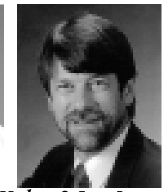
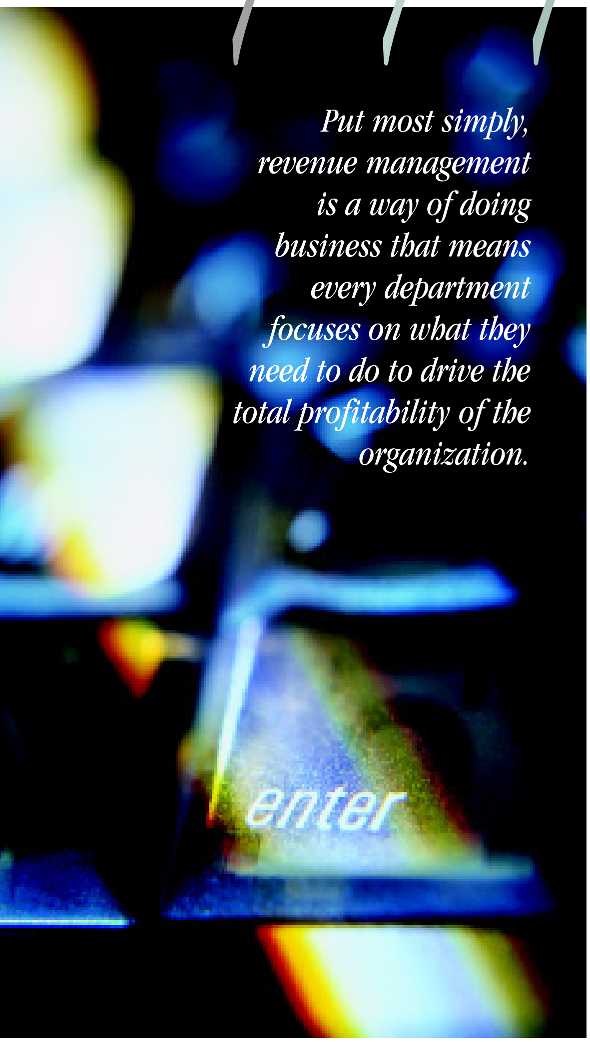
Revenue Management

It Really Should Be Called Profit Management

by Mark Haley & Jon Inge



Put most simply, revenue management is a way of doing business that means every department focuses on what they need to do to drive the total profitability of the organization.

Every hotel manager, operator and owner has a fundamental obligation to optimize the long-term profitability of the assets he or she oversees. Fulfilling this obligation means increasing rates during busy periods and dropping them during slower times to maintain occupancy or it means incurring expenses like a room renovation or investment in technology. Given the uptick in demand of the past year, one area of investment more and more hotel companies are evaluating is revenue management (RM). Hoteliers believe that they can drive increased profitability using RM tools and techniques.

Revenue management is more complex than ever and potentially more rewarding, too. The entire organization must pull together to make revenue management successful, but the right RM implementation can positively drive results, creating not only revenues but also profits.

Most practitioners accept that implementing revenue management in a hotel can increase revenues 3 percent to 6 percent. Many have won much greater increases. Affinia Hospitality saw revenues increase 17 percent over the prior year in the first month after implementing manual RM processes in a new central reservations office. The Millennium Bostonian Hotel paid back all of their start-up costs and more in the first month after converting from manual RM processes to an ASP-based service. Harrah's Entertainment credited its RM system (installed in 2001) with increasing room and gaming revenues 13 percent for the year in 2002.

Focus on that for a moment.

Implementing revenue management can increase revenues 3 percent to 6 percent, or more.

Then consider that most of that incremental revenue flows through to operating profit. So, you might think you can increase profitability merely by installing a computer system. Well, not exactly: Revenue management is not a computer system or a set of arcane statistical algorithms. It isn't even a department in your hotel. Put most simply, revenue management is a way of doing business that means every department focuses on what they need to do to drive the total profitability of the organization. Computer systems drive a much more disciplined and consistent implementation of RM, but the organization must embrace the cultural shifts required to benefit from revenue management. It's the culture, not the computer.

How Did All This Start?

