shortfalls exist for guest room technologies and customer relationship technologies. Consistent with the industry's efforts to create personalized customer experiences, guest-room technologies and customer relationship technologies were ranked as the third (4.02) and fourth (3.98) most important IT projects, respectively. The importance of the two technology projects was also evident in their substantial budget allocation in 2013 (collectively accounting for about 30% of the overall budget). However, satisfaction rankings of guest-room technologies and customer relationship both fall toward the bottom half of the scale.

Overall, these findings expose a need for significant and immediate attention in guestroom and CRM technology innovation. As guest expectations for both grow at a rapid rate, it will be important for hoteliers to seek affordable, satisfying technology offerings. ●



Figure 4: **Top IT Department Challenges**

Guests expect greater technology advancements than we can keep up with: 26.4% (2013), 22.0% (2011)

Our company doesn't have a sufficient IT budget: 25.3% (2013), 39.0% (2011)

Our company doesn't have the employees to make necessary improvements: 24.2% (2013), 17.0% (2011)

Our company is slow and/or resistant to technology upgrades: 14.3% (2013), 15.0% (2011)

The technology itself is insufficient to meet our company needs: 9.9% (2013), 7.0% (2011)

2013 Percentage / 2011 Percentage



Figure 5: **IT Project Success Scale: Comparing Importance and Satisfaction Levels**

IMPORTANCE SCALE

PCI Compliance 4.14
PMS 4.05
Guestroom Tech 4.02
CRM 3.98
Website Enhancement 3.95
Network Infrastructure 3.95
Business Intelligence 3.92
Social Media 3.92
Mobile Solutions 3.71
Energy Management 3.60
Distribution Systems 3.52
Point of Sale 3.38
Cellular Infrastructure 3.37
Cloud Solutions 3.31
Digital Signage 3.15
Augmented Reality 2.45

SATISFACTION SCALE

3.58 PCI Compliance
3.55 Point of Sale
3.51 Social Media
3.46 Website Enhancement
3.41 Distribution System
3.37 PMS
3.35 Digital Signage
3.34 Network Infrastructure
3.29 Business Intelligence
3.23 CRM
3.22 Guestroom Tech
3.21 Energy Management
3.12 Cloud Solutions
3.05 Augmented Reality
3.00 Cellular Infrastructure
2.96 Mobile Solutions

# Hotels reveal investment plans for in-room technology

Bandwidth remains top priority as an industry grapples with pricing strategies

Guests are increasingly expecting the same or better access to technology in the hotel room as they have in their homes. To find out about hoteliers' specific in-room tech plans, we surveyed on a variety of topics. First, respondents were provided a list of 10 initiatives and asked to indicate if they have plans to upgrade, and when (within the next 18 months, or in 18 months or more). We also posed multiple questions about hoteliers' in-room HSIA strategies. Overall results show that bandwidth remains a high priority and is subject to much debate.

## SOONER OR LATER?
## IN-ROOM TECH INVESTMENTS

Bandwidth was the top choice for near-term investment, with 51% of hoteliers reporting plans to increase bandwidth to guestrooms within the next 18 months. This figure is similar to that of last year's survey (at 49%), suggesting planned implementations are not yet complete and/or have taken longer than expected. Still focusing on connectivity, 43% of hoteliers planned to add or upgrade their in-room wireless Internet access, up from 32% last year; possibly to add more access points, or add the capability all together.

Turning attention to in-room televisions, hoteliers were asked to consider three distinct types of technologies: Flat Screen TVs, HDTV, and 3DTV. Investment in flat screen TVs is likely to happen sooner: nearly 28% plan to add or update their current systems within 18 months. Another 2% plan to upgrade in a longer timeframe (sometime after 18 months). The push for HDTV is even more prominent, with 32% planning to add or upgrade sooner, and an additional 3% planning for upgrades in the 18-month+ time frame. Not surprisingly and consistent with the last two years of this research, of all the in-room technologies examined, 3DTV is the lowest priority. Just 3.4%

of hoteliers plan to invest in 3DTV within the next 18 months. Primary inhibitors include a lack of 3D content coupled with low levels of consumer demand. Investments in 3DTV over the long term are also quite low (4.5%), but slightly higher than short term, indicating a willingness on the part of hoteliers to consider the technology if consumer interest increases.

