

## The Business Challenge – How do you measure up?



- Poor customer service performance
- No clear corporate strategy on balance between inventory and customer service
- Excessive inventory on some products while others are out of stock
- Poor return on investment
- Inaccurate Forecasts
- Frequent fire-fighting

**The key to a successful business** is delivering excellent customer service while increasing profitability. For a stockholding company, that means maintaining a high level of product availability whilst minimizing overall inventory.

**RightStock is a demand management solution** that optimizes inventory through intelligent forecasting and accurate replenishment planning.

**RightStock is a tactical tool**, complementary to all major ERP and Supply Chain systems and will not compromise a larger business system implementation.

**RightStock can help you analyze your inventory** situation, let you explore alternative business strategies. RightStock will be your comprehensive inventory management tool.

**RightStock enables you to:**

- Determine an optimal balance between customer service and the cost of stockholding
- Forecast demand for materials and finished goods
- Generate replenishment orders for stock based on a specified level of service to be provided
- Improve availability of key stock items while minimizing overall inventory levels
- Achieve customer service target levels with a minimum of stock and management effort, even for very large inventories
- Increase your revenues, lower operating costs and improve profits

**RightStock Forecasting** helps you decide which products you need and when.

**RightStock Replenishment Planning** tells you when to make or acquire goods and what safety stocks to maintain to allow for unexpected events.

**RightStock Inventory Strategist** helps you decide the best balance of inventory and customer service by showing you the cost of risk.

**RightStock** is a truly agile business solution that allows a lean but optimized inventory to be easily managed whilst maintaining customer service levels and delivering improved profitability rapidly to your business.

# Forecasting



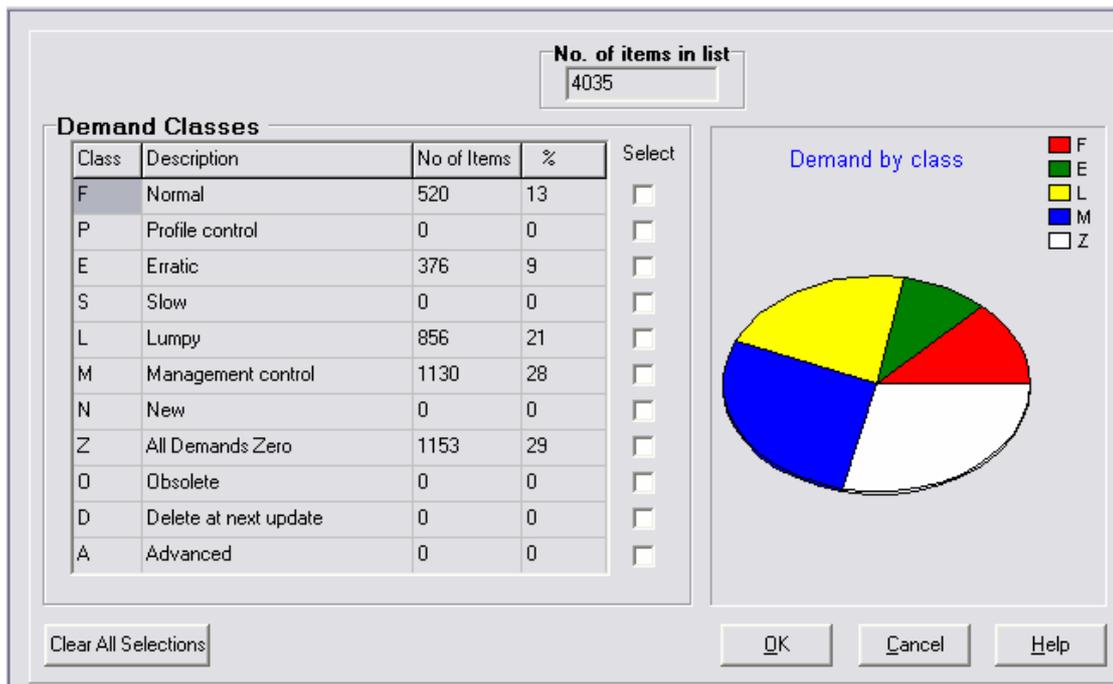
RightStock Forecasting has been developed to generate a realistic prediction of market demand.

Working as a fully functional standalone forecasting tool to support supply chain operations, RightStock Forecasting is flexible enough to address material and component replenishment predictions, finished goods inventory analysis, multi-warehouse distribution issues, spare parts replenishment or for the simulation of future sales patterns for decision support purposes.

