

8. STRATEGIC PLANNING METHODS

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8.1 INTRODUCTION

The purposes of these notes are: (1) to provide a resource into the tools and techniques available for formal business and marketing strategic planning and (2) as a link between the marketing research methods discussed in other chapters with the strategic planning process. While term “strategic planning” can take on many meanings, for this chapter, we are interested in those activities design to assist in the long range directed changes in marketing, manufacturing, acquisitions and investment decisions. It covers mainly marketing and business investment analysis. However, it is also a creative activity. Merely analyzing a situation does not lead to actions that provide improved long term gain for the business. New ideas are required.

Formal financial planning is usually required in some form and is done by almost all firms. Strategic business planning however is less common. Formal strategic planning is usually undertaken in response to either an uncomfortable change in the market or demanded by oversight management from corporate executives and directors or from supporting financial institutions. During the 1960’s and 70”s there was a great drive toward formal corporate strategic planning as a key activity of professional management. Many firms established corporate planning functions at this time. A broad range of techniques discussed in this chapter were developed during this period. A number of well-known professional strategic planning consulting firms were also established at that time. However, perceived results from the investment in formal planning were not overly encouraging mainly due to a lack of effective implementation. During the 1980’s and the early 1990’s, decentralization and wide spread cost reduction programs discouraged formal corporate strategic planning programs. Recently, however, the need for formal planning on both the corporate and functional levels has again become in favor. This is due to the need to renew established businesses and to demonstrate strong operational control to obtain outside financial support.

8.1.1 IMPLEMENTATION

The greatest problem facing strategic planning is implementation. The best plans that are not implemented are worthless. The major problem within the commercial arena is that management tends to struggle in maintaining the present operations without considering changing them. With cost reduction and its corresponding reduction in staff, this problem has only gotten worse. However, at the same time implementing new strategies has never been more important.

The “peace-time” military, on the other hand, appears to have mastered the strategic implementation issue. Preparation for events is their full time interest. As such, it is a useful resource to examine for implementation tools.

8.1.1.1 Command and Control

The most important military concept for strategic implementation is “Command and Control”. Unless resources can be controlled, they can not be applied to a strategy. The term “Command and Control”, however, does not mean total blind control, but only the ability to appropriately apply the resources to get the desired results. Only sufficient control is necessary to assure action. However, if control is not available, as is often the case with a strong independent salesforce, new strategies can not be executed.

8.1.1.2 Delegation

There are two military approaches regarding delegation attributed to the Germans and the Russians, which are also observed in commerce firms. The German approach is to assign subunit objectives and allow the local commanders to develop and execute plans to accomplish them. This approach is fully delegated. The Russian approach, on the other hand, is to develop detailed plans based on inputs from local commanders and then require flawless execution irrespective of resources required. This approach is the mainstay of formal commerce planning. Typically, the salesforce and to a less extent marketing prefers the delegated method. Manufacturing and finance, of course, prefers the centralized approach. The major problem with commercial firms is that this degree of control and responsibility is rarely clarified. This has led to the inability to implement strategic plans.

8.1.1.3 Empowerment

Empowerment here refers to the perceived ability of the organization to take specific actions. One of the greatest problems in firms is the need for financial control and the desire for aggressive business building. Business building requires reinvestment often with high risk. In business environments, where personnel are continuously under severe pressure to reduce costs, there is normally a lack of empowerment to undertake “unnecessary” expenditures.

The mission of a business usually focuses on the specific products and markets served. It is not unusual that a business or market group will feel constrained to stay within that context. As such, the business is not empowered to explore opportunities beyond that context.

8.1.1.4 Rewards and Incentives

The rewards and compensation are subtle but powerful forces to either encourage or discourage strategic action. The effective implementation of new strategy often requires changes in the reward system. In many cases the compensation system favors specific actions from the sales force and management that is in direct conflict with the new strategy. Under these conditions it is not surprising that there is disappointment with the results.

8.1.1.5 Doctrine

The US Navy has a unique problem, due to the dispersion of its forces. It has historically been difficult for the Navy to maintain close control of resources. As such, they have developed a concept of strategic doctrine where the unit managers have a clear understanding of what types of actions are expected under what conditions. Changes in strategy correspond to changes in doctrine. This concept typically only exists vaguely as a corporate culture in commerce. However, when it has been applied, as in the case of General Electric, it provides the type of remote command and control needed to implement broad based dynamic strategies.

8.1.1.6 “Training for Action” and Reeducation

“Train for Action” is a procedure of rehearsing procedures to the point where they become second nature. This process is used extensively by the military but only rarely by firms. In general, strategic reeducation and training is done sparsely and often amounts to a lecture during an annual sales meeting. The problem is the education is a continuing function. Implementation of new strategy generally requires new skills as well as the disciplined exercise of specific actions. Only with careful and repeated training can this be accomplished¹.

8.1.2 STRATEGIC CONSULTING

Strategic planning must be the responsibility of the business and its management team.

¹ It is interesting to note that the military (US Navy) invests heavily in training and education of all of its personnel. No matter what level, Naval personnel are retrained before taking over new responsibilities. However, there is a side issue here. While the military appears to have adequate time for training, they are under continued pressure to reduce costs. On the other hand, commercial firms are willing to spend significant funds for extensive training but do not have the personnel time.

There is ultimately no way to factor ultimate accountability away from the business itself. Outside consultants can help facilitate the process and provide an “outside” and somewhat independent perspective. But they will never assume the level of risk that is held by the management team. Ultimately, the business must be under the command and control of the management team.

Consulting firms tend to be divided into three categories: (1) small firms, generally of one individual, providing a narrow range of services, (2) special purpose firms, usually mid-size of three to twenty individuals, focus on a basic service such as business research or analysis and providing a range of strategic services, and finally (3) large nationally known consulting firms. These latter firms have evolved either from auditing and accounting firms or from prestigious business schools. The services and costs structure of these firms vary widely. In choosing strategic consultants the following should be considered.

8.1.2.1 Style and Personality Match

The matching of personality and style between the consultant and the client is critical. To be effective, strategic consulting involves personal and intimate trust and relationships. The personalities of all people do not mesh. Choosing an effective consultant often focuses making the appropriate match.

8.1.2.1.1 Credibility

Credibility is derived to a certain degree by the comfort level that the organization has with the consultant. This is an issue of personality as well as knowledge. How the individual positions himself and what he knows, determines to a great extent the willingness of the client to accept it. However, credibility itself is of great value to clients.

The large discrepancy in costs between small strategy consulting firms and the large nationally recognized firms is generally attributable to the high credibility of the national firms. The old saying appear to hold for these firms “No one ever got fired from hiring”

8.1.2.1.2 Reporting and Working Levels

A major issue in consulting is that there is usually a difference between the internal people that are responsible for the strategic plan and the people who hire the consultants. The needs to the two groups can be very different. While the relationship with the working level determines the quality of the results, the relationship with the upper management generally determines the longevity of the association.

Good upper level management relations ultimately rest on credibility and good will. Executives must believe that their consultants are qualified and have the best interests of the client’s firm in mind. On the other hand, good relationship with the company staff relies heavily on trust and to some extent self interest. They must trust the consultant to

“meaningfully do no harm.” Furthermore, they will give assistance only if they believe that the consultant gives value in the form of reduced work and risk.

8.1.2.2 Services

Ultimately, consultants are vendors of services. They provide specific services to the firm. The major problem in selecting firms is to understand what services are needed. Often that is the starting point of the consultation process².

8.1.2.2.1 Specialized Knowledge

A key use of consultants is to provide specialized knowledge unavailable in the firm. This may be in specific industrial areas, technology, or in methodologies such as competitive intelligence, marketing research, advertising and promotion, or Quality assessment. In most cases, however, specialized knowledge is only the beginning of the consulting process.

8.1.2.2.2 Skill Assistance

With very lean organizations it is often desirable to hire consultants to perform tasks that theoretically could be done in-house if resources and specific skills were available. This includes things such as documentation, system development, strategic formulation, as well as a host of operational chores.

8.1.2.2.3 Strategic Review

Strategic reviews and audits are the traditional home of the consulting firms. These activities involve applying a board range of tools and techniques to compare strategy and performance with the structure of the business.

8.1.2.2.4 Structured Procedures

The purpose for structured procedures is to provide a framework for strategic planning and as a means to avoid being blind-sided.

8.1.2.2.5 Workshop Processes

Strategy formulation is a creative process. And strategy implementation requires consensus building. Both creativity and consensus building are enhanced by collaborative and heuristic approaches. Many consulting firms provide a range of these workshops to assist in strategy formulation.

8.1.2.2.6 Training

² Unfortunately, most consultants tend to believe that whatever problem you have, their speciality is the solution.

Strategic training and education should always be key services of consultants. Strategic formulation ultimately has to be internal. As such, the consulting activities should focus on the transfer of skills to the organization. This may be informal, with one-on-one coaching or formal seminars, presentations, and workshops.

8.1.2.2.7 Communications Conduit

Trusted consultants can act as intermediaries within the organization. It is not unusual that communication between levels within an organization is guarded. This often takes place when there are several different levels involved or when there is a perception of barriers due to local agendas. In these situations, consultants can act to provide alternative communication channels³.

8.1.2.3 Expertise

Consulting firms vary in their expertise, both in subject and in extent.

8.1.2.3.1 The “Green Team”

Large consulting firms, in particular, suffer from a range of personnel. Typically, highly experienced personnel act to sell projects and deliver the final reports. However, generally, far less experienced personnel are involved in managing the projects and conducting them. The individual conducting the studies are typically well educated (with prestigious MBA's) but with little experience. These are referred to as the “Green Team.” This is less of a problem with small consulting firms due to the lack of high turnover.

8.1.2.3.2 Recommendations

Depending on what the consultants are doing for the business, it may be appropriate for the presentation of recommendations. The willingness of the organization to accept the recommendations will depend on the consultants' expertise, credibility and reasonability of the suggestions. However, it is not always advisable that consultant recommendations be presented, and in many situations it is probably not a good idea. The purpose of ongoing strategic activity should be directed at the organization reviewing their programs, operations, initiatives and plans rather than have an external organization direct them.

8.1.2.4 Costs

As previously noted costs vary greatly among consulting firms. The major difference is between large and small firms. Some of these lies in the differences of services provided. Small firms and single consultants rely heavily on internal resources for research and planning efforts. Furthermore, small firms will tend to spread the effort over a

³ This has to be done very carefully in order for the consultant to maintain trust through out the organization.

considerably long time frame. Large firms on the other hand tend to throw man-power at the problems and rely on an ensemble of different skills to provide the final analysis. Even under the most favorable analyses, the large nationally recognized firms tend to be much more expensive. To some extent, this assures better acceptance of their recommendations to upper management.

