

Perspective



The Connected Hospitality Enterprise

Jayesh Amdekar

Abstract

There is no industry that cannot leverage Information Technology to improve operational efficiencies, productivity and margins. The Hospitality Industry is no exception. IT and specialized IT services providers can help hotels to transform into Connected Hospitality Enterprises that deliver personalized guest experiences. This paper provides a holistic view of IT as an enabler of this transformation by focusing on four key business imperatives and six 'Ps'.

The Connected Hospitality Enterprise

The Hospitality Industry is witnessing rapid consolidation through multiple mergers and acquisitions. The industry is dynamic - influenced by changing demographics, travel patterns and guest needs. With growth in domestic and international travel, and increased industry competition, deliver of personalized guest experience is critical to attract and retain guests. This environment is driving the need for enterprise-wide transformation. To avoid commoditization of services, the hospitality industry players must transform themselves into the “Connected Hospitality Enterprise”.

To achieve this state, the industry needs to focus on four key areas (Figure 1):

- Connected Distribution Systems
- Connected & Interoperable Systems
- Connected In-room Technology
- Staying Connected to Guests



Figure 1- Connected Hospitality Enterprise

Connected distribution systems

A recent survey released by TIA¹ suggests that 8 in 10 travelers plan their trips online, of these, 80% book online. In coming years, while the growth rate in online travel planning slows down, the overall number of online buyers and transactions is likely to increase.

The entrance of players like Google® and Yahoo! Travel® into the travel space has added to the overall complexity of online travel distribution for hotels. Keeping distribution channels synchronized, and ensuring that consistent rates and availability are displayed across multiple channels are major challenges confronting the hospitality industry. This makes it necessary for hoteliers to continue to invest and keep electronic distribution and e-commerce platforms updated.

Increased room demand underscores the importance of revenue management. However, narrow focus on room yields, without due consideration to the lifetime value of guests can lead to commoditization of the hotel product. To avoid this, hospitality companies must connect distribution channels to customer information and ensure higher focus on profitable customers. This can be done even while incorporating customer values in yield decisions.

Another emerging trend is the online reservation of meeting spaces. Most companies and event organizers prefer to book online for simple, small meetings. The growing popularity of companies like StarCite Inc. demonstrates this trend. Customers expect faster and customized responses from properties. Hence, it is necessary that hotels incorporate and also connect catering operations into their overall electronic distribution strategy.

