

User Guide for Marketing Programs Analysis Template

Description of Marketing Program Contribution Margin Analysis Template

The model computes a contribution margin for each Marketing Program. (See definitions of terms below).

- *The Key: Allocate revenue from each sales order to specific Program Events that touched the customer.*
 - Allocate expenses (to Programs, Program Events, Lead Events) using fixed expense and variable expense per Lead Person.
 - Contribution margin (of a Program, Program Event or Lead Event) = allocated revenue – allocated costs.
 - The key results are collected on worksheet "ContMargin."
- The model tracks sales revenue by customer, by product, and by time period during model time.
 - It lumps together all orders from one customer for one product in one time period.
 - The model computes gross margin and allocated it to each marketing and sales program.
 - Allocating gross margin (instead of revenue) to programs ensures the programs get high ratings for generating margin dollars, not revenue.
 - This is the key step that produces the useful metrics that follow.
 - The model computes a contribution margin for each Marketing Program. (See definitions of terms below).
 - *The Key: Allocate revenue from each sales order to specific Program Events that touched the customer.*
 - Allocate expenses (to Programs, Program Events, Lead Events) by gradually 'depreciating' expense of each program over the life of the program. Expense accounting includes fixed expense and variable expense per Lead Person.
 - Contribution margin (of a Program, Program Event or Lead Event) = allocated revenue – allocated costs.
 - The key results are collected on worksheet 'Contrib Margin'.
 - The model computes "accrued" program expense for each time period.
 - Each marketing and sales program is a depreciable asset, with its own lifetime, and its own depreciation schedule based on the specified rate of decline in selling effectiveness of each program over time.
 - The cost of a program in each time period is defined as the depreciation in that time period (not the actual expenditure in that period).
 - Remaining asset value at the end of model time is not included in accrued program expense. (Sales orders are tracked during model time.)
 - Allocates accrued program expense to each lead event, which allocates it to customers.
 - Allocating program expense to time periods and customers results in allocating it to products.
 - The model matches revenues with associated program expenses.
 - Each type of Lead Event has a finite effective lifetime. The effectiveness of a Lead Event (measured by its share of revenue from a customer order) declines over its lifetime.
 - The model tracks Lead Events ('marketing touches') that occur several time period before the start of model time. It adds part of expense from those earlier periods to accrued program expense during model time.
 - The model computes a contribution margin and return on investment for each program.
 - Contribution margin is defined as revenue less cost of goods, less accrued program expenses. It does not subtract overhead expenses, so it is higher than the bottom line profit margin.
 - The return on investment metric is some times called ROMI (return on marketing investment). It does not subtract overhead expenses, so it is higher than normal profit margin percentages.
 - The model optionally includes measures of profit performance for individual products and customers.
 - Advanced versions of the model contain a pivot table report for customer data.
 - The model includes Excel graphs of key variables.

Not all features are included in the Standard Version.

Instructions for Using Marketing Programs Analysis Template

1 Let the template tell you how it works

The template has four main facilities to help you learn how it works.

- Throughout the template, section titles, variable names and Excel comments provide information about the template and the computations behind it. The Excel comment for each variable is repeated for each display instance of a variable.
- Worksheet “Labels” contains a glossary of variables and dimensions in the template.
 - It lists all the variables in the model, accompanied on the right by the explanatory comment for each variable.
 - It lists all the dimensions and their dimension items, accompanied on the right by the explanatory comment for each dimension.
- The Excel workbook contains Excel collapsible groups that you can open to see detailed information or close to get an overview of the information on each worksheet.
- Worksheet “Formulas” contains a list of the symbolic formulas that define values of variables in terms of numerical constants and other variables.

The template is derived from these symbolic formulas by ModelSheet. Although these formulas are not executable in Excel, they often provide the quickest route to understanding what the computations are doing, avoiding the need to decode dozens of Excel formulas written in terms of cell addresses.

Of course, you can read the Excel cell formulas.

2 Editing Data in the Excel Template

You can enter input data in shaded input cells (usually dark blue). Most of the input data is on worksheet 'Inputs'. You can edit display names of variables and dimension items on worksheet 'Labels' (and in some templates the input cell for Model Start Date is located at the top of worksheet 'Labels'). Putting most inputs in one or two places eliminates the need to search the workbook for input cells.

3 Customizing the Excel Template

You can customize the workbook further on the worksheet “Labels”.

- Change the model start date (at the top of the worksheet).
- Change the display name of any variable, dimension or dimension item.
- Edit the comment associated with any variable or dimension. The new comments will not propagate through the workbook.

If you want to include these changes in a future version of the template, you can re-import them into ModelSheet, which will include them in any future version of the template exported from ModelSheet.

4 Further Customizations

This template has additional features that can be turned on or added, such as learning curve effects, lot size scale effects, recruiting costs and more.

In addition, ModelSheet Software can extend the template in new directions to meet your requirements, on a project basis.

Technical Notes

- Allocate gross margin (revenue - cost of goods sold) to programs, so that programs are rewarded more for helping to generate high-margin sales.
- Terminology
 - Marketing Program: an activity such as all seminars, all webinars, all website visits, all trade shows.
 - Sales Program: the model also includes sales department program events such as visits and phone calls. (Not included in Standard Version)
 - Program Event: a specific activity at a specific time, such as a seminar, webinar, website visit, trade show participation.
 - Lead Person: one person from a prospective customer organization who is reached (and presumably influenced) by a marketing program.
 - Lead Event: The event at which a Lead Person is reached by a Program Event.
 - Bluebird: An order that has no associated Lead Events; that is, there is no record of a company program that influenced the buyer.
- The customer is a network of people that make the purchase decision.
 - In practice, the customer site (defined by company, division, address) is a proxy for the decision network.
 - The customer is not the person who placed the order or the person who attended the Program Event. Using these definitions makes it impossible to link marketing touches with sales orders.
- The effectiveness of a program event in influencing purchasers changes over time as a function $Pgmeff(T)$ (where $T := (\text{order date} - \text{event date}) / (\text{Program Life})$) that satisfies these conditions.
 - $Pgmeff(0) = 1$. That is, measure effectiveness over time relative to initial effectiveness.
 - The derivative $d Pgmeff(T) / dT = 0$ when $T = 0$ or 1 . That is, the rate of change of effectiveness is very small at the beginning and end of program life.
 - The value of $Pgmeff(0.5)$ is an adjustable parameter called hv (half value) that determines whether the effectiveness declines more in the first or second half of program life.
 - $Pgmeff(T)$ is a polynomial.
 These conditions determine that during program life (for $0 \leq T \leq 1$) $Pgmeff(T)$ is:
 - the computationally efficient Horner's form: $(T * ((16 * hv - 8) * T - 32 * hv + 18) + 16 * hv - 11) * T^2 + 1$
 - the factored form that is easier to read: $(T - 1)^2 * (2 * T * (2 * hv - 1) * T + 1) + 1$
 This expression is used in ModelSheet analysis variables "Mktg_Ev_Age_Factor" and "Sls_Ev_Age_Factor" to determine the effectiveness of marketing and sales programs as they age.
- The effectiveness function determines depreciation as a function of time to be initial value * $Pgmdepr(T)$, where $Pgmdepr(T) = - d Pgmeff(T) / d T$. Therefore the remaining "book value" of a program at normalized time T ($0 \leq T \leq 1$) is $Pgmeff(T)$. This fact is used in ModelSheet analysis variables "Mktg_Pgm_Exp_Accr" and "Sls_Pgm_Exp_Accr" to determine the accrued portion of the cost of a program at the end of model time.

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