

# The Rainmaker Group

## Forecasting demand for hospitality



### Objective

Anticipating business and responding appropriately can net millions for hotels, airlines and casinos. The Rainmaker Group helps companies in the travel and hospitality industries increase revenue by forecasting consumer demand and optimizing product availability. Customers maximize earnings for seats, rooms and mixed revenue streams that include restaurants, casino spending, and food and beverage services. Far from simple, this task requires powerful software that can consider all the variables when forecasting business and optimizing revenue.

### Solution

Rainmaker uses ILOG CPLEX, the market-leading mathematical programming engine, to optimize product availability using forecasts for future demand. It enables Rainmaker customers to better plan their operations and capture incremental revenue that would otherwise be lost. Powered by Manugistics, the Rainmaker solution for revenue management or yield management forecasts demand over a given horizon, taking into account such important criteria as customer segment, seasonal influence, day of week, length of stay, and with casino customers, associated gaming value. ILOG CPLEX takes the resulting forecast and applies parameters such as potential room prices and airfares to create optimized availability recommendations for maximizing revenue. Rainmaker has increased revenue for customers by more than 10 percent. A recent Rainmaker customer conservatively estimates an increase of 8 percent, or about \$50 million, while another has claimed 13 percent for revenue per available room. With ILOG CPLEX, Rainmaker makes a difference.

ILOG Product: ILOG CPLEX

- **Industry:** Travel and hospitality industry
- **Application:** Business forecasting
- **Geographic Coverage:** United States
- **Benefits:**
  - ▶ 10+% revenue increase
  - ▶ Better planning for future business
  - ▶ Faster data processing



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## Maximizing revenue

Rainmaker's revenue management solution forecasts demand by customer segment over a given time horizon. Using the demand forecast and capacity constraints, the system makes decisions concerning pricing, and depending upon the customer's environment, length of stay. For example, when demand is low, discounts are offered and lower prices for short stays may be made available. Conversely, when demand is high, no discounts may be offered and prices can be restricted to higher categories or lower prices offered only for longer stays. By taking into account historical data and current trends, Rainmaker's solution can make projections useful for establishing other resource needs and setting optimal product availability. For example, it can help determine the number for front-desk staff and prepared rooms at a hotel during a season. The optimization component driven by ILOG CPLEX must address an average of 800 constraints. It generates a set of optimal availability restrictions for maximizing revenue given the demand forecast. The customer can accept the restrictions, modify them or select only the ones judged to be the most appropriate or feasible.

## Benefits

Rainmaker guesstimates that ILOG CPLEX is a thousand percent better than their old optimization solution. For a customer with 40 or more properties, the entire forecasting and optimization process can take only three hours. The process is accomplished on a per property basis, and each property's optimization may take a maximum of three to five minutes to complete. The old optimization routine took more than 20 minutes per property. A big, multiproperty project can be run overnight given these performance metrics, easily delivering results within a very tight timeframe. This high speed also allows the process to be repeated within a short period of time to address new demand or availability conditions.

Companies that can benefit from the Rainmaker solution in managing their services include:

- Hotels: room availability and pricing, restaurants, bars, other amenities . . .
- Airlines: seat availability and pricing, aircraft assignment . . .
- Casinos: lodgers' gaming values, mixed revenue sources such as restaurants and bars . . .

## Project

Rainmaker is a longtime user of ILOG CPLEX. The product can be integrated with any computer environment, including UNIX and SQL, making it highly versatile and easy to deploy. Rainmaker depends on ILOG CPLEX's outstanding performance and reliability, traits the company could not obtain with custom products previously used with the solution.

## About The Rainmaker Group

The Rainmaker Group was formed in 1998 to provide software development and consulting services for the travel and hospitality industries. Its business focus is on improving customers' revenue generation capabilities through business process improvements and the implementation of customer-focused technology solutions. The consultancy has a strategic alliance with Manugistics, and is responsible for providing software support and new product development for hotel/gaming revenue management products. It lists Caesar's Entertainment, Harrah's and Omni Hotels among its customers. For more information, visit [www.letitrain.com](http://www.letitrain.com).

## ABOUT ILOG

ILOG delivers software and services that empower customers to make better decisions faster and manage change and complexity. Over 2,000 global corporations and more than 400 leading software vendors rely on ILOG's market-leading business rule management system (BRMS), optimization and visualization software components, to achieve dramatic returns on investment, create market-defining products and services, and sharpen their competitive edge. The BRMS market share leader, ILOG was founded in 1987 and employs more than 600 people worldwide.

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Representatives and distributors in other countries

"ILOG CPLEX is a bomb-proof, high-performance optimization engine. It enables us to consistently deliver high-quality results to our demanding customers in very tight time windows. Our customers, in turn, have reaped increased revenues on the order of 5 to more than 10 percent."

- Tom Walker  
Vice President

Business Consulting  
The Rainmaker Group



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