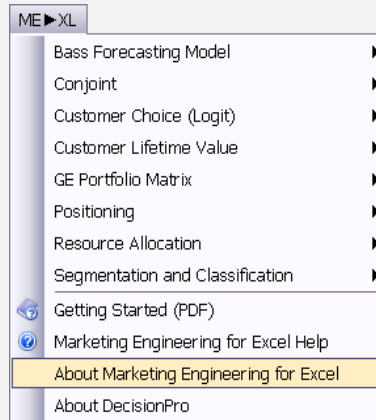Tutorial

GE Portfolio Matrix

Marketing Engineering for Excel is a *Microsoft Excel* add-in. The software runs from within Microsoft Excel and only with data contained in an Excel spreadsheet.

After installing the software, simply open *Microsoft Excel*. A new menu appears, called "*ME▸XL.*" This tutorial refers to the "*ME▸XL/GE Portfolio Matrix*" submenu.

Overview

The GE Portfolio approach evaluates a business on the basis of two composite dimensions: industry attractiveness and business strength. These dimensions, in turn, consist of a series of weighted factors. Both the factor weights and the factors themselves may vary from one application to another; for example, industry attractiveness includes measures of market size, growth rate, competitive intensity, and the like, whereas business strength normally includes such measures as market share, share growth, and product quality. Analysts assign each business a rating for each factor and a weight to each factor. Multiplying the factor ratings by the weights produces a position for each business on the strength/attractiveness matrix.

Although designed to mimic the GE approach to portfolio management, this model can also be used for any situation in which a certain number of entities (e.g., companies, products, sales territories) can be ranked on one or more sets of weighted factors.

The GE Portfolio approach helps firms answer such questions as:

   ✓   On which products, offerings, or divisions should we focus our efforts?

- ✓ What method can we use to assess and understand the weights that various members of the management team assign to different dimensions?
- ✓ How can we reconcile different points of view regarding weights and evaluations given to various factors by different groups within an organization?

Getting Started

The GE Portfolio matrix software allows you to use your own data directly or to use a template preformatted for the GE analysis.

F.Y.I.

The next section explains how to create an easy-to-use template to enter your own data.

If you want to run the GE Portfolio Matrix immediately, open the example file "*OfficeStar Data (GE).xls*" and jump to "Step 3: Running analysis" (p. 7). By default, the example files install in "*My Documents/My Marketing Engineering/.*"

Step 1   Creating a template

Using the interactive assistant

In Excel, if you click on ME ▸ XL → GE PORTFOLIO MATRIX → CREATE TEMPLATE, a dialog box appears. This box represents the first step in creating a template for running the GE Portfolio matrix software. The first dialog box prompts you to use an interactive assistant.

Unless you are already familiar with the methodology, you should select "yes."
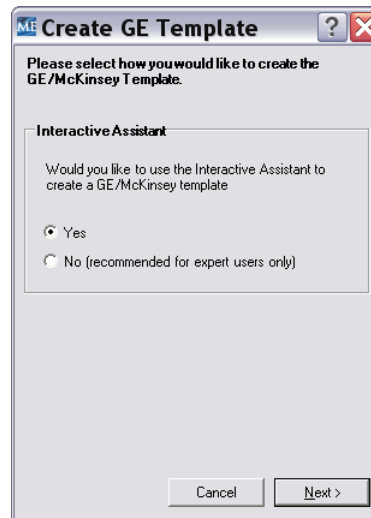
Listing items

The first step of the template generation process requires you to label and list the items (e.g., business units, products) you want to compare.

Label the type of entities you will be analyzing. "Business Units/Products" already has been entered as a default.

Enter the names of your business units/products in the drop-down box. Press ENTER or click on the Add button to add your entry to the list of business units/products.

