

Martec's ROI and Business Case Analyzer

Martec has developed a return on investment model which addresses a wide a variety of potential retail investments and encompasses deployment of:

- Omni-channel ERP systems.
- Point of sale and store systems solutions.
- Merchandise and assortment planning solutions.
- CRM solutions.
- Forecasting, Allocation and Replenishment solutions.
- Electronic shelf edge labels and associated software.
- EDI implementations.
- Warehouse automation.
- RFID.
- and many other types of investment project.

Vendors can use the product to develop business cases for their clients and retailers can use it to develop business cases for their Boards and investors. Companies can purchase Martec's ROI model complete with user documentation and a comprehensive training package. This teaches all the key concepts needed to create an effective business case to support a major investment and use the model effectively.

Some vendors will build a trial model of the client's situation at a early stage in the sales cycle to help stimulate client interest. Some will build a detailed model for a client in later stages of the sales cycle as they get closer to a decision point and some give a draft model to the client for them to finesse the numbers themselves. Which approaches you take are your decision.

Approach

We have developed a standard approach to assessing the business case for various types of investment and we do it by quantifying before and after scenarios in a financial model that assesses changes in the P&L, Balance Sheet and Cash Flow. The model is time phased to represent when costs are incurred and when benefits are actually realized.



The model format is one that is readily understood by Finance Directors or Chief Financial Officers and can be presented to the Capex Committee or Board of Directors to help secure Board approval for the investment.

An example of the P&L end result is shown below.

	2016	2017	2018	2019	2020	2021	2022	2023
New P&L Forecast								
Percent of Benefits Achieved		0.00%	5.25%	33.50%	65.50%	87.50%	100.00%	100.00%
	\$	\$	\$	\$	\$	\$	\$	\$
Sales	835,805,000	835,805,000	837,370,710	845,795,719	855,339,093	861,900,162	865,628,042	865,628,042
Cost of Goods Sold	424,640,000	424,640,000	425,204,676	428,228,352	431,623,215	433,938,582	435,247,380	435,247,380
Gross Profit	411,165,000	411,165,000	412,166,034	417,567,367	423,715,877	427,961,579	430,380,662	430,380,662
GP%	49.2%	49.19%	49.22%	49.37%	49.54%	49.65%	49.72%	49.72%
Expenses	288,672,000	289,237,000	289,430,963	289,342,963	289,074,439	288,852,630	288,696,107	288,696,107
Expenses % Sales	34.5%	34.6%	34.6%	34.2%	33.8%	33.5%	33.4%	33.4%
Operating Profit (EBIT)	122,493,000	121,928,000	122,735,071	128,224,403	134,641,439	139,108,949	141,684,555	141,684,555
EBITDA %	14.7%	14.6%	14.7%	15.2%	15.7%	16.1%	16.4%	16.4%
Interest	-138,000	-138,000	-147,854	-294,448	-633,733	-961,898	-1,179,779	-1,179,779
Depreciation	0	500,000	700,000	700,000	700,000	700,000	200,000	0
EBT	122,631,000	121,566,000	122,182,925	127,818,851	134,575,171	139,370,847	142,664,334	142,864,334
EBT %	14.7%	14.5%	14.6%	15.1%	15.7%	16.2%	16.5%	16.5%
Balance Sheet Extract								
New Turn	3.19	3.19	3.22	3.36	3.52	3.63	3.69	3.69
Inventory	133,118,000	133,118,000	132,208,365	127,553,167	122,722,571	119,643,343	117,973,657	117,973,657
Sales:Stock Ratio	6.28	6.28	6.33	6.63	6.97	7.20	7.34	7.34
Inventory @ a sales:stock ratio of	6.28	133,118,000	133,367,369	134,709,214	136,229,179	137,274,156	137,867,892	137,867,892

This example shows a project being implemented in 2017 and 2018; with go live in stages across those two years and five further years while 100% benefits realization is achieved. 2016 is also included as the base year before the project started so that future years can be viewed in terms of the increase on the base year. The cash flow analysis shows the incremental cash flows achieved by the project and the internal rate of return.