## Forecasting Techniques

Historically, a wide range of generic forecasting techniques have been developed with the implication that each technique is well suited to many businesses. Yet no single technique has been proven to be consistently optimal for all situations. To address this, RightStock Forecasting has been designed to provide a reliable automated selection of the appropriate statistical technique. This is then utilized in the prediction of future demands for a given product, group, raw material or brand.

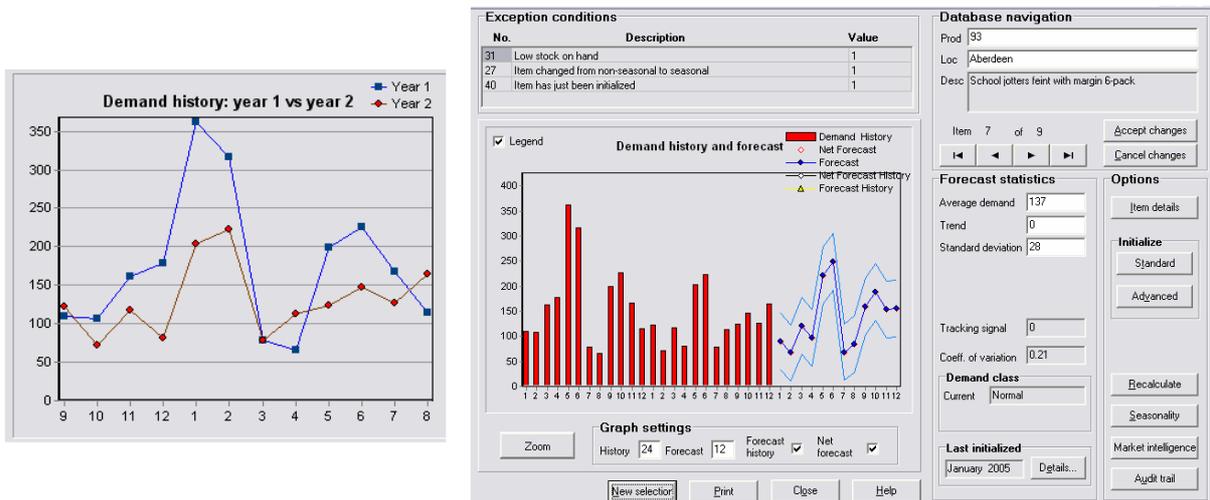
## Demand Class



The level of demand for finished goods, raw materials, ingredients, components or service parts in a typical enterprise can range from slow-moving to fast-moving, intermittent to continuous, subject to trend or seasonality and can be further complicated by the occurrence of exceptionally high or low demands in any time period. In a fluctuating real life environment, unexpected changes in level, trend and demand class can outmaneuver many forecasting techniques designed for more stable scenarios. Such situations together with new product introductions and obsolescence create significant operational demands upon the overall design of forecasting systems.

RightStock Forecasting intelligently aligns specific demand classes to the most appropriate forecasting technique which is sharply focused on the specific characteristics of that demand pattern. Patterns are described as Normal, Erratic, Lumpy, Slow moving or Seasonal.

Trends are identified using a specific statistical technique and outliers or anomalies are also identified at this point and can be excluded from calculations if desired.



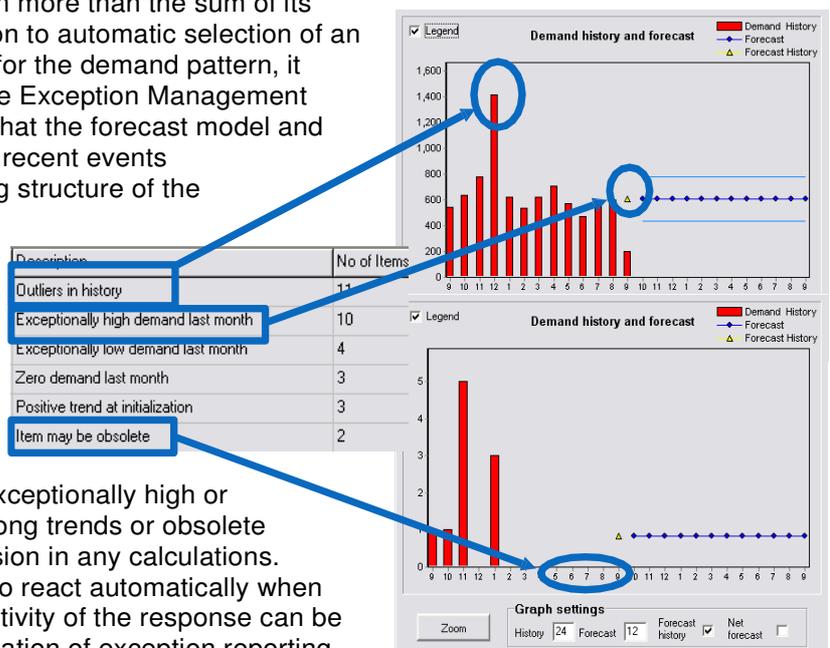
Seasonality is determined by a configurable statistical test applied to normal fast moving items. In addition, seasonal profiles calculated by RightStock Forecasting can be stored in a library and applied to other products which exhibit similar characteristics.

