BY SALONI VASTANI

Your latest financial forecast shows modest improvement over last year. Most economists are predicting a 2 percent growth in gross domestic product (GDP) in 2014, which is lower than the 3.7 percent increase we experienced during the second half of 2013. How will you increase profitability and improve revenue in a relatively flat year? You've heard of companies increasing their revenue by more than 5 percent through the use of revenue management, but what does that mean, and how can it be applied to parking?

Revenue management, also known as yield management, means selling the right product to the right customer at the right time and the right price. In the parking industry, this can be translated to selling the right parking space to the right driver at the right price. It assumes the same product can be sold at different prices at different times to different customers. For example, you might sell to a business customer who values convenience and is willing to pay more for it at one time, and later, sell to a leisure customer who is more likely to be price-sensitive.

For many years, the travel industry has successfully deployed revenue management and yield management concepts to increase revenue. The airline industry took the lead in implementing the revenue management discipline and developed sophisticated methods to maximize revenue potential. In the 1990s, airlines increased their revenue by 8 percent by implementing the principles of revenue management. Airplane seats were divided into different fare classes based on restrictions, and capacity was released based on timing and sales. Robert Crandall, former CEO of American Airlines, said the company made $1 billion in incremental revenue by deploying revenue management.

Revenue management is used in many industries. Hotels, car rentals, cruise, and cargo companies in the travel and tourism sectors have successfully deployed and implemented revenue management strategies. Other industries, such as energy, health care, golf, and restaurants, are also using the same principle to increase revenue and profitability. Parking, too, has a fixed, perishable product with a variety of different segments of customers with some level of predictable demand, making it a prime candidate to benefit from revenue management techniques.

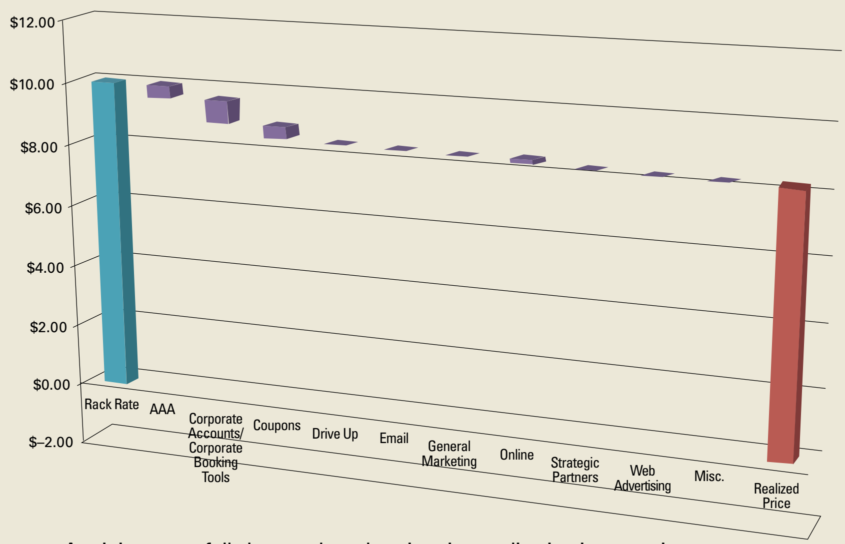
A PATH TO

SHUTTERSTOCK

Revenue management and analytics offer a clear road to financial success.

PROFITABILITY

Figure 1.



A pricing waterfall shows where loss in price realization is occurring.

A Growing Industry

Parking, says the International Parking Institute (IPI), is a $30 billion industry that's growing increasingly sophisticated in its use of technology. Customers can pay online, check availability and prices online, and reserve parking spaces ahead of time. Apps allow parkers to pay for parking meter charges using their smartphones. According to the results of an industry-wide survey conducted by IPI in 2013, increased demand for technology-related innovations accounted for half the industry's top 10 trends that year.

Increasingly, the parking industry is applying technology to improve customer experience and profitability. For many off-airport parking operations, more than 30 percent of revenue now comes through online channels. This rise in technology has resulted in more data being available to parking operators. According to Eric Schmidt, former CEO of Google, our connected world generates as much data in just days as it previously had since the dawn of civilization. That's almost five Exabytes (1 Exabyte= 10^{18} bytes) of data generated every two days and growing.

