

## Perspective



### Enabling enhanced consumer-centric pricing

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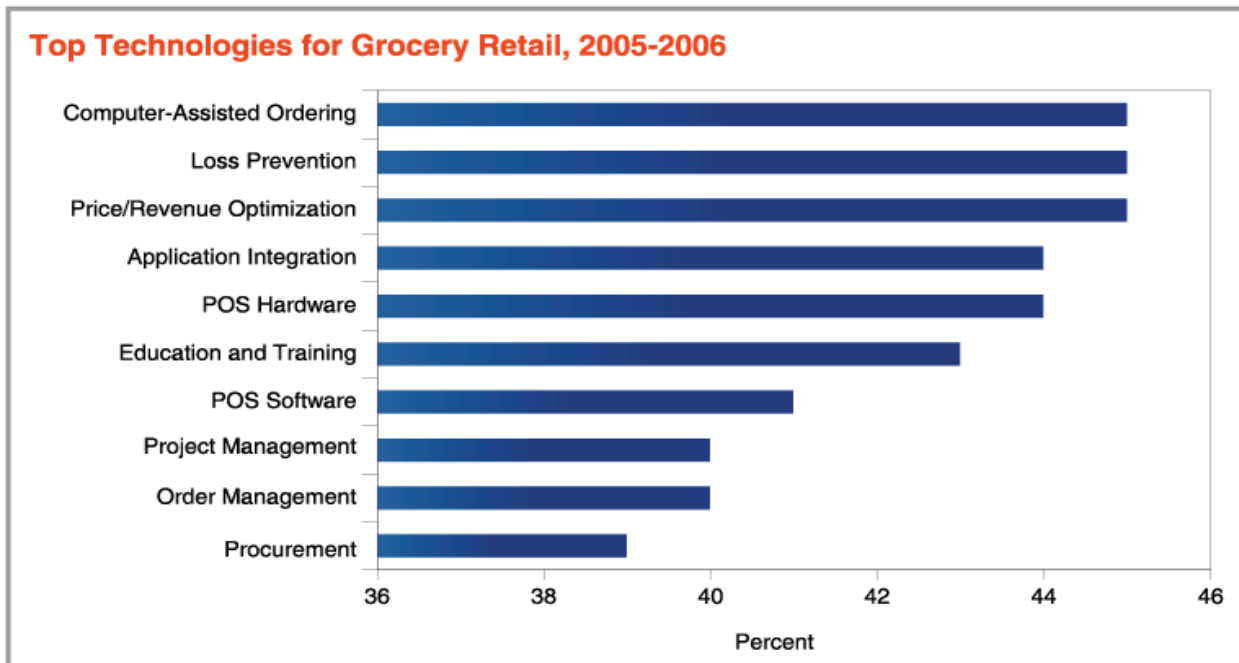
#### Abstract

*Price optimization solutions today provide a scientific approach to help retailers improve margins and increase sales. However, implementing the solution involves significant risks and challenges. This paper provides insights into the strategies, methodologies and best practices that can help retailers mitigate these risks and maximize the benefits of price optimization packages.*

## From gut feel to pricing math

Retailers have long relied on rudimentary tools and the “gut-feel” of pricing analysts to set shelf prices. Today, revenue optimization solutions bring science to pricing decisions, enabling retailers to better leverage price elasticity.

The positive spin-offs of revenue optimization solutions are visible from the high return on investments through improved margins. Some retailers have even recovered solution costs in less than a year. Recently, a large US discount retailer attributed quarterly profits of three cents per share to margin improvements on sales. The credit for this went to the company’s markdown optimization system, demonstrating the success of pricing math.



Source: Gartner, “Forecast: Retail Sector IT Spending, 2004-2009” by Jeffrey Roster. September 2005.

High spends by retailers on price and promotion optimization solutions point to the growing acceptance of technology in pricing decisions.

## Challenges in traditional pricing

Traditional pricing follows a process shown in Figure 1:



**Figure 1: The traditional pricing model**

The key challenges in traditional pricing that most retailers experience include:

- Lack of adequate manpower to price all item and store combinations
- Inadequate time by pricing analyst spent on rules creation (translation of corporate strategy, competitor data, market data, vendor agreements, merchandising tactics)
- ‘Gut-feel’ based ‘what-if’ analysis to gauge the impact of price changes on an item’s performance across single or multiple stores
- Absence of cannibalization/halo factors from ‘what-if’ except during promotional periods
- Inability to handle multiple items and stores simultaneously, resulting in multiple iterations and sub-optimal prices
- Ad-hoc approvals and feedback
- Lack of planning for store labor while planning price execution
- Lack of efficient processes linking actual tag setting to price activation at POS
- Limited planning from the perspective of pricing lifecycles - introductory, regular, promotional and markdown.

