Emerging clouds in hotel technology
Spotlight on cloud-based PMS
Cloud-based technology has seen rapid uptake in recent years and Gartner predicts that in 2016 it will account for the bulk of new IT spend. Appetite for cloud is growing and even the more conservative forecasts show strong global uptake over the next 2-3 years.

Hospitality is one industry which is at a tipping point in terms of cloud adoption and in this paper we focus on one the most significant IT spend items for hotels – the property management system (PMS) – software which enables the automation of all front desk activities and acts as the ‘back bone’ of the hotel.

The cloud-PMS opportunity

The digital revolution has transformed the distribution and booking end of the hospitality industry with the inexorable rise of online travel agents and rapid evolution of consumer booking to online and mobile devices. Hotels themselves have been slower to embrace new technology, preferring to stick to their tried and trusted systems. But this is now changing.

Signs now are that hotels are taking the plunge into cloud with a new generation of cloud-based systems populating and disrupting the hotel technology landscape. With a raft of exciting new tech start ups helping to catalyse this transition and the legacy hotel technology giants migrating their offering, cloud-based hotel technology is now moving from early adopter to mainstream status, representing an exciting opportunity for both hotels and investors alike.

Positive underlying market drivers for cloud-based PMS

- Strong demand growth with hotel software spend forecast to grow at 7-8% over the next three years globally
- Continued professionalisation of hotels often driven by a younger generation of owners/managers together with new build and consolidation activity are all driving new technology adoption
- Benefits of easier updates, more flexible remote access and a simpler pricing model
- New generation of innovative technology players emerging with mobile optimised solutions

14% budget spent on PMS

$3.8 billion spend on hotel software in 2015

187,000 hotels worldwide and 17.5 million rooms

Pipeline of 1.3 million hotel rooms in 2015

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Hotel technology spend

With technology developments enabling improved customer experience and interaction as well as revenue optimisation and cost savings, it is inevitable that hotels – both large and small – are looking at how to make the most of new technology.

Hotel technology spend

The global hospitality IT market was estimated to be worth $29.7bn in 2015. Software accounts for 12% of hospitality IT spend and is forecast to grow at 7% pa from 2015-18, outstripping other segments.

IT spending in the hospitality industry is relatively low compared with industries such as financial services and telecoms. Nevertheless, the hospitality industry is increasingly making use of technology to drive operational efficiency and engage with customers (from booking process to check-out and engagement post-stay). A recent study showed that in 2015 on average 4.9% of hotel revenue was allocated to the IT budget (vs. 2.6% in 2014), with guest-facing mobile technology spending priority for hotels. Advances in technology have altered the relationship between hotels and guests:

- From the way guests research and book a stay altered the relationship between hotels and guests: the spending priority for hotels.
- Advances in technology have outstripped other segments.
- IT spending in the hospitality industry is relatively low compared with industries such as financial services and telecoms. Nevertheless, the hospitality industry is increasingly making use of technology to drive operational efficiency and engage with customers.
- A recent study showed that in 2015 on average 4.9% of hotel revenue was allocated to the IT budget (vs. 2.6% in 2014), with guest-facing mobile technology spending priority for hotels.

The challenge for hoteliers is the ongoing investment requirements, given the short lifespan of technology, the frequent need for upgrades and the continual evolution of consumer technology and guest expectations. In addition, hotels may not always derive value from technology investments if these are done only to keep up with competition rather than to align to the hotel’s strategic direction. For example, self-service technology which has been a feature of other industries like banking for many years is only now making an entrance into the hotel industry. However, selecting a room and checking-in prior to arrival or doing mobile check-in through a kiosk may not suit every guest's expectations of what constitutes personalised service experience and therefore has to be offered as an option rather than imposed as the norm.

Global hospitality technology spend by segment ($bn)

<table>
<thead>
<tr>
<th>Segment</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Centre</td>
<td>2.1</td>
<td>2.3</td>
<td>2.2</td>
<td>2.4</td>
<td>2.6</td>
<td>2.8</td>
<td>3.0</td>
</tr>
<tr>
<td>Software</td>
<td>3.3</td>
<td>3.5</td>
<td>3.6</td>
<td>3.7</td>
<td>3.8</td>
<td>3.9</td>
<td>4.0</td>
</tr>
<tr>
<td>Telecom</td>
<td>2.6</td>
<td>2.8</td>
<td>2.8</td>
<td>2.9</td>
<td>3.0</td>
<td>3.2</td>
<td>3.4</td>
</tr>
<tr>
<td>Services</td>
<td>5.6</td>
<td>5.8</td>
<td>5.9</td>
<td>6.1</td>
<td>6.3</td>
<td>6.5</td>
<td>6.7</td>
</tr>
<tr>
<td>IT Services</td>
<td>6.0</td>
<td>6.2</td>
<td>6.4</td>
<td>6.6</td>
<td>6.8</td>
<td>7.0</td>
<td>7.2</td>
</tr>
</tbody>
</table>