Two areas experiencing significant technology advancement are



Figure 6: **In-Room Tech Upgrade Plans: Sooner or Later?**

| Category | Sooner | Later |
|---|---|---|
| Increasing Bandwith | 51.1% | 3.3% |
| Wireless Internet Access | 43.3% | 2.2% |
| HDTV | 31.8% | 3.4% |
| Flat Screen TV | 27.8% | 2.2% |
| Energy Management | 23.1% | 7.7% |
| VoIP Phone | 20% | 14.4% |
| Room Control Device | 19.8% | 7.7% |
| Electronic Locking System | 19.8% | 15.4% |
| iPad/Tablet | 16.5% | 11.0% |
| 3DTV | 3.4% | 4.5% |

**Sooner:** Will upgrade witihin 18 months    **Later:** Will upgrade sometime after 18 months

electronic door locks, and energy management systems. Door locking advancements include NFC-based, proximity-based, and crypto acoustics. Overall, just over one-third (35%) of respondents in our study have plans to upgrade room locking devices over collective short- and long-term time horizons. Energy management systems will be upgraded by 31% of hotels, largely driven by the industry directive to promote sustainability, and empowered by IP networks that can monitor and optimize the guestroom climate. Additionally, 34% plan to add or upgrade a VoIP system.

With the influx of in-room technology, hotel executives are now looking at various tools to control the space: from regulating networked thermostats and lighting, to providing in-room concierge services to guests. One emerging trend is providing a tablet to guests as an in-room amenity. Projections from this study see 16.5% of hotels placing tablets in guest rooms within 18 months, and an additional 11% will add them in 18+ months (totaling 27.5% over the entire time period). While these numbers are far less than a majority, just like other technologies previously mentioned, as tablet computing evolves hoteliers should be aware of the potential these devices have for not only providing guest convenience but also increasing employee productivity. Beyond the tablet, 20% of hotels are planning to install some other device to control the in-room experience (i.e. remote control, touchscreen panel) in the coming 18 months, and an additional 7.7% will do so in 18 months or more. VoIP phone upgrades are planned by 34% of respondents over both near- and long-term time lines, driven in part by a desire to control the guest-

room. Ultimately, however, it may be that guests' own devices will be the ideal in-room control solution. During an in-room technology panel discussion at the 8th annual Hotel Technology Forum (April 2012, Cosmopolitan Las Vegas) this scenario was discussed as a viable solution by panelists and attendees.

## HSIA PRICING STRUCTURES

As hotels switch from traditional phone systems to VoIP systems, we witness not only changes in communication technology but also sweeping changes in the revenue streams produced by in-room communications. A few decades ago, income from a property's telephone department made up more than 2.5% of the hotel's total revenue. Today that number has fallen to well below 1% (Vallen & Vallen, 2009). As guests continue to bring more and more personal wireless-enabled devices into the guestroom, hotels are faced with the challenge of providing high-quality, but affordable connectivity.

High Speed Internet Access (HSIA) is a must-have amenity in nearly all hotel segments; on that the industry and guests agree. But consensus ends there, and pricing models for HSIA can become complex: complimentary to the guest (or built into the room rate); free to loyalty members only; or tiered pricing (that may or may not include complimentary access at lower bandwidth levels). In this last scenario, there's no set standard for the level at which bandwidth switches from free to paid.

This study seeks to provide a com-

<div style="font-style: italic; color: #1a5276; font-weight: bold;">Projections from this study see 16.5% of hotels placing tablets in guest rooms within 18 months.</div>

prehensive picture of HSIA pricing models in use across the industry (Figure 7a). Currently, 55% of hotels — the bulk of the industry — provide HSIA at no additional cost beyond the room rate (identified as "free-to-guest", or "FTG"). Nearly 20% charge a flat rate to all guests, and 25% have a tiered pricing structure. Of those, 14% offer limited access (primarily for checking email and Web browsing) at no cost and charge incremental rates as bandwidth needs increase, while 11% have a tiered structure that charges for access at all levels, with prices increasing as bandwidth needs increase.

Further research provides additional insight into patterns in tiered pricing. Of the 14% of hotels industry-wide that offer complimentary HSIA at the lowest bandwidth tier, the vast majority (69%) do so for all of their guests, regardless of loyalty status. Nearly 8% offer their complimentary HSIA to loyalty program members, while another 8% offer complimentary HSIA only to elite loyalty program members (Figure 7b). When asked at what level their properties begin charging guests for bandwidth use, the most common responses (regardless of segment) included: 256Kbps, 750Kbps, 1Mbps, 2Mbps, and 5Mbps.

