

September 13, 2007

# Best Practices: Demand Management

by George Lawrie

for Business Process & Applications Professionals



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by **George Lawrie**

with Sharyn Leaver and Elisse Gaynor

### EXECUTIVE SUMMARY

Retailers and consumer goods manufacturers with more complex and extended supply chains, more sophisticated market segmentation, and highly empowered consumers face daunting challenges to elegantly match supply and demand. Yet some manage to accurately forecast demand across millions of item-location combinations, place inventory and reserve logistic capacity at just the right time in just the right place in the supply network, and manage price changes so as to balance supply and demand in each period and location. To uncover demand management best practices, Forrester spoke with leading retail and consumer goods firms and their technology partners. We found best practices in four areas: 1) collaborative planning; 2) transparent allocation and replenishment; 3) demand shaping; and 4) integrated sales, operations, and inventory planning.

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### NOTES & RESOURCES

Forrester interviewed 20 vendor and user companies including: ConAgra Foods, JDA, Just Group, Oracle, SAP, and Shaw Industries.

#### **Related Research Documents**

["Trends 2007: Retail IT"](#)

February 6, 2007

["The State Of Manufacturer And Retailer Collaboration 2006"](#)

December 19, 2006

["Forrester Waves™: Demand Management And Demand Forecasting"](#)

July 25, 2003

## RESEARCH CATALYST

Clients selected this topic for Client Choice research.

### DEMAND PLANNING AND FORECASTING IMPLEMENTATION CHALLENGES ABOUND

Retailers and manufacturers collectively agree that they would see higher returns on investment, higher than for any other process or application, by improving demand management and forecasting. In fact, demand planning and forecasting still tops the priority list for many supply chain executives.<sup>1</sup> But firms are relatively slow to implement new processes and lack the commitment to manage demand at a sufficiently granular level.<sup>2</sup> Despite years of hype about collaboration and demand-driven supply chains, manufacturers and retailers are still suffering from the same old problems of stock-outs in one location or season and massive markdowns in another. Challenges that top the list include:

- **Poor understanding of automated algorithms.** With literally millions of combinations of stores, SKUs, and SKU options like size and color, manual forecasting is just too labor intensive. But “black box” forecasting earns users’ distrust and misses vital demand data such as holidays or ad hoc promotions. Many have a poor understanding of how the parameters have been set in their long implemented replenishment systems, meaning that they can’t predict the impact on their inventory investment of deciding, for example, to improve the service level.
- **A tricky art and science balancing act.** The top 50 global brands including Procter & Gamble and Unilever invest more than \$100 billion annually in trade funds to promote sales of their merchandise.<sup>3</sup> Their account teams work with retailers using a sophisticated blend of judgment and mathematical demand modeling to determine the timing, level, and location of promotions. Yet incorporating these carefully elaborated account team judgments is a challenge for firms that have yet to invest in implementing collaborative demand forecasting.
- **Elusive and uncoordinated demand signals.** Manufacturers would like to use detailed point of sale (POS) data to match the rate of production to demand. But most end up paying for second hand aggregated data.<sup>4</sup> And fewer than one in five manufacturers has any data structure or process for receiving, storing, and using point of sale data from retailers.<sup>5</sup> Those that do suffer from conflicting demand data and lack processes to coordinate all of the involved stakeholders. For example, marketing and sales teams often focus on detailed store-level activity, supply chain teams on demand signals like warehouse activity, retailer forecasts, promotion schedules, internal sales forecasts, and replenishment. Meanwhile, customer service stakeholders focus on retailer key performance indicators (KPIs) including out of stocks, fill rates, transportation compliance, and purchase order status.

## DEMAND MANAGEMENT IMPLEMENTATION BEST PRACTICES

To understand how some of the most successful firms, ranging from a global CPG manufacturer to a North American grocery chain, implemented demand management, we spoke with project team leaders at companies like Shaw Industries, ConAgra Foods, and Australasia's Just Group. We also interviewed executives at key vendors like Aldata, JDA, Oracle, and SAP and leading systems integrators and consultants like Capgemini and NIIT, together with thought leaders at the Sam M. Walton College of Business and University of Arkansas, among others. We found that successful firms take a rigorous approach to:

1. **Collaborative demand forecasting.** Our interviewees were unanimous in declaring the need for firms to reach a consensus, at least internally, but ideally with their value chain partners on the expected level, timing, mix, and location of demand. This data should form a common foundation for merchandising, logistics and budgeting processes.
2. **Transparent allocation and replenishment.** Once they have agreed on the forecast, firms need to reserve manufacturing, transportation, and warehousing capacity and allocate inventory in the supply network to meet expected demand. The key here is transparency — to promote confidence in the plans and facilitate continuous improvement.
3. **Demand shaping.** To meet their financial goals, firms need to monitor their sell through rate against their forecasts and use pricing and promotions to stimulate demand.
4. **Full sales, operations, and inventory planning.** Our interviewees told us that they deployed systems to rationalize safety stock in multi-echelon distribution networks and implemented structured processes regularly to review and synchronize supply and projected demand.

### BEST PRACTICE NO. 1: COLLABORATIVE DEMAND FORECASTING

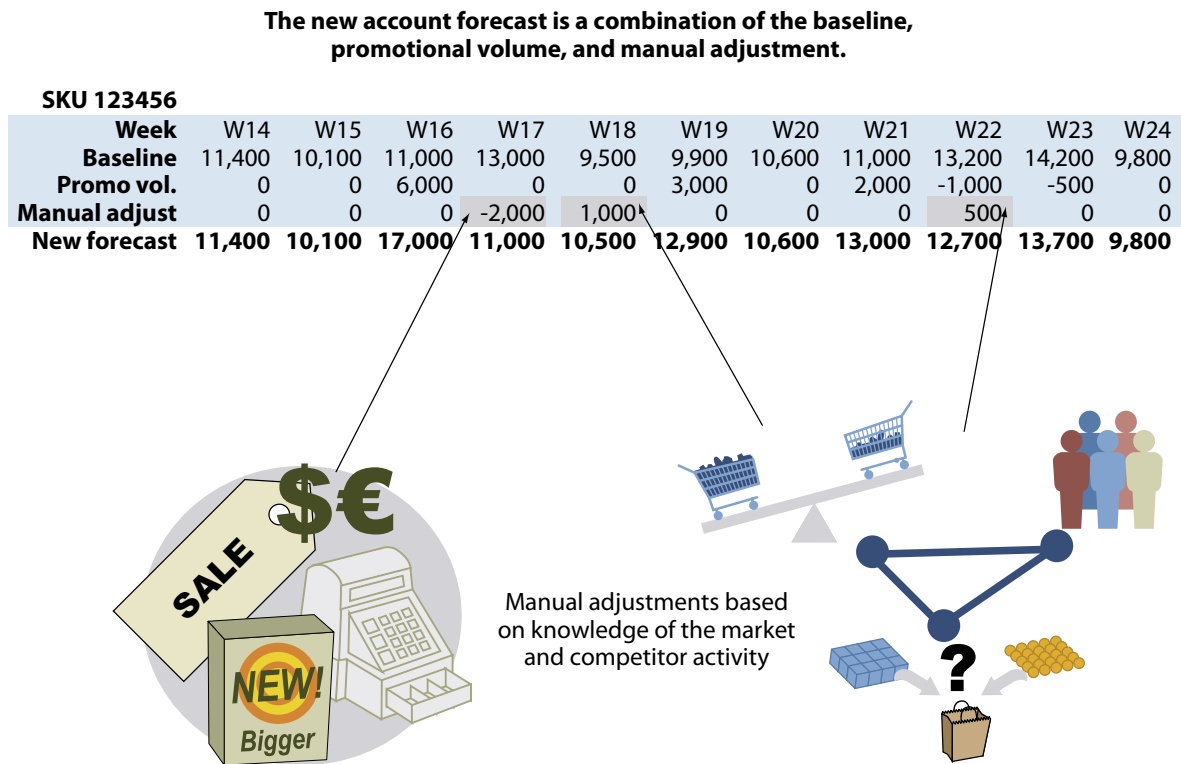
Without a sound but labor-efficient adjustment from stakeholders in the forecasting process, it is not possible to plan capacity and inventory to service customer demand. Our interviewees told us that they:

- **Rationalize forecasting effort.** All of our interviewees set out to harmonize forecasting systems, automate the bulk of the work, and then allow collaborating stakeholders to make highly transparent and annotated adjustments. ConAgra simplified its 11 forecasting systems by abandoning forecasting at intermediate levels in the supply network and employing SAP's advanced planning and optimization demand planner to propagate a single forecast of customer demand throughout the network. Now stakeholders make adjustments at each level in the supply network, but start from a common view of baseline demand.
- **Develop forecasts of weekly demand.** Retailers and their suppliers should ensure that their forecasts are sufficiently frequent to offer maximum intervention opportunities without incurring too much manual effort. Most of our manufacturing interviewees forecast weekly

demand since the demand signal from their retail customers is weekly. Although it can mask seasonal factors, the weekly signal helps firms plan for important calendar events like July Fourth in the US. The switch from monthly to weekly forecasting also provides more opportunities to take corrective action when sales are lagging.

- **Forecast at a SKU-location level, or lower.** The challenge of forecasting millions of SKU location combinations defeated traditional forecasting applications running on older generations of hardware, so users had to make do with less granular forecasts. Lack of forecast detail means more guessing and more stock-outs. But with cheaper and more readily available processing power, it is possible to forecast demand by SKU and location in a way that would have been impossible even in the recent past. It is even possible to forecast by SKU attributes like size, color, and style. And modern forecasting systems can compensate for the inherent instability of forecasts for slow moving items by adjusting the forecast period. For example, an item that might have a high forecast error at one sale per month might be accurately forecasted at twelve sales per year.
- **Integrate sales teams into the forecasting process.** CPG account teams and retailer merchandising teams plan promotions that lift sales. For example, a \$99 pad (underlay) promotion at Home Depot can lift Shaw Industries' sales volume by as much as 40%. Therefore, it is vital to incorporate promotional lift into overall plans. How? One global CPG manufacturer secured account team commitment by incorporating specific assistance with achieving their personal goals. Whenever they update the forecast, account teams can review their progress against personal revenue and margin targets. The system can even propose actions to close any gaps between target and expected achievement.
- **Build up forecasts in layers.** Consumer goods manufacturers should develop a baseline weekly forecast by SKU and retailer. Dedicated forecasting specialists can remove obvious exceptions to avoid distortions and build a sound baseline. All of our interviewees use simple time series techniques like smoothed weighted moving average. Most manufacturers can develop their baseline from case shipments recorded in their enterprise resource planning (ERP) apps. The most sophisticated forecasters supplement the case shipment demand signal with POS data from their retail customers to sense changes in demand. Promotion-led firms add to the forecast the expected promotional volumes in weeks of planned promotions. They deploy collaborative demand planning apps from vendors like TXT to validate the feasibility of the expected promotional uplift and also take account of promotion induced cannibalization (see Figure 1).
- **Adopt a formal scheduled forecast review process.** Our interviewees told us that their sales and operations planning (S&OP) meetings used layered forecasts, together with the embedded explanatory notes, to drive enterprisewide forecasts. They resolve conflicts at a level of management responsible for achieving both profit and loss targets like margin and balance sheet targets like stock turn. Regular scheduled S&OP and inventory review meetings ensure the availability of senior decision-makers to arbitrate any conflicts over use of scarce resources or inventory and drive commitment to an agreed forecast.

**Figure 1** Build Up Forecasts In Layers



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Source: Forrester Research, Inc.

### Demand Forecasting Pitfalls To Avoid

Experienced demand management professionals warn against:

- **Poorly aligned goals.** Our interviewees in retail explained that their merchandise managers in some cases earned bonuses up to 70% of their basic pay. A big lesson learned is to not calculate bonuses in proportion to revenue alone, a practice that can result in merchandise managers “gaming the system.” Instead, firms should calculate buyers’ bonuses on both revenue and “stockturn,” that is, the ratio of average inventory balances in a period to the period’s revenues.
- **“Black box” forecasting.** Our interviewees agreed that technology should empower executive decision-making, not replace it. Why? Although the science of merchandising — calculating safety stocks across thousands of lines and hundreds of stores — is well suited to automation, the art of merchandising, especially the alchemy that selects winning fashion apparel lines, requires human intuition to make sense of myriad barely quantifiable and poorly structured market signals. Case in point: A European retailer ignored the concerns of its experienced buyers when it implemented a new forecasting system that was heavily influenced by two previous unseasonably warm falls. The result? The retailer missed out on opportunities to sell gloves and scarves.