Technology spend

<table>
<thead>
<tr>
<th>Segment</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guestroom Technology</td>
<td>5%</td>
<td>6%</td>
<td>7%</td>
<td>8%</td>
<td>9%</td>
</tr>
<tr>
<td>Networking/Connectivity</td>
<td>11%</td>
<td>12%</td>
<td>13%</td>
<td>14%</td>
<td>15%</td>
</tr>
<tr>
<td>PMS</td>
<td>18%</td>
<td>19%</td>
<td>20%</td>
<td>21%</td>
<td>22%</td>
</tr>
<tr>
<td>Payment Security</td>
<td>3%</td>
<td>4%</td>
<td>5%</td>
<td>6%</td>
<td>7%</td>
</tr>
<tr>
<td>Point of Sale System</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Customer Relationship</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>Management</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>Revenue Management</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>Workforce Management</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
</tr>
</tbody>
</table>

Top tech priorities for hotels in 2015

<table>
<thead>
<tr>
<th>Feature</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer-facing mobile solutions</td>
<td>17%</td>
<td>18%</td>
<td>18%</td>
<td>18%</td>
<td>18%</td>
</tr>
<tr>
<td>Adding bandwith</td>
<td>15%</td>
<td>16%</td>
<td>16%</td>
<td>16%</td>
<td>16%</td>
</tr>
<tr>
<td>Preparing for change in payment technology</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
<td>14%</td>
</tr>
<tr>
<td>Securing data</td>
<td>13%</td>
<td>13%</td>
<td>13%</td>
<td>13%</td>
<td>13%</td>
</tr>
<tr>
<td>Migrating to the cloud</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
<td>9%</td>
</tr>
<tr>
<td>Developing a digital strategy</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
<td>8%</td>
</tr>
</tbody>
</table>

Property management software (PMS)

As hotel operations have become more complex, hotel software has been designed for all areas of hotel operations in order to automate operational processes and assist staff / management to gather business intelligence and analyse vital information in real-time.

PMS represents the back-bone of hotel operations and interfaces with a variety of other key systems from channel management and bookings to hardware such as telephony and key rooms. In the past, PMS was used to manage guest check-in and check-out and housekeeping services. However, now PMS covers the entire guest experience, including the booking process to capturing guest data for future interaction.

PMS in hospitality technology

- EPOS
- CRM
- Revenue/yield
- Central reservations
- Reporting and analytics
- Core PMS modules
- Guest management
- Front desk
- Housekeeping/maintenance
- Back office
- Leisure/events modules
- Food and beverage
- Conferences
- Spa
- Other (eg. gift, canvas, receipt)

ERP applications interfaces

- HR and Payroll
- Finance
- Workforce management
- Entertainment
- Utilities
- Infrastructure

Larger hotel groups with international operations may opt for an ERP solution, whereby a technology supplier offers a comprehensive end-to-end solution integrating front desk and back office functionality. Although the concept of an ERP in the hospitality industry is still relatively new, it offers numerous advantages in terms of seamless use of technology, more automation, greater visibility into hotel operations, optimised use of manpower, reduced revenue leakages and higher resultant profits.

Hoteliers are prioritising technology investments that can provide consumer facing mobile solutions and cloud adaptability. Consequently, PMS cloud solutions that enable mobility - for both customers and hotel staff - are in demand.
PMS uptake in hotels

The market for PMS is well developed in the more mature countries of western Europe and the US. We estimate that the current penetration across hotels is as high as 80-85% in the US and UK. Overall penetration is somewhat lower in the more fragmented hotel markets of Italy and Germany which have a high number of small independent hotels.

The cycle for replacement with on-premise systems, which still account for the majority of installed PMS, is every c. 5-7 years for the major hotel chains, but many independent hotels will hang on to their systems for as long as 10-15 years.