A closer examination of HSIA pricing strategies dissected by sub-segment reveals some interesting findings (Figure 7c). Across the board,

# Currently, 55% of hotels — the bulk of the industry — provide HSIA at no additional cost beyond the room rate.

100% of the economy hotels that participated in this study do not charge for HSIA. In addition, only 16% of midscale properties charge for Interne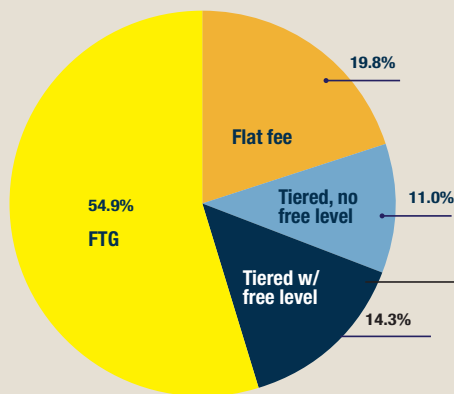t usage. When upscale and luxury properties are examined, the pricing structures are significantly more varied. Only 37% of upscale and 22% of luxury properties have no fees for HSIA. Approximately 27% of upscale and 33% of luxury charge a flat fee for all bandwidth levels. A significant portion of both markets use some form of tiered pricing: 37% of upscale and 44% of luxury (representing the most common approach for the luxury segment).

In summary, the varying strategies for HSIA show that there is no standard for meeting both the needs of the property and its guests. It is also important to remember that while a certain structure may be beneficial for a specific property it may not have the same results across different markets or even for other properties of the same brand. That said, as hotels increasingly look to guests' personal devices as functional tools for moving about the property and as a primary communication tool (such as for guestroom access and eventually guestroom control), policies regarding HSIA will likely evolve. ●

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**Figure 7:**   **Guest Room HSIA: Free or For a Fee?**

### 7a   Current HSIA Pricing: Industry Overall

- 19.8% Flat fee
- 54.9% FTG
- 11.0% Tiered, no free level
- 14.3% Tiered w/ free level

### 7b   Who Gets Free Access in a Tiered Model?

- 15.4% Other (guests and non-registered guests)
- 7.7% Only to members of elite loyalty program
- 7.7% All members of a hotel loyalty program
- 69.2% All hotel guests

### 7c   HSIA Pricing by Industry Segment

**Economy**
- 100%

**Midscale**
- 12.0%
- 4.0%
- 84.0%

**Upscale**
- 26.7%
- 36.7%
- 13.3%
- 23.3%

**Luxury**
- 33.4%
- 22.2%
- 22.2%
- 22.2%

Legend:
- Free to Guest
- Tiered access, partial FTG
- Tiered access, charges at all levels
- Flat fee

# MEASURING PROPERTY MANAGEMENT, LABOR AND MORE

Hotels invest in systems that can personalize and streamline, but need for integration remains paramount

Faced with mounting pressure to keep pace with guest expectations, hotels are investing not only in guestroom technology, but also in back-of-house IT systems that can deliver personalization to guests, while enabling optimum performance and deep business insight to managers. This study examines a variety of back-of-house systems: property management, labor management, and trends in the use of mobile and cloud-based technology for back-of-house applications. Plus, we examine some of the challenges hoteliers face with their back-office systems; core among them, an ongoing need for better system integration.

## PMS INVESTMENT PLANS

Property management retains a significant portion of hotel executives' time and attention. In fact, property management systems (PMS) are ranked in the number-two spot for both budget allocation and for project importance, just slightly behind guestroom technology in both cases (Chapter 1, Figure 1).

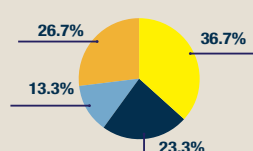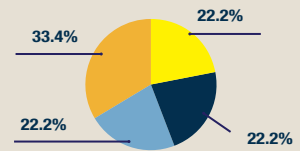The PMS is responsible for a variety of hotel functions, which can include: guest bookings, billing, online reservations, room revenue, rate management, guest profiles, front desk, room management, marketing and statistics, powerful reporting and revenue management, and accounting systems. This litany of tasks makes any PMS investment a weighty decision for hotels. This

research provides insight into hoteliers' investment plans for their property management systems in two key ways: a timeline for planned investments; and specifics into the type of functionality hotels are looking to add with their next PMS upgrade.

The industry is split nearly 50/50 with regard to PMS system investment plans: about half (49.4%) of respondents report no current investment plans (Figure 8). Of the half that plan to invest, the vast majority (nearly 40% of all hoteliers in our survey) will do so within two years. The remaining 11% do have investment plans in the works, but with a timeframe stretching more than two years.