8.1.2.4.1 Cost Structure

Costs are handled either on a project or on a daily charge rate (per diem) basis. Fixed priced project costing is feasible only with well-specified programs. However, for most consulting activities the per diem approach is traditional. The charge rate for consultants is usually high, since they tend not to be able to charge all allocated time to the clients. Typically, the project charges may be two to four times the internal rate in order to cover non-billable work done for the client. In many cases, the clients will only pay for actual presence at their site. Additional support work is often not covered.

8.1.2.4.2 Accountability

Recently there has been a movement toward making consultants accountable for strategic recommendations. This is handled by tying payment to the firms future performance. Alternatively, stock options or their equivalent can be used. However, this is usually applied to specific business reorganizations rather than general strategic consulting services.

8.1.2.4.3 Tenure and Support

The cost of consultants greatly effects the tenure and support nature of those services. Smaller firms at lower cost rates are able to provide multi-year support that is affordable. This is not usually the case with large national firms that tend to campaign studies rather than provide long term support.

8.2 “A PERVASIVE MARKETPLACE AWARENESS”

The US military believes that obtaining a “Dominant Battlefield Awareness” provides them a means of victory. By this they endeavor to obtain a full understanding of all activities within the field of interest and exclude that information from their competition with the ultimate goal of neutralizing the enemy. The same is true in the commercial arena though complete destruction of competitors is usually not the objective and it is infeasible to deny the competitor of similar information. How to convert this information and awareness into congruent strategy is the process of planning.

Not all business information, however, is strategic. Much of the information is and should be devoted to operational issues. Below are the types of information, however, that are, or should be, available for strategic planning.

8.2.1 INTERNAL DATA

Internal accounting and operational data are critical for all planning processes but particularly for strategic issues. It should be noted that internal data are never totally accurate. Costs, in particular, are subject to the vulgarities of averaging and accounting procedures. Market prices are often not completely under control or in many cases are unknown. There is usually a balance between the timeliness of data and its completeness. Fortunately, for strategic purposes annual data is usually sufficient.

8.2.2 MARKET RESEARCH

The function of market research is to identify what is purchased by who at what price and where. While this may seem straight forward, it is a very difficult manner to obtain precise and accurate measurements from diverse market channels. Estimates of market share, both in products and revenue, rely on these types of information. It is not unusual, that a major, if not the majority, of business research expenditure are directed to obtain this type of market information. For the most part, this type of information is obtained either from government sources or from private syndicated studies. The greatest problems with this information are accuracy and timeliness.

8.2.3 MARKETPLACE RESEARCH

Understanding the specifics of the product position in the marketplace and its relative performance may be critical to maintain proper market awareness. While this information is useful for all ventures, it is critical for end-users’ business including consumer products. For these businesses, knowledge of how their products and their competitors’ products are presented is critical in an environment where perception and availability is everything.

8.2.3.1 Label Analysis

Label analysis consists of compiling and tracking label and product sheet information on competitive products. The objective is not only to understand the present product

composition and performance but to identify strategy and new market initiatives. This activity is usually done by the business often as part of the R&D function. However, independent marketplace research services exist that maintain this data in many industries.

8.2.3.2 Competitive Product Testing

Often products behave differently than specified. The only way to fully obtain a comparative understanding of market position is often to test competitive products on the same bases as one's own. While this activity is usually done by the in-house technical service, it is often useful to have products tested externally if the data will be used for promotional purposes.

8.2.3.3 Shelf Space and Location

There is an old rule of merchandising that revenue is proportional to "shelf space." The term "shelf space" means not only the conventional front shelf area at retail but also advertising space and promotional effort. Furthermore, as in retail and real estate, location can be everything. Tracking these types of marketing activities is critical to understanding competitive strategy. This information is usually critical for consumer products, but less so in business to business transactions. However, even here it can be extremely important to understand competitive activities on the Internet and at trade shows as well as trade advertising.

8.2.4 CUSTOMER SATISFACTION

Satisfaction studies are often the most extensive data available on existing and potential customers. Typically studies are undertaken periodically (annually or over a set number of years) or when there has been a major problem.⁴ In addition to their use in identifying sources of problems, strategically they are used for: (1) market segmentation, (2) product positioning, and (3) communications preferences. Typically these studies are best performed by professional marketing research firms who can approach customers unanimously. It is critical for effective analysis that comparative data is collected from both existing customers and potential customers. Analysis of this type of data can be very involved and is discussed in detail in a separate chapter of these notes.

8.2.5 DECISION AND VALUE ANALYSIS

Understanding the way in which purchasers decide on products and the value that they attribute to product features can be critical for positioning the product and the firm. Both subjective and analytical tools are used for this purpose including focus groups. For strategic use, qualitative research is preferred to allow broader coverage of issues and products. Tools for measuring value are covered in two separate chapters in these notes, one for perceived value methods and the other for economic evaluation.

⁴ It should be noted, that customer satisfaction studies are a requirement for ISO 9000 Quality certification

8.2.6 PRICING AND LOYALTY

Measurements of price sensitivity are useful for both operational decisions as well as setting pricing strategy and policy. For strategic purposes information regarding the identification and price isolation of market segments is critical and more important than selection of optimum or best price. This often involves examining the results of multiple studies⁵. The measurement of price sensitivity is covered in detail in a separate chapter of these notes..

8.2.7 COMPETITIVE INTELLIGENCE

Competitive Intelligence focuses on the behavior and capability of competitors. While market and marketplace research is often included in this group, it takes a very different orientation. Market and marketplace research is oriented to the venue of what and where products are purchased. Competitive intelligence is oriented into the mind and plants of the competition. There are two key types of information that is sought from existing and potential competitors.

8.2.7.1 Capability

Understanding present and future competitive capability is critical to identify what they can do. This involves financial ability as well as facilities, knowledge, skills and proprietary position. It is important that these capabilities be put into a historical perspective to understand the long-term changes in that capability. Capabilities are often track by published information as well as syndicated research.

8.2.7.2 Intentions and Strategy

However, just understanding capability is insufficient. It is critical to estimate what competitors are likely to do. What are they intentions of actions? Furthermore, we would like to predict competitive reactions to market changes in order to forecast likely outcomes of strategic moves. This requires in-depth understanding of the competitors' cultures and in many cases the characteristics and capabilities of competitors' management.

8.2.8 BENCHMARKING

Benchmarking is often associated with both Quality methodologies and competitive intelligence. In general it focuses on the tools and procedures of firms' operations that may or may not be in direct competition. In more cases than not, the firms targeted for benchmarking are those viewed as having shown excellence in a particular function irrespective of industry. Typically in traditional operational benchmarking there are three issues examined: (1) operational procedures, (2) strategic integration and organization,

⁵ The analysis of results of multiple survey studies is referred to as meta-analysis. To be effective standardized tools and methods need to be applied.

and (3) technology employed. The key problem in most benchmarking studies is the establishment of standards of performance. Unless there are straight-forward measures such as economic productivity, this issue of metrics is often ignored and simply a comparison of methods discussed.

In addition to operational is financial or performance benchmarking. PIMS⁶ database is a compilation of operational and performance measures on a “business” basis. This is an unusually resource for determining the potential impact of strategic changes on expected performance. Unfortunately, this database as not been updated for several years and the analyses may not be reliable.

8.2.9 GLOBAL AND ENVIRONMENTAL ANALYSIS

External factors can greatly effect the business environment and the outcome of strategic actions. Tracking of macro-economics, financial market changes as well as regulatory conditions are often critical, particularly for timing of strategic actions. Extensive public and syndicated sources are available for this information. Less available are measures of international conditions. This is particularly critical with the present global economic structure. For many US firms over 50% of revenues are derived overseas. Data and insight are particularly difficult to obtain in the less developed countries that often offer large growth opportunities both for markets and manufacture.

⁶ PIMS (Profit Impact of Marketing Strategy) is a database originally held by the Strategic Planning Institute (SPI) of over 3000 business units mainly parts of large corporations. Several hundred estimates of business characteristics and expenditure levels as well as earnings and other measures of performance over several years had been collected for each business. Statistical analysis allow the development of “PAR” models that allow testing of proposed business structures against expected profitability. The present state SPI is uncertain as is the availability of that data.

8.3 STRATEGIC REVIEW

A key function of strategic consulting, both internal and external, is developing and reviewing business strategy. Strategy refers to the conduction between actions and the desired future outcomes. This is an exercise in the applications of resources and assets to obtain the best long-term results.

8.3.1 FORECAST AUDIT

Forecast reviews are undertaken to determine the consistency, reasonability and feasibility of forecasts and business pro forma. They are designed to assure that the forecast has been done in a reasonable fashion and consider the wide range of issues consistent with history. Forecast audits cannot assure that the forecast will take place nor that future events will not invalidate the forecast assumptions. The future is always risky. However, the audit should provide confidence that the forecast is based on the best presently available information.

A forecast audit examines the consistency of forecasts and the process used to produce them. Statistical analysis, external standards, check lists, documentation and literature audits and surveys are used to verify the consistency of the forecast. A key component of the forecast audit is estimating the robustness of the forecast. This requires an analysis of the risks facing the business and determining how the forecast captures those risks.

Financial and Forecast Audits

Like financial audits, forecast reviews focus on process and control and on substance. In the case of financial audits, the substance relates to the asset accounts. In the case of forecast reviews, it is the expected change in assets. It is the goal of both processes to assure that the process operates in the most objective manner possible and that the substance of the audits is as consistent and reliable as is feasible. And finally, in order to maintain the quality of both types of audits, they need to be performed independently of the management responsible for forecast generation.

Financial audits deal with what has past. They deal with facts. Forecast audits deals with things that have yet to happen. Because forecasts focus on the future, they must be based on trends and opinions rather than verifiable facts. Different procedures and standards are necessary to deal with opinions and trends, which are inconsistent with the fundamentals of generally, accepted accounting principles.

Procedures

The function of forecast audits is limited to an evaluation of specific estimates of future organizational performance. Forecasts are intimately linked with strategic, financial and operational plans. Therefore, the analyses of those plans are critical to any forecast review. One can think of the forecast as the accumulation of the planning effort and the summary of expected results. To some extent, an audit of the forecast carries elements of an audit of the planning process. However, a forecast review is not planning consulting

nor is it a strategic audit.

The focus of the forecast review is on the consistency of the forecast. Inconsistency of the forecast with the organizational plans clearly indicates a problem. However, it is not the responsibility of the forecast review to determine the source of that inconsistency.

Strategic auditing deals with the "optimum" selection of actions that an organization can take to meet its objectives. This is beyond the scope of a forecast review. Forecast reviews can not tell what the optimum return could be nor how to obtain it.