Key factors which will influence the uptake of PMS in a hotel include:

- Hotel size – this is the most significant determinant of whether hotel management software is used. Hotels with fewer than 20 rooms will be much less likely to have a PMS and may opt to manage their reservations manually with pen and paper or spreadsheets. By contrast, penetration will be close to 100% in the larger hotels (>100 rooms)

- Ownership – hotel chains are more likely to have a PMS installed across sites and franchise chains will also often stipulate use of PMS and have one or two preferred suppliers for PMS systems. Independent hotels which can often be family run establishments are less likely to have adopted this technology

- Star rating and facilities – PMS penetration is higher in the 3 star and above categories. The breadth of facilities (restaurant, spa, conference) which 4 and 5 star hotels have adopted this technology can often be family run establishments are less likely to have adopted this technology

- Star rating and facilities – PMS penetration is higher in the 3 star and above categories. The breadth of facilities (restaurant, spa, conference) which 4 and 5 star hotels have adopted this technology can also increases their need for management software and the efficiency benefits which technology can offer

- Occupancy – the occupancy rates of hotels will have an impact on whether a PMS is adopted – lower occupancy hotels (<30%) and seasonal hotels, for example will be less likely to have invested the capital in PMS

- Location – uptake of PMS varies by location and is higher in metropolitan areas as these tend to have a higher proportion of online bookings which correlates directly to the efficiency saving PMS can bring

The penetration of hotel management technology will continue to increase in the next 3-5 years driven by:

- Consolidation – consolidation of the hotel landscape is expected to continue. This will drive PMS uptake, given change in ownership and the increased demands of a multi-site operation

- Online-booking – the surge in bookings through online travel agents (OTAs) and the rise of the online booking channel has been a key driver of technology adoption. With 71% of consumers globally now preferring to book online, more hotels have been investing in channel managers (to optimise online booking efficiency through OTA and other channels), booking engines (to receive and manage bookings directly through hotel website) and central reservation systems (to consolidate and manage reservations across a portfolio of properties). Each of these systems will feed into and integrate with the PMS which is at the heart of the hotel's operations

Evolution of PMS: from on-premise to web-native

The most prevalent systems in place in hotels across Europe and North America are the traditional on-premise PMS, which are accessed via a desktop, with data stored in a locally based server.

Systems are evolving, however, and the past decade has seen the rise of a new generation of PMS with the introduction of agile, cloud-based models which have disrupted the established landscape. The leading hospitality technology providers, Oracle Hospitality, Infor, Protel have themselves been updating and redesigning their products to offer dynamic web-based delivery and cloud storage with subscription based pricing models.

Overview of different PMS models

On-premise

- The traditional solution for PMS, typically installed on hotel computer and accessed via desktop
- Application hosted and data stored on a server located on the hotel premise
- Software application designed for Microsoft Windows operating system
- Capital investment in hardware (computers, terminals, servers...) and upfront license fee for software (perpetual license). Updates are usually paid for
- Usually acquired with a contract for service and maintenance
- Systems have typically been developed over a long time and have high functionality

Hybrid cloud

- Legacy solutions which have been transitioned from on-premise (having been written for Windows OS eg in Java) and given web front-end for access via browser on computer, tablet and mobile
- Can be hosted locally or remotely from PMS providers’ server at data centre
- May still have certain elements on desktop
- Subscription based pricing model, typically calculated as a fee per room per month
- Initial set-up fee (with additional charge for interfaces & training) migration fee from on-premise
- Quicker to deploy than web-native as do not need to rewrite all of the code
- Greater depth of functionality than web-native as has all the functionality of the legacy system

Web-native cloud

- Designed purely as a web-based solution – optimised for tablet and mobile use
- Accessed via internet browser
- Can either be hosted via –
  - Private cloud – PMS providers’ servers at data centre
  - Public cloud (eg Microsoft Azure) – often referred to as “pure cloud” and has advantage of being more agile and open to multi-tenancy
- Designed specifically as web software and so mobile functionality is higher, typically easier to use and faster to launch updates
- Subscription based pricing – per room per month with an initial set-up fee. Updates typically included in package
- Easier to interface with other systems
- Recently developed and so solutions can lack the richness of functionality required by hotels with complex operations
- Needs internet connection to operate

PMS uptake

<table>
<thead>
<tr>
<th>Country</th>
<th>Estimated PMS penetration</th>
<th># Hotels</th>
</tr>
</thead>
<tbody>
<tr>
<td>US</td>
<td>85%</td>
<td>13,000</td>
</tr>
<tr>
<td>UK</td>
<td>85%</td>
<td>53,000</td>
</tr>
<tr>
<td>France</td>
<td>75%</td>
<td>18,300</td>
</tr>
<tr>
<td>Italy</td>
<td>75%</td>
<td>33,300</td>
</tr>
<tr>
<td>Spain</td>
<td>75%</td>
<td>19,400</td>
</tr>
<tr>
<td>Germany</td>
<td>65%</td>
<td>14,000</td>
</tr>
</tbody>
</table>
Emerging Clouds in Hotel Technology

Spotlight on cloud-based PMS

Emerging Clouds in Hotel Technology

Advantages of cloud from hotelier perspective

From a hotelier perspective, the cloud offers a more agile, flexible and cost-effective solution for PMS. Its benefits vary in significance depending on the hotel characteristics: the simplicity, remote access and affordability are key advantages for the small hotelier, whereas the ease of multi-site management, rapidity of deployment and scalability are a major advantage for larger hotel chains.