Let's examine the history of RM and some of the basic concepts. Many people correctly observe that there is nothing new about revenue management. Anyone selling a perishable product knows that you need to flex your pricing in accordance with demand, lead time, competitors and a host of other factors. Hotel rooms, airplane seats, advertising time, fresh produce and winter clothing are all subject to revenue management tactics.

Revenue management as a formal discipline has its origins in the domestic American airline industry of the 1970s. Established, regulated airlines were threatened by unregulated charter competitors. American Airlines (AA), led by the legendary Bob Crandall, sought to cut the charters off at the pass. AA did so successfully with advance purchase restrictions on deeply discounted fares. Thus was born yield management (YM), the precursor to today's revenue management.

AA and other airlines refined and extended their YM capabilities during the early years of deregulation, ultimately giving them the ability to price every seat on every flight for maximum value, selling low cost seats to price-sensitive travelers (usually the leisure segment) and high-cost seats to time-sensitive travelers (usually on business). The impact and benefit of these capabilities became transparent to all observers by the end of 1985, when AA reported 48 percent profit growth on 14.5 percent revenue growth, while low-cost competitor People's Express was hemorrhaging customers and cash. These financial results and the overwhelming competitive advantage attracted a great deal of attention from many industries.

Cruise lines, car rental agencies and hotel companies started to evaluate the benefits of adopting YM as a business strategy. Early adopters in the hotel space included Marriott International, Holiday Inns Worldwide (now InterContinental Hotels Group), Hilton Hotels Corporation and ITT Sheraton. Organizations with centralized information systems and management structures adopted centralized systems. More decentralized organizations sought property-based systems.

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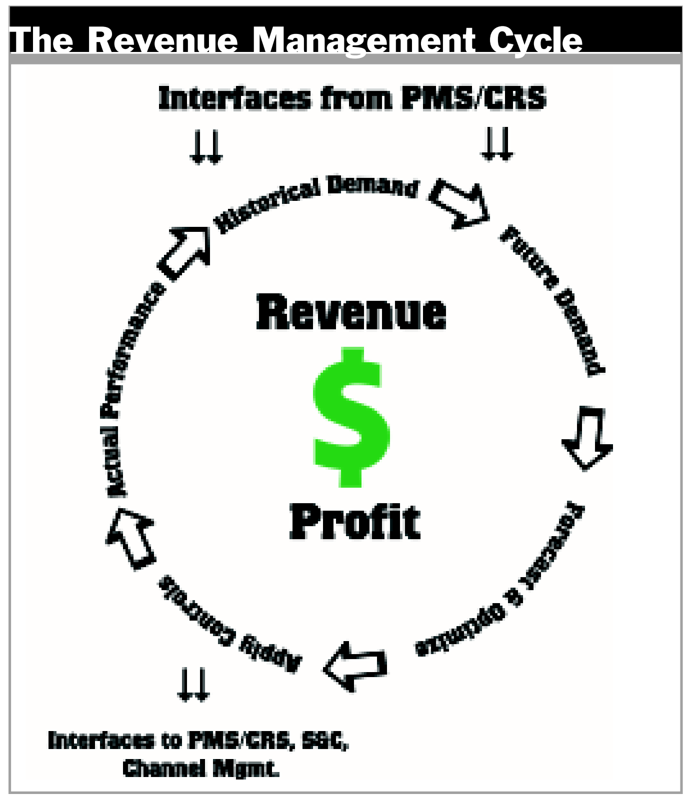
Sample Calendar View of an RMS. This screen is where the revenue manager typically first goes in the system. Note flags for high or low occupancy, special events and alerts. These flags make the Calendar View exception-driven, so the revenue manager goes straight to the arrival dates flagged as opportunities to increase revenue. Screen shot courtesy of IDeaS, Inc.



What Does RM Mean?

As yield management matured into revenue management, the standard definition of the art evolved: Revenue management is the practice of selling the right product (room, seat and banana) for the right price (rate and fare) at the right time to the right customer. In the era of compound distribution channels and merchant model outlets, we can also add via the right channel. Different channels demand different prices and yielding strategies, and guests have come to expect different prices by channel because the product itself is subtly different on each. A good example of differentiation by service could be a low-priced merchant model room sale that excludes frequency program points or upgrade benefits.