We believe that forecast reviews can provide an alternative view of the planning and forecasting process that could assist in their development. It should provide an objective assessment of the reliability of the forecast as a means of fairly capturing the opinions and data on the business as it is known today. This assessment should assist in the planning process.

Similar to other types of auditing procedures, forecast reviews are conducted in steps or phases. Depending on the complexity and extent of the audit, these steps may be conducted in sequence or concurrently.

8.3.1.1.1 Assessment of Auditability

The most critical step in forecast review is assessing the auditability of the forecast and the process by which it was derived. As previously noted, not all forecasts can be audited. Auditability focuses on how the forecast was done and what data and documentation is available for the review. The result of this phase is a report structuring how the forecast was generated, a recommendation on the feasibility of a useful review, and a detailed proposal for the necessary activities with a cost estimate.

During this assessment, the purpose of the forecast, the functional structure and the nature of the forecast development process need to be identified. The availability of data and documentation are verified with some qualitative assessment of the expected cooperation from the organization. A review of the strategic plan and organizational objectives is often necessary to complete the assessment.

It should be noted that the assessment of auditability is often the first and final step of the auditing process. If it is infeasible to audit the forecast, a recommendation of methods and approaches that could be used to produce a forecast that will be auditable must be suggested.

8.3.1.1.2 Forecast Process Control

A consistent process is usually necessary to produce forecasts that are themselves consistent. The first step in a forecast review is to focus on the process of generating the forecasts. We believe that forecasts must involve those individuals and functions that will be responsible for the results that are projected by the forecast.

With a consistent process, we can test its past performance. How good have previous forecasts been? Is there consistent bias and what is the variability between forecast and actual? The attached figure shows historical analysis with large but unbiased variability at low projected growth rates but a significant bias at high growth rates.

Finally, we need to assess that integrity of the process is maintained. Was the process followed to generate the forecast, to verify it, or as merely as a means of justification.

8.3.1.1.3 Forecast Consistency

Things do not take place in a historical vacuum. The future, to some extent, is an extrapolation of past performance. We use the past to test the reasonability of forecasts in terms of sales, market volume, share, costs, prices and investment. Historical data provides us with the trend, and expected range of variability. Various standard models are used to allow for reasonable "external" tests.

Historical analysis provides a basis of determining the reasonability of forecasts. If nothing changes in resources and programs the historical trend is the best that can be expected. The consistency of a sales forecast can be statistically tested against historical sales and earnings.

Rapid growth has long been a problem of forecasting. However, techniques have been developed that identify reasonable bounds of the physical sales of new products. The General Sales Growth Curve has been effectively used for almost 20 years as a guide to the potential of growth products. This technique is incorporated in the forecast review procedures.

8.3.1.1.4 Sensitivity

Though we are not chained to the past, deviation from expected past performance must be coupled with changes in behavior and resource allocations. These are the underlying assumptions made regarding the expected performance based on programs, markets, and competition. The feasibility of the forecast rests on the reasonability of these assumptions.

Competitive business models can be used to develop forecasts and test the sensitivity of their assumptions. Models used for the development of forecasts need to be tested. The most general type of business model used is the tabular or "Pro Forma" models that allow testing of relationships and performance levels. Based on these models, the sensitivity of key components can be determined. The underlying assumptions of the most important components will then be verified based on both internal and external opinions.

8.3.1.1.5 Assumption Validity and Consistency

All sales forecasts must rest on the willingness of customers to purchase the product or services and the behavior of existing and potential competitors. Analysis of customer satisfaction and "intent to purchase" data, if available, need to be examined to test

forecasting assumptions. Even if such data is available, customers should be interviewed to confirm the reasonability of forecasts and opinions of competitors. Similarly anonymous surveys of internal personnel are needed to verify the confidence of the organization in meeting the forecasted performance levels.

8.3.1.1.6 Risk Containment

The future is uncertain and, as such, a useful forecast must be robust to be able to withstand a range of unlikely but feasible possibilities. During the review, identified risks are examined and an effort is taken to determine any obvious risks ignored. Since no one can clearly see the future, there can not be any assurance that all-important risks will be uncovered. The goal of the review is to be assured that the obvious and standard sources of risks have been examined in the course of developing the forecast and that the limits of the forecast are clearly identified. Risk containment workshop methods are discussed below.

8.3.2 STRATEGIC AUDITS (GRAPHIC REVIEWS)

The purpose of graphical strategic data analysis is to provide insight into the probable problems and identify opportunities. The graphical process focuses on the visualization of information. These charts present different perspectives and follow different strategic theories and methodologies. It is usually critical to review several of these approaches to get a proper perspective on the strategic position and performance of the organization.

Many of these graphical tools are used as part of the Planning Workshop Procedures where the charts are used as the output of the planning processes. These are usually specific applications of the tools. However, the charts can be used for a broader range of applications based on available business data. Furthermore, the data from the Planning Workshops are almost always an internal perception of the business. Strategic graphical data analysis usually involves financial and external data.

Below are examples of the standard graphic tools prepared using Microsoft Excel.. Some of these are routine and are used for almost all strategic audits. Others, however, are unique or focus on specific problems and issues.

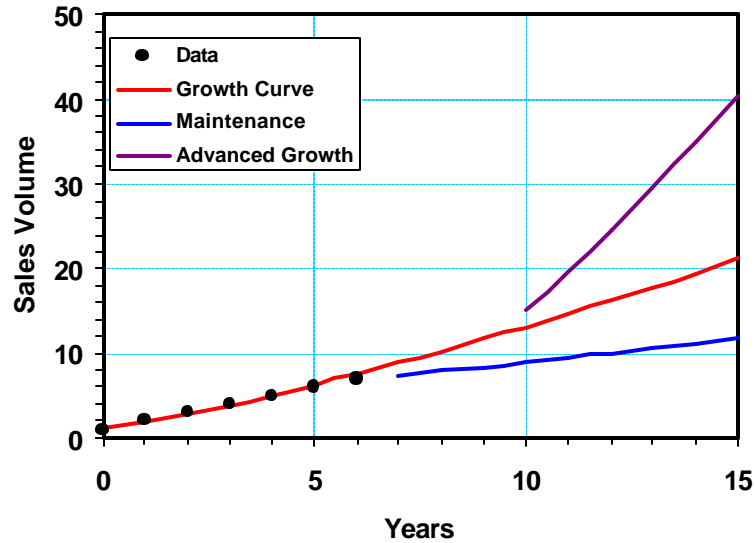
8.3.2.1 Business Performance

The most fundamental of the business charts focus on operations and business characteristics. For strategic planning purposes, these charts focus on marketing and sales information.

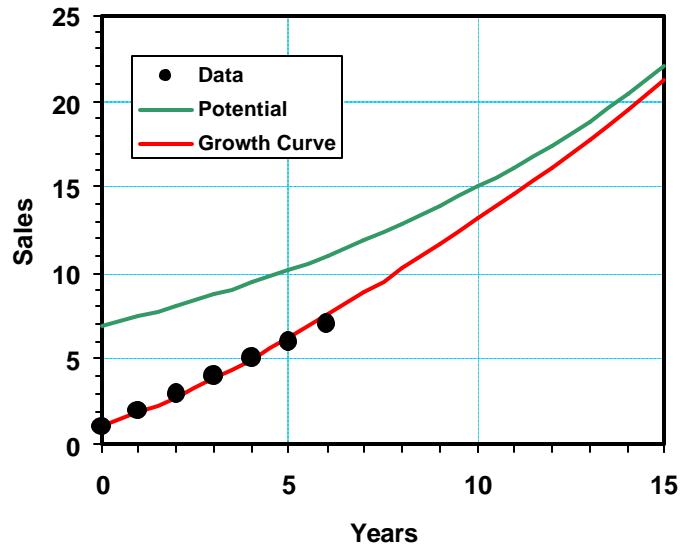
8.3.2.1.1 Sales Forecasting (Routine)

Below is a standard sales forecasting chart showing both historical data and several forecasts⁷. Typically, one of the forecasts is based on the extrapolation of historical data as shown below. Often two or more alternative scenarios are included. These may be given either in terms of “resource allocation” theme as below or in terms of “likelihood” or confidence intervals.

⁷ The sales volumes may be plotted on a logarithmic scale. This gives a straight-line plot a constant rate of growth situation. However, this complexity is usually not useful for management presentations.

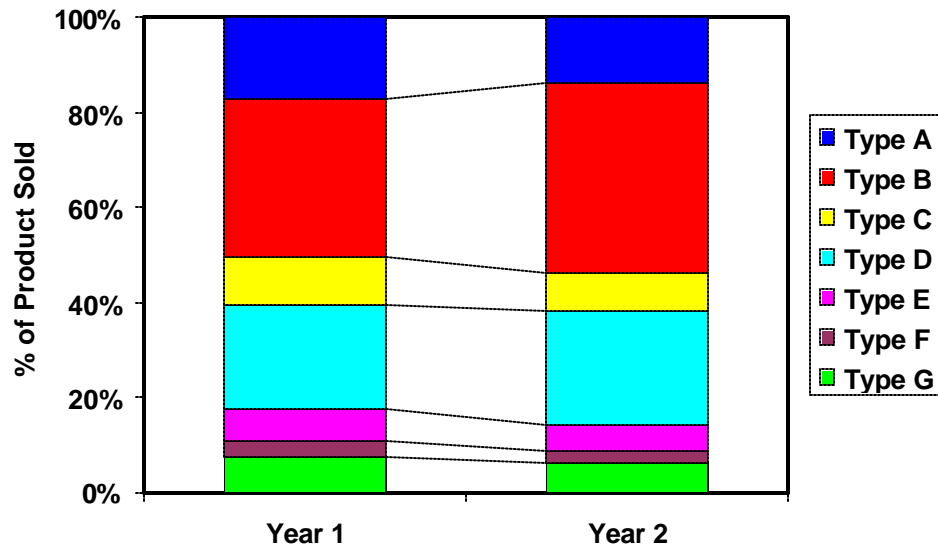


If a sophisticated model is used to estimate future sales, then measures of the future potential can also be generated. However, this incorporates a host of assumptions, which is usually unnecessary.