## Strategies to overcome implementation challenges

While revenue optimization can help resolve the challenges in traditional pricing, getting the implementation right has its own challenges. To maximize ROI with minimal risk, retailers need a robust strategy and roadmap to mitigate constraints. These typically involve people, system and data requirements and processes.

### *Organization structure and people*

Even with the best systems and processes, the success of any technology implementation hinges on the users. Pricing analysts and category management personnel hold the key to the success of a price optimization solution. However, their concerns pose a significant challenge (See Table 1).

	Challenges	Strategies to Overcome Challenges
<b>Pricing Analytics</b>	<ul style="list-style-type: none"> <li>• Concern about the impact on their roles and functions</li> <li>• Lack of clarity their performance evaluation</li> <li>• May not possess the skills required to translate merchandising strategy to business rules</li> </ul>	<ul style="list-style-type: none"> <li>• Education on the package - their rules govern its output</li> <li>• Evaluate analyst's performance based on solution volume and margins forecast against actual results</li> <li>• Maintain category-based classification within pricing teams enabling better customer behavior understanding</li> </ul>
<b>Category Management Team</b>	<ul style="list-style-type: none"> <li>• Assigning product roles to various items - traffic builder, driver - may not exist in the merchandising structure</li> <li>• Category management knowledge and merchandising strategies are shared with pricing teams only on a 'need to know' basis for current pricing</li> </ul>	<ul style="list-style-type: none"> <li>• Formalize and save roles set for different items in the system enabling the roles to be used in pricing rules</li> <li>• Formalize and regularize communication</li> <li>• Upgrade pricing execution to include staff experienced in merchandising</li> </ul>

**Table 1: Organization Structure and People Challenges**

### System and data pre-requisites

The criticality of the application to the business and image make it necessary to analyze existing system capabilities and understand the scale of investments required. A pre-implementation diagnostic ensures that the tool has data of the requisite quality. This is essential for the smooth implementation of the price optimization tool. The following are some system and data requirements:

- Robust item data base with enough attributes for demand grouping (grouping of mutually substitutable items)
- POS data cleaned and available for a minimum of 2 years
- Item introduction processes that incorporate steps of attaching to demand groups and item role assignments (e.g. Traffic builder is an item role)
- New store introduction processes that incorporate links to like stores allowing access to POS history
- Perpetual inventory system and code date tracking (in case of sell-by dates in grocery), for markdown optimization
- Formally maintained event calendar for markdown and promotion optimization
- Competitor price data availability for maintenance of price image during optimization
- Vendor related commitments on pricing or expected deal availability, etc., to be available as data

### Processes

**Pricing interval:** With a price optimization tool, what-if analyses and price generation are possible more frequently. However, prices need to be revisited only at fixed intervals to ensure efficient execution. Implementing a process to decide this interval is crucial for balancing costs against the benefits of more frequent price changes. However, the key driver for frequency of price change should be the expected customer impact. Therefore a consumer panel can be a key feedback tool in the early stages of implementation.

**Review:** Most packages provide a screen-flow for price approval after price generation. However, the ability to do that by showing rules used, added or changed is currently lacking. For the review process to be meaningful, a rules database, depiction of commonly used rules highlighting changed rules, etc., should be considered.

**Cross-category:** A process is needed to ensure that users are able to capture cross-category influences. An example would be strawberries and cream. If price optimization is implemented for dairy but not for produce (therefore, for cream and not for strawberries), the high prices possible for cream may not be captured when strawberries are discounted. So, a process is needed to link all items with relationships (cannibalizing, complementary or highly substitutable), using either periodic market basket analysis or merchandiser experience.

**Supporting processes:** All input data required (item, inventory, events, competitor prices, etc.) need supporting processes to ensure all data required is accurate and updated.

**Change management:** Most importantly, change management consideration demands that a process is established to use the tool for what-if analyses in order to win the confidence of pricing analysts. This transition phase allows user intervention and adjustment until the retailer graduates to complete scientific pricing.