The model estimates various benefits. The main areas are:

- Sales increases.
- Gross margin improvements.
- Inventory reductions and stock turn improvements.
- Expense reductions.

Sales Increases

We define sales as:

$$\text{Traffic} \times \text{Conversion Rate} \times \text{Average Transaction Value} - \text{Returns}$$

We project sales increases by considering how the solution under consideration will increase traffic, conversion rate, average transaction value and reduce returns. We factor in key variables such as availability changes on the shelf at store/SKU or channel/SKU.

Gross Margin Improvements

The model works for all retail segments – fashion, general merchandise and food. The example below is one which calculates the improvement in gross margin for a fashion retailer as a result of implementing a merchandising solution. This is derived by assessing the increase in full price sell

through and season sell through, along with any changes in the effectiveness of promotions management and clearance.

Gross Margin Analysis			
	Before Implementation	After Implementation	
Percent full price sell through	63.1%	70.0%	
Percent sell through in season	85.0%	90.0%	
Initial margin	78.6%	78.6%	Sales 178,195,923
First markdown	25.0%	22.0%	49,650,009
Second and subsequent markdowns	40.0%	35.0%	34,006,856
Sales (Money)	226,712,370	226,712,370	
Full price sales margin	112,441,627	124,737,146	
First markdown margin	26,612,405	25,663,840	
Second & subsequent markdown margin	20,404,113	14,736,304	
Total margin earned	159,458,145	165,137,290	Gain 5,679,145
Achieved margin	70.3%	72.8%	2.5%
Achieved margin "before" from accounts	70.1%		
Simulation Margin Gain Estimate			
Model Number			2.5%

Inventory Reductions and Inventory Turn

The model includes two approaches to calculating the inventory improvements possible. The first is based on current stock turn and how it compares with best practice in other similar retailers and is illustrated below.

Relative Stock Improvement Based on Current Turnover (Gets Adjusted Later for Future Growth)			
	Before	After	Full Year Saving
Financial carrying cost	4.0%		
Physical carrying cost of stock	9.0%		
Stock turn	2.7	4.0	
Sales	96,333,885	96,333,885	
Average stock at cost	16,000,000	10,948,920	5,051,080
Cost of goods sold	43,795,681	43,795,681	
Carrying cost of stock - financial	640,000	437,957	202,043
Carrying cost of stock - physical	1,440,000	985,403	454,597
Total carrying cost	2,080,000	1,423,360	656,640

The alternative more detailed approach is based on weeks of sales:

ESTIMATION OF STOCK SAVINGS			Cycle Time (Days)	
	\$		Before	After
Total Chain Sales	1,676,000,000	Store Replenishment		
Total Chain Average Stock At Cost	480,000,000	Capture POS sales in store, transmit HQ	1	1
Total Chain Average Stock At Retail	971,000,000	Process sales at HQ	0	0
		Generate Forecast	7	2
Domestic Sourced Sales Percent To Total	65%	Raise replenishment requests	7	7
Domestic Sourced Sales	1,089,400,000	Warehouse pick and dispatch	1	1
		Shipping	8	8
Domestic Stock At Cost	312,000,000	Store receiving	1	1
Average Cycle Time For Domestic Sourcing (Days)	59			
Cycle Time Stock	87,049,950			
Safety Stock	224,950,050			
Damp Down Factor (OTB, etc)	100%	Warehouse Replenishment		
Forecast Error At Store/Article	43%	Raise PO	14	7
		Transmit to vendor	1	1
Vendor Forecast Error At Store/Article	30%	Ship to warehouse	27	27
		Warehouse receiving	4	4
Safety Stock Saving	68,008,155			
Carrying Cost Percent First Year	11%			
Carrying Cost Percent Subsequent Years	5%			
Full Inventory Carrying Cost Impact In Expenses Section Of P&L	-7,480,897	Total Cycle Time (Days)	71	59
Subsequent Year Impact	-3,400,408			

Expenses

Expense savings can include payroll, insurance premiums, occupancy costs, marketing costs, compliance costs, freight charges and a variety of other expenses. Alongside expense savings, many solutions also increase expenses, at least initially, because of the costs associated with buying and implementing the solution.