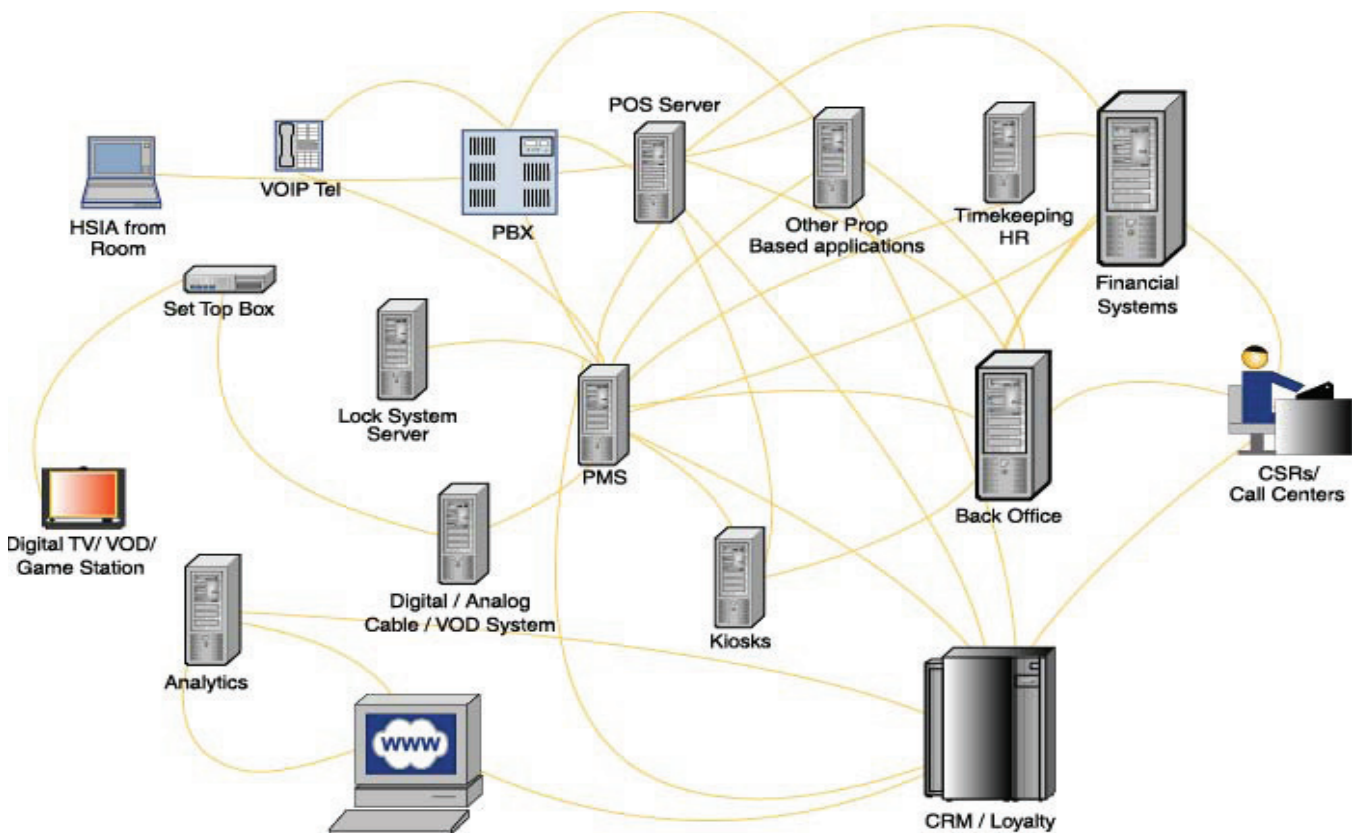


Figure 2 - Disconnected Hospitality Application Landscape

¹ <http://www.tia.org/pressmedia/pressrec.asp?Item=689>

Connectivity between customer information and electronic distribution channels allows hotels to customize offerings to guests based on their value to the business, as against merely selling rooms at the highest rates. While smaller properties often take the manual route, large companies have developed point-to-point interfaces between systems. Often, these interfaces are not standardized and need to be revamped when systems are upgraded or replaced. This results in sub-optimal integration between applications and expensive system maintenance. Hotels should, therefore, use emerging integration standards to establish true interplay of applications. This will minimize total cost of ownership and distribution costs, and maximize yields and customer satisfaction.

Connected and interoperable systems

To differentiate itself from competition, a hotel must provide its guests with consistent and seamless experience across all points of service. Typically, smaller hotels have over 50 different systems from multiple vendors. This results in duplication and dilution of guest and operational data across multiple systems, resulting in inconsistencies in operational indicators and guest experience.

Disconnected systems cause problems at two levels:

- First, hotels cannot ascertain the value of the guest across all points of service
- Second, information is often inadequate to take informed decisions in a timely manner