Drilling down on that definition a little bit, let's see what it takes to execute against it. The first building block is an accurate record of demand for past arrival dates with arrival date, departure date, booking date, rate and market segment, including booking channel, captured for every reservation. The system then calculates the day of week (DOW) for the arrival and departure dates and length of stay (LOS). Ideally, you will start with just over a year's worth of history, but that often is not practical.

The next element is data about known demand for future arrival dates, again by segment. The revenue management system (RMS) extracts this data from the PMS or CRS daily (or more often) on an on-going basis. The historical data, in combination with the known demand for future arrival dates, is then used to forecast demand by segment for all future arrival dates within a defined window. This forecast is usually sensitive to DOW factors and seasonal and secular demand shifts.

The system then optimizes the available rate and stay pattern controls against the forecasted demand and makes recommendations as to what controls to apply on what arrival dates to generate the most total revenue. Finally, the system captures actual performance (again via extracts from PMS or CRS) on the arrival date and, in some cases, modifies the forecasting and optimization algorithms for no shows or walk-ins and the impact of the controls actually imposed. This element closes the feedback loop and makes the system heuristic, able to learn from its experience over time.

Some of today's systems optimize ancillary revenues as well as room revenue. In this scenario management provides an estimated profit margin for each ancillary revenue stream (casino play, lift tickets and food and beverage sales) as well as rooms margin. The system then generates recommendations that optimize profit rather than revenue. For example, Intrawest Resorts' group RM module may recommend accepting a group with a ski lift ticket commitment at a lower room rate than would be sold to transients with a smaller lift ticket revenue forecast. The same logic applies to optimizing room revenue by cost of distribution channel.

Most RMSs provide a choice of merely offering up recommendations or automatically triggering status and inventory controls in the PMS or CRS. A recommendation-driven system requires more time, expertise and attention from the hotel's revenue manager to enter the recommendation into the PMS, CRS or other channel. A command-driven system automates the input, but naturally requires a more robust interface to the PMS or CRS.

There are also hybrid solutions that allow hotels to establish parameters defining the recommendations that can be implemented automatically vs. those that need to be reviewed before implementation. In these systems all, some or no recommendations can be deployed automatically depending on the client's needs.

Some PMS or CRS products offer automated yielding tools that may appear to support RM functions. These features allow the hotel to define business rules sensitive to realized demand that trigger status controls when "X" number of rooms are booked for a given arrival date. While these triggers offer value and discipline in managing inventory, they are reactive rather than proactive, responding only to pre-set triggers and not identifying changes in booking pace. We would label these features as rate management, and argue that they do not represent revenue management because they lack the crucial forecasting and revenue optimization algorithms.

Likewise, a number of business intelligence

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(BI) tools provide tremendous analytical support to the revenue management function. *Decisions*, from Datavision Technologies (http://datavisiontech.com/index.html), extracts a wealth of PMS data on past and future performance and presents it in an accessible and interactive manner facilitating decision-making, but not necessarily calculating forecasts and optimized controls. Affinia Hospitality feeds data from their internally developed RM tools, CRM system and other data streams into a BI cube for analysis, decision support and strategic planning in revenue management as well as throughout the enterprise.

Revenue Management 101

Let's review some of the fundamental concepts underlying revenue management.

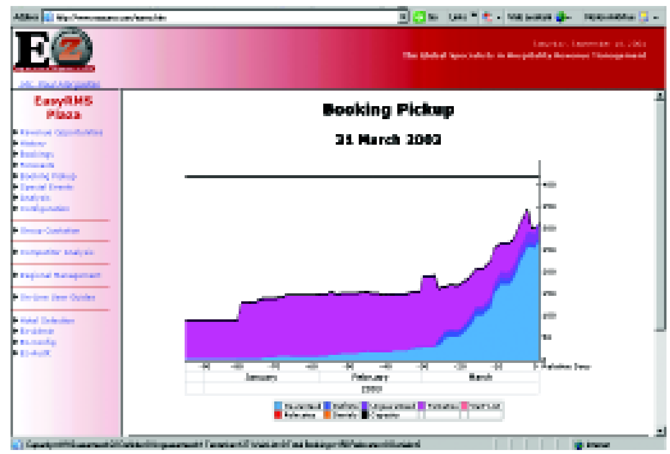
Rate vs. Occupancy vs. RevPAR - In hotel school we were taught to look at average daily rate and occupancy rate. One tells us how much we got for each room and the other how many of our available rooms we sold. Both are useful, but both only tell part of the story. A hotel company looking at its business from a revenue management perspective is more interested in RevPAR, or revenue per available room. RevPAR elegantly expresses both variables in a single number.

