



Fruits and vegetables are perishable inventory because they spoil if grocers cannot sell them. The same is true of hotel rooms, rental cars, and airplane seats. Unless they are filled by a certain time, these services cannot produce revenue.

Corporations have become adept at selling perishable inventory by varying prices and running sales. These adjustments are called dynamic pricing, and Guillermo Gallego is one of the field's pioneers. He originally explored how customers value such attributes as a flight's departure time, stopovers, seats, and luggage policies. His work is embedded in many of the models used to price perishable services.

Today, Gallego is working on "service engineering," a concept similar to financial engineering. "It is similar to selling options on a stock," he explained. "We take a basic service and create derivative services from it. This can be a win-win for buyers and sellers, and could dramatically change how certain services are sold."

An example is a fulfillment option. Ordinarily, airline customers buy seats on specific flights. Gallego proposes that airlines offer a discount to customers willing to fly within a certain time period, say 9:00 a.m. to 3:00 p.m., and allow the airline to pick the flight. "The buyer gets a discount. The company buys flexibility, so they can accommodate business customers who often book late and must pay a premium price for a ticket," he said.

Callable products are another possibility. Here, the seller discounts a service in return for the right to buy it back at a premium. A concert promoter, for example, might do that if a band becomes wildly popular during a tour. "In exchange for a discount, the provider can take advantage of a rise in prices," Gallego said.

Gallego is also assessing options where consumers pay an up-front fee that gives them the right to buy a service, such as a hotel room, at a discount in the future. "Companies can afford to do this because not all consumers will exercise their options," he said.

"There's an art and science to engineering and pricing services, but it is always easier when they are win-win for buyers and sellers," Gallego said. "I'm using service engineering concepts to help Hewlett-Packard redesign its warranties. We can offer annual warranties or month-to-month warranties that customers can drop at any time. Priced right, monthly warranties offer value to customers who replace products frequently and are profitable at the same time."

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*Engineering Services
(Before They Perish)*

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