Because such data are available to parking operators, the use of analytics can be transformed to drive profitability and revenue. Revenue management techniques can be implemented with a higher level of knowledge than ever before.

Broadly, revenue management revolves around three basic concepts: demand forecasting, price optimization, and capacity allocation. The three concepts are closely linked and can be adjusted and optimized to realize the highest revenue potential.

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Demand Forecasting

As shown above, we are in the midst of a data revolution. Analytics software can handle massive datasets, including unstructured data such as text messages, emails, tweets, images, and more. These unstructured data are often referred to as big data and can be used to generate accurate forecasts that facilitate resource management to generate higher revenue or lower costs and improve customer experience.

Using historical data to predict the future is one way to predict demand. However, several factors, including the economy, competition, supply in the market, and special events, affect demand. All these factors are constantly and rapidly changing, making it difficult to pinpoint the demand signals to plan resources. In spite of these challenges, most industry experts are able to predict demand for up to 12 months with reasonable precision.

Simple statistical techniques can be applied to forecasting demand; the autoregressive integrated moving average (ARIMA) and econometric forecasting models can predict demand to within 2 percent to 3 percent accuracy, 12 months out. Factors such as local nuances, holidays, and GDP can all be considered potential variables. Once the models and variables are determined, statistical software packages can be used to build and run models. Analytics software can crunch and correlate data from millions of transactions to generate your forecast.

Pricing

As Warren Buffet says, "Price is what you pay. Value is what you get." A recent survey conducted by McKinsey and Company indicated that corporations left 2 percent of potential revenue on the table by pricing incorrectly. Pricing is a strategic element that should be an integral part of an overall strategy of business, driven by an understanding of customers' needs, parking processes, competitors' capabilities, and the fundamental strengths of the company. Pricing is a key lever to increase profitability.

When looking into optimizing price, factoring in the overall pricing strategy is an important part of understanding the value to both buyer and seller. Proximity of the lot, additional value, added services, and appearance all need to be factored in while considering price competitiveness. One way to start this exercise is by establishing current price bands based on transaction level data. Looking at transaction-level detail will also offer a good sense of the true price realization; it helps identify where price leaks occur, where discounts are given, when they should be avoided, and where a charge for additional revenue is missed. Companies can pick a period of time—a week or month—and study the transaction-level details using software tools to identify discrepancies.

Creating a pricing waterfall is another way companies can see where the loss in price realization is

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occurring; see Figure 1. One of the management traps here is separating planned loss in revenue and unplanned loss in revenue. Planned discounts and lower rates are fine as long as they generate additional revenue to offset their inherent losses. However, unplanned discounts need to be closed in the systems.

Once you've set the prices, the next step is to strengthen the price realization capability within an organization. Clear communication, both verbal and written, to field staff at regular intervals is necessary to ensure higher price realization. Finally, it is important to consider the competitive landscape and potential competitor reaction when planning any price changes. In a price-competitive industry with similar products, price decreases can result in wars to the detriment of the entire industry.

Capacity Allocation

You know how full the lot will be or what the demand will be on a particular day, and you've established what you will charge. The next step is calculating how many spaces to sell at each price point.

Segmenting your customer base can help further identify expected demand at each level. Ideally, you want to block enough spaces to sell to customers who are willing to pay the highest price and sell other inventory at lower pricing tiers. Customers can be segmented based on demographics, purpose, purchase channels, time of day, day of week, or even length of stay. You can then allocate inventory at each pricing tier based on expected occupancy. With reservations increasingly originating online, dynamic inventory allocation is also possible.

The three concepts of revenue management—demand forecasting, pricing, and capacity allocation—work together to create a revenue management vehicle to increase revenue. Companies that have implemented these disciplines have increased their annual revenues by 5 percent to 8 percent. The parking industry is at the brink of taking advantage of these same techniques. Companies using sophisticated IT systems are not only changing customer behavior but are able to implement revenue management techniques and dynamic pricing and develop high-fidelity revenue forecasts.

Technology and sophisticated systems are now available to make sense of the data and implement solutions that can increase revenue and profitability with every transaction.