The RM-enabled hotel company establishes incentive compensation based on RevPAR rather than rate or occupancy, allowing for effective comparison of performance across properties and time periods. This dissuades staff from increasing occupancy solely by selling rooms at heavily discounted rates or selling very few rooms at high rates.

Unconstrained vs. Constrained Demand – Unconstrained demand is the RM term for the total demand for rooms on a given arrival date if you could in fact provide rooms for all of that demand. Constrained demand means the total demand you can serve, subject to the number of available rooms.

Sometimes the concept is applied when a limit on one resource reduces the revenue potential of another resource. For example, a lack of guestrooms can constrain the revenue potential of the casino floor at Harrah's. Harrah's Director of Revenue Management Steve Pinchuk said, "We calculate total RevPAR as (room revenue + gaming revenue)/rooms available and our Rainmaker RMS optimizes on that basis."

Displacement Cost – Displacement cost refers to the revenue potential lost, or displaced, to the enterprise incurred by accepting one piece of business over a competing opportunity. When a hotel accepts a group, it may have to refuse some volume of non-group business as a result. The revenue from that non-group business is therefore displaced, but the question is whether the accepted revenue



Sample Booking Pace graph. Most RM systems present a number of ways to look at Booking Pace. This graph shows both definite (blue) and tentative (purple) bookings over the 90 days prior to arrival in a 420-room hotel (horizontal black line). Note the sharp drop-off in tentative rooms at about Day -5, indicating the hotel reduced group blocks. Screen shot courtesy of EasyRMS

is greater than the displaced revenue. When it isn't the net displacement is negative. If the Sheraton Boston Hotel & Towers accepts a low-rated "leaf-peeper" bus tour for the October foliage season, it risks a net negative displacement cost due to not having rooms available for higher-rated corporate group or transient business.

Spoilage – This is exactly what it sounds like: inventory that goes unsold when there is unsatisfied, constrained demand in the market. Reasons for spoilage include a poor forecast that leads the revenue manager to hold too many rooms for late sale at a high rate but the demand never materializes, bad weather occurs or a group block cancels at the last minute.

Booking Pace – Booking pace is the number of rooms reserved for an arrival date (day 0) as of each preceding booking date (day minus 30, day minus 60). Typically represented graphically, booking date on the X-axis and number of rooms booked as of the date on the Y-axis. Revenue managers must intimately understand their booking pace by day of the week.

Data Extract – Reliably extracting data about past demand, future demand and actual performance from the hotel's PMS or CRS is often the most problematic aspect of an RMS implementation. A key point in selecting an RMS is the stability and reliability of the data extract process. It's critical that the systems work well together.

Controls – Revenue management uses controls to fit forecasted, unconstrained demand into available rooms to optimize total revenue. Price is a key control. Others speak to behavioral "fences" governing stay pattern, including Saturday night stayovers, minimum length of stay and so on. Let's look at a few examples.

Rate Tiers – Remember when the term rack rate meant something? Today, RM-enabled hotels are more likely to have multiple tiers of rates that are applied to any given arrival date according to forecasted, unconstrained demand and how far out the booking date is. Sometimes expressed as "A Rates, B Rates, …" or "BAR 1, BAR 2, ….") where BAR means best available rate.

Minimum Length of Stay (MLOS) – MLOS represents one of the key controls available to the hotel revenue manager. Applied in the PMS and CRS, MLOS increases the total revenue from rooms available for brief peaks by selling them only to guests willing to stay on shoulder nights around the peak. For example, the gracious and historic White Elephant Inn on Nantucket Island routinely applies a three-night MLOS restriction on every weekend in the summer. If you want a Friday/Saturday night stay, you need to stay

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Revenue Management 101

There are two equivalent ways to calculate RevPAR:

$$\frac{\text{Total Room Revenue}}{\text{Total Available Rooms}} = \text{RevPAR}$$

$$\text{ADR x Occupancy Percentage} = \text{RevPAR}$$

Thursday or Sunday as well. However, in April you are welcome to come for only one night on any day of the week. MLOS controls have the singular advantage of being easy to explain to the guest, an attribute not all RM controls share.