### Managing by Exception

RightStock Forecasting is much more than the sum of its statistical techniques. In addition to automatic selection of an appropriate forecasting model for the demand pattern, it incorporates a fully configurable Exception Management facility. This flexibility ensures that the forecast model and parameters are adjusted when recent events demonstrate that the underlying structure of the demand has changed.

RightStock Forecasting identifies a comprehensive range of exception conditions allowing management to focus on those results where direct input of market intelligence and information is required or desirable.

Exception conditions include exceptionally high or low demand, zero demand, strong trends or obsolete items no longer requiring inclusion in any calculations. RightStock can be configured to react automatically when exceptions occur and the sensitivity of the response can be set by the user. Such a combination of exception reporting and programmable system action gives the ability to manage extensive product ranges efficiently and safely.



## The Key Operations

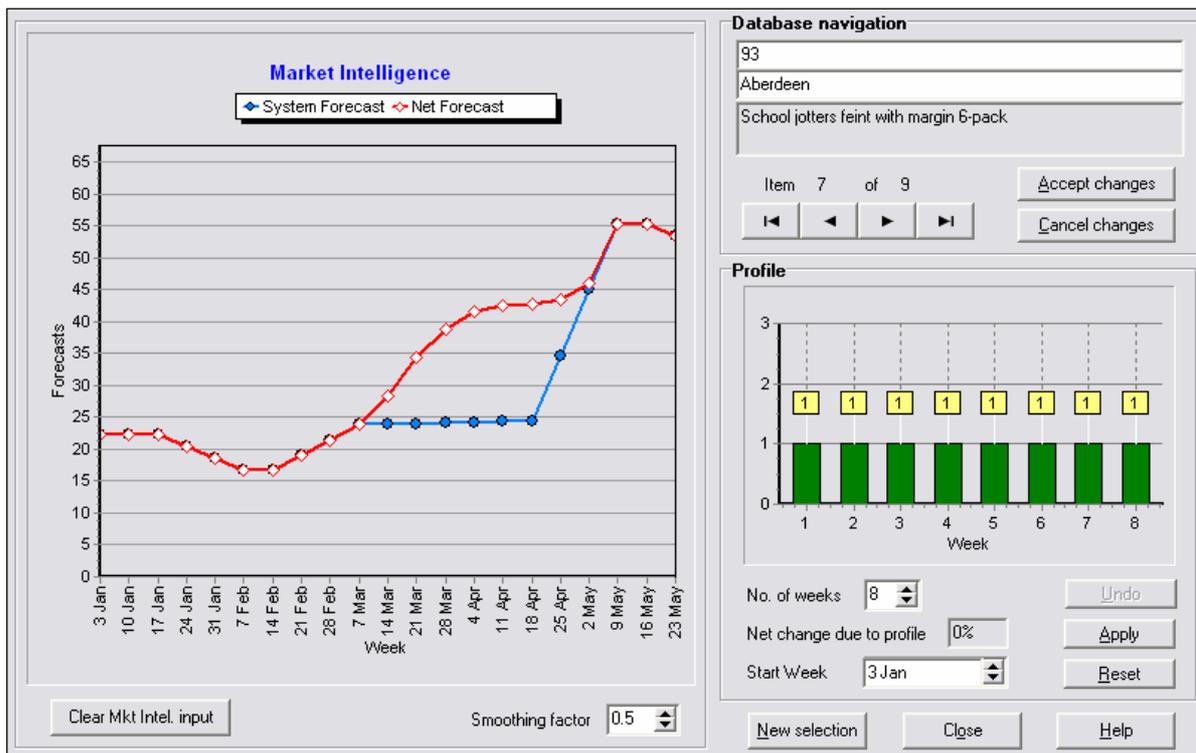
RightStock Forecasting incorporates seven simple functions to generate the forecast: data import and export, initialization, determination of any trends or outliers, seasonality, forecast generation, exception management, incorporation of market intelligence and aggregation.