## BEST PRACTICE NO. 2: TRANSPARENT ALLOCATION AND REPLENISHMENT

Although all of our interviewees agreed that propagating a common forecast of expected or mean demand in each period is essential, those with complex supply chains and multi-echelon inventory emphasized the importance of propagating forecast error or variance as well. Our interviewees told us that they:

- **Focus logistics on capacity.** By better understanding its patterns of demand at a low level of granularity, Shaw Industries both reduced its manufacturing cost and increased its service levels. Realizing that it could benefit from the seasonal nature of flooring demand, Shaw chose to build inventory of perennially popular lines such as Philadelphia Carpets during the slack winter season, thereby releasing capacity to meet special orders in the busy spring and summer months.
- **Help employees understand how the theory drives the practice.** Several interviewees including a North American grocery chain warned that sometimes even experienced personnel have little understanding of the theory behind inventory and demand planning. Firms like Hallmark and Giant Eagle participate in a program of formal certification for demand and supply chain management with bodies like the Retail Industry Leaders Association.<sup>6</sup>
- **Tune supply networks.** A North American grocery chain discovered that 353 of its 9,000 SKUs made up 56% of its shipment cubic capacity. It developed high velocity and low velocity networks with specialist cross docking distribution centers dedicated to the 353 items in order to better allocate transportation and warehousing capacity. Meanwhile, retailers in Europe like Aldi commonly use colored kanban-like cards that contain an RFID chip slotted into fresh food crates to indicate when they must move. Warehouse workers drop the robust, reusable cards in a chute when they move the crate. The RFID reader can scan dozens of cards simultaneously and simply sends email to the planners listing all the crates that have moved. The result? Supply capacity that is well aligned with forecast demand.
- **Implement processes that encourage a “sell out” culture.** To synchronize with their markets, firms like L’Oreal that launch 10 or more products per year and sell 30% by volume through promotions need to view sales all the way through to consumers, not as shipments to retailers’ distribution centers (DCs). Working with one of its key accounts, Carrefour, L’Oreal implemented a vendor managed inventory (VMI) process. It also adapted bonus plans to ensure that L’Oreal account teams focused on Carrefour’s sales to consumers rather than L’Oreal’s sales to Carrefour. The result? In its pilot DC, the project reduced inventory by 7% and the number of credit notes by 7%, while improving downstream case fill rate from 97% to 98%.<sup>7</sup>
- **Enable allocation at a regional level.** Retailer interviewees agreed that they must allocate inventory at the level of a market or demand region so that regional merchandisers can take local demand and competitive conditions into account. Stores typically pull from the DCs, but low tech networking among retail branches in some fashion and fresh food chains enables more inter-store transfers and inventory end of life and reduces markdowns and write offs.<sup>8</sup>

## Transparent Allocation And Replenishment Pitfalls To Avoid

When establishing allocation and replenishment processes to support their forecast demand, firms should avoid:

- **Setting uniform service levels and uniform forecast horizons.** Items with longer lead time need more protection. For example, paper towels require less safety stock than high fashion shoes sold in North America and sourced from Europe. Items with greater stockout penalties should also have higher safety stocks to protect the firm's financial performance. One fashion apparel firm set the same service level for locally sourced accessories and imported ladies tailored suits. The result? It ended up holding too much accessory inventory and had to mark down. Firms like Woolworths South Africa pay strict attention to setting carefully calculated higher service levels for items like shoes that drag high margin merchandise like handbags.<sup>9</sup>
- **Taking lead times as fixed.** Safety stock is based on an expected level of demand and forecast error and an expected lead time. Most firms consider the lead time for an item as invariable. Yet, some of our interviewees consider lead time variability as the greatest threat to successful demand management. A North American firm that failed to increase its lead time to account for new port security measures lost revenues because its imported specialist dishwasher powder was out of stock. Firms should follow ConAgra's example and set safety stocks at intermediate levels in the supply network to accommodate lead time variability.
- **Letting item master data grow stale.** Most applications carry in the item master record the parameters that govern replenishment. Before revamping its demand management process, a North American grocery chain had difficulty matching supply and demand because it had not reviewed critical item master data like minimum order quantity and pallet dimensions since implementing its first computerized inventory control system. Demand managers should follow this North American grocery chain's example and frequently review the lead time and target service level together with carrying cost, order cost, and other settings.