No Arrivals/No Departures – Often used inside an MLOS restriction, a no arrivals control disallows reservations from arriving on the specified date(s), even if they exceed the MLOS. Conversely, no departures inhibits departures. The result is to minimize a peak or valley during the period and spread more revenue over more days.

Stay-Throughs Allowed – Perhaps more of an exception than a control itself, stay-throughs will allow any reservation of more than "X" nights to be booked despite the other controls that are in force, including a stop sale.

Where Is RM Going?

Today, revenue management is an active and vibrant market with numerous system vendors and consulting shops vying for any hotel's business and promising endless profits raining from mountains of new revenue. There are more vendors offering systems than ever before and they all report increased demand for their products. These vendors believe the market opportunity before them is immense.

A survey of RMS vendor executives asking them to estimate the current market penetration of automated RMSs received responses ranging from 6 percent to 11 percent penetration, converging on 10 percent. Tom Walker of The Rainmaker Group said, "Thousands of hotels representing millions of rooms stand to increase revenues and profits by embracing revenue management as a way of life." Walker's colleagues and competitors agree. John Romeo, co-founder of Trend FX Solutions, Inc., said, "ASP-based systems open up the rest of the market for automated revenue management solutions."

Application service provider (ASP) systems allow the hotel to skip buying hardware and software and instead rent the right to use it on a monthly subscription basis. Moving from property-based systems to ASP-based systems is one of the major trends in the RM industry today. ASP-products reduce the cost of entry to the point that virtually any hotel can afford the start-up fees and monthly subscription fees. IDeaS Revenue Optimization CEO Ed Booth said, "Given the business conditions affecting the hospitality industry after Sept. 11, we took advantage of that time to completely re-tool, revise and re-code our intellectual property to operate on an ASP platform. Today our clients are executing large-scale rapid deployments with great efficiencies in cost, time and resources."

Going along with ASP platforms as a business model (rent vs. own), the same technology supports large-scale, centralized RM implementations by brands. In system architectures where all inventory resides in the CRS, a centralized RM system offers the notable benefit of a single interface between the CRS and RMS, allowing very effective maintenance of the RMS interface. It also allows brands to add significant value to the relationship. Andy Oman, director of revenue management for Carlson Hotels Worldwide, said, "We support owned, managed and franchised properties on our centralized TopLine™ PROPHET system. All of the hotels benefit from the integration with our Curtis-C CRS and our ability to help them move from a purely tactical view of revenue management to a more strategic posture. The structure will ultimately include competitive set information and forward rate setting to increase the property's share of the market."

Another trend driving larger and faster deployments is the ability for some systems to provide a multiple-property view of a market. This allows an area manager to control rates and controls for the entire market, not only a single hotel. Delfo Melli of Optims cites using cluster optimization levers to drive the ability to cross-sell and up-sell among properties revenue managed as a group. These capabilities benefit a group of hotels in several ways:

- They increase revenues for the market by yielding multiple properties in concert
- Selected segments can be steered to properties with more availability
- The hotels share the cost of a dedicated

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A Day in the Life of a Revenue Manager

Christopher Bates is the regional director of revenue management for Millennium Hotels in the Americas. Hospitality Upgrade *wanted to know what revenue managers do all day. We asked Bates: he laughed, took a deep breath and started talking—fast.*

"Every morning starts with a review of the nightly reports – the pick-up reports for the previous day, the revised forecast through month end, and so on – to see what changes have occurred, in which market segments and for which dates. We also look at any flags the revenue management system has come up with for us to review," said Bates.

These changes are then reported to the other department managers at the morning's operations meeting, where they discuss actions to cover any specific issues. "And there's always something!" said Bates. "Then we go back to make the various rate/room availability changes we need in the different distribution channels – the PMS reservations module, the CRS, GDSs, merchant model extranets and so on – and update the forecasts once again.