Although property management sys-

tems are responsible for a long list of hotel functions, it's the "smart" capabilities that are driving investments for hotels. For the 50% of hoteliers that are planning to upgrade their PMS systems, the most sought-after features come in the form of Wizards that will provide easier navigation for hotel staff, and more opportunities for personalization to the guest. Currently, 4 out of 10 hoteliers report plans to add a reservations wizard to handle bookings, and the same number is seeking a guest-centric wizard to control the guest experience. These wizards have ranked high on hoteliers' priority lists for the past several years, as shown in the 2011 – 2013 comparison in Figure 9. The third most important PMS innovation in 2013 is a room management grid, which increased in importance over the past two years and is now a priority for 39.6% of hotels (compared to 31% in 2011).

This year's study reveals a drop in the number of hotels that plan to add automatic data back-up capabilities to their PMS systems (chosen by 46% of respondents in 2011, down to 30.8% in 2013). The likely cause for this drop is project completion. The hoteliers who intended to add automatic data backup in 2011 and 2012 have done so, and as such the capability is moving out of the realm of "innovation" and into the realm of PMS system table stakes.

Above-property hosting and direct billing capabilities will be included in the next round of PMS upgrades for 28.6% of hotels. Customized business letters rank lowest in planned innovations, and will be included in the next upgrade for just 17.6% of hotels.

## TOP PMS INTEGRATION CHALLENGES

For all their functionality and importance, hotels have long been challenged
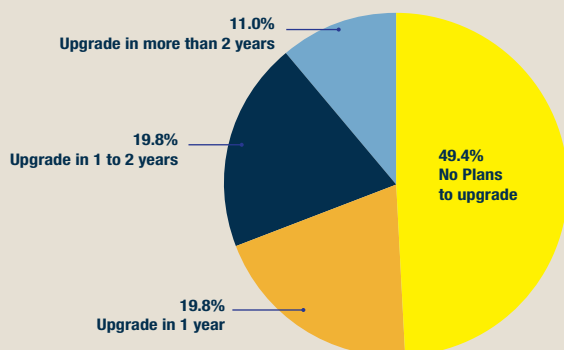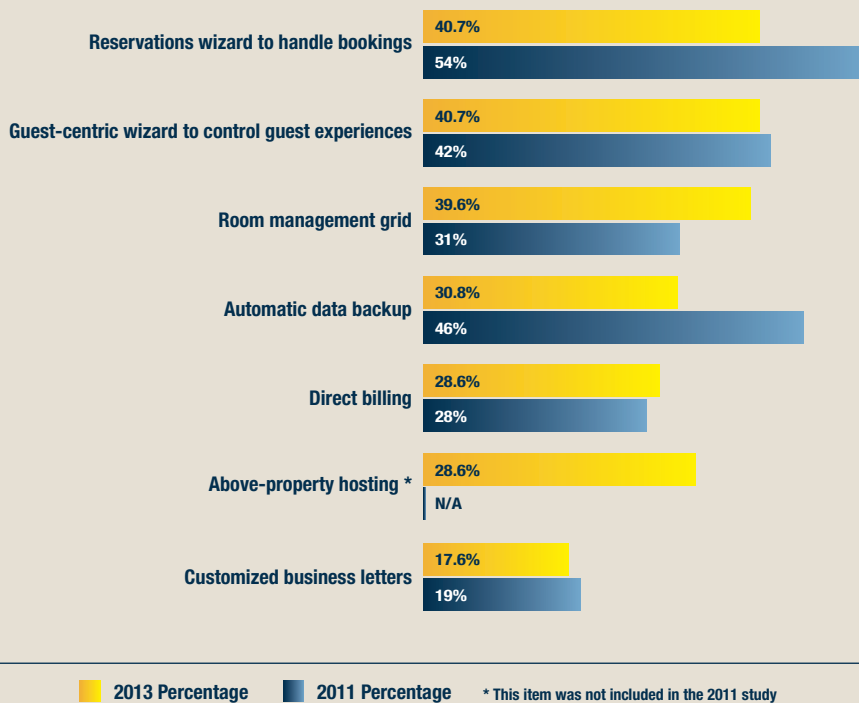
**Figure 8: Property Management System: Upgrade Timeline**

- 11.0% Upgrade in more than 2 years
- 19.8% Upgrade in 1 to 2 years
- 19.8% Upgrade in 1 year
- 49.4% No Plans to upgrade

