Table 11.11. Commonly tracked RM system performance measures.

Performance Measure	*Description*
RevPAD	Revenue per available day (hospitality) Revenue per available ad (broadcasting)
RevPAR	Revenue per available room (hospitality industry, cruise lines)
RevPAF	Revenue per available square foot (retail, casinos)
RevPASM	Revenue per available seat mile (airlines)
Yield	Revenue per available unit of inventory (airline)
Occupancy	Percent of available inventory sold (hospitality)
ARR	Average room rate (hospitality)
Spoilage	Capacity that could have been sold but was not, due to a low overbooking pad
Load factor	Same as occupancy (airlines)
Spill	Estimate of demand that has been rejected
Group utilization ratio	Percentage of a group booking that shows up
ADY	Average daily yield
ADR	Average daily revenue
ATP	Average ticket price (events, theater)

mization system? What are the benefits of moving from a leg-level control to a network-level control? What is the revenue difference between different types of controls: Bid-price control or virtual nesting control? How robust is the system to errors in forecasting? How much revenue is lost by bad or biased forecasts? What are the revenue impacts of different types of customer-choice behavior (including sell-ups and revenue dilution)? And so on. The ability to provide detailed answers to such a wide range of questions is the main advantages of simulation.

For the results of a simulation study to be meaningful, the program has to model the current business and control processes and the planned processes as accurately as possible. Customer booking streams are normally generated using a pseudo-random number generator based on historical booking patterns. A simulation clock governs the progress of the simulation. At various points in time, one or more *events* occur. For example, events for a quantity-based RM simulation include booking requests, cancellations, no-shows, and optimization and forecasting runs. For a price-based RM simulation, events include price changes, customer arrivals, and purchase decisions (purchase, delay purchase, or no-purchase).

By carefully modeling the firm's sale practices and customer behavior, a reasonably accurate picture of revenue benefits can be obtained via simulation. But even at its best, it is important to remember that a simulation is only an abstraction of a real system—and it can only