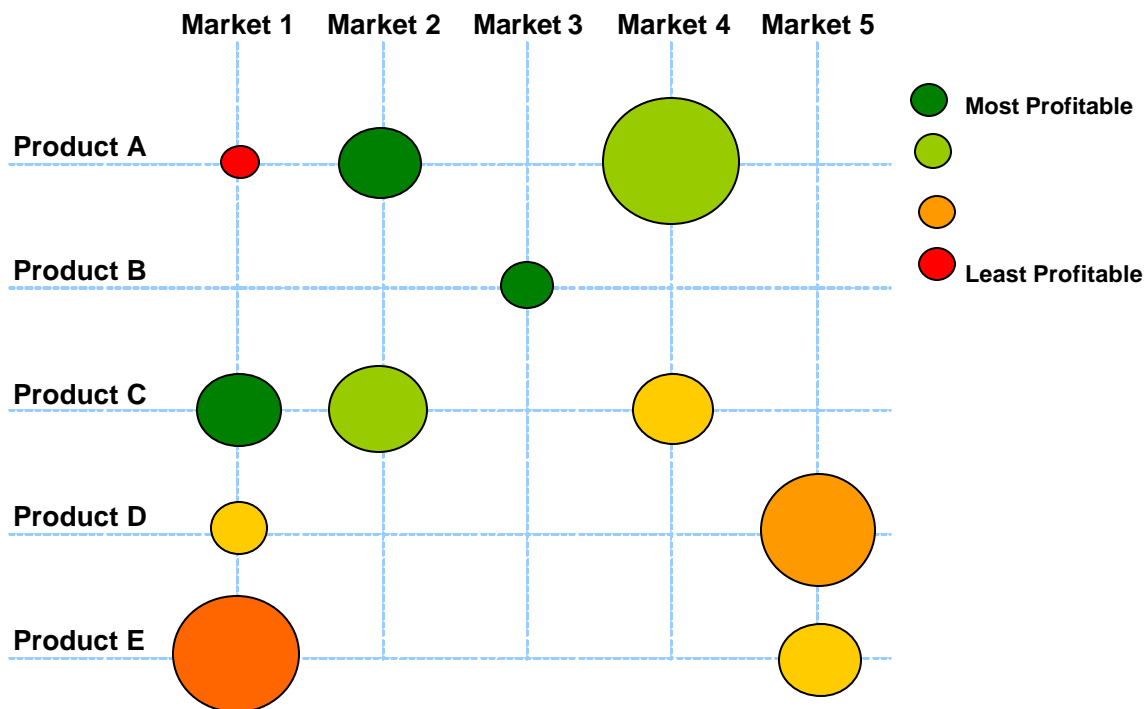
8.3.2.1.2 Product Distributions (Routine)

Product distributions are often displayed as stacked bar charts as shown below. The issue here is change in the product distribution. These are usually done by market groups if products cross business lines.



8.3.2.1.3 Product Market Matrices⁸

Product market matrices show the distribution of products by market or business units. Using bubble chart notation allows for displaying size (usually as revenue) and profitability as color⁹. This type of chart is highly useful for examining pricing strategy and organization.

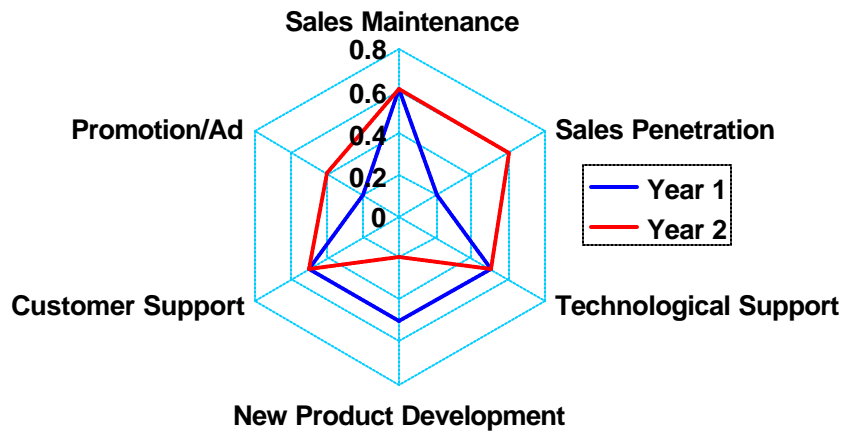


⁸ This may be a proprietary diagram in that it is not native to Microsoft Excel but similar tools exist for displaying data. Matrix and Icon graphs are available in SYSTAT, (by SPSS).

⁹ There are a number of additional attributes that can be displayed in this type of graph, however, they tend to make the chart too difficult to discern order.

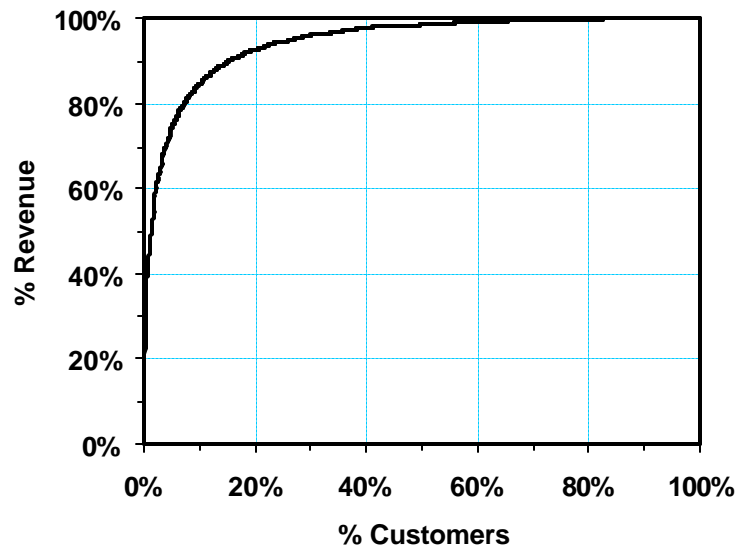
8.3.2.1.4 Resource Distributions

Resource distributions are often displayed as star charts as shown below or as pie or bar charts. The advantage of the star chart is that it highlights differences among resources and does not require them to be viewed on the same scale. Resources are often in different forms such as dollars for advertising and man-years for sales. While it is necessary to get them onto the same level, precise scaling is unnecessary. The major disadvantage to this form is the complexity of the chart if multi-year data will be presented. Under those conditions a stacked bar chart is preferred.



8.3.2.1.5 Customer Distributions (Routine)

The distribution of customers by size is often a critical issue in terms of stability of the business and the means of servicing the market. While many traditional businesses see a “80/20 rule” with 80% of the revenue coming from only 20% of the customers, industrial businesses more often see a “90/10 rule.” A typical customer distribution curve is shown below. Sometimes, if the accounting system permits, similar graphs showing percent earnings by customers are constructed. In these cases, concentration can be significantly higher with only one or two customers contributing all of the earnings.



8.3.2.2 Portfolio Analysis

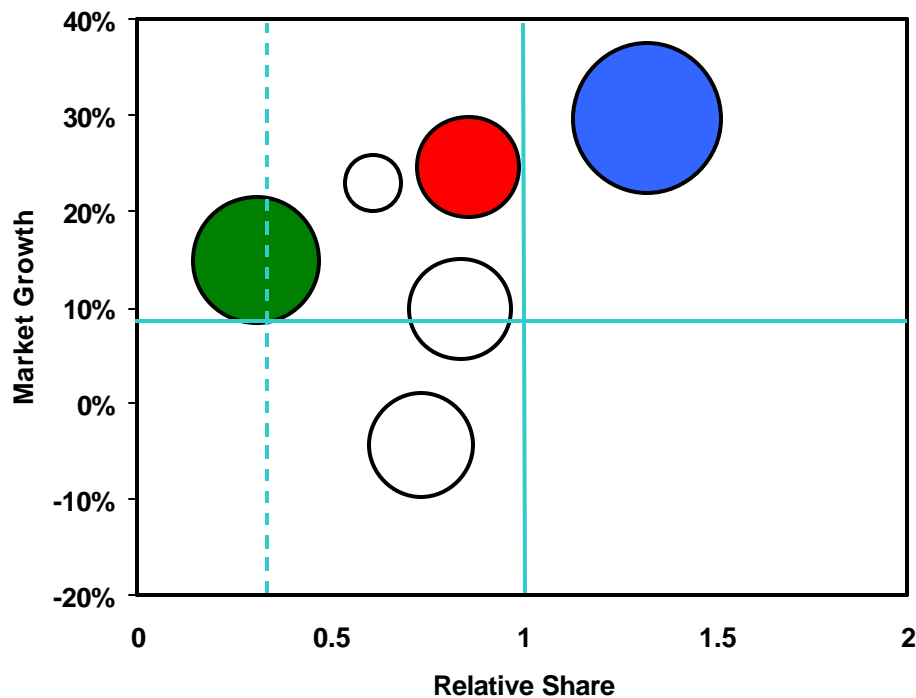
The purpose of portfolio analysis is to visualize the characteristics of groups of products, programs, or customers. The most common type of portfolio analysis deals with the “Strategic Planning (or Business) Units”, SBU. These are subdivisions of the business designed to be more or less independent elements. In reality, of course, rarely are businesses totally independent within a firm. But for the purposes of analysis they are considered as such. Portfolio analysis of this type is also used for development programs where each program is considered to be a SBU.

8.3.2.2.1 Bubble Charts (Routine)

The term “bubble chart” is almost synonymous with position maps created from “Shell or GE matrices”¹⁰. These matrices were developed to display the relative value of SBU’s. Typically measures of: (1) business attractiveness, (2) market strength, and (3) business

¹⁰ The use of the bubble charts in this way appears to have been pioneered by the Boston Consulting Group and several of their spin-offs.

value are shown. Business attractiveness is typically measured by industry growth. Market strength is measured by market share¹¹. Business value is measured by either revenue or earnings depending on the nature of the business. However, it should be noted that different measures might be needed that reflect the nature of the business. For example, in highly fragmented markets with similar sized firms, market share often has little meaning. The size of the bubbles represents the importance or size of the business. Color coding may also be used to either designate the business or represent an additional characteristic. A Typical chart is shown below.



Standards for comparison are also given as vertical and horizontal lines. These tend to divide the charts into four quadrants¹².