Advantages of cloud

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Remote access and mobile</td>
<td>Web-based solutions enable hoteliers to keep on top of bookings and other</td>
</tr>
<tr>
<td>optimisation</td>
<td>elements of hotel management any time, anywhere - a key advantage for</td>
</tr>
<tr>
<td></td>
<td>independent hoteliers who need no longer be tied to the front desk</td>
</tr>
<tr>
<td></td>
<td>The optimisation for mobile access ensures ease of access via smartphone or</td>
</tr>
<tr>
<td></td>
<td>tablet for hotel staff (waiting, housekeeping etc)</td>
</tr>
<tr>
<td>Speed and fluidity of</td>
<td>Software updates can be rapidly deployed online and usually do not incur</td>
</tr>
<tr>
<td>updates, integration and</td>
<td>additional fees</td>
</tr>
<tr>
<td>communication with third party</td>
<td>The communication with third party systems – OTA, GDS etc. – is enhanced</td>
</tr>
<tr>
<td>software</td>
<td>eg with room availability updated in real-time</td>
</tr>
<tr>
<td>Simpler and less expensive</td>
<td>Total cost of ownership for cloud-based PMS is generally lower and the</td>
</tr>
<tr>
<td>pricing</td>
<td>all-inclusive, subscription-based per room fee appeals to hotels</td>
</tr>
<tr>
<td></td>
<td>The switch from Capex to Opex for PMS is a major incentive for some</td>
</tr>
<tr>
<td></td>
<td>hoteliers</td>
</tr>
<tr>
<td>Intuitive, web-optimised</td>
<td>Solutions which have been entirely created or redesigned for the web tend</td>
</tr>
<tr>
<td>interface</td>
<td>to have simpler, more intuitive interfaces making them easier to use</td>
</tr>
<tr>
<td></td>
<td>The more complex on-premise systems can require weeks of training, whereas</td>
</tr>
<tr>
<td></td>
<td>the newer cloud-based systems can be taught in a matter of days through</td>
</tr>
<tr>
<td></td>
<td>in-person and/or online training modules</td>
</tr>
<tr>
<td>Ease of managing multi-site</td>
<td>The above-property, remote management enabled capabilities of cloud solutions</td>
</tr>
<tr>
<td>operation</td>
<td>facilitate control of multiple properties - enable visibility and management</td>
</tr>
<tr>
<td></td>
<td>of individual properties from one device at any time</td>
</tr>
<tr>
<td>Speed of deployment and</td>
<td>Cloud solutions can be rapidly deployed and scaled-up at a much lower cost</td>
</tr>
<tr>
<td>scalability</td>
<td>than traditional solutions – a key advantage for fast-expanding hotel chains</td>
</tr>
<tr>
<td></td>
<td>Public cloud solutions have added benefit of being geo-redundant</td>
</tr>
</tbody>
</table>

“The real demand for cloud comes when you have a concentration of hotels – or hotel owners which have several hotels and want to be able to control / access them all remotely”

“Typically other industries use cloud because it is easy to install and deploy, you get much more in terms of economies of scale. Therefore, the infrastructure is bigger and powerful than you would build in your own environment.”

Current penetration of cloud

Europe

Cloud penetration varies across Europe and the world, depending upon the relative rate of transition from the older generation of hoteliers to the next generation, and the efficacy and coverage of internet infrastructure.

Europe is characterised by a fragmented hotel landscape with many small, independent hotels, and patchiness of internet infrastructure in more remote areas.

The UK leads the way in cloud PMS adoption. The relatively robust internet infrastructure, openness to new technology and presence of a strong domestic cloud PMS provider have all contributed to this shift.

Spain offers considerable potential for cloud players with significant recent improvement in internet infrastructure and openness to technology making web-based PMS ripe for adoption. Cloud-based solutions are also gaining traction in France and Italy with strong uptake anticipated in the near term.

German hoteliers have been less receptive to PMS solutions despite having strong domestic cloud offerings and migration is expected to be slower due to the fragmentation of the hotel landscape (a high number of very small hotels) and conservative nature of the hotelier base. Austria and Switzerland have also been much slower to adopt.

US

The US plays host to a high number of pure-cloud players, many of which are targeted at the small hotel bracket and these companies have been gathering impetus with their low cost and ease of use a strong attraction. Uptake has been slow amongst the hotel chains which dominate the hotel landscape and overall penetration has therefore been limited. There are signs that cloud adoption is now at a tipping point, however, and will accelerate over the next 2-3 years. Once more of the larger chains embrace the cloud, the balance will shift dramatically.