Forecasts are generated for one year ahead in defined time buckets. For the normal, fast moving, erratic and profile control demand classes, a 95% confidence interval is displayed to indicate future demand uncertainty. Forecasts are updated automatically using smoothing techniques specific to the demand class and forecasts generated previously can be compared to actual historical demand.

## Market Intelligence

The incorporation of management judgment and knowledge of external events or influences into the statistically generated forecast is a key input towards achieving the most accurate forecast. This can be incorporated either directly to an individual item or as a percentage to a defined group of items.

RightStock Forecasting enables users to rapidly increase the cost-effectiveness of planning decisions, by reducing forecast error and linking improved demand forecasting to corporate goals.



# Replenishment Planner



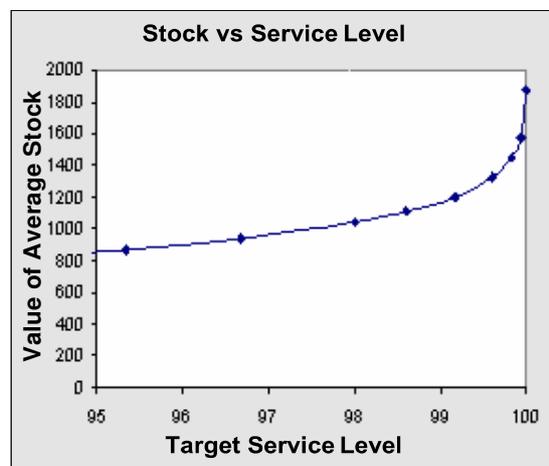
## The Business Problem

Customers will often not wait for late delivery, and suppliers either need to meet their needs immediately or lose the business. Manufacturing lead times are being greatly reduced by the application of progressive scheduling technology but there are still many markets where customers expect to be able to purchase products off the shelf. Often their continued custom depends upon it, so the supplier then has no choice but to hold stock.

### The question is - *How much stock?*

Customer demand can be very hard to predict with any accuracy and increased levels of safety stock can often be the only protection from such variability. It is always easy to improve customer service by increasing stock, and equally easy to save working capital by reducing stock, but it can be difficult to decide upon and maintain a balance between these conflicting goals.

Any stockholder knows how much money is tied up in stock. Most have a clear view as to the level of customer service they aim to achieve. But how many can put a figure on the minimum investment in stock, which will be needed to enable their target customer service levels to be met?



## Supply for Time

A common method of determining stock levels and replenishment orders is the Time Supply rule. For example setting the safety stock to 10 days' supply, or always ordering up to 2 weeks' worth of stock versus ongoing demand. While this is easy to understand and to apply, the drawbacks are clear:

- It takes no account of the fact that some products exhibit much more variable demand than others
- It does not allow a specific target service level to be achieved other than by long-term trial and error