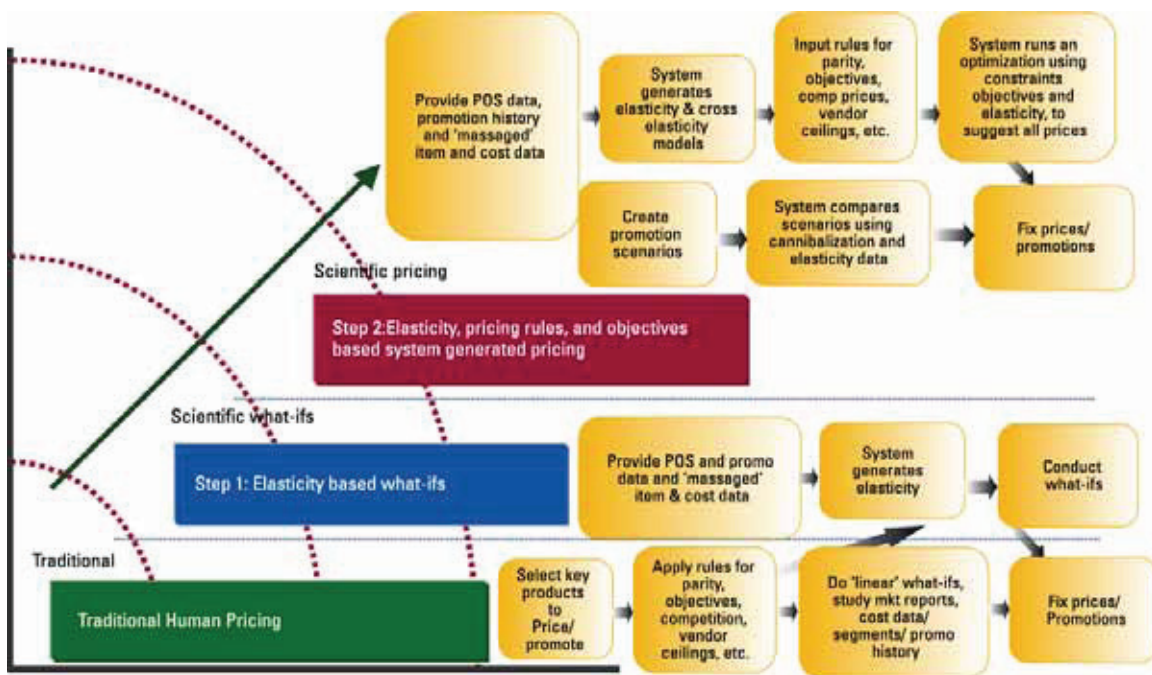
## The Infosys Approach to Revenue Optimization

The Infosys approach to achieving successful price optimization involves master data management, change management, business rules management and process definition.

This includes:

- Validating accuracy and availability of required data and attributes, especially store, item, sales, competitor and promotions data
- Initial support in rule definition and training the pricing team. Deriving a reporting and analytics process that can support rules setting, and ensure rules feedback is incorporated in the price approval process
- Defining a business process adopting best practices, internal requirements, client knowledge and expertise embedded in legacy systems. Incorporate expectations from the initiative, budget and resources available, package features and Infosys' process innovation

From a change management and user education perspective, planning a phased process is critical when rolling out price optimization. For example, it is advisable to introduce it as a support tool for pricing analysts to help with 'what-ifs'. Retailers can gradually step up usage to set all prices for a category based on pricing scenarios.



**Figure 2: Infosys' phased approach to price optimization**

Figure 2 shows a successful transition to scientific pricing using a phased approach.

To implement this approach, human capital resources that collectively possess the following are required: experience and expertise in retail and merchandising, price optimization packages and consulting skills, change management capabilities, IT assessment, design, development and implementation capabilities.

The price optimization initiative steps would include:

- Initial assessment, business strategy, vision creation and roadmap generation
- Structure and people alignment and business process re-engineering
- Technology assessment, options analysis and design recommendations
- Package interaction and evaluation and pilot design
- Legacy integration, custom build and implementation program management

## Successful End State

A planned, phased approach to a price/revenue optimization implementation can lead to:

- A performance intensive price modeling and price generation engine
- A skilled team with a firm grasp of merchandising and the firm's strategy creating scenarios, setting objectives and constraints for that engine
- A superstructure of all pre-requisite systems and processes to provide the data required by the engine as completely and accurately as possible
- An approval process ensuring that prices do not need to be 'eyeballed'. It would be based on exception reports of changed rules, expected volumes/ margins, average basket impact, competition relative image, and price impact by product roles
- An audit mechanism to track accuracy of the volume and margin forecasts by the package, and ensure effective fine-tuning of processes
- Regular and formal communication between all members of merchandising to understand and apply pricing analytics in merchandising and vendor negotiations

## Benefits

Successful implementations of price and markdown-optimization solutions have demonstrated improvements in the range of 2% to 10% in gross profit margins. Some retailers have reported up to 6% increase in sales. The success rates vary depending on the industry segment and the merchandise categories targeted.

### About the author

Subhashis Nath ([subhashis\\_nath@infosys.com](mailto:subhashis_nath@infosys.com)) is a Principal Consultant with Infosys' Retail and CPG practice. He has extensive experience in marketing, customer relationship and consulting. He has provided strategic and process consulting services to European and US retailers in the areas of CRM, demand planning, merchandising and analytics. He can be reached at [subhashis\\_nath@infosys.com](mailto:subhashis_nath@infosys.com)



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