Asia Pacific

The flourishing tourism industry with a younger hotel infrastructure and high number of new hotel openings in many of the Asia-Pacific countries such as Thailand, Malaysia and Indonesia make these markets fertile ground for cloud-PMS adoption. Openness to technology is high and a younger generation of entrepreneurial hoteliers are receptive to the benefits cloud brings. For many of the European and US-based cloud PMS providers, Asian expansion is a key short term priority.

Cloud as a proportion of installed PMS systems % estimate

<table>
<thead>
<tr>
<th>Country</th>
<th>Cloud PMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>UK</td>
<td>32%</td>
</tr>
<tr>
<td>US</td>
<td>30%</td>
</tr>
<tr>
<td>Spain</td>
<td>20%</td>
</tr>
<tr>
<td>France</td>
<td>15%</td>
</tr>
<tr>
<td>Italy</td>
<td>10%</td>
</tr>
<tr>
<td>Germany</td>
<td>6%</td>
</tr>
</tbody>
</table>

The US and UK lead the way with cloud adoption, whereas the rest of Europe and Asia-Pacific countries lag behind. The UK is the leading cloud PMS market, followed by the US. Spain, France, Italy and Germany are also significant cloud PMS markets, with cloud adoption levels ranging from 15% to 20%. Asia-Pacific countries, such as Thailand, Malaysia and Indonesia, are also fertile ground for cloud PMS, with cloud adoption levels ranging from 10% to 15%.

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Spa...
Competitive landscape

The global PMS technology supplier market is very fragmented and with the advent of cloud many start ups have entered the market in recent years. In addition, GDS, channel managers and booking engines are entering the PMS market, making the landscape even more crowded.

Traditional PMS players and their target customers

The global PMS industry is very fragmented. A PMS supplier count on Capterra (a software comparison website) reveals 246 suppliers, of which 50% offer web-native solutions and an additional 14% offering both web-native and on-premise PMS.

Number of PMS suppliers

The supplier landscape can be segmented into:

- Global players such as Oracle Hospitality (Micros) and Infor
- Regional players such as Protel, Itesso, PAR Springer Miller
- National “champions” such as Guestline (UK), Quatrough/Vega and Medialog (France), GP Dati (Italy) and Tesipro (Spain)
- A long tail of niche players (mainly cloud start-ups)

PMS suppliers usually market their solutions to both chains and independent hotels with many players having developed specific PMS solutions for large group vs small/limited service hotels. However, they tend to target and gain more traction in some hotel segments rather than across the board.

Future competitive landscape

In the battle to offer a complete platform which is fully centred around the guest experience, global distribution system (GDS) players, channel managers and booking engines have recently entered the PMS market, usually through acquisition. Given their scale and distribution power these new entrants can pose serious challenges to traditional PMS players at both ends of the spectrum.

Examples of GDS providers that have entered the market include Amadeus (acquisition of Itesso in 2015) and Sabre (acquisition of SoftHotel in 2011). Their one-stop-shop offering is most appropriate for large hotels and targeted at winning chains.

Channel managers and online booking engines are increasingly acquiring or developing products with some limited PMS functionality eg Little Hotelier by Siteminder, typically targeted at the less than 20 room market.

Supplier overview

Functionality

All the major players have comparable functionality in their PMS offering, with little to provide significant differentiation, aside from the intuitiveness of the user interface, the ability to facilitate mobile/tablet usage by both guests and staff, and the richness of connectivity with in-house and third party systems.

Longer term, most players believe PMS will be slowly commoditised, given the limited differentiation in product functionality, as a result they are investing in developing more comprehensive hotel management systems as well an on-going product enhancements.

Supplier hospitality product overview

<table>
<thead>
<tr>
<th>Company</th>
<th>Booking Core PMS</th>
<th>Leisure/ events</th>
<th>Advanced PMS</th>
<th>ERP modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oracle Hospitality</td>
<td>P</td>
<td>P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infor</td>
<td>P</td>
<td>P</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protel</td>
<td>P</td>
<td>P</td>
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Note: P = Partners; A lot of PMS providers state that they have their own channel manager when they actually repackage a third party’s as their own. It is not always clear from the websites if this is the case.