8.3.2.2.2 Momentum Charts¹³

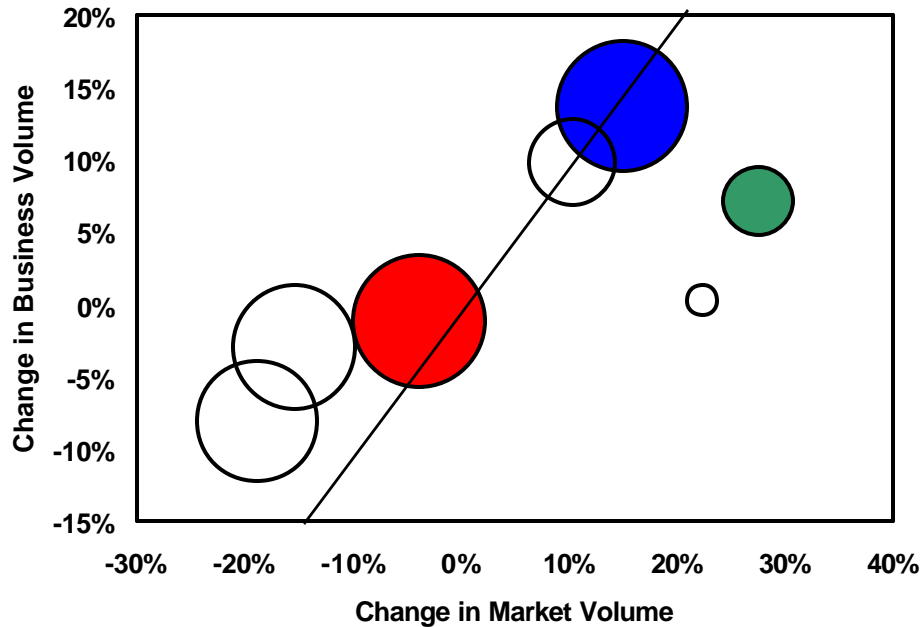
Momentum charts shows the annual change in sales of the business compared to the industry for each SBU, as shown below. The diagonal line represents growth with the

¹¹ Braxton Associates (now part of Deloitte Touche Tohmatsu) suggested the use of relative share to the nearest competitor as a better measure of strength than simply the market share.

¹² Various successful strategies derived from position in the matrix is covered by Michael Porter, *Competitive Strategy*, The Free Press (1980)

¹³ These charts appear to have been pioneered or at least promoted by Braxton Associates (now part of Deloitte Touche Tohmatsu).

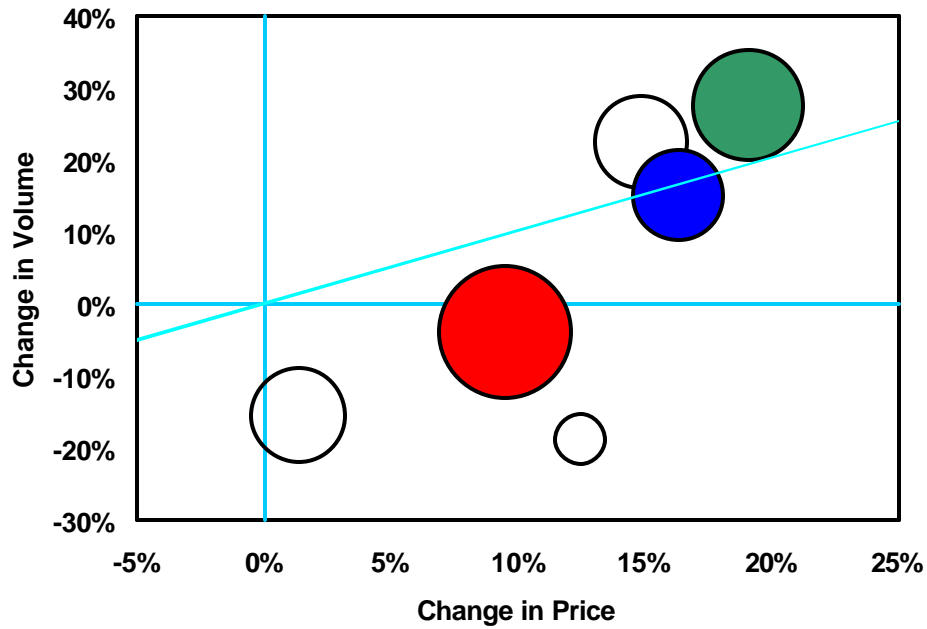
market. Bubbles above the line correspond to a gain in market share and below a loss. The size of the bubble indicates importance or size and the color usually designates the organization. Occasionally, competitive products may be included on these graphs to give a global view of the industry. A typical graph is shown below.



These types of charts are very useful to differentiate growth from changing market position. However, they are useful only where share has a well-defined meaning and is significant in the business situation.

8.3.2.2.3 Price Volume Change Charts

It is often useful to look into the sources of annual change in revenue. The Price Volume Change chart is intended for that purpose. This is most interesting in relationship with retail and distribution businesses where fine control over price is feasible. It is also useful for computing implied price sensitivity.

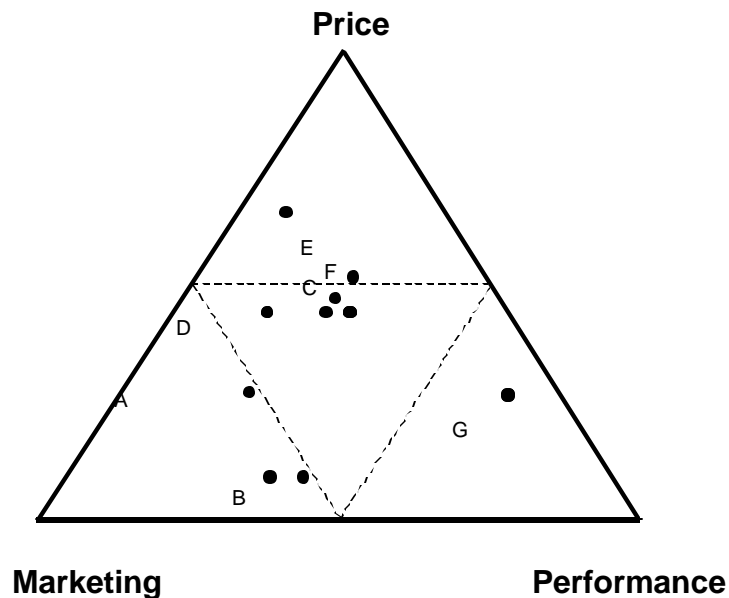


8.3.2.3 Positioning Maps

The objective of positioning is to identify the relative strengths and weakness of the business and competitors. The goal is to strategically allocate resources that strengthen the businesses effectively.

8.3.2.3.1 Position Triangles¹⁴

The triangular graph is useful for managing the business life cycle, in that product tend to progress from highly differentiated products to commodities. During that transition, the value of brands and marketing services may increase producing competitive advantage. The Position Triangle is a means of evaluating the relative importance of price, marketing (brand), and product performance (technology). A typical diagram is shown below.

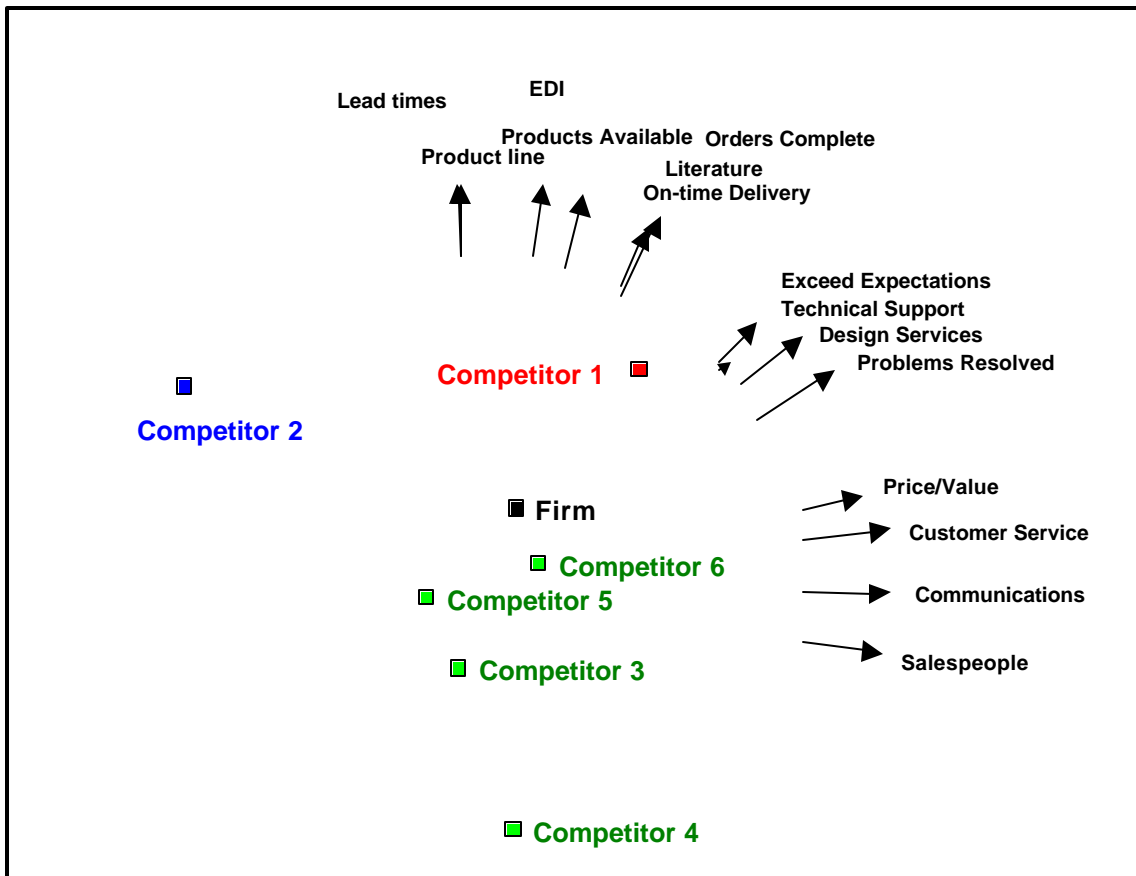


The closer the point is to the vertex the larger the proportion of importance is attributable to the corresponding characteristic. Products or businesses close to the price vertex can be considered commodities, for example.

¹⁴ This is a proprietary graph in that is not native to Microsoft Excel but can be constructed in that package. Similar graphs are available in SYSTAT and other statistical packages.

8.3.2.3.2 Perceptual Maps

The position triangle is limited to three dimensions. Often it is useful to examine the relative performance of competitors and SBU's across a range of attributes. This data is usually obtained either from a customer satisfaction survey or from a positioning marketing research study. The function of the position maps is to present that type of data. A typical map is shown below.