## BEST PRACTICE NO. 3: DEMAND SHAPING

All firms that plan to supply to a forecast demand must make decisions about pricing each item in each location so as to balance supply with demand. In markets with fickle demand or short shelf life like fashion and fresh food, merchandisers must gamble on demand that sometimes doesn't materialize and then make markdown decisions to manage demand and clear inventory. But even packaged goods are subject to promotions that have an impact on the demand planning function; if you promote beer in a supermarket you might stock-out of complementary items like pretzels. Forrester's interviewees told us that to implement the demand shaping element of demand management they:

- **Develop a convincing business case for a demand shaping process.** Our interviewees told us that pricing actions have a direct and immediate impact on the bottom line, but that so many decisions are required by SKU, by location, and by day (or part of day) that technology must amplify human effort. To quantify the benefit of soft improvements like more consistent, frequent, and better quality price actions, some of our interviewees conducted pilots to measure uplift, then scaled the achieved uplift to estimate the benefits for their business case.
- **Establish a pricing supremo.** Our vendor interviewees explained that their clients often established a pricing policy committee, but sometimes appointed an individual to take responsibility for all pricing. Forrester knows at least one consumer goods firm with a VP of pricing. This mirrors Forrester's earlier research showing that the critical factor for success in implementing pricing promotion and markdown processes is less the technology, which is now well proven, and more the change management and accompanying redistribution of responsibilities.<sup>10</sup>
- **Pay strict attention to data quality.** Pricing projects are notoriously sensitive to the quality of data that drives the pricing algorithms. Demand shaping software vendors like PROS Revenue Management, Profimetrics, and Vendavo provide clients like Honeywell Specialty Materials and Portugal's Sonae retail chain with "wizards" that enable them to rapidly establish item relationships that ensure, for example, a consistent price image with respect to competitors' pricing and a coherent relationship between the prices of one liter and two liter bottles of Coca-Cola.

### Demand Shaping Pitfalls To Avoid

Our interviewees told us that demand shaping processes such as price setting, promotions, and markdowns are highly idiosyncratic to geographies — Portuguese retailing, for example, is heavily dependent on daily promotions — and individual firms' pricing policies, which might be undocumented and instinctive. They told us that this can lead to:

- **Massive change requests.** When users need to standardize processes and adopt packaged software, they can react by demanding massive changes. The business case must be sufficiently robust to overcome such objections in order to avoid cost and delivery overruns. In the case of Miquel Alimentacio Grup, the implementation team tested each request for software or process modification against clearly established business goals. Users recognized that the software modifications might put the success of the project and those common business goals at risk.

### BEST PRACTICE NO 4: FULL SALES, OPERATIONS, AND INVENTORY PLANNING

Advanced firms develop a deep understanding of lead time variability at each stage in the supply network. They focus their demand management implementation on:

- **Adopting multi-echelon inventory planning.** Firms like ConAgra treat demand at all points in the supply network, except at the point of sale to consumers, as "dependent." This eliminates wasteful cycles of inventory building and reduction at intermediate network nodes. By extending

the process to include not just the planning of sales and operations, but crucially planning inventory in the supply network, too, firms can mitigate the notorious “bullwhip” effect. Firms like the North American grocery chain also drive their demand management processes from a deep understanding of the relationship between item velocity and network capacity. By including multi-echelon inventories in their plans and focusing on network capacity utilization, they can release both working capital and network capacity to provide superior service.

- **Understanding lead time variability at each supply network stage.** Firms like ConAgra that implement sales, operations, and inventory planning can reduce network safety stocks because they no longer need to cover demand forecast error at each network echelon. But they pay special attention to understanding the lead time variability between each echelon and ensuring that they have adequate safety stock cover. Whereas most transportation is dependable and its lead time invariant, waiting time for customs and security clearance and port congestion is a significant cause of lead time variability.