Deriving Improvement Estimates

How do you get the improvement numbers? There are three main ways:

1. Sometimes you can measure results directly. For example, if you manage inventories on 10 weeks of supply, say, and can identify process improvements that will mean operating on 8, the inventory saving can be calculated directly.
2. In some cases, we know from past project experiences what a reasonable result will be. For example, we know that every one percent improvement in availability on store shelves delivers an average 0.5% increase in same store sales. This knowledge is encoded in the model.
3. Selecting a peer group of publicly quoted retailers or those privately held retailers that file or publish their accounts and determining best practice for some metrics, such as achieved margin and inventory turn by examining publicly available information. You can then compare your projected improvements to see if they put you out of line with other well regarded retailers.

Sensitivity Testing

Once the first draft business case is built you can test the sensitivity of key metrics and assumptions to see whether they are material and likely to change the decision to invest. If not, you don't need to worry too much, but if they are then they need further research. The model includes a simulation facility which preserves original data so it doesn't have to be re-keyed repeatedly.

Phasing

In projects of this nature, the bulk of the investment cost will be spent in years 1 and 2. There will be no benefits realized in year 1, some will start to be achieved in year 2 and they will increase in years 3, 4 and probably 5, as your staff grows with the new system and really gets to understand how to exploit it to the full. Hence, benefits are phased in over time, factoring in when the various modules of the system go live and how long it will take everyone concerned to get to full competence with the new facilities.

Investment Cost

The investment cost is broken into various elements, notably those that are Capex and those that are operating expenses. All relevant costs such as annual maintenance or support, recurring license fees, cloud or hosting costs, etc. as well as the one-time costs, such as implementation services are included.

Results Analysis

The results are presented in three ways:

1. A time phased P&L starting with the base year and typically running till 5 years after the go live.
2. A time phased extract of the balance sheet showing the impact of working capital changes, notably inventory and cash.
3. A cash flow statement by year typically showing changes in cash inflows and outflows and the internal rate of return.

ROI models are provided as Excel spread sheets with an accompanying document describing how to use them and what data to populate them with. The models also include help in each data input cell to explain what to enter and, often, to give advice on values to use if unsure.

What Makes Martec's Approach Unique?

Our model includes a Segment Default Data worksheet which provides key performance indicator guidelines and benchmarks by retail segment and geography. These provide valuable starter data when you don't have access to all the data you want.

We build the detail of our models and estimates so that if the client does not achieve them after go live, they can identify where they missed and then take remedial action.

For example, if they failed to achieve a predicted gross margin gain, there could be three contributory factors:

1. Full price sell through isn't what was predicted
2. The improvement in promotion success isn't happening
3. The expected reduction in clearance costs was not achieved.

Clients can compare actual performance with the model predictions and see which one(s) fell short. If it was full price sell through, for example, the steps planned to achieve the goal can be reviewed and ones which were not implemented successfully identified. Remedial action can then be initiated. This way, clients can ensure that they really do get the benefits they expected.

The Package

The ROI package consists of:

- The ROI model.
- A detailed user guide.
- 4 user licenses for Martec's e-learning Building a Business Case and ROI Course.
- A one hour webinar for your team with a live instructor reviewing how to use the model.

Making It Fit You

We have a general purpose model which we can customise to each client's unique situation. We start by understanding exactly what you sell to who, what the real benefits are that you deliver and we then edit the model logic to accurately model the benefits and cost associated with your specific solutions.

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