Market positioning of key PMS players

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<tr>
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<th>In house</th>
<th>Oracle</th>
<th>Protel</th>
<th>Itesso</th>
<th>Infor</th>
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<th>Other (mainly national and local players)</th>
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Source: Grant Thornton interviews

Often done manually
## Supplier overview

### Supplier hospitality product overview continued

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<th>SaaS</th>
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<th>Core PMS</th>
<th>Leisure/ events</th>
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Note: P = Partners; A lot of PMS providers state that they have their own channel manager when they actually repackage a third party’s as their own. It is not always clear from the websites if this is the case.
Hotel landscape

- Independent hotels make up 66% of all hotels
- New hotel openings*: 119
- Average hotel size: 46 rooms
- Average size of Independent hotel is 24 rooms, and average size of chain hotel is 89 rooms

Current PMS penetration

- The current penetration of PMS is c. 90%
  - “Penetration of hotels with over 10 rooms must be well into the 90’s as it is very difficult to manage multiple channels and inventories without a PMS system. Even people like Best Western and other consortiums now mandate that their hotels use a PMS system” (PMS Provider)

Adoption of cloud-based PMS

- Our primary research bottom-up assessment suggests that 3,905 hotels are using cloud PMS, which is 32% of the hotels market
- Cloud adoption expected to grow in the next 5 years with increasing hotels’ awareness of its benefits
  - “There is higher uptake with smaller hotels than larger ones currently” (PMS Provider)
  - “We are seeing a major shift to those looking at cloud in the independent hotel sector – they think that if it works for the big guys then it’s all right for them” (PMS Provider)
  - “Sales in the UK currently - pure cloud 5%, hosted 60-65%, on premise 33% – in three years declining sales of windows based system – big spike in cloud / steep curve upwards” (PMS Provider)
  - However… “More hotels are moving to cloud, but a lot have server based system which they will keep using until it stops working” (PMS Provider)

Competitive environment

- Large international hotel chains and resorts targeted by Oracle Hospitality, PAR Springer Miller and Itesso or use in-house PMS system
- 30-150 room hotels – generally independents and small chains - targeted by Infor, Sabre, Protel, Itesso, Hotelogix, Guestline and Opera Lite
- Local and region focused players also do well – Clock, Hotel Perfect in South West, and Ihotelligence in Ireland
- Small hotels (< 30 rooms) - targeted by new entrants Littlehoteller, Evivo, Avondata, Hetras and Welcome Anywhere

The British hotel market

Total hotels = 13.1k

- >200 rooms: 3%
- 101-200 rooms: 9%
- 51-100 rooms: 15%
- 26-50 rooms: 19%
- 11-25 rooms: 30%
- <10 rooms: 24%

*2017 forecast
Source: Grant Thornton interviews, Lodging Econometrics, STR

The French hotel market

Total hotels = 18.3k

- >200 rooms: 4%
- 101-200 rooms: 55%
- 25-100 rooms: 27%
- 11-20 rooms: 14%
- <10 rooms: 9%

*2017 forecast
Source: Grant Thornton Lodging Econometrics, INSEE, PKF hotel consulting, Horwath HTL, Tophotelprojects

Adoption of cloud-based PMS

- The current penetration of cloud and cloud-hybrid PMS is estimated at c. 10-15%
  - “For the independent hotels, cloud penetration is not more than 15%” (PMS Provider)
- Hybrid cloud solutions have gained more traction than pure cloud as hotels prefer back-up of server and there are more hybrid versions available on the market
  - “Clients like to own their license. With the pure cloud – it is all 100% rental essentially and you don’t actually own anything. If you are talking about “pseudo Cloud” – such as VPN – where the client owns license and has online safeguard, there is going to be exponential growth. In five years’ time, everyone will want to have a ‘pseudo cloud’ solution” (PMS Provider)
- Shift to cloud should accelerate in coming years – cloud-PMS expected to account for 20-25% of PMS systems in 3 years’ time.
  - “Out of the PMS players active in France there are 15% pure web / cloud, probably 50% who do both on-premise and cloud and then 35% who do just on-premise” (PMS Provider)

Competitive environment

- Oracle, Protel and Itesso focus on larger hotels
- Along with Infor, French national players target the 20-100 room hotels and have high awareness – Quatuhore (Vega), SequoiaSoft/Cegid, Mediatalog, Topsys and Fiducial
- Pure cloud players also targeting this segment – Misterbooking, Conservus, ThaisSoft
- The micro segment is targeted by more basic cloud offerings from players which include Evivo and Familyhotel

Source: Grant Thornton interviews, Lodging Econometrics, STR, INSEE, PKF hotel consulting, Horwath HTL, Tophotelprojects
The German hotel market

**Hotel landscape**
- Independents make up 89% of hotels
- New hotel openings: 554 hotels with 77,142 rooms
- Average hotel size: 28 rooms

**Current PMS penetration**
- The current penetration of PMS is c. 60-70%
  - Highest in the >100 rooms bracket, close to 100%
  - It is much lower in the <20 room bracket, with higher uptake in the medium sized hotels
- “Penetration of PMS overall is lower in Germany - 60-70%, there are still a lot of small/independent hotels using pen and paper” (PMS Provider)
- “Around 5 years ago, only 50% of small and medium hotels (<70 rooms) used a PMS system, however, this figure is now around 70-75%” (PMS Provider)