After entering the items, you may reorder your list by selecting an item and clicking the Up or Down button. You may also delete the highlighted item.
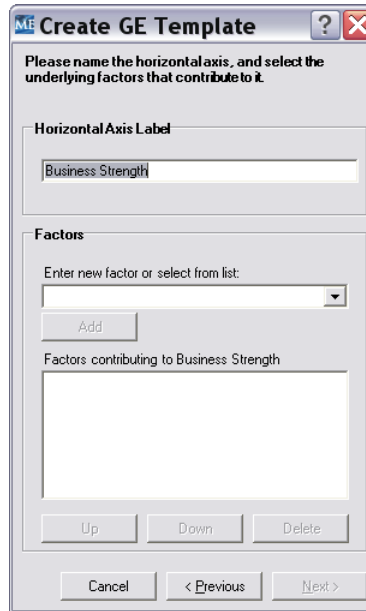

After entering all your business units/products (at least two), click on the Next button to proceed to the next step of the template creation process.
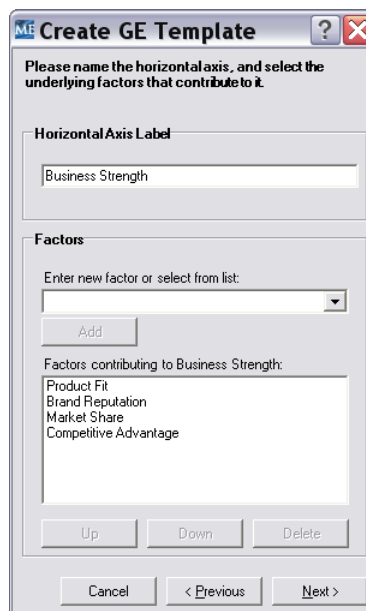
Defining the horizontal axis

In the next step, you label and define the underlying components of the horizontal axis, labelled "Business Strength" by default.

Enter the names of your business strengths for this analysis. Alternatively, you may choose from a list of preset alternatives in the drop-down box. (Note: Items with a "C#" after them refer to the factors defined by Cooper [1993].) Press ENTER or click on the Add button to add your entry to the "Factors contributing to Business Strengths."

After entering the names, you may reorder your list by selecting an item and clicking the Up or Down button. You may also delete the highlighted item.

After entering all your business strengths (at least one), click on the Next button to proceed to the next step of the template creation process.

Defining the vertical axis

In this step, you label and define the underlying components of the vertical axis, labelled "Industry Attractiveness" by default.

Enter the names of your industry attractiveness factors for this analysis. Alternatively, you may choose from a list of preset alternatives in the drop-down box. (Note: Items with a "C#" after them refer to the factors defined by Cooper [1993].) Press ENTER or click on the Add button to add your entry to the "Factors contributing to Industry Attractiveness."

After entering the factors, you may reorder your list by selecting an item and clicking the Up or Down button. You may also delete the highlighted item.
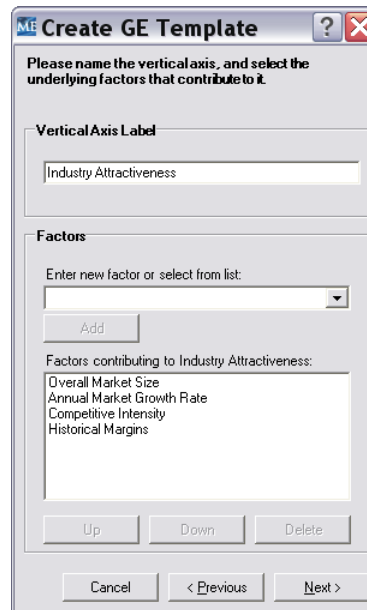
After entering all your industry attractiveness factors (at least one), click on the Next button to proceed to the next step of the template creation process.

Defining weight sets

The last step of the template generation process requires you to define the weight sets.

Different groups in the organization often believe the various factors from the previous two sections have different levels of importance. The analysis can take this divergence of opinion into consideration and help illustrate how two different groups might disagree about the importance of a factor, which indicates the relative positioning of the business units or products.

Create GE Template

Please select whether the analysis will be run with one or multiple weight sets, and name the weight sets under consideration.

Number of weight sets
- ○ One set of weights
- ● Multiple sets of weights

Weight sets

Enter new Weight Set Label:

[   ] ▼

Add

List of Weight Sets

Marketing Weights
Finance Weights

Up   Down   Delete

Cancel   < Previous   OK

To use the default, i.e., One set of weights, click OK. Otherwise, select Multiple sets of weights to enable the rest of the dialog box. Enter the names of your weight sets (groups or people in the organization) in the drop-down box, then press ENTER or click on the Add button. Your weight set appears in the List of Weight Sets.

By clicking OK, you generate a template.

Microsoft Excel - Book2

File Edit View Insert Format Tools Data Window Help ME ▶ XL

Horizontal Axis (ratings, weights)

On a scale from 1 to 5, rate Products on each factor, and weight the importance of each factor.