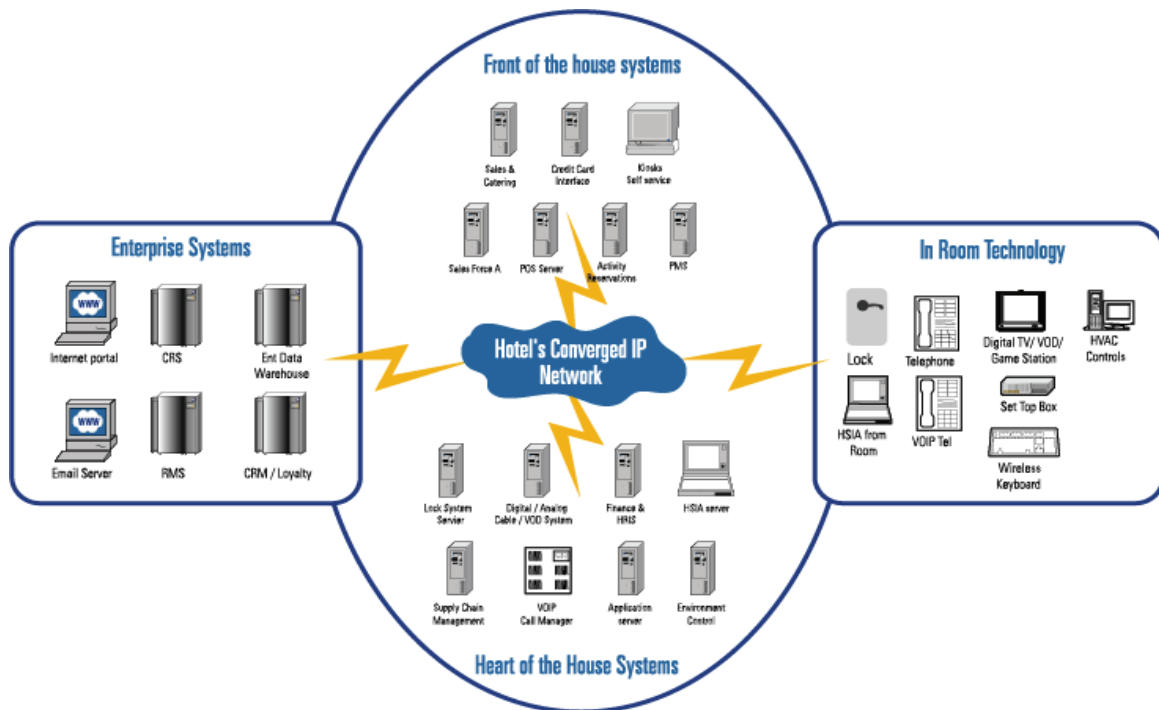


Figure 3 - Connected & Interoperable Systems

Therefore, hospitality CIOs must think beyond deployment of standardized best-of-breed applications. CIOs must think of how they can transform a disconnected IT landscape to connected and interoperable systems in a cost-effective manner.

To achieve true interoperability, hotels must start with the common elements across the systems and create one single source of truth for such elements, for example, guest information. When all the points of service in a hotel access the same guest master database it becomes easier for the hotel to track that guest's total spend. This enables hotels to gain 360° view of their customer and to determine the true value of the customer to the hotel.

Services-Oriented Architecture (SOA) allows reuse of common services and data elements while maintaining integrity of legacy applications. Therefore, SOA is being adopted in the hospitality industry. Using SOA hotels can also connect their applications with external partners to provide a holistic trip experience to guests. Such interoperability enables hotels to better utilize their investments in legacy applications and effectively leverage information that was previously compartmentalized in different applications.

Another challenge in interoperability is to convert data into actionable information and to make it available to the right people/ applications to drive better decision-making in a timely manner. Most hotel chains find it extremely difficult to roll-out their financial accounting seamlessly. Procurement and supply chain is another area where disconnected systems cause duplicity of efforts. Many hotel chains do not have the capability to accurately measure total purchases from a given vendor across different brands, locations, store keeping units (SKUs). This results in the inability to leverage economies of scale and obtain better prices or terms. More effort is spent in gathering data rather than analyzing and utilizing it for taking strategic decisions. Very often decisions are based on inaccurate or incomplete data.

Interoperability becomes more cost effective when all the applications in a hotel are on a converged network, based on Internet Protocol (IP). To transform to connected and interoperable systems hotels must invest in enabling infrastructure of converged networks. CIOs should consider partnering with independent software vendors (ISVs) to ensure that these best-of-breed applications use existing standards and open technologies and are able to integrate with other best-of-breed applications without custom development.

Interoperability becomes more cost effective when all the applications in a hotel are on a converged network, based on Internet Protocol (IP). To transform to connected and interoperable systems hotels must invest in enabling infrastructure of converged networks. CIOs should consider partnering with independent software vendors (ISVs) to ensure that these best-of-breed applications use existing standards and open technologies and are able to integrate with other best-of-breed applications without custom development.

Connected In-room devices and self service technology

In-room technology is becoming a key differentiator for hospitality companies. More guests are adopting technologies like high speed internet, digital entertainment devices and Voice over Internet Protocol (VoIP) in their day-to-day life. To provide a true 'home away from home' experience, the hospitality industry must aggressively upgrade its product offering by providing connectivity and access to popular devices and digital entertainment options for next-generation guests. As per AH&LA, over 67% of business travelers, more than half of them in the age group of 35 to 54, are likely to spend their time in the room.² These guests will demand that the quality of in-room entertainment matches the options available to them at their homes and offices.

In-room technology, particularly, in-room entertainment options, are undergoing a major change. Inventions like TiVo®, Digital Video Recorders (DVR) and video iPods® are changing the guest expectations about in-room entertainment. The new generation of guests – the 'echo boomers' or 'Generation Y' – often travel with their gadgets and expect hotels to provide the necessary connectivity for them to enjoy their own content³ rather than content provided by the hotel. In that sense, hotels are bound to witness erosion in their pay-per-view revenue, just the way they experienced massive erosion in telephone revenues with the advent of cellular phones.

Deploying these technologies requires huge capital investments from the lodging companies. However, by deploying point solutions or devices just for the sake of keeping up with the competition, hotels can only jeopardize their competitive situation. Hotels must look at these investments in a holistic manner and also invest in enabling technologies and network infrastructure. The objective of such investment should be to tap newer streams of revenue through the next generation of in-room technologies. Again, IP-based networks are emerging as a credible alternative to which the industry can migrate. Hotels can also leverage the thought leadership that forums like HTNG are driving in this area.

Today hotels have access to next generation in-room technology that can interface with hotel eco-systems and other in-room devices to deliver personalized guest experiences. For example, the Micro-Electrical Mechanical Systems (MEMS) can record the average temperature in a guest room or measure the levels of carbon monoxide (CO), and alert security of any problems. Such information can be leveraged to personalize the guest experience. For example, the front-desk agent can remotely set up room temperature to guests' preferences before they enter the room. Further, these technologies can make hotel operations efficient and cost-effective. Technologies like motion sensors can be interfaced with HVAC system to control air-conditioning when the guest leaves the room. Similarly, such systems can alert the maintenance department of leakages in plumbing to carry out maintenance and thereby ensure better guest satisfaction.

Selecting the right technology and integrating it with other eco-systems can help hotels to achieve the desired efficiencies and enhance guest satisfaction. Even as the industry moves towards adopting these technologies, its implementation, maintenance and upkeep may present

² AH&LA 2005 Lodging Industry Profile, http://www.ahla.com/products_info_center_lip.asp

³ HTNG White Paper Guest of the Future, June 2005 page 15

challenges to most hospitality companies. These challenges can be overcome by partnering with vendors who can provide end-to-end services.

Staying connected to guests

Staying connected to guests, means systematically tracking customer behavior and preferences and utilizing that knowledge to enhance guest satisfaction and system-wide revenues. In today's competitive environment this is very critical to sustained revenue growth and profitability. A Gartner Research note (2001) stated that U.S. enterprises spend over \$1.2 billion on customer loyalty programs that do not significantly increase profits⁴. The situation is much the same even today. Many hotel loyalty programs end up as discounts to guests. Recent studies show that loyalty programs by themselves do little to earn customer loyalty. On the contrary, the choice of hotel is driven by the ease in finding rooms, their rates and their fitment to personal requirements. Companies that are successful in their CRM initiatives strive to track customer behavior across all touch-points and utilize that information to attract customers through personalized offers.

Many hotels have comprehensive qualitative data - guests' likes and dislikes, birthdays, hobbies, spend patterns, stay patterns, spouse information, etc. Many hotels spend a lot of man-hours collecting data which eventually get locked into various silos of applications across the enterprise. The data is seldom made available at a point of service in a manner that can be leveraged to cross-sell or up-sell the guest their preferred services.

To remain connected to their guests, hotels must graduate to the next level of technology – connected systems, where such data is converted into actionable information at the point of service. Staying connected means utilizing such information to drive higher revenues and delighting guests. Some of the leading hospitality and gaming companies have developed closed-loop CRM programs that enable hotels/ casino chains to send their guests customized offers. But most of the programs fail miserably to market to the guests, while they are in-house, because their marketing systems are not geared to communicate real-time with point of service applications.

Consider a situation where Ms. Jones, vice president of a mid-size corporation, a big LPGA fan and spa enthusiast, makes an online reservation. Wouldn't it be nice if the reservations system could automatically show her available tickets for a LPGA tournament in town, or available spa appointments during her stay, which she can book at a click? Or, when she turns on her in-room TV the welcome screen displays LPGA games that are available on pay-per-view. Technology can enable such personalized offers, and such personalized offers have a better chance of materializing in an actual sale, resulting in additional revenue and faster ROI for the hotel and certainly, satisfied guests.

Staying connected to guests requires a well implemented customer relationship strategy that is built on a robust data warehouse, supported by appropriate business intelligence tools. It also requires robust technology that can communicate back with points of service in time to drive guest satisfaction and generate additional revenues by personalizing services. Sending personalized offers, providing personalized templates for online reservations, allowing easy access to view available loyalty points and its redemption, are just some of the ways in which hotels can stay connected to guests. These initiatives help build long-term relationships with guests across the umbrella of brands and locations and, in turn, enhance revenues. Some of the leading companies, with mature CRM practices, stay connected to their guests throughout the cycle. They are now offering real-time personalization during and after the guests' stay.

⁴ Gartner Research Note Customer Loyalty Programs: The Next Generation, 26 June 2001 Claudio Marcus

The concept of staying connected (Figure 4) is not limited to the services provided by the hotels. It may extend to services offered by partner companies and complementary services like local business centers, car rentals, airlines, etc. A leading hotel company offers the facility of printing boarding passes at the hotel checkout terminal - a simple facility that helps extend connection with guests.

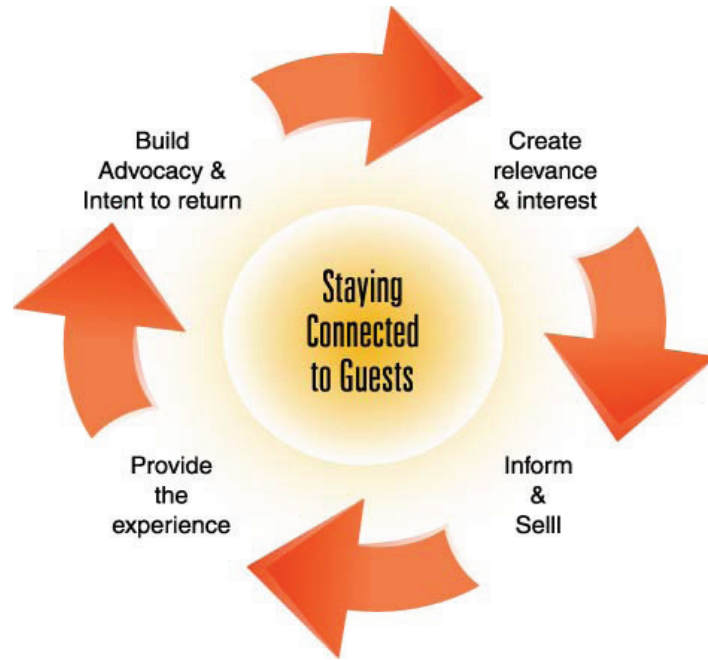


Figure 4 - Staying Connected to Guests

Journey towards Connected Hospitality Enterprise

Infosys' "Connected Hospitality Enterprise" enables hospitality companies leverage the power of next-generation IT to consistently deliver personalized guest experiences. Companies that transform fast can better respond to the demands of a changing environment and stay ahead of the competition. The key is to leverage current investments in legacy, best-of-breed applications and available data to deliver better guest experiences.

Through the efforts of Open Travel Alliance (OTA) and Hospitality Technology Next Generation (HTNG), the industry is arriving at a common set of standards to eliminate heterogeneity within existing systems. This would keep the cost of transformation at feasible levels for small players who cannot always afford to throw dollars and man-hours, while larger players can re-deploy their existing IT resources to develop the next generation of differentiating systems. Today, most hospitality companies do not have sophisticated in-house IT departments with the capacity to upgrade existing applications to adopt these standards. Small and mid-size companies lack the buying power to make vendors comply with standards and provide upgrades. The model utilized by industries like banking and retail, where operators have taken help from IT services vendors to carry out upgrades and maintenance of IT systems, has not been widely accepted by hospitality companies largely due to reliance on the ISVs to provide services around their applications. Therefore, the efforts of OTA and HTNG have made little progress so far.

Seek help from the experts

As the systems landscape becomes more complex, and as the lines between applications blur due to increased integration, hospitality companies need to start leveraging the services of specialist IT vendors who bring to the table proven execution capabilities in application support, system integration expertise and capability to develop and deploy applications using existing standards. Some vendors execute this work in a cost efficient way by leveraging the distributed development model and offshore development capabilities.

Leveraging the services of these specialist service providers will help operators in two ways. First, hotels can focus on their core functions by leveraging IT to deliver personalized guest experiences. Second, hotels can benefit from the proven processes and cost advantages that vendors bring through the use of skilled resources. Hotel industry ISVs can leverage these vendors to bring their products to market faster and at better price points than ever before. Utilization of these specialist vendors enables ISVs to be more responsive to operators' needs and will help hotel companies and ISVs alike to transform into Connected Hospitality Enterprises, in a cost-effective and predictable way.

Six 'P's for the transformation to a "Connected Hospitality Enterprise"

1. **Prioritize** – Using customer experience as the key decision criteria, determine the priorities for connecting applications and systems.
2. **Professional Help** – Seek help of professional IT services companies to re-architect the application landscape and jointly determine a road map for enterprise application integration initiatives.
3. **Platform** – Identify and make necessary investments in IT platforms and infrastructure that are capable of carrying the next generation of IT.
4. **Protocols** – Adopt emerging technology and industry standards and protocols for application integration.
5. **Partner** – Partner with ISVs to get existing legacy applications upgraded to meet emerging technology/ industry standards.
6. **Progressive deployment** – Transform the enterprise IT landscape through progressive enhancements of legacy applications and deployment of next generation IT rather than a 'big bang' approach.

Bottom Line

The benefits of connected enterprises are higher profitability, lower costs and satisfied guests. However, to achieve this, CIOs must take a holistic view of IT as an enabler of transformation and as a way of gaining market differentiation, and not just as a tool to fix problems in isolation. CIOs also need to embrace emerging hospitality industry-specific and other technology standards. It is imperative for the industry to adopt existing technology standards and partner with specialized IT services providers who can provide necessary professional support to help transform hotels into Connected Hospitality Enterprises. The objective of this transformation should be the delivery of personalized guest experience by leveraging existing ecosystems at reasonable costs.

About the Author

Jayesh Amdekar is a Principal in Hospitality and Gaming Practice at Infosys. He has over thirteen years of experience in technology-led business transformation in hospitality & gaming industries. He can be reached at Jayesh_amdekar@infosys.com

References

- www.dhla.org
- www.tia.org
- Whitepaper – "The Guest of the Future: In-Room Technology Preferences Today and Tomorrow" By Hotel Technology Next Generation (HTNG) June 2005; Prepared by the Center for Marketing Effectiveness (CeME),
- Whitepaper "Convergence: Hotel Technology for Today and Tomorrow" by Hotel Technology Next Generation (HTNG) In-Room Technology Workgroup, June 2005



For more information, contact askus@infosys.com

About Infosys

Many of the world's most successful organizations rely on Infosys to deliver measurable business value. Infosys provides business consulting, technology, engineering and outsourcing services to help clients in over 30 countries build tomorrow's enterprise.

For more information about Infosys (NASDAQ:INFY), visit www.infosys.com.