

## **HOW TO INFORM PRICE CHANGES TO BUSINESS: An easy tool to implement!**

Do raw materials have a major impact on your company costs? If so, any of your business colleagues worth their salt will want to know ASAP when their raw materials undergo a price increase.

Of course, for raw materials with big spend dollars and high variable-cost impact, purchasing usually informs its internal clients about changes in price.

Now, imagine that you are able to show, on a monthly basis, the overall price increase or decrease of *all* raw materials! Moreover, that you are able to show the price impact over the following three months in the future, serving as a purchasing alert for what is happening in the marketplace, allowing business colleagues to take proactive measures and prevent margin erosion.

This is possible without additional software, just using your company data along with **Purchasing Alerta™**, an Excel spreadsheet developed specifically for this purpose.



Before I explain the **Purchasing Alerta™** tool, let me go over with you some crucial terminology: timing, prices, business structure, and three economic terms.

### **TIMING**

In any supply chain we have inventories of Raw Materials (RM), Work in Process, semi Finish Goods and Finished Goods (FG). Those inventories serve as buffers to meet uncertainties in demand, supply, and movement of goods. Every industry adapts these for the timing needed to avoid specific uncertainties.

According to a study from Hackett Group ([SupplyChainDigest](#)), the 2010 average days of inventory outstanding for hundreds of public U.S. companies was around 51 days. To that we must add the manufacturing time, Work in Process and movement of goods. Even for very efficient companies, these factors move the timing to an average of 90 days.

Based on accounting rules, RM prices register in the books or ERP systems the moment the product arrives at the plant, or more precisely, register the quantity received and total amount to be paid. Under the same rules, sales are registered the moment the FG leaves the plant to the customer. With a lag time between RM and FG around 90 days, a RM purchased in January is part of the FG sold in April.

### **PRICES**

Unit price in purchasing is defined as the total amount to be paid divided by the total quantity received. The Unit of Measure (UOM) used to define the quantity is used in a unit price like \$/pound, kilogram, metric ton, square meter, etc.

Purchasing departments deal with variability all the time because the same product is purchased in different UOMs according to the geographic region. The USA, United Kingdom, and former British colonies use English units of pounds, ounces, tons (long and short), gallons, and cubic feet. Most other countries use metric units of kilograms, metric ton (1000 kg), and liters. The same mix of UOM is used on the sell side by the company.



The problem of comparing sales unit price with RM unit price is that both must be in the same UOM for accurate comparison. In order to meet this need, **Purchasing Alerta™** was developed to translate almost all UOMs, from sales and purchasing, into one measurement, allowing users to compare apples with apples.

**BUSINESS STRUCTURE**

Each organization has its design based on business type and structure. The most common structure has at the highest level the global business unit (GBU), where it is divided into business groups, business units, value centers, and performance centers. The names used in the organization may differ, but the structures follow the same rational: aggregation of products. Each product sold belongs to a performance center, which belongs to a value center, and so on.

Once the corporation defines its structure, finance and business develop the sales structure accordingly, and controllers (as a part of finance) develop cost accounts accordingly. For example: Product A is manufactured using RM “X” and “Y.” On the sell side, Product A is registered into the system in the appropriate performance center, value center, and so on. The RM “X” and “Y” are registered on the cost side following the same business structure.

Following accounting rules in any country, any sale of a product is registered into the system in the correct business. Likewise, any raw material used to manufacture that product is also registered in the same business. **Purchasing Alerta™** was developed to link both sales and purchasing in the same manner, at any level desired.



**ECONOMIC TERMS**

Margins are terms used in economics to define the amount of money remaining after deduction of certain items and normally used in the income statement analysis. The income statement starts with revenue and then shows all possible costs reaching profitability. Three important margin terms are:

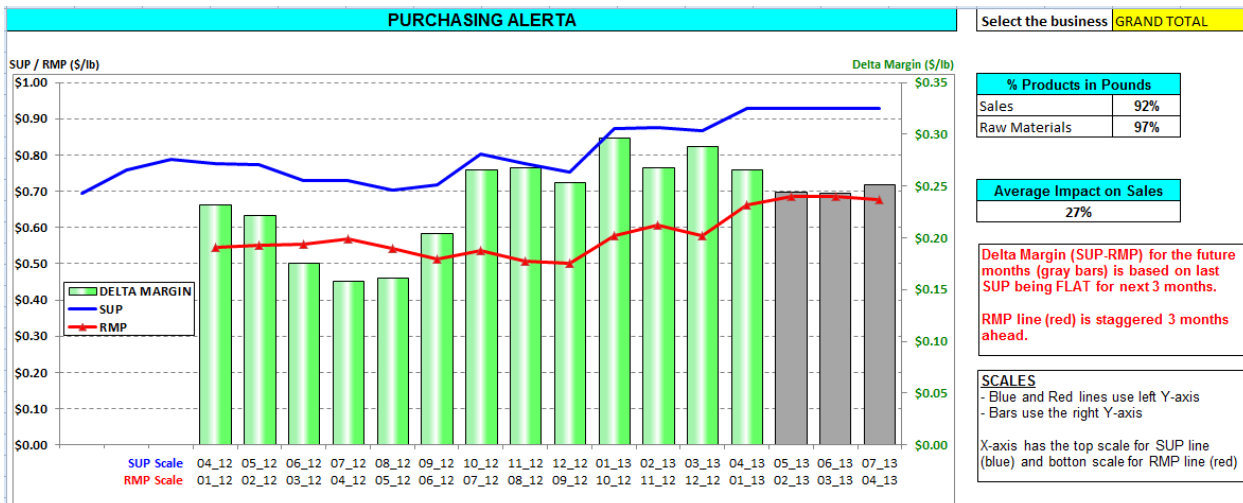
- Contribution Margin: This is the revenue less the variable costs. Variable costs are composed of all input costs which vary according to the quantity of products sold (raw materials, packaging, utilities, etc.).
- Gross Margin: This is the contribution margin less the fixed costs. Fixed cost is composed of plant labor, maintenance, depreciation, and all other costs in the plant (which do not change with produced volume).
- Operating Margin: This is the gross margin less expenses. Expenses are composed of R&D, administration, sales, marketing, etc.

**Purchasing Alerta™** shows the difference between sales unit price (SUP) and raw material unit price (RMP). This is a margin close to the contribution margin because it contains all raw materials but not packaging or utilities; for this reason, we call this the Delta margin.

**PURCHASING ALERTA™**

Any company where raw materials have a high impact on cost can use this tool. The software gives an alert to business colleagues on what is happening in the marketplace related to all raw materials purchased by the company compared to their sales unit price (SUP).

More important, it alerts users as to what will happen in the coming three months, so colleagues can take proactive actions to avoid margin erosion.



**Scales**

- Both Y-axes are, in this case, in \$/pound, the unit of measure (UOM) common to sales unit price (SUP) and raw materials price (RMP). All UOM, from sales and purchasing, were translated into just one UOM. The blue line represents SUP, and red line represents RMP.
- The X-axis presents two time scales, one for SUP (top) and another one for RMP (bottom). The scale for RMP is staggered three months ahead. As explained in the paragraph above Timing, there are around ninety days of lag time, so a raw material purchased in January will comprise part of the cost of a sold product in April.
- The delta margin is the difference between SUP and RMP in \$/pound represented in the bars.

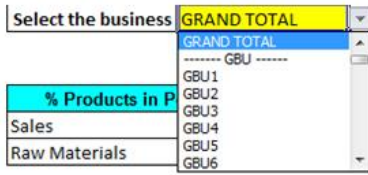
**Forecast**

As we have a lag time of ninety days between the raw materials and sold products, we can forecast the cost impact in future sales. In reality, we are using actual RM data from the ERP system which will be part of the cost of products to be sold in the future.

As purchasing professionals are not expert in predicting sales prices for the future, we assume the sales price (SUP) from the ERP system will remain flat in the next three months based on last price available. This is, at least, the conservative view.

With this SUP “forecast” we are able to calculate the delta margin (gray bars), showing the improvement or erosion of margin in the next three months, and our business colleagues can take proactive measures accordingly.

**Business Structure**



Through a drop-down tool, you can select any business level, according to the existing business structure, and the graph will display the data accordingly.

**Relevant Information**

This tool also calculates other relevant information: Impact on sales (total purchasing costs divided by the total sales, for each selected business) and Percentage of products translated to the same unit from all UOM in the ERP system.

% Products in Pounds	
Sales	92%
Raw Materials	97%

Average Impact on Sales
27%

**HOW THIS FITS YOUR COMPANY**

The **Purchasing Alerta™** tool can be adapted to your company and you will be able, on monthly basis, to alert your business colleagues about what is happening in the marketplace.

- You define the business structure you want to show
- We prepare the tool with all your sales and purchasing data
- We coach you on defining the process of monthly data collection
- We coach you how to do the monthly updates, while you manage the tool internally
- You need no software, just a person to collect the data, manipulate it in the tool, and publish in your Intranet for access by your business colleagues

To request a free demonstration, email [paulomoretti@pm2consult.com](mailto:paulomoretti@pm2consult.com).

With best regards,

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**Paulo Moretti**

Principal