Business Strength	Office Supplies	Furniture	Computers	Software	Ink & Toner	Marketing Weights	Finance Weights
Product Fit						5	5
Brand Reputation						5	5
Market Share						5	5
Competitive Advantage						5	5

Vertical Axis (ratings, weights)

On a scale from 1 to 5, rate Products on each factor, and weight the importance of each factor.

| Industry Attractiveness	Office Supplies	Furniture	Computers	Software	Ink & Toner	Marketing Weights	Finance Weights
Overall Market Size						5	5
Annual Market Growth Rate						5	5
Competitive Intensity						5	5
Historical Margins						5	5

Market Size

On a scale from 1 to 20, please enter market size for each item.

	Office Supplies	Furniture	Computers	Software	Ink & Toner
Market Size	10	10	10	10	10

Not using the interactive assistant

You may skip the above intermediary steps and create a blank template. When you are prompted to use the interactive assistant, just click "no." The following dialog box appears:
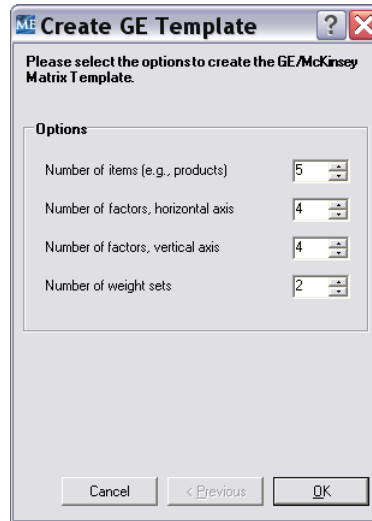
When you click OK, you generate a new blank spreadsheet. You must enter the names of all entities and factor labels manually in the spreadsheet.
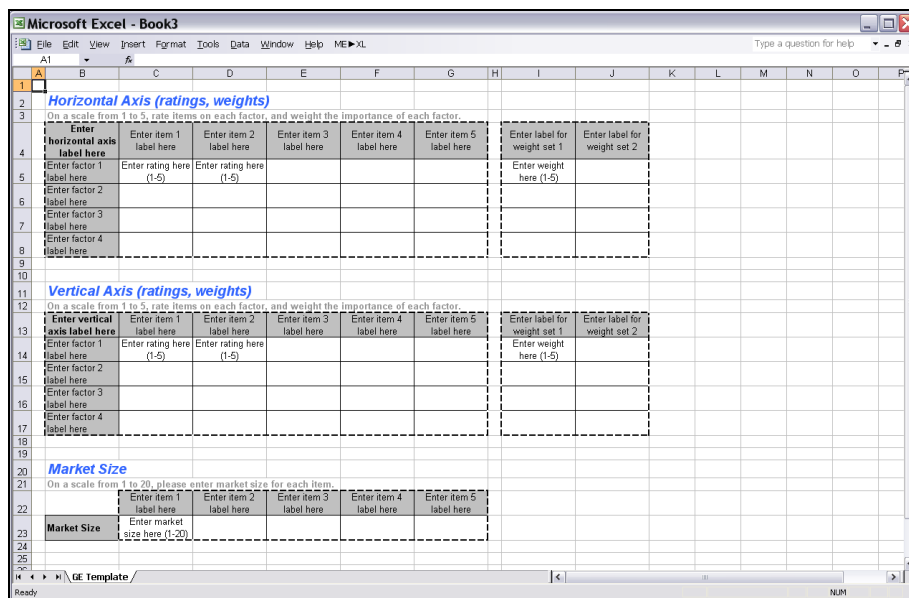
Step 2   Entering your data

In this tutorial, we use the example file "*OfficeStar Data (GE).xls,*" which by default appears in "*My Documents/My Marketing Engineering/.*"

To view a proper data format, open that spreadsheet in Excel. A snapshot is reproduced below.

Microsoft Excel - OfficeStar (GE).xls

Horizontal Axis (ratings, weights)

On a scale from 1 to 5, rate Products on each factor, and weight the importance of each factor.

Business Strength	Office supplies	Furniture	Computers	Software	Ink & Toner	Marketing weights	Finance weights
Product Fit	4	4	3	2	5	5	3
Brand Reputation	5	3	2	1	4	5	2
Market Share	3	2	1	3	3	3	5
Competitive Advantage	4	5	3	2	3	5	1

Vertical Axis (ratings, weights)

On a scale from 1 to 5, rate Products on each factor, and weight the importance of each factor.