## FORRESTER’S DEMAND MANAGEMENT NEXT PRACTICES

Our research uncovered a number of demand management best practices. Here are some next practices that demand managers should focus on once they’ve mastered the basics (see Figure 2):

- **Next practice No. 1: “Predictive market” forecasting.** Leading firms develop effective statistical forecast baselines and then collect transparent adjustments for promotions and expected competitor behavior from domain experts within the firm. The next step? Using predictive markets to pool the collective wisdom of the wider world. A few firms in consumer markets are looking to use services like Iowa Electronic Markets to replicate in their own forecasting the success of Hollywood Stock Exchange at forecasting movie successes and failures. To encourage high quality participation, firms offer cash rewards to players. For firms struggling with critical decisions about which style or color will most likely succeed, this is a cost effective method of forecasting that dilutes the risk of gambling on the subjective judgment of a few executives.
- **Next practice No. 2: Parameter review processes.** Most of our interviewees told us about experiences reviewing data elements like lead time for each item. Forrester believes the next step is to establish processes for continuously reviewing data like item master parameters and item velocity. This should result in planning and allocation that is highly tuned to subtle changes in demand and supply conditions. Superior planning and allocation ultimately yield better customer satisfaction and higher revenues.
- **Next practice No. 3: Activity-based costing to test execution impact.** Forrester heard of many cases in which apparently smart merchandising strategies floundered because of supply chain execution problems. Forrester believes that the smartest operators will develop supply network cost and capacity models and test new merchandising strategies for feasibility and cost effectiveness before implementing them.

**Figure 2** Demand Management Implementation Best And Next Practices

	<b>Best practices</b>	<b>Next practices</b>
<b>Demand forecasting</b>	Increase the frequency of forecasts	Synchronize forecast frequency with customers' planning periods
	Provide a baseline for account team adjustment	Validate adjustments with statistical modeling
	Establish an integrated sales and operations planning process	Use predictive markets
<b>Allocation and replenishment</b>	Conduct item velocity analysis	Establish process to review item velocities
	Conduct network capacity analysis	Establish process to reserve capacities for priority merchandise
		Use activity based costing to understand impact of merchandising decisions on execution costs
	Conduct item file parameter review	Establish process to review item master data parameters
	Monitor forecast error	Monitor forecast error and lead time variability
Train end users in the theory of inventory management	Certify end users in theory of inventory management	
<b>Demand shaping</b>	Clean item master data to support demand shaping	Establish a process to maintain item master attributes driving pricing, promotion, and mark down logic

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Source: Forrester Research, Inc.

## IDENTIFYING YOUR CHALLENGES

Where should you start? Use this diagnostic tool to assess your current capabilities and opportunities for improvement, and to see how you stack up against your peers. Scores will be calculated automatically for online readers. All scores are anonymous (see Figure 3).

**Figure 3** Self-Diagnostic Tool For Demand Management Implementation Best Practice

<b>Forecasting</b>	<b>Yes</b>	<b>No</b>
Does your implementation increase the frequency of your forecast (e.g. from monthly to weekly)?		
Does your implementation align your forecast with that of your customers?		
Does your implementation include analysis to drive a high level of automated forecasting?		
Does your implementation include establishing a process for account teams selectively to modify forecasts?		
Does your implementation include establishing a process collectively to review adjustments and their justifications?		
Does your implementation include a process to validate judgmental adjustments — either using “predictive forecasting” to pool such judgments or using demand curve estimating techniques?		
<b>Total</b>		

<b>Allocation and replenishment</b>	<b>Yes</b>	<b>No</b>
Does your implementation identify item sales velocities and their impact on network capacity?		
Does your implementation include significant effort to review the item master parameter settings driving replenishment?		
Does your implementation include significant training for end users?		
Does your implementation include certification for end users?		
Does your implementation establish a policy that replenishments pulled from the distribution center at the store “sell out” rate?		
Does your implementation establish a policy for allocating capacity across seasons and across items with different demand characteristics and profitability?		
<b>Total</b>		