## Figure 9: Top Property Management Platform Innovations

| Innovation | 2013 Percentage | 2011 Percentage |
|---|---|---|
| Reservations wizard to handle bookings | 40.7% | 54% |
| Guest-centric wizard to control guest experiences | 40.7% | 42% |
| Room management grid | 39.6% | 31% |
| Automatic data backup | 30.8% | 46% |
| Direct billing | 28.6% | 28% |
| Above-property hosting * | 28.6% | N/A |
| Customized business letters | 17.6% | 19% |

■ 2013 Percentage  ■ 2011 Percentage  * This item was not included in the 2011 study

## Figure 10: Top Property Management System Integration Challenges

| Challenge | 2013 Percentage | 2011 Percentage |
|---|---|---|
| To migrate data from one format to another | 53.8% | 53% |
| To choose the best integration method based on the needs of the project | 41.8% | 45% |
| To have the right team leader in place to support the integration process | 41.8% | 26% |
| To control & manage frustration during the integration process | 35.2% | 32% |
| To combine teams that have not previously worked together | 25.3% | 23% |

■ 2013 Percentage  ■ 2011 Percentage

to integrate their PMS systems into the overall infrastructure. Challenges range from resource-based (not having the right team leaders, for example) to software-based (as in, difficulties migrating data). For insight into which challenges are most pressing for hoteliers, respondents were asked to evaluate a list of factors, and select the ones they currently face in their organizations (Figure 10).

More than half of all hoteliers in our survey (53.8%) report that their number one challenge in PMS system integration is "migrating data from one format to another." This challenge has topped hoteliers' hit lists since 2011, and suggests that progress in resolving data migration issues has been slow at best.

The second most-common difficulty, selected by 41.8% of respondents, is to choose the best integration method based on the needs of the project. This factor has changed little since 2011 (when it was selected as a top challenge by 45% of hoteliers).
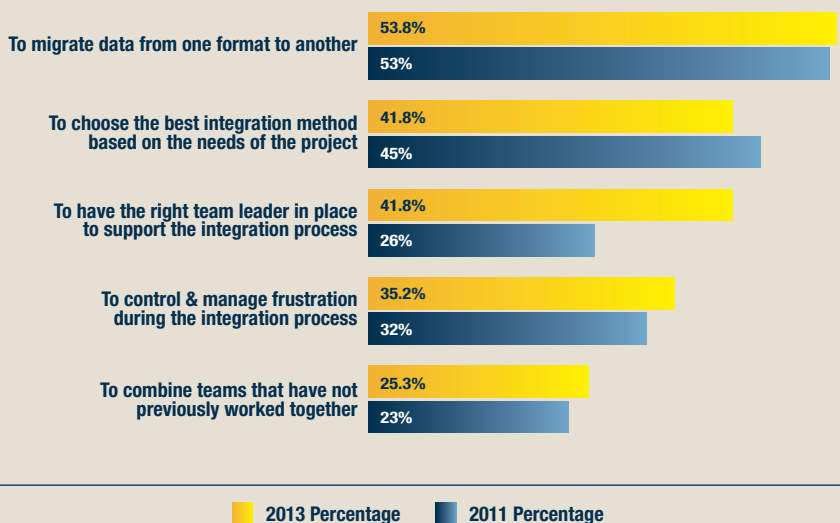
### THE TALENT FACTOR

A growing concern is revealed in the area of talent. In this year's survey, 42% of hotels find it challenging "to select the right team leader to support the integration process." This is a marked increase over 2011, when just 26% of survey respondents experienced this difficulty. This correlates with our finding that the pool of talented IT executives in the hotel industry is not keeping pace with need. As noted previously (in Chapter 1, Figure 4), an increasing number of hoteliers — now nearly a quarter — report that finding and retaining experienced talent is a top concern for their IT departments. Whether fueled by rapid innovation without continuing education and/or the syphoning of IT talent into industries other than lodging, this challenge is real and growing. Limited resources for in-house technology talent will continue to drive the need for simplified technology design on the part of the suppliers, and is furthermore a growing incentive for hotels to look at cloud and/or outsourced technology solutions.

Finally the PMS integration challenge that rated lowest (though still plaguing nearly a quarter of respondents) is difficulty in combining teams that have not previously worked together. Though lowest on the list, 25% of hoteliers face this difficulty, further

reinforcing the importance of skilled IT leadership within an organization.