Industry Attractiveness	Office supplies	Furniture	Computers	Software	Ink & Toner	Marketing weights	Finance weights
Overall Market Size	4	4	5	3	2	2	5
Annual Market Growth Rate	1	2	4	3	4	2	4
Competitive Intensity	2	4	5	2	2	4	2
Historial Margins	2	2	1	3	4	3	5

Market Size

On a scale from 1 to 20, please enter market size for each item.

	Office supplies	Furniture	Computers	Software	Ink & Toner
Market Size	8	6	8	9	5

A typical GE Portfolio matrix spreadsheet contains:

- **Horizontal (vertical) ratings:** Consensus estimates of the *relative* strengths of each item (e.g., business units, products) on the underlying factors that constitute the horizontal (vertical) axis.

- **Horizontal (vertical) weights:** The weights of the underlying factors that constitute the horizontal (vertical) axis. The higher the weight, the more impact the ratings have on the overall axis. You can use different sets of weights to see how the weighting of various factors affects the overall analysis.

- **Market sizes:** These sizes affect the size of the bubbles in the final GE Portfolio charts.

> All weights and ratings have positive connotations, meaning that a higher rating means "better" and a higher weight means "more important."
>
> For example, if you take into account a "Competitive Intensity" factor, a rating of 1 would mean that competition is very intense in the market (usually an undesirable characteristic), and a rating of 5 indicates the market is largely free of major or aggressive competitors.
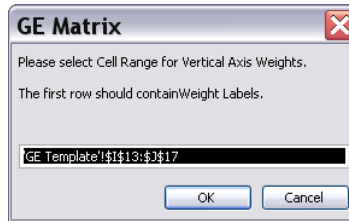
Step 3   Running analyses

After you enter your data in the Excel spreadsheet using the appropriate format, click on ME ▸ XL → GE PORTFOLIO MATRIX → RUN ANALYSIS. The dialog box that appears indicates the next steps required to perform a GE Portfolio matrix analysis of your data.
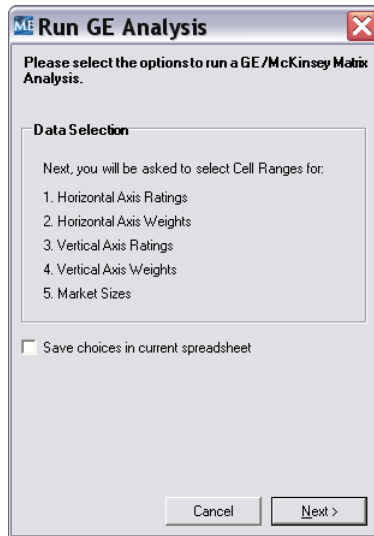
When you have selected all the options, then select the cells containing the data.
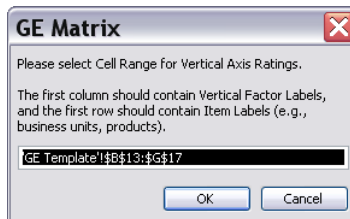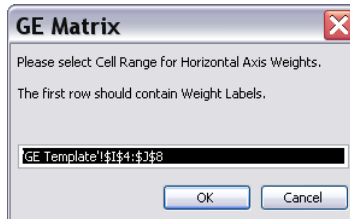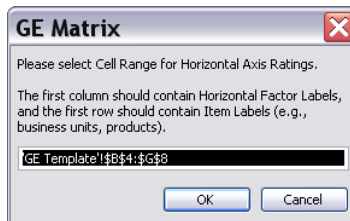
The new generated spreadsheet contains the results of your GE Portfolio matrix analysis.