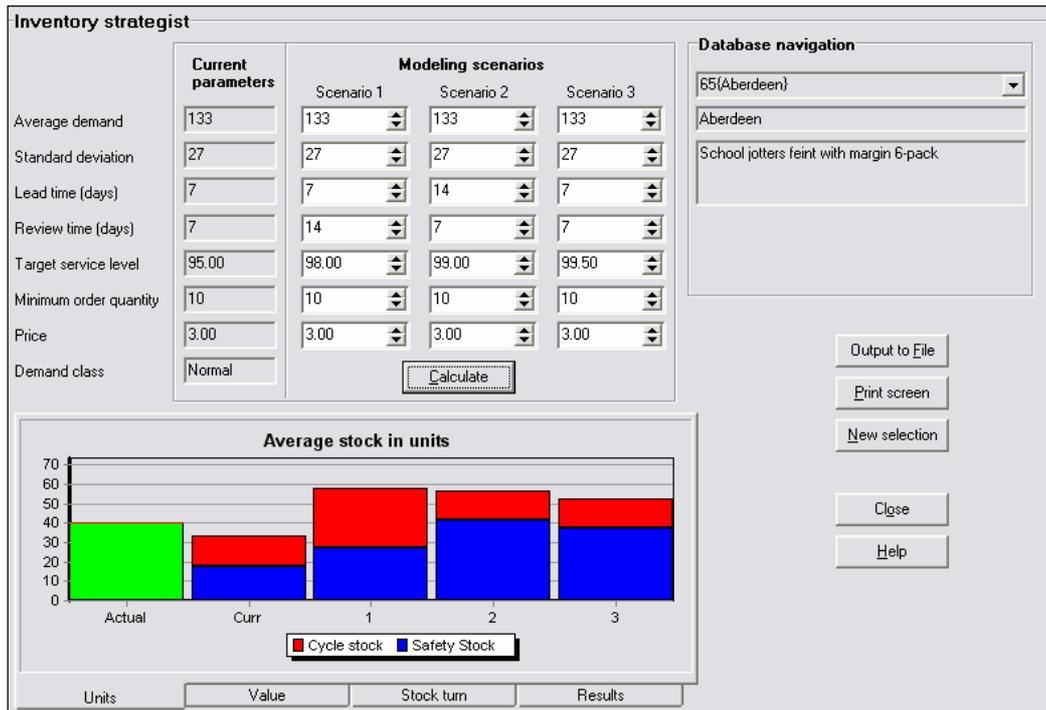
## The Contemporary Solution

In a world where customers demand a specific minimum level of service, a supplier who wishes to retain the business has two choices. They can either play safe at the risk of being significantly overstocked across a large range of products, or apply proven statistical techniques to determine the optimal stock level for each individual item.

Service-driven safety stock calculations are designed *to enable customer service targets to be met at minimum cost in inventory*. The previous diagram of stock level vs. service level shows the importance of the calculation of safety stocks. A small increase in the target service has a disproportionate effect on the investment in stock. When the stock level is so sensitive to small changes in service level, a precision tool such as RightStock is more financially effective than simple rules of thumb.

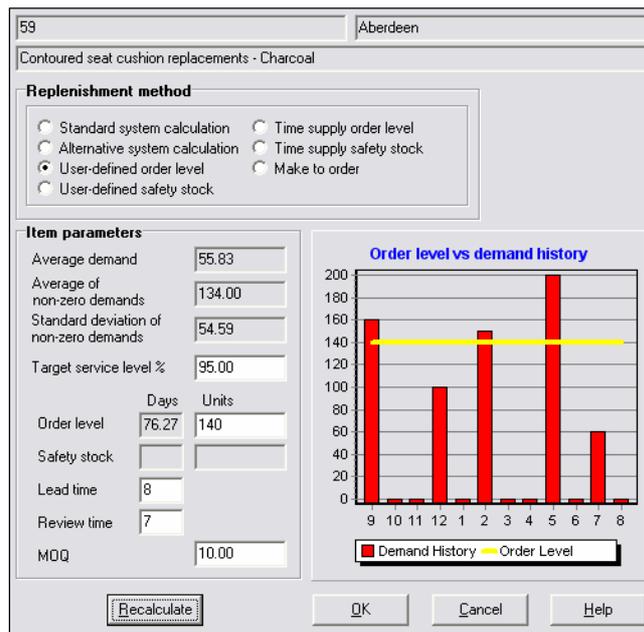
## Inventory Strategist

RightStock Replenishment Planner incorporates a powerful 'What If' inventory modelling tool allowing the fine balance between service level and inventory level to be fully explored. Simple evaluation of precise effects on average stock levels of higher or lower lead times, review times, batch sizes, average demand, standard deviation and target service level can be made. Especially useful where there are investment limits on stockholding, is the facility to adjust service targets and other factors across an entire inventory until a balance is found.



## Replenishment Planning

Once the corporate policy on the balance between service level and cost has been established, RightStock Replenishment Planner can calculate replenishment orders on a daily, weekly or monthly basis, with the order quantity rounded to take account of batch sizing. Extensive use of exception reporting enables desired service levels to be achieved and maintained with minimal imposition upon management time.



## Production Forecast

The firm replenishment order is the primary output from the RightStock Replenishment Planner.

In many situations it is also important to forecast future replenishment orders so that any potential capacity limitations can be seen well in advance. The production forecasts can extend up to a year ahead in the user's choice of time buckets.

The combination of replenishment order and production forecasts can be passed directly to the source of supply, whether external supplier or internal production unit.