"It sounds obvious, but it's essential to make sure you do have availability where and when you need it, and that never stops for the rest of the day. You have to check today's figures to see if you want to put any last-minute availability out on the merchant models, make sure VIP arrivals have the right room blocked, review guest requests to make sure you haven't overbooked specific room types you'll need later, monitor extranet allocations and pick ups, check call conversion rates, keep an eye on the reasons for declines and denials to understand the actual demand," said Bates.

Also most revenue managers are either reservations managers or have reservations managers reporting to them. "So there is all the daily activity in the reservations department to manage as well – general booking issues, processing no-shows correctly once you've ensured that they really are no-shows and haven't just been entered into the system under a different name, handling travel agency commission queries—it never stops.

"Twice a week we have a specific revenue management meeting with the GM, controller and director of sales and marketing," said Bates. "Here we review current status and forecasts, look at specific business opportunities, restrictions and rates by market segment, and any exceptional circumstances that will influence previous forecasts. Then it's back to the systems to input the various adjustments."

Working the old way with fixed allocations for different channels had the advantage that you would get a message when a channel's block was used up, but with most hotels on free sale it's way too easy to oversell the property at discounted rates. "Automated systems and interfaces make a very significant difference," said Bates. "All your main channels now look at the same availability and restrictions. But you do have to understand what the systems do before you can start manipulating their results."

revenue manager, thus receiving a higher level of productivity

Everyone is aware of the proliferation of new distribution channels. In addition to baseline PMS/CRS/GDS channels, we now have the hotel Web site, the brand Web site and countless third-party online channels. This proliferation impacts the RM process in two key ways:

1. Optimization routines must consider the cost of each distribution channel in calculating what controls will yield the most revenue
2. Implementation of recommendations across more channels takes more time and effort

Channel management complexity is a core part of any hotel's RM strategy, whether or not a revenue management system is involved. Kathryn Lange of Maxim Revenue Management Solutions said, "This increased complexity poses many challenges to revenue managers, including the need to optimize net profit for each particular channel, as well as the time-consuming task of updating the controls across channels. An RMS maximizes net profit by channel and automatically updates controls to be applied to each channel, thus maximizing profit while at the same time minimizing the revenue manager's workload."

Most of today's systems have some capability to value groups. The central questions include: ***How much transient revenue might be displaced and at what rate? What rate should we offer the group? What happens to total revenue if we can entice the group to shift to different dates?***

Answering these questions depends upon strong long-range forecasting algorithms in the RMS and the capacity to calculate margins on ancillary revenues. A significant trend in the RMS space today is to extend the reach of the RMS into sales and catering (S&C) systems. Integration of RMS and S&C systems allows sales managers to value groups without opening the RMS and re-inputting the data. Peter Johnson is the general manager of MICROS Systems' TopLine PROPHET unit. Johnson said, "Our clients have found sales and catering interfaces to be a popular labor-saving tool that brings the value of the RMS to every desktop in the sales office."

What Are the Challenges?

Implementing revenue management is no simple task. Some obstacles are technical, such as the reliability of PMS data extracts. Other obstacles are cultural and organizational. Let's examine some of these challenges.

The question of where to place control of the RM function organizationally often generates emotion and conflict, both within the property and within the enterprise. Many properties historically placed inventory controls in the rooms organization, while others put it into the sales and marketing food chain. Changing the reporting lines in any direction often causes conflicts on the executive committee. The historic New Yorker Hotel, with 1,013 rooms in mid-town Manhattan, eliminated this issue by moving the reservations office reporting line out of sales and into the revenue manager, who now reports directly to the general manager.

At the enterprise level the opportunity to centralize controls offers numerous benefits we have described, including: yielding the market and higher level of staffing for example. However, many organizations see great risk and organizational conflict in taking the control of revenue generation out of the property. Many hotel companies opt for a blended approach: Omni Hotels' OmniCHARM (centralized hotel automated revenue management) is a completely centralized operation from a technology perspective, based on Rainmaker architecture. Brad Anderson, corpo-

Harrah's Entertainment has a centralized RMS with decentralized control of rates and status.

Photo courtesy of Harrah's Entertainment.

rate director of revenue management for Omni, said, "Omni employs directors of revenue management at 40 hotels who report to their directors of sales and marketing. Our corporate RM staff of three supports these individuals in their use of RM strategies and technology."