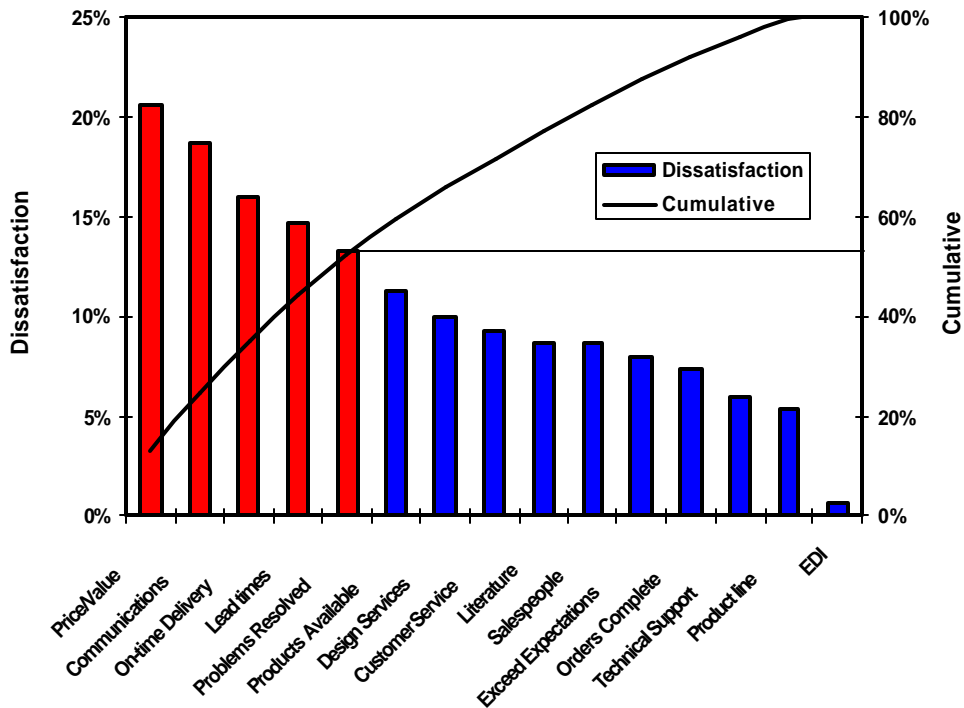
It should be noted that there are a number of ways of constructing these maps. In all cases, they are an approximation with some information not captured by the map. Similar to the triangle map, competitors closer to the attributes would be performing better on them on average. However, positioning is only approximate and it is necessary to also present tabular data to confirm any observations. These types of maps are discussed in detail in the chapter on rating data analysis in these notes.

8.3.2.4 Operational Performance Factors

Operational performance analysis is the goal of Quality management and is a key function of strategic planning. Several charts are used in strategic planning in connection with resource allocation.

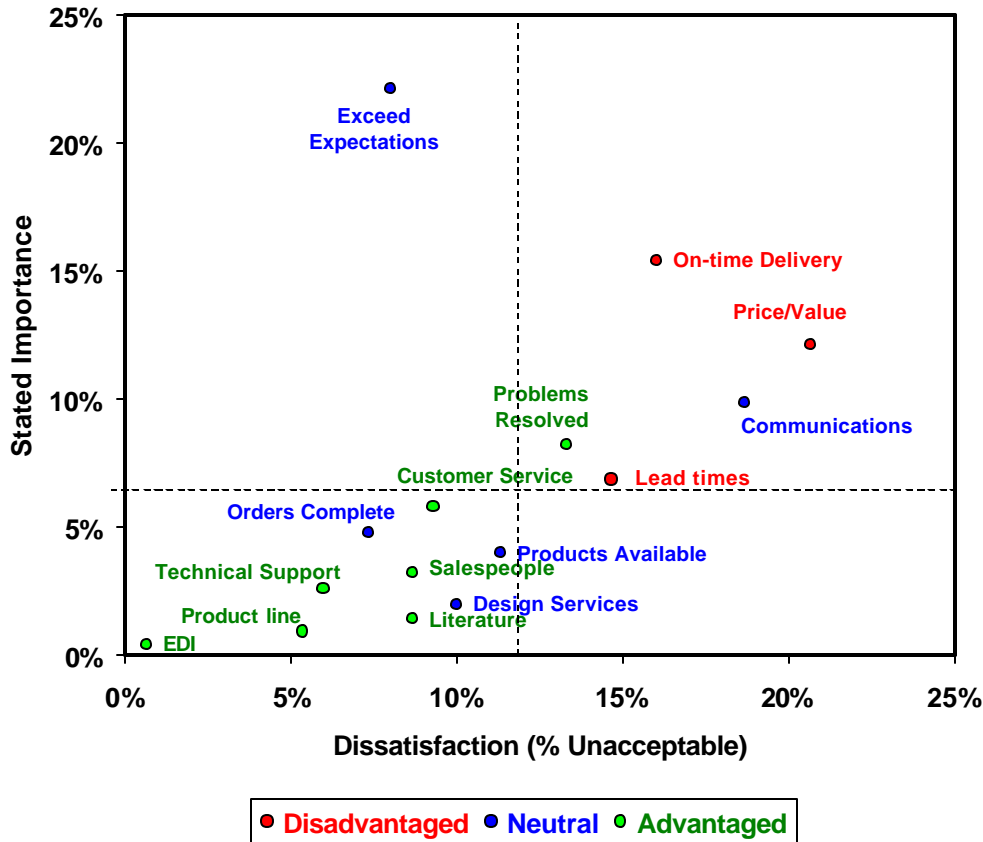
8.3.2.4.1 Pareto Charts

The pareto chart is the simplest presentation of customer dissatisfaction. Usually this is a standard result from the analysis of Customer Satisfaction Study data. The attributes or characteristics that have been measured are ranked in order of the expected percentage of dissatisfied customers. The cumulative percent of the total is also plotted. Traditionally, those items that account for fifty percent of the total dissatisfaction need immediate attention.



8.3.2.4.2 *Quadrant Maps (Routine)*

The percent dissatisfied is only one of the factors that need to be considered in determining action. Typically, some measure of the relative importance and competition position¹⁵ needs to be included. These are shown on the Quadrant map, an example is shown below.



The data for the Quadrant map is usually also obtained from Customer Satisfaction Studies. Several measures of importance can be used. However, stated importance based on explicit estimates from customers is typically used. An alternative is derived importance that is the correlation between the performance of the attribute and the overall satisfaction of the customer. Similarly there are a number of definitions of competitive advantage. Typically, the average difference compared to the best competitor by category or against the main competitor is used.

¹⁵ Traditional Quadrant maps include only average performance and stated importance. Competitive advantage is usually not included mainly due to the lack of data.

8.3.3 STRATEGIC REALIZATION

It is critical to test strategies to verify that they are consistent and feasible. A key function of external strategic consultants (or outside business directors) is to provide the an independent and some extent “naive” perspective on the business strategy. The term “naive” here should not imply a lack of business knowledge but only a lack of indoctrination into the organization’s culture, past business practices and biases.

The objective of these activities is to identify the “root causes” of difficulty and avoid being “blind sided” on risk and issues. The fundamental assumption with this approach is that even very bright and knowledgeable people can miss even obvious issues if they are too close or involved in them. Our experience has indicated that many strategic planning problems are derived not from ill-will or the lack of insight but from working on the problem too long along the same lines of approach.

8.3.3.1 Business Classification

The “Discrete Classification” approach is based on forcing the business, venture or SBU into multiple discrete and somewhat extreme views of the situation and see how the strategy applies. It should be noted, of course, that all real businesses are usually not at an extreme; and therefore, this approach is only approximate. We seek insight by forcing the classification. We have found that most of much of the “blind sided” takes place when a change in structure is required from the existing business.

8.3.3.1.1 *By Offering Type*

The nature of the product dictates much of the characteristics of the business. In many cases the specification of the type of offering determines the range of strategy. Furthermore, simply indicating the general nature of the offering sets the success factors of the business, often independent of strategy.

8.3.3.1.1.1 Product vs. Solutions

One of the simplest and often overlooked distinctions is the degree to which the product offering is a solution to the customers' problems or is it the interchangeable and identified product. In Business to Customer (B2C) transactions, this is not a key issue; but for Business to Business (B2B) transactions, it is critical. This situation impacts every issue of marketing, promotion and production. In particular, it impacts branding in that the firm name is the brand for solutions but not for products.

8.3.3.1.1.2 Sources Customer Value

The source of customer value and its relationship to the offering is often key to understanding strategic ground rules. Is the offering “pixie dust,” a specialty product where it is not what it is but what it does or what the customer thinks it does? How much of its value is in the perception versus its performance? Each of these questions focuses on the key sources of value and competitive advantage. The marketplace is a battle for

the minds of the customer. Understanding the sources of value helps scope out the battle territory.

8.3.3.1.1.3 Uniqueness

Uniqueness is in the mind of the customer! When we talk of the uniqueness of the offering, the physical properties and performance are only one dimension. The degree to which customers believe that competing products are interchangeable is critical to understanding the competitive marketplace. It is here, often that strategies may be found to be inappropriate.

8.3.3.1.1.4 The Class of Product

Is a ceramic always a ceramic; and is a diet drink always a diet drink? In many respects the answer is yes. Viewing the offering in a simplified format presents a set of existing strategic models and constraints. The reasons why certain industries are in the form that they are is dictated by the general nature of the product. Understanding that, helps define the scope of the strategic options.

8.3.3.1.2 By Business Model

The business model is the definition of how the venture is expected to make money. The business model by its nature will be highly dependent on the physical nature of the business within its “value chain.” There is a great difference in how an OEM makes money versus its component suppliers, versus distributors and wholesalers, versus the retailers and value added resellers. Each makes money in different ways with different sources of risk. While each venture to some extent has a unique business model, there have much in common. It is that commonality that we seek to focus on in understanding the success elements.

8.3.3.1.3 By Customer Type

The composition of the customers not only dictates their value but the nature of the business. There is a world of difference between businesses that are highly concentrated from those that are highly dispersed. The sheer number of customers dictate the business and marketing structure.

8.3.3.1.4 By Nature of Competition

The relative size and ferocity of the competition fixes the range and likely success of various strategies. Some competitors will not attack small niche players while others try to “eat them alive.” Strategies that rely on partnerships likewise also rest on the nature of partner/competitor/supplier behavior. Some firms are best left alone! This may include suppliers, competitors and even customers.

8.3.3.1.5 By the Nature of Manufacturing

How products are produced and their relationship with the processes to make other products can dictate strategy often at the disadvantage of the firm. This is often a policy and historical issue as well as economic. Firms that are highly integrated find it difficult to out source production even if it is economically advantaged. Similarly, firms that have historically only sold products produced internally, find it difficult to expand beyond their historical scope.

8.3.3.2 Strategic Perspective

Developing a strategic perspective is often the first step in the development of a business plan. However, it should also be the last in that it is critical that the resulting agreed upon strategy and implementation plan is consistent with that perspective. Auditing the strategic perspective is the first stage of an effective strategic assessment. Unfortunately, usually insufficient concern is often paid to its development.

8.3.3.2.1 Mission

The business mission is a statement of its actual present function. It should not be a statement of a wishful hope for the future, but a practical statement of what is expected in the present. Unfortunately, most mission statements only focus on financial performance and some general operational principles rather than defining the business as it presently exists. We believe that there should be at least three elements in an effective mission statement.

8.3.3.2.1.1 Business Scope

The business definition or scope statement defines what the business or venture does. This usually includes some classification of its customers served and the range of products and offerings provided. Its value is more in what is presently excluded than what is included. It should only include those businesses that are presently being undertaken, not what is possible or even feasible.