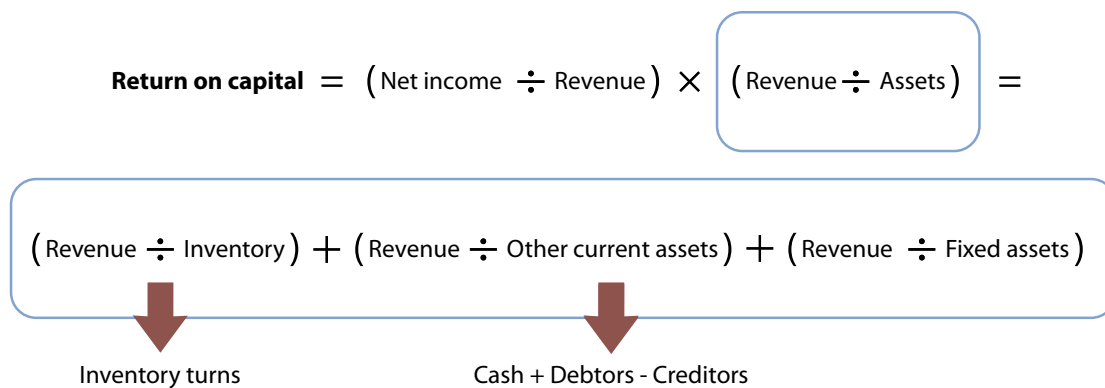
<b>Demand shaping</b>	<b>Yes</b>	<b>No</b>
Does your implementation include significant effort to improve data quality for demand shaping?		
Does your implementation include a quality controlled demand shaping pilot (say for one category)?		
Does your implementation include significant end user training for demand shaping?		
Does your implementation include a sound business case to guide discussions about process and application modification?		
<b>Total</b>		

### MEASURING YOUR SUCCESS

A common characteristic of successful process and application professionals implementing demand management is the ability to quantify improved business metrics. A North American grocery chain, for example, reduced its inventory by 10% and increased annual revenues by between 6% and 7%. To help justify, and eventually measure and prove the business value of, a demand management implementation project, process and application professionals should target measurable drivers of ROI:

- **Out of stock.** Firms like the global CPG manufacturer and North American grocery chain continually monitor out of stock and use it to measure their success in demand management forecasting and fulfillment.
- **Inventory turns.** All of our interviewees paid strict attention to inventory turn and some, like Just Group, include inventory turns in their merchandise managers' scorecards to ensure that their decisions also take account of any increased work capital needed to meet a target service level.
- **Revenue increase.** Firms undertake demand management implementations to better anticipate and meet demand at the best price. Firms like the interviewed global CPG manufacturer saw revenues rise by 6% to 7% following a successful demand management implementation.
- **Finished goods inventory.** Our interviewees all monitored levels of finished goods inventory during their demand management implementations. Some, like the global CPG manufacturer, realized dramatic reductions of up to 10% that freed funds for other investment. For others, like the North American grocery chain, clearing dead stock released distribution capacity for faster flow through of high demand items (see Figure 4).

**Figure 4** Demand Management Implementation ROI Drivers



## CASE STUDIES

### Case Study: ConAgra — Sales, Operations, And Inventory Planning

Mastering demand management requires understanding how best to match capacity with demand. This requires not just forecasting improvements, but also data and tools for determining how best to build inventory for future consumption. ConAgra's food demand management process illustrates best practices in implementing an integrated sales operations and inventory planning process based on SMARTOPS MIPO that complements its SAP core applications to eliminate five days of inventory from the supply network, grow revenues by 2% annually by improving in-store availability from 97% to 99.5%, and improve return on capital by 12% by reducing forecast error from its peak of 40%.<sup>11</sup>

### Case Study: Just Group Implements Transparent Allocation And Replenishment

Our research has shown that retailers can use demand management to maintain a lead even in fragmented markets with limited barriers to entry. We spoke with Just Group leaders to find out how judicious use of demand profiling, multispeed supply chain, and alignment of decision-making helped it to stay ahead of the pack, maintaining its fashion leadership in multiple markets in Australia and New Zealand.<sup>12</sup>

### Case Study: A North American Grocery Chain's Transparent Allocation And Replenishment

Our research has shown that to implement demand management effectively, firms must really understand the effect of supply chain service parameters on system-generated replenishment orders, together with the capacity of their supply networks and the impact of each item's demand velocity and handling characteristics. We spoke with grocery chain leadership to find out how physical reorganization, reassignment of responsibility for inventory, and a deeper understanding of the relationship between service levels and inventory enabled it successfully to maintain service levels at a consistent 96% despite heavy seasonality, to reduce inventory balances by 10%, and to increase revenues by 6%.<sup>13</sup>

## SUPPLEMENTAL MATERIAL

### Online Resource

The online version of Figure 3 is an interactive self-diagnostic tool that helps clients assess how their current practices stack up against their peers.