**Adoption of cloud-based PMS**
- The current penetration of cloud (web native PMS) is estimated at less than 10%
  - “Perhaps up to 10% of hotels are currently using cloud, but it could be slightly lower” (PMS Provider)
  - Hybrid cloud solutions have gained some traction as players targeting larger hotels - Oracle and Protel, have developed a hosted solution and moving chain hotels to it
  - Shift to cloud is not expected to accelerate at the same rate as in other EU countries in the short to medium term, although some smaller players expect a shift in the next replacement cycle
    - “Expect Germany will switch to cloud slower than the rest of Western Europe... Hotel owners like their data being on site” (PMS Provider)
    - “Germany is less advanced due to market structure (large share of <20 room hotels) and attitude to cloud... the transition to cloud may be slower” (PMS Provider)
    - “Adoption of cloud is going to change significantly during the next PMS replacement cycle” (PMS Provider)
    - “We are definitely slower in Germany vs UK in cloud adoption, but things are changing... hoteliers who 2-3 years ago were telling us they will never move to cloud are now more open and interested in switching” (PMS Provider)
  - “Acceptance of cloud is changing. Everyone is talking about cloud now” (PMS Provider)

**Competitive environment**
- Oracle targets larger hotels and chains
- Protel also targets some larger hotels, but focuses on the mid-tier (c. 100 rooms)
- Infors targets chains, larger and mid-tier hotels
- Local German players target the mid-market – Protel, Gube, Hetras (target mid-size chains with up to 130+ rooms)
- Protel (with Protel Air) and Hetras also target the 20-30 room hotels. Cloud players targeting the micro segment (<10 rooms) include Adelpha and Ermitus
- Some hotels may use PMS functionality provided by their distribution channel

Source: Grant Thornton interviews, Lodging Econometrics, STR, Eurostat, PKF hotel consulting, Horwath HTL, Tophotelprojects

The Italian hotel market

**Hotel landscape**
- Independents make up 96% of hotels and 87% of rooms
- New hotel openings: 81 hotels with 10,301 rooms
- Average hotel size: 33 rooms

**Current PMS penetration**
- The current penetration of PMS is c. 70-75%
- PMS uptake is higher in urban areas, especially in major tourist destinations – Rome, Venice, Milan, and Florence
- Highest in the >100 rooms bracket, close to 100%
- Much lower in the <25 room bracket
- “There are more than 33,000 hotels in Italy and about 70% use a PMS of some sort because they understand the benefits of process automation, whilst the remaining 30%, primarily small businesses, will be manually managed” (PMS Provider)
- “PMS penetration will grow to 80% over the next 3 years” (PMS Provider)

**Adoption of cloud-based PMS**
- The current penetration of cloud and hybrid-cloud PMS is estimated at c. 10% and expected to grow to 15-20% over the next 3 years – most providers offer cloud, and most PMS replacements are for cloud
- “Cloud is relatively new in Italy as it has really developed only in the past 3-5 years. There is a positive outlook as small establishments are looking to cloud-based as a relatively cheap and agile PMS offering” (PMS Provider)
- Hybrid cloud solutions have gained more traction than pure cloud as smaller (<100 rooms) hotels favour local backup servers
- “In Italy, it is still very common for a hotel to have its PMS installed on a local server. As far as our company is concerned, we do have some clients using pure cloud, but it’s just a fraction of our customer base” (PMS Provider)

**Competitive environment**
- Oracle targets larger and high-end (4/5*) hotels and chains, as do Protel
- Local Italian players target the mid-market – GP Dati (Scrigno), Ericsoft (Hotel 4o), Gestione Albergo (Leonardo Hotel), HQ Soft (Horizon Accommodation), and Passepartout (Welcome)
- NICE, Informatica and Sistelle* target the <25 rooms size band

Source: Grant Thornton interviews, Lodging Econometrics, STR, Eurostat, PKF hotel consulting, Horwath HTL, Tophotelprojects
The Spanish hotel market

Hotel landscape
- Independents make up 80% of hotels
- New hotel openings: 82 hotels with 15,717 rooms
- Average hotel size: 47 rooms

Current PMS penetration
- The current penetration of PMS is c. 70%
  - Highest in the >100 rooms brackets, close to 100%
  - Considerably lower in the <25 room bracket
- “In my opinion, as soon as you start having more than 15-20 rooms, you need a PMS. However, nearly half of small hotels still employ manual solutions so I would estimate PMS penetration to be around 70%” (PMS Provider)

Uptake of PMS higher in urban areas and notorious holiday destinations in the Balearic and Canary Islands