Once the organizational issues get sorted out, the hotel company confronts implementation challenges. Obtaining adequate historical data on demand represents a significant technical challenge. Property management systems are not built to store booking pace demand detail, so sometimes initial databases are built from manually maintained spreadsheets. We know this to be a painful process. Most RMS vendors would like to have a full year of history to generate accurate forecasts. But they can begin the effort with 90 days to 180 days of booking history if required, noting that forecasts generated early in implementation are less reliable than forecasts based on more history.

The hotel must carefully examine rate structures when implementing RM. Static rack rates that perhaps vary only seasonally generally get replaced with flexible tiers of rates that vary on any given day. This dynamic approach to pricing requires a dynamic mindset in the reservations office, with everyone trained to always look for rates in the system and not on a chart on the wall. This is an important cultural change.

The next shift lands squarely on the revenue manager and everyone up the reporting line: How much trust do you place in the recommendations? At what point does the revenue manager say the system is wrong and he will keep my discounts off because he knows more than the computer does?

The fact is sometimes an RMS will generate a recommendation that seems at odds with the real world. Chris Bates, regional director of revenue management for Millennium Hotels & Resorts, said, "The system recommendations are only as accurate as the data that goes into it. Millennium's position is that a trained revenue manager working in concert with the system generates more revenue increase than the system alone or the human alone."

Omni's Anderson said, "Omni's CHARM system allows the revenue manager to adjust the assumptions the system uses to forecast unconstrained demand. We use such adjustments to depress forecasted demand due to events like the SARS outbreak or a new competitor opening, or to increase the forecast because the major competitor closes for renovations. In either case, Omni's experience is that the management team comes to accept the system recommendations and use them as the productivity and profit tools they are."

Other property-level conflicts arise when the RMS says "don't take the tour bus business." We guarantee you that the sales person whose job is selling to tour and travel accounts will have a problem with that.

As we noted at the beginning, revenue management is a way of doing business rather than a computer system or a department. Any given hotel organization is at a different point on their revenue management journey. Organizations should look at the penetration of the RM ethos in their company and identify a strategy for extending it.

A hotel with static pricing models needs to look at setting rates dynamically and carefully tracking booking pace. A hotel with established manual RM processes should investigate automation. Key considerations will include PMS or CRS interface (data extract and applying controls), S&C or channel management interfaces, availability as an ASP and optimization of ancillary revenues by margin.

A hotel company with automated revenue management in place needs to look at continuous training and how to drive RM strategies into other parts of the organization and over a longer period of time.

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Revenue Management, with Benefits

Hotel companies invest in RM processes and technology in order to improve revenues and profits. Having said that, we have learned over time that these investments often bring other unexpected benefits with them. We spoke with colleagues David Sjolander, vice president of hotel information systems for Carlson Hotels Worldwide, and Brad Anderson, corporate director of revenue management for Omni Hotels & Resorts, to explore what their organizations have found as buried treasure in the revenue management field. Here are some of the key fringe benefits of embracing revenue management they identified to us:

PEOPLE

- **Reduced turnover among revenue managers** (establishing a clearer career path keeps high performers with the company)
- **Improved presentation and persuasion skills among revenue managers** (by running weekly RM meetings, they develop skills and comfort managing an agenda and selling recommendations)
- **Elevated sense of teamwork among management team** (by focusing the entire organization on revenue and profit, more cohesion develops among the hotel management team)

PROCESS

- **Forecasting improves significantly, but takes much less time to do** (better forecasting means better staffing and scheduling; Better staffing means better guest service at lower payroll costs.)
- **Overbooking performance improves** (much of the pain of overbooking goes away and hotels are more willing to push toward a sellout knowing the data is on their side. The guest experience improves.)
- **See changes in the marketplace much faster** (The system red flags problems and opportunities, making it easy to find the cause of the demand shift. The system can automatically respond to sudden changes in demand, even nights and weekends, meaning the revenue manager can go home at night.)
- **Use it as an ad hoc executive information system** (Drill down capabilities to examine performance of past dates and promotions useful for future decision-making reaching further up the marketing value chain.)