## EXPANDING THE BACK OFFICE: MOBILE, CLOUD AND LABOR

Access to real-time business intelligence has transformative value to a GM's decision-making process. Back-office software vendors are already making their solutions available in mobile and cloud-based platforms to enable that access. Hotel demand for cloud applica-

tions is debuting strong in our survey. For example, when specifically asked if they support moving their company's revenue management system to a cloud-based Software as a Service (SaaS) model, 46.3% of hoteliers agreed or strongly agreed that it's the right move (Figure 11).

As for mobile technology, there's less momentum for employee-facing apps compared to consumer-facing apps. About 25% of hotel executives would

prefer to access their company's revenue management software via a mobile app. Indeed, efforts in mobile innovation have thus far been focused on consumer-facing application development. According to *HT's Customer Engagement Technology Study* (August 2012), 42.7% of hotels currently offer a mobile application for consumer use, and another 22.5% have plans to add one before mid-2013. Movement to employee-facing mobile apps will increase as more vendors optimize their software for mobile dashboards.

Labor management systems are most often relied upon as a cost analysis/cost management tool, and this is reflected in our survey (with 81% usage for this functionality). However, more sophisticated technologies are allowing hotels to monitor a variety of other variables for better insight, including the performance of staff members based on which shift they work, and industry benchmarks for wages.
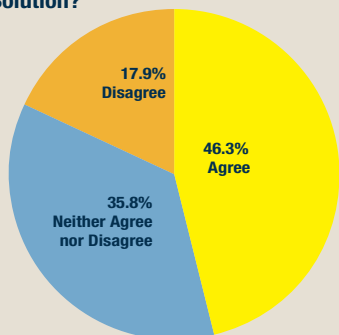
The positive news for the industry is that use of more sophisticated systems is on the rise. In fact, four of the six capabilities measured in this study have seen an increase in use over the past several years (Figure 12). The biggest change is the addition of "operational productivity analysis" capabilities, now being leveraged by nearly 44% of hotels (up 10% points from 2011).

Three-quarters of hotels use a labor management system for employee scheduling and for monitoring attendance. Wage monitoring, however, continues to see lower use rates, at 50% and in fact saw a 6% drop in use from 2011.

As employee-facing apps are increasingly made mobile and front-line workers are given access to mobile tools, hotels will have greater opportunities to measure worker productivity and output. The call to the vendor industry will be to develop labor management solutions that leverage open APIs for integration with PMS, reservations, sales/catering systems, etc. ●

**Figure 11:**
## Cloud or Mobile Revenue Management?

**Do you support moving your Revenue Management system to a cloud SaaS Solution?**



- 17.9% Disagree
- 46.3% Agree
- 35.8% Neither Agree nor Disagree

**Would you prefer to access your Revenue Management system from a mobile app?**



- 17.9% Disagree
- 23.9% Agree
- 52.2% Neither Agree nor Disagree

**Figure 12:**
## Labor Management Tools Currently in Use



| Tool | 2013 Percentage | 2011 Percentage |
|---|---|---|
| Labor cost analysis/labor cost management | 81.3% | 75% |
| Payroll management | 78.1% | 76% |
| Employee scheduling | 75% | 76% |
| Monitoring absenteeism/attendance | 75% | 61% |
| Wage monitoring | 50% | 56% |
| Operational productivity analysis | 43.8% | 34% |

■ 2013 Percentage  ■ 2011 Percentage

# Hotels Ready for Long-Overdue Payment Overhaul

Commitment to payment security is strong, but actual implementation exposes need for simple and effective solutions

The problem isn't budget related, it isn't about poor commitment from top management, and it's not being attributed to unknowledgeable IT staff. Rather, payment security challenges are significantly the result of an antiquated mag-stripe system. Hotel executives in this study overwhelmingly agree that card brands should take greater responsibility in payment security, and that merchants bear an unreasonable burden.

Indeed, PCI Compliance efforts received top priority from hoteliers in this study's IT Project Importance Scale (Chapter 1, Figure 5). U.S. merchants and the lodging industry are in for some relief in the coming 24 months, with major card brands announcing a commitment to completely overhaul payment technology and migrate to the chip-based cards. The change can't come soon enough for the hospitality industry, which, inclusive of both hotels and restaurants, is routinely the most compromised industry according to *Verizon's 2012 Data Breach Report.*

As U.S. merchants wait for a major overhaul of the payment system, they continue to evaluate technologies and best practices for secure environments. Our research covers two distinct areas of payment security: we surveyed hotels about their current use of a variety of payment security measures (some of which are required for PCI compliance), and we asked hotels to share their opinions on a variety of payment-related questions.