Adoption of cloud-based PMS
- PMS penetration is expected to grow to 85% over next 3 years, driven by cloud adoption, growth in online bookings, and increasing uptake by <25 rooms establishments
- “Even the smallest hotels are more and more looking for a PMS solution, although basic. They are starting to realise they need it to better compete in such a large market” (PMS Provider)
- Current penetration of cloud and hybrid-cloud PMS is estimated at c. 20% and expected to grow to over 25% over the next 3 years - most PMS replacements are for cloud, prominent hotel chains have manifested their intention to switch to cloud, and hybrid solutions are more popular than pure cloud
- “On premise is certainly more common than cloud at the moment, although there is an evident on-going shift to the latter. That’s why we are developing our own cloud solution. We want to leverage this shift and capture new clients, as well as value, through it” (PMS Provider)
- “Big chains like Meliá and NH Hoteles have said they will switch to cloud solutions. There are very few valid pure cloud solutions in the market though” (PMS Provider)

Competitive environment
- Oracle targets larger and high-end (4/5*) hotels and chains, as do Protel and Tesipro Solutions
- Spanish national players target the mid-market – Tesipro Solutions (Ulyses), WinHotel Solutions (WinHotel), Prestige Software (Prestige)
- Also German competitor Gubse AG (Sihot)
- Very fragmented, with regionally focussed players, eg Antalis Software and Informatica Santuari.Deversor in the Balearic Islands (Mallorca)

The US hotel market

Hotel landscape
- Independents make up 66% of all hotels
- New hotel openings: 1,347 hotels with 286,882 rooms
- Average hotel size: 94 rooms
- Non-branded hotels have a higher presence in luxury and economy class accommodation

Current PMS penetration
- The current penetration of PMS is c. 75-85%
  - Highest in the 50+ rooms bracket, where it is greater than 90%
  - “Any hotel of greater than 10 rooms is very likely to use a PMS solution. Certainly in the 3* upwards market it is close to 100%” (PMS Provider)

Adoption of cloud-based PMS
- The current penetration of web-native PMS is estimated at c. 10-15% with another c. 15-20% of hybrid solutions
  - “Hotels with <150 rooms have been most receptive to cloud technology…The vast majority of new sales to this sector are cloud and current penetration is c. 15%” (PMS Provider)
- PMS providers frequently segment the market by star rating rather than room-size
  - “Our on-premise solution is aimed at 3.5-4 star properties – where the benefits are creating good reports, better group functionality, and guest history/profiling. For cloud we target 2-3 star properties as it is a simpler solution” (PMS Provider)
  - Shift to cloud should accelerate in coming years - web-native PMS expected to account for 30-50% of PMS systems in 5 years’ time
  - “The big growth in the cloud PMS market will be the limited service hotels that do not have the horizontal complexity of spas, F&B, events, golf” (PMS Provider)
  - “There is a significant growing independent and rising boutique hotel market who are interested in functionality such as removing front-desk, checking in on the way to the room” (PMS Provider)

Competitive environment
- Oracle targets 4* and 5* market. Also offers Oracle Express and Oracle Lite to target lower-end customers
- Infor’s cloud PMS can be expanded to a full ERP solution. Targeting large 4-5 star hotels. It’s key strength is richness of functionality, particularly around revenue management
- PAR Springer Miller has full featured on-premise solution with deep integration to target large hotels and pure cloud solution to target the <150 rooms market

Source: Grant Thornton interviews, Lodging Econometrics, STR, Eurostat, PKF hotel consulting, Horwath HTL, Tophotelprojects
Asia Pacific
- Has largest regional pipeline in the world, at 4,284 projects/871,480 rooms (Q1 2015)
- 51% of the region’s hotel inventory is branded
- Thailand, Malaysia and Indonesia are significant markets (established tourist destinations, high number of hotels, significant number of new openings)
- Myanmar, Cambodia, Vietnam and Laos are earlier stage markets

Geographic distribution by number of properties (chain properties)

Middle East
- The UAE and Saudi Arabia in particular have continued to attract increasing numbers of tourists, and increasing hotel stock
- There are 276 hotels and almost 78,000 new rooms under construction across the region
- Saudi Arabia reports the most rooms under construction with 17,135 rooms, according to SR global.
- Four other countries had more than 2,500 rooms under construction: United Arab Emirates (16,627), Qatar (5,633), Jordan (3,231) and Egypt (3,966)
- Luxury and upscale hotel segment will continue to dominate the hotel landscape, but Dubai has announced plans to accelerate the development of more affordable 3 and 4* hotels

Other regions

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Source: Grant Thornton interviews, hotelnewsnow, Lodging Econometrics
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