Step 4   Interpreting the results

GE matrices

The software generates a GE matrix for each weight set. If you have specified different weight sets, you might switch from one matrix to the next to help identify how the different sets of weights affect the overall diagnostic results.
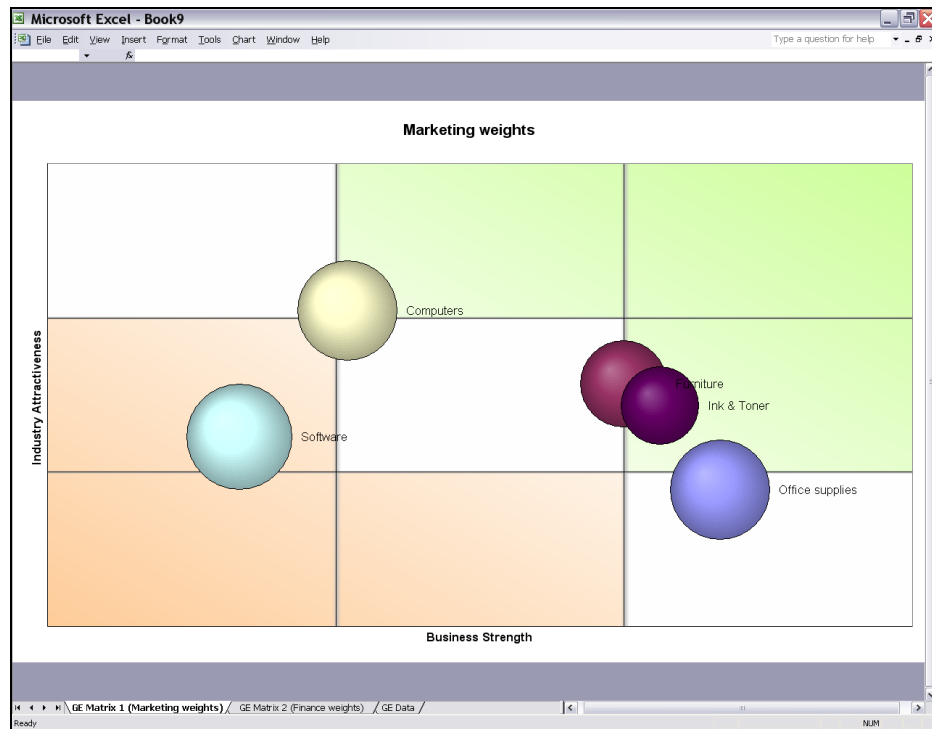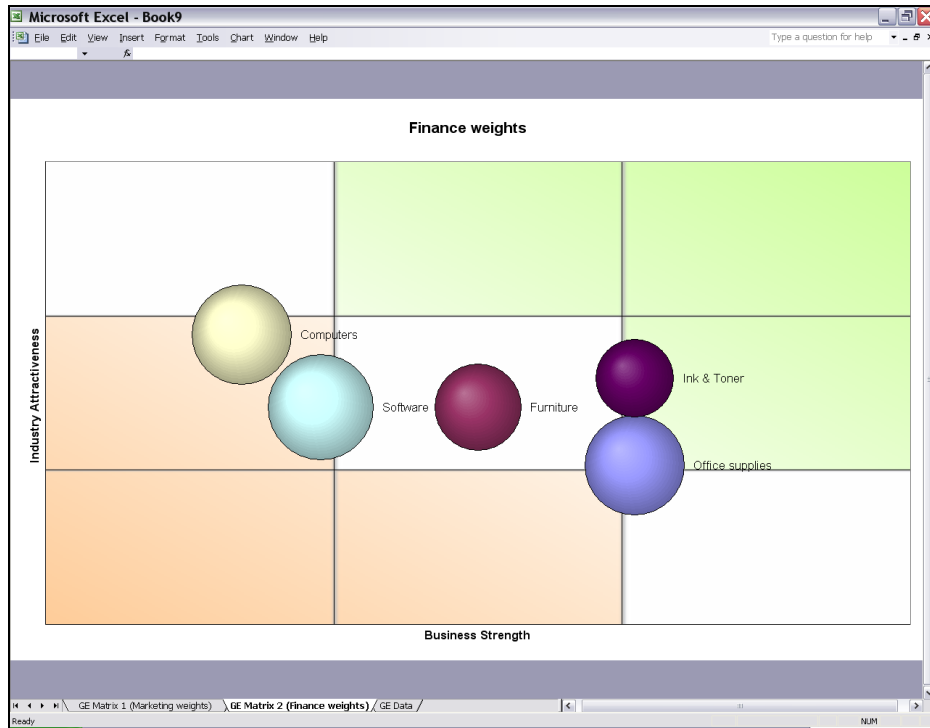
When interpreting the matrices, keep in mind that the most desirable items (e.g., business units or products on which you should focus most of your efforts and allocate resources) are those that are large enough and ideally those in the upper right corner of the matrix. You have particular strengths in pursuing these businesses, the industry is particularly attractive, and the market is large enough to sustain the business.

References

Cooper, Robert G. (1993), Winning at New Products, Perseus Books: New York.