8.3.3.2.1.2 Objectives

While financial performance is almost always included in the objectives, it should never be exclusive. The objectives should include marketing position, short term growth as well as marketing goals such as price maintenance.

8.3.3.2.1.3 Functional Imperatives

Functional imperatives are those things that must happen or must not be allowed to happen. These are often the quality and safety objectives. These set the “other” objectives of the firm and can be as important to future strategy as the financial objectives.

8.3.3.2.2 *Vision*

While the mission focuses on the present, the vision sets the target of where the organization wishes to go. The major problems in most vision statements are (1) their focus on a future financial position, and (2) lack specificity. A good vision statement is the major guide for the strategic process. In a way, the strategy is the “future business history” to obtain the vision. The more vague the vision the more difficult it is to set a path into the future. There are three key components to a good vision statement.

8.3.3.2.2.1 Business Range

The business range is equivalent to the future scope of business operations. This may correspond to all feasible businesses that can be envisioned. However, more effectively, it is an assessment of the businesses that the management team wishes to participate in and those that are excluded. Some the excluded businesses may be those that are presently active. As such, it may not be merely an expansion of businesses' operations but shift to new areas¹⁶.

8.3.3.2.2.2 Goals

The major goals tend to be financial. Recently, with the emphasis on stockholder value, goals now focus on relative stock evaluation and market capitalization as well as financial performance. Unfortunately, achieving those goals directly are generally not within the scope of business strategy. The goals may also contain specific guidelines for the business. For example, General Electric has set specific market share position requirements for its businesses that translate into goals.

8.3.3.2.2.3 Potential Competitive Advantage

The potential competitive advantages are the means by which the goals can be achieved. These are very important in the vision statement since it begins to ground the vision in reality. For the vision to be doable, the reasoning of how it will happen should be included. This separates vision from speculation.

8.3.3.2.2.4 Taglines and Business Branding

One of the techniques that we find useful is to have the organization reinvent itself through exercises of identifying a taglines or new business brands or names as means of putting “flesh” on the vision.

8.3.3.2.3 *Core Competencies*

The core competencies are the intersection between those things that we do, or should do

¹⁶ Example of this is the shift of Marriott from a restaurateur to a real estate firm and the movement of General Electric into a financial company.

well, and those things that provide competitive advantage. There may be a world of things that we do well but unless they provide competitive advantage, they are not core competencies. Similarly, there are things that give competitive advantage but we may not do them well. However, that may need to change in order to implement an effective strategy.

8.3.3.2.3.1 Business Strengths

Truly understanding a company's meaningful strengths is often difficult. Management teams by their nature are inward focused¹⁷. This makes a real understanding of competitive strengths difficult. Benchmarking in this area is usually critical. The key here is not only over-estimating strengths but missing critical ones that are taken for granted. This oversight is as dangerous as the overestimation. It is important to note that strengths are derived not only from skills and knowledge but from market position, history, and physical facilities as well as access to resources.

8.3.3.2.3.2 Businesses Weaknesses

Similarly understanding weaknesses is critical. In general, the roots of future failures and weaknesses are built on past successes. There is a general belief that if one is successful, all that is done is correct and strong. This is generally not the case, past success generally first hides weaknesses and then compounds them.

8.3.3.2.3.3 Sources of Competitive Advantage

Strengths and weaknesses are the means by which competitive advantage is obtained. However, just because a firm has strengths (or can obtain strengths), does not mean that those strengths will translate into meaningful competitive advantages. That linkage needs to be established in order to determine where strengths need to be maintained and weaknesses reduced.

8.3.3.2.4 Orientation

So far we have dealt with what could be an objective, non-biased view of where the firms are and where we wish it to go. However, no such view is truly objective. Each firm is a set of organizations and people, which have inherent biases. These biases color the view of the present and future. Unfortunately, those biases can straight-jacket the strategy and make it nothing more than an extension of the past. This will condemn the organization to repeat past mistakes. We have found it useful to consider three sources of orientation bias.

8.3.3.2.4.1 Functional Orientation

Businesses, and in particular management teams, tend to be dominated by particular

¹⁷ Peter Drucker discusses this in detail in his classic book "The Effective Executive."

functional outlooks. Whether it is manufacturing, marketing, sales, operations, or finance, each produces its own “spin” on history and on the future vision. When radical changes are in the air, these biases can greatly limit the strategic alternatives. Each function, with their corresponding formal educational backgrounds, has their own needs, imperatives, and if I dare use the term “world paradigm.” They are not necessarily wrong but they are biased toward past solutions.

8.3.3.2.4.2 Culture

Organizations develop culture and mores that dictate acceptable behavior, business and strategies as well as acceptable practices. While many of these are honorable and appropriate, some are not. They are often based on old business models, which are no longer functional and limit future growth and direction. Organizational policies and reward and compensation systems are particularly sensitive to cultural structures.

8.3.3.2.4.3 Inherent Assumptions

Similar to cultural issues there are generally held assumptions regarding acceptable and unacceptable actions. These may be considered as a part of the organizational culture, however, they have greater consequences. Potential opportunities may be identified and accepted but the means for obtaining success in them may be assumed infeasible. These assumptions may not be explicit but simply the conventional wisdom of “what we do” or the “way we do it.”

8.3.3.3 Competitive Marketing Strategic Analysis

Competitive marketing strategy centers on the appropriate identification of market segments and profitable “position.” Market segments and product position are not independent concepts. Furthermore, the selection of an effective strategy incorporating market segmentation and positioning must be successful against the existing and potential competitors.

8.3.3.3.1 Market Segmentation

Market segmentation is a strategy formulation tool, not a characteristic of the market. Imposing segments brings apparent order in the chaos of the marketplace. Segments consist of identifiable uniform groups of customers for which marketing strategy can be applied. As marketing strategy may have multiple elements, several segmentation schemes may be useful. However, it must be recognized that the segmentation is an invention of the strategy not inherent to the market. Different strategies may require looking at the market through differing perspectives and therefore, using different segmentation schemes.

Unfortunately, most segmentation schemes are based on product or industry definitions. This is usually historical, based on specific applications of products. The scheme is also often built into the accounting system. This limits creative approaches to the market since the segments have already been set.

8.3.3.3.2 Business and Market Position

In general business, market and product position refer to the mental image of the offering in the mind of the customer. It covers all aspects of the business practice as viewed from the potential buyer and user of the products and services. A whole series of quantitative tools exist to help visualize the relative competitive advantages of the firm based on marketing research data and the opinions of the management team. The objective of these tools is to provide a series of advantageous offering descriptions that convey targeted customer values. The goals usually are to first differentiate the offerings in the marketplace and then make those of the firm specifically favorable to the targeted “market segment.”

How the business and offerings are positioned, therefore, depend on the market segmentation. However, the market segmentation will depend to a great extent on the possibilities of attractive new positions. We try to “segment” the market by repositioning the business and its products. It should be noted here that pricing strategy is integral to the concept of positioning. The nature of the pricing policy to a great extent is the outcome of selection of product position.

8.3.3.3.3 Competitive Marketing Strategy

Michael Porter discusses details of alternative competitive strategies in detail in his classic reference on Competitive Strategy. These strategies include such classic concepts as:

- Niche Marketer,
- Price Leader,
- Second Source, and
- Market (Technology) Leader.

There are a number of tools not emphasized by Porter that are highly useful in reviewing strategies.

8.3.3.3.3.1 The Ecological Imperative

There is a biological principle, attributed to Darwin, that “no two species can exist long occupying the same niche.” This translates to a business perspective as: “no two competitors can long exist applying the same strategy in the same market.” Only one will eventually be successful. Fortunately, the market tends to force the less successful competitor to adopt an alternative strategy.

8.3.3.3.3.2 Mutual Survival

Unlike combat, commercial activities are not intended to “close-in and destroy” the

competition irrespective of statements of sales managers¹⁸. Effective competitive strategies are mutually supporting with various competitors taking on different roles for selected segments. Market shares, as is discussed later, tend to become stable. Furthermore, in most cases, it is not feasible to force competition out. As such, some accommodation is needed.

8.3.3.3.3 Role of the Customer

The customer is central to all business strategy. They are the ultimate determining factor in competitive markets. It should be noted that under effective monopoly conditions the impact of the customer may be more subdued or delayed. However, the customer will eventually prevail.

8.3.3.3.4 Competitive Modeling

Quantitative industry models can be effective in estimating the impact of competitive reaction to strategies. These models incorporate market behavior, economic conditions, and competitive behavior to provide predictive estimates. The key issues investigated using these models typically are:

- The Impact of New Entries;
- Potential Reaction to Pricing Policies; and
- Need for New Capacity.

Competitive models are discussed in far more detail in another chapter of these notes.

8.3.3.4 Policy Alignment

Testing strategic plans focuses on the alignment of activities and expected results. Alignment should be viewed as both “feasible” in the external world and internally consistent.

8.3.3.4.1 Strategic Benchmarking

The goal of strategic benchmarking is to provide external tests of feasibility. We wish to determine the likely outcome of strategic actions.

8.3.3.4.1.1 Comparative Performance

The PIMS database, as previously noted, consists of characteristics and financial performance of business units from which strategic conclusions can be obtained¹⁹. Since

¹⁸ Occasionally you hear brand or sales managers extolling its sales force to “crush the competition like bugs.” However, that is more metaphore than reality.

¹⁹ Several organizations have indicated interest in developing similar databases. However, at this point, I am unaware of any that exist with this level of detail.

this is a fairly extensive (though dated) database, statistical or PAR models can be developed, which indicate expected performance. It must be noted, that these are on average effects. These models do not indicate the impact of a change in strategy but only comparisons between expected differences between ventures.

8.3.3.4.1.2 Financial Analysis

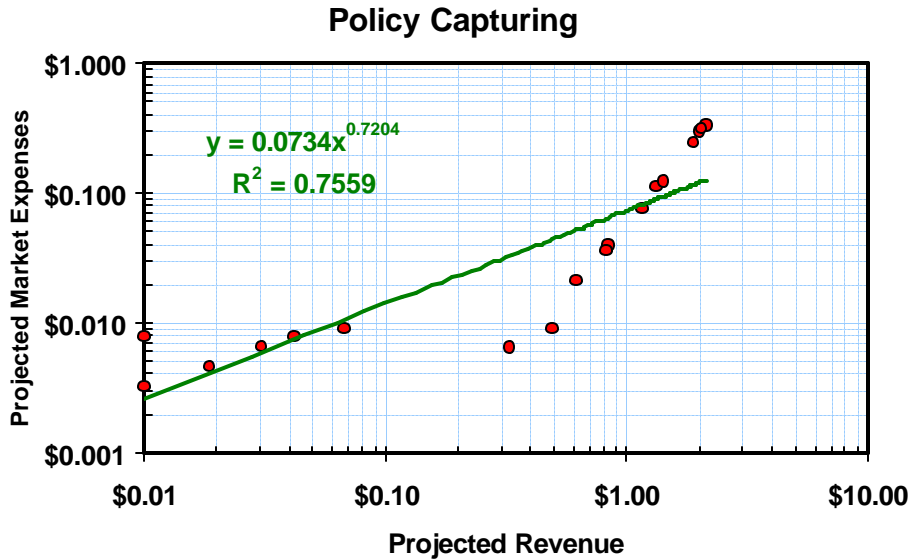
Similar analysis can be done using exclusively financial data. The analysis using resources such as Dun & Bradstreet databases usually focus on general characteristics of small and moderate businesses.

8.3.3.4.1.3 Case and Benchmark Analysis

The third method is by “case study.” Literature research is often used; but in much more common is to attempt direct contact with non-competitive firms with similar characteristics and strategies. In all cases, the objective is to identify key success factors for implementing the strategies.

8.3.3.4.2 Policy Capturing

Policy capturing is the link between resource allocation and strategic outcomes. Not all businesses or SBUs are created equal. We would expect that the effectiveness of each of the elements of the marketing mix will differ. As such, we would not expect that the allocations of resources and expenses for each tool should be simply proportional to the projected revenue or earnings. A method of examining this relationship is by regression analysis. The allocations (advertising, sales, marketing, research, new product development, etc.) are thereby statistically compared to the future revenues. Below is a typical chart of this type of analysis.



Typically this is done using logarithmic scales and produces a “power-law” model for the form:

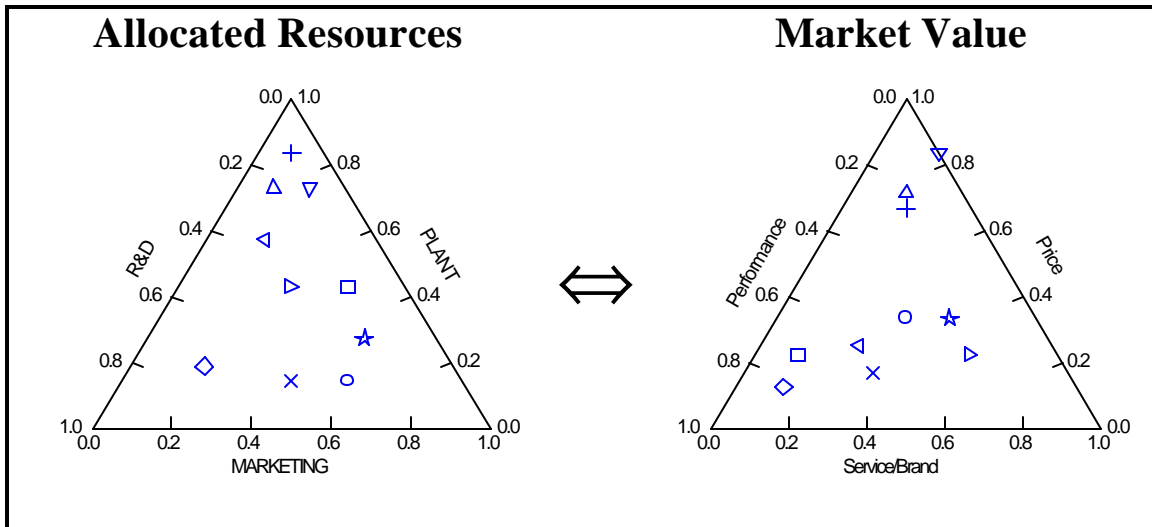
$$\{\text{Projected Expenditures}\} = a \cdot \{\text{Projected Revenue}\}^b$$

where **a** and **b** are constants. The power law index, **b**, usually varies from 0.6 to 1.0. The R-Square is the measure of the fit. It is unexpected that there should not be major deviations from the curve²⁰. The strategic review focuses on those deviations. Why should a business need more of a specific resource than others?

8.3.3.4.3 Resource Impact Alignment

Business position identifies the relative importance of product performance, brand and services and price in the marketplace. Roughly those should be also the relative allocation of resources. Products are developed by R&D; branding and services are usually the function of marketing; and the goal of manufacturing is usually to reduced costs. It is reasonable to expect that there should be a relationship among these characteristics. This type of alignment is examined on the following charts.

²⁰ In some cases we have seen extremely close relationships between revenue and expenditures with power law indices close to 1 and almost a 100% R-Square. This turned out were sources of funds rather than their uses. Accounting systems charged businesses based on revenue. However, this usually did not reflect the use of the funds.



It must be noted that strategic resource allocation is a function of business life cycle management. Allocations are made not only as a response to marketplace desires but as a means to build customer value for the products and businesses. Marketing expenses, for example, is often viewed as an investment in building brand awareness and value. R&D may find opportunities to develop new products that will meaningfully differentiate from competitive offerings even though the present products are viewed as commodities. Each of these will distort a simple relationship between market value and allocated resources.

8.3.3.5 Technology Strategy

Because of the importance of technology, it is often useful to consider technology strategies as a separate planning activity. However, it must be fully integrated into the strategic plan. Technology enables strategy just as marketing and manufacturing implements it.

8.3.3.5.1 Technology Stages

Technology is a means to an end. It appears embodied into applications. As the technology develops, it tends to undergo four overlapping stages:

1. Innovative Stage - where the technology searches for exploratory applications;
2. The Retrofitting Stage - where the technology is forced to replace other technologies within the present practices and uses;
3. A Diffusion Stage - where the technology is applied to new applications based on the existing base; and
4. The Establishment Stage - where the technology is fully integrated into business practices.

As technologies progress through these stages the cost, support, value and potential competitive advantages change.

8.3.3.5.2 Alternative Users Strategies

Coupled with the stages of technology development are a variety of adoption strategies. It must be noted that these strategies are specific to groups of technologies but should not be applied universally. The process of technology strategy formulation consists of matching the specific technologies and strategies. While there are several popular descriptions of these strategies the one that we use include:

1. Pioneers are organizations who usually get involved with targeted technologies very early, usually in the innovative stage. We refer to organizations "getting involved" with technologies rather than "adopting" them since the technologies at this stage are still evolving. Pioneers are usually the "beta" testers.
2. Early Adopters are trying to obtain competitive advantage by using new technology. The technology is usually in the retrofitting stage. There are usually significantly higher costs and a lack of infrastructure and available supplies at this stage.
3. Early Followers usually only adopt technologies that are fully proven. Typically technology at this stage is undergoing wide diffusion with multiple applications involved. Lower adoption costs are often realized. But far more important, is the availability of a well-established infrastructure with competitive markets for supplies and support.
4. Late Adopters are usually forced by customers and suppliers to adopt the new technologies. The technology is usually well established at this point. The motivation for adoption is often survival.

It would be very unusually and probably unwise for any firm or venture to pioneer or even be an early adopter across all pertinent technologies. Each strategy carries with it advantages but also risks. The table below shows a comparison of those technology strategies.

Technology Strategy	Application Stage	Advantages	Risks	Acquisition Strategies
Pioneers	Innovation	Technical Leadership	Expensive & High Risk of Failure	Internal R&D/ Invention
Early Adopters	Retrofitting	Competitive Leadership	High Technical Risk	Internal Development
Early Followers	Diffusion	Cost Advantage	Little Competitive Advantage	Strategic Alliances
Late Adopters	Establishment	Low Technical Risk	Non-Competitiveness	External Purchase/ Out-Sourcing

8.3.4 FUNCTIONAL AUDITS

Audits of various corporate functions are routinely done usually as a requirement for certification, or in the case of independent financial audits, by law. While these audits typically are not used as part of the strategic planning process they do provide information that can be useful. More significantly, the auditing process tends to bias the strategic planning process by structuring information that may not be well focused on business strategy. The following audits are typically done at some point by most commercial firms.

8.3.4.1 Financial Audits

Financial audits focus on the sources and uses of capital in the firm. Financial audits generally follow the accounting principles that focus on consistency. They act to discourage changes in the business definition and thereby restricts strategic options.

8.3.4.1.1 External or Independent Audits

The independent audit is a requirement of publicly traded firms, but is also routinely done by privately held firms in the interest of the owners. The purpose of these audits is to verify the financial statements of the firm. These audits are prepared by certified public accountants in independent accounting firms. As such, the constraints on consistency are very strong. Any variation in methods would be reported in the opinion that reflects negatively on the firm. The flip side to the constraints imposed by this type of auditing is that they assure the availability of consistent financial data for strategic planning.

8.3.4.1.2 Control Audits

Large firms also have internal auditing staff that focuses on the maintenance of financial controls. While theoretically, internal and independent auditing are separate functions, in practice they are usually combined. The objectives are different, while the independent audit is interested in the financial statements, the internal audits are concerned that control processes that assure that resources are expended appropriate are functioning correctly. However, both are concerned about fraud. The problem with maintaining strong control systems is that it greatly limits discretion in the part of marketing and strategic actions. However, once again the existence of control audits provides a means of maintaining the command and control required to implement strategy.

8.3.4.1.3 Risk Audits

Financial risk audits focus on insurance requirements to offset potentially damaging events. As such, they are far rarer than the other types of financial audits. They are usually undertaken with increased capitalization and the necessary to review insurance coverage. Like other financial audits, they provide insight into operations but also constrain options. Conceivably risk audits should be a source of creative strategy, but in reality they tend to limit options.

8.3.4.2 Operational Audits

Operational audits focus on the effectiveness of specific production and distribution functions. Benchmarking is the major tool in operational audits and therefore helps establish a Pervasive Marketplace Awareness and are input into the competitive strategic planning process. In addition to conventional operational audits, there are two types of special audits that need mentioning.

8.3.4.2.1 Quality Audits

Standardized Quality audits are undertaken as part of international Quality certification (ISO9000), US Quality competition (Malcomb Balridge Award) and US automotive industry Quality certification (QS9000). In addition, many of the larger original equipment manufacturers (OEM's) require their own Quality audits and certification for preferred suppliers. These audits generally focus on procedures to maintain product and process consistency and to establish effective means to correct problems. In the past, all procedures did not deal directly with strategic issues other than maintaining and growing customer value and reliability. However, the more recent, QS9000, standard goes beyond just "implying" specific strategic conditions. They include enforced timely price reductions. Furthermore, the standard establishes a preferred supplier standing, which implies limited competition. These conditions take the Quality audit out of the traditional scope of manufacturing standards.

8.3.4.2.2 Supply Chain Audits

Supply chain audits or studies are