## CURRENT PAYMENT SECURITY PRACTICES

The results of our technologies-in-use survey (Figure 13) are somewhat surprising: about 75% of the hoteliers use end-to-end encryption for cardholder data, and an even smaller number (65%) reported that they regularly test systems and processes. While these
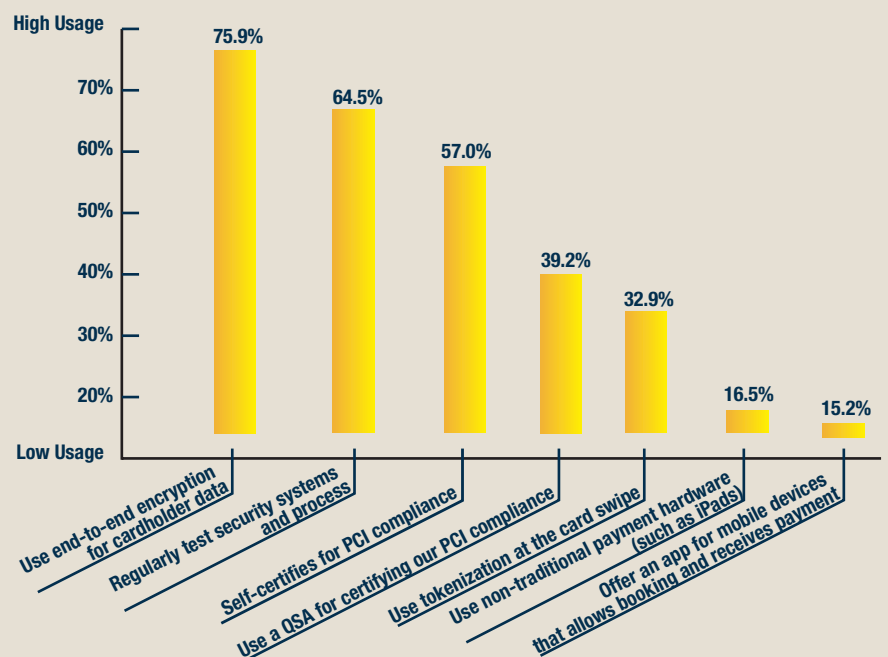
numbers represent a majority, they reveal that large portions of hotels are not using technology best-practices for payment security.

Only 33% of the respondents use tokenization as a method for processing and storing cardholder data. Tokenization is a relatively new offering in payment processing. According to the PCI Council, tokenization is a "process by which the primary account number

(PAN) is replaced with a surrogate value called a token. The security of an individual token relies predominantly on the infeasibility of determining the original PAN, knowing only the surrogate value. Depending on the particular implementation of a tokenization solution, tokens used within merchant systems and applications may not need the same level of security protection associated with the use of PAN. Storing tokens instead of PANs is one alternative that can help to reduce the amount of cardholder data in the environment, potentially reducing the merchant's effort to implement PCI DSS requirements." We predict that the percentage of hoteliers who use tokenization will increase in the coming years, as it is a great benefit for merchants to


Figure 13 — Payment Security Processes in Use

reduce the amount of effort required to comply with PCI DSS.

As for certifying compliance, the majority (57%) self-certify, and 39% use a QSA (Qualified Security Assessor). Interestingly, this means that about 4% of hotels in our survey did not report a process for certification, which could indicate that they are unsure or that they don't actively certify.

When it comes to using non-traditional payment hardware, hotels aren't in a hurry. Only 16% of the hoteliers reported the use of iPads as payment hardware. Similarly, only 15% offer an app for mobile devices that allows booking and receives payment. These numbers will likely increase with the migration to EMV technology.

## EMV: A MOVE LONG OVERDUE
The EMV specification, which stands for Europay, Mastercard, Visa, was first made available in 1996 and is currently the go-to method of payment for 76.4% of POS terminals installed globally. EMV chip cards contain embedded microprocessors that provide strong transaction security features and other application capabilities not possible with traditional magnetic

stripe cards. The United States is one of the last countries to migrate to the global EMV standard for payment cards. Over the past 18 months, all major card brands – Visa, Mastercard, Discover and American Express – have announced EMV migration plans for the U.S., and the new payment approach will use integrated circuit cards (IC cards or "chip cards") with signature verification.

To determine industry-wide perspectives on this and a variety of payment security initiatives and trends, hoteliers were asked to evaluate a series of statements and, on a scale of 1 to 5, weigh-in with their agreement levels (with a score of 1 representing strong disagreement, 2 representing disagreement, 3 representing general ambivalence, 4 representing agreement, and 5 representing strong agreement; Figure 14).

Hoteliers overwhelmingly agreed with the statement "card brands should take greater responsibility in ensuring payment technology is secure," with a score of 4.2 out of 5 on the agreement scale. They also agree that merchants have an unreasonable burden associated with protecting cardholder data (with a score of 3.83).

Awareness of and action plans for the EMV migration were not quite as high. The statement, "we are fully aware of changes necessary to implement EMV technology" received an agreement score of 3.25 (just slightly better than "neither agree nor disagree" on our scale). Interestingly enough, a larger number (with a 3.7 agreement score) are on board with the statement, "our organization plans to upgrade devices and procedures by the April 2015 EMV deadline for merchant compliance." The fact that a greater number of hoteliers proclaim compliance plans for EMV than general awareness of EMV is indicative of confusion and a general commitment to be ready, even though the action plans remain unclear. These results call for more education and leadership on the part of card brands and technology providers to help their merchants through the migration process. The Smart Card Alliance has established a website, *www.emv-connection.com*, that's fully dedicated to helping U.S. issuers, merchants, acquirers/processors, and consumers move through the migration process.

Overall support for payment security measures is high across the industry. Indeed, the statements that received the most disagreement in our survey were based around a lack of support in all forms: a lack of knowledgeable staff, a lack of necessary funding for compliance efforts, and a lack of commitment from top management. All three factors dropped to the bottom of the agreement scale, indicating that hotels are ready, willing and able to funnel resources at this critical issue. Their solution, they contend, now rests squarely in the hands of the card brands at pushing through a more secure method of payment. ●
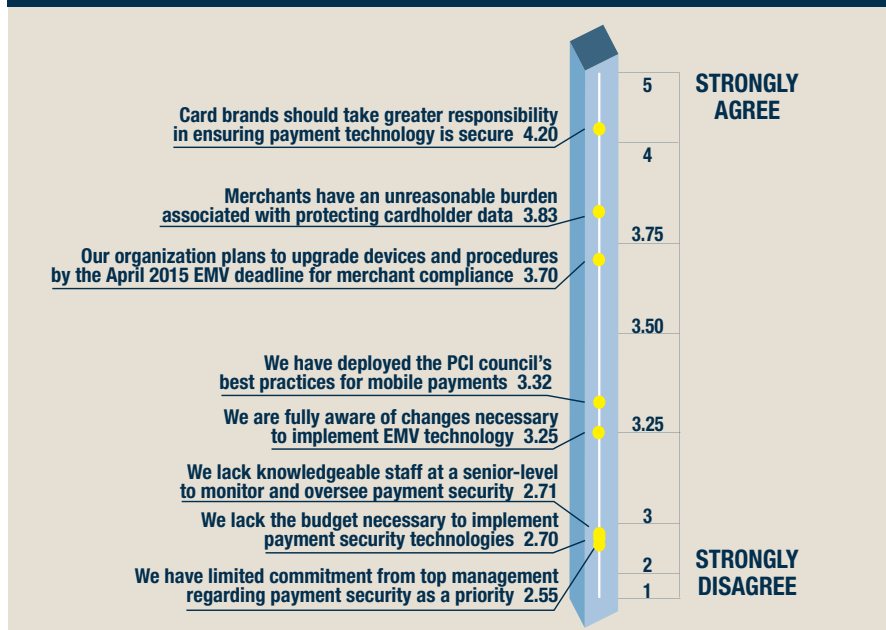
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*Verizon's 2012 Data Breach Investigations Report*, conducted by the Verizon RISK Team

**Figure 14:** **Payment Security Opinion Tracker**

- Card brands should take greater responsibility in ensuring payment technology is secure **4.20**
- Merchants have an unreasonable burden associated with protecting cardholder data **3.83**
- Our organization plans to upgrade devices and procedures by the April 2015 EMV deadline for merchant compliance **3.70**
- We have deployed the PCI council's best practices for mobile payments **3.32**
- We are fully aware of changes necessary to implement EMV technology **3.25**
- We lack knowledgeable staff at a senior-level to monitor and oversee payment security **2.71**
- We lack the budget necessary to implement payment security technologies **2.70**
- We have limited commitment from top management regarding payment security as a priority **2.55**

5 — STRONGLY AGREE
4
3.75
3.50
3.25
3 — 
2 — STRONGLY DISAGREE
1

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