## Companies Interviewed For This Document

Aldata Solution	Oracle
Capgemini	Profimetrics
ConAgra Foods	PROS
DemandTec	SAP
i2	Shaw Industries
INFORM	SmartOps
JDA Software	Smart Software
JustEnough	Tomax
Just Group	True Demand
Lawson	TXT
Logility	University of Arkansas
Miquel Alimentacio Grup	Vendavo
NIIT	

## ENDNOTES

- <sup>1</sup> Demand planning and forecasting topped the list in overall ROI ranking (across both retailers and manufacturers) for the second year in a row. See the December 19, 2006, "[The State Of Manufacturer And Retailer Collaboration 2006](#)" report.
- <sup>2</sup> Retailer adoption of demand planning and forecasting tools has increased over past year, and CPFR adoption remains strong, but granularity is lacking. See the December 19, 2006, "[The State Of Manufacturer And Retailer Collaboration 2006](#)" report.
- <sup>3</sup> Consumer packaged goods (CPG) firms' trade promotion budgets have escalated to 14% or more of the average CPG firm's gross revenues. This represents €100 billion in trade promotion spend by the 50 biggest CPG firms, but many rely on spreadsheets and point solutions to manage these huge investments. See the June 11, 2004, "[Grading Trade Promotion Solutions](#)" report.
- <sup>4</sup> Most brand owners pay a third party for a monthly soft-copy report of transaction data that provides SKU-level data, but only partial market information. However, most marketers want more. The third party aggregates sales transaction information from multiple retailers and gives no store or customer detail. See the April 1, 2005, "[The Price Of Point-Of-Sale Customer Data](#)" report.
- <sup>5</sup> Ironically, even if retailers did provide demand signal data, few manufacturers have a place to put it, only 19% of them reporting fully deployed demand signal repositories. See the December 19, 2006, "[The State Of Manufacturer And Retailer Collaboration 2006](#)" report.

- <sup>6</sup> The Retail Industry Leaders' Association provides formal training and certification to ensure a common good understanding of the theory that underpins allocation and replenishment best practice. Source: Retail Industry Leaders Association (<http://www.retail-leaders.org/latest/rlCertification.aspx?section=RCEROV>).
- <sup>7</sup> L'Oreal partners with Carrefour to strategically tackle inventory management through consumer-driven retailing and inventory management. Source: ECR Europe (<http://www.ecreuropeforum.net/PublicPages/Archive/Milan/Downloads/BO3.2%20-%20Growth%20in%20demand%20driven%20supply%20networks.pdf>).
- <sup>8</sup> Forrester learned that when store managers have a high level of autonomy and the ability to manage transfers between stores with different prices for the same item, managers in neighboring stores use email to share simple lists of slow moving and fast moving items and then arrange their own transfers to match local supply and demand.
- <sup>9</sup> Woolworths, a premium retailer of apparel and groceries in South Africa, pays strict attention to developing a merchandising plan that drives inventory investment to meet service-level objectives derived from its strategy and retail philosophy. It uses a criticality matrix to set the appropriate service level targets for each item and store type (or combination of store types). This attention to detail enables Woolworths South Africa to achieve superior performance for the same level of inventory investment. See the November 5, 2004, "[Retailers Augment Margins With Merchandise Management Apps](#)" report.
- <sup>10</sup> Create a centralized pricing center of excellence. The first hurdle that companies encounter when they look to improve their pricing practices is the lack of visibility of current pricing practices. Rarely do companies measure and benchmark pricing policies across business units or customers. For example, a global company like IBM can have varied pricing policies for the same customer across different regions. Although there could be a reason for that, without a central pricing function that has visibility across functions, individual units will likely continue current practices that face the least resistance from customers. A pricing center of excellence can institute and evangelize new ways of price management as well as track contract and rule compliance. See the August 24, 2006, "[Readying The Enterprise For Pricing Transformation](#)" report.
- <sup>11</sup> Forrester published a detailed case study outlining ConAgra Food's demand management implementation best practices. See the September 12, 2007, "[Case Study: ConAgra Sales Operations And Inventory Planning](#)" report.
- <sup>12</sup> Forrester published a detailed case study outlining Just Group's demand management implementation best practices. See the October 16, 2007, "[Case Study: Just Group Implements Transparent Allocation And Replenishment](#)" report.
- <sup>13</sup> Forrester published a detailed case study outlining a North American grocery chain's demand management implementation best practices. See the October 16, 2007, "[Case Study: A North American Grocery Chain Adopts Transparent Allocation And Replenishment](#)" report.

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Making Leaders Successful Every Day

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