Replenishment order		Replenishment controls	
	Units	Value	
Cover period forecast	71	909	<b>Lead time</b>
Safety stock	20	255.82	Months Weeks Days
Order level	91		0.46 2.00 14
Stock on hand	23	295.09	Due date Thu 18, Nov
Stock on order	50	641.50	<b>Review time</b>
Back orders	0	0.00	Months Weeks Days
Order quantity	18	228.65	0.23 1.00 7
Unit price		12.83	Next review Thu 11, Nov
<b>Rounded order qty</b>	25	320.75	<b>Service level</b>
			Target service level % 99.00
			<b>Order quantity constraints</b>
			Minimum order quantity 25
			Incremental order qty 25
<input type="button" value="Re-calculate"/>			

## Applications

In combination with RightStock Forecasting RightStock Replenishment Planner is applicable to any business situation where regular replenishment of stocks is required to satisfy customer demand immediately. The technology applies equally well to:

- Finished goods in distribution or from production
- Raw materials
- Service parts in all vertical markets

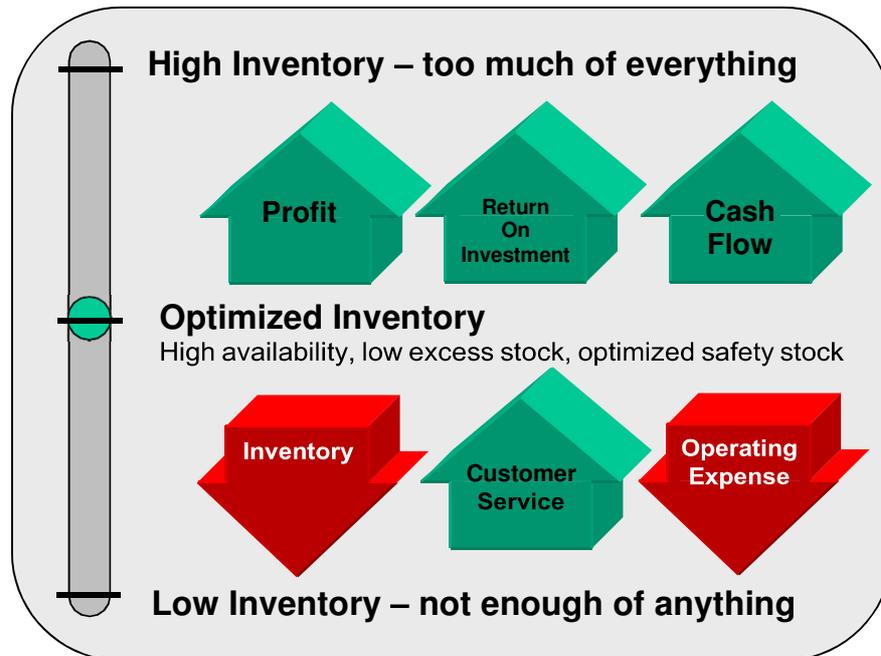
## Added Value

The statistical and mathematical techniques used in RightStock Replenishment Planner have delivered great benefits all over the world and in all industrial sectors in terms of:

- Reductions in Inventory
- Increases in throughput due to improved customer service
- Reductions in the time required to manage an inventory

RightStock Replenishment Planner exploits these techniques and presents them in a way that enables the non-statistician to achieve and maintain the strategic balance between customer service and investment in inventory.

## Optimized Inventory Boosts Profits



**Inventory** – will fall as the actual stock required is optimized by careful forecasting and accurate replenishment planning. Stocks will match customer demand. Safety stocks will be realistic.

**Customer Service** – will rise as shortages are eliminated and availability is improved by optimizing inventory to match customer demand. Prices can be keener when margins are not eaten up in unwanted stock. Happy customers give repeat orders not cancelled ones.

**Operating Expense** – will fall as storage requirements are balanced with the reduced inventory. Write-off of obsolete stock should be eliminated as should management time spent dealing with unhappy customers. RightStock reduces planning time.

**Cash Flow** – will improve as money is not tied up in unnecessary inventory and unpaid invoices due to late or part delivery

**Return on Investment** – will rise as the money in the business can be better employed rather than being tied up in unwanted inventory, write-offs and unpaid invoices

**Profits** – will rise as margins improve due to optimized, economic stock levels. The extra cash in the business can be better employed and satisfied customers bring in more business.

### For Further Information:

#### DBO Services Limited

Email: [enquiries@dboservices.com](mailto:enquiries@dboservices.com)

Web: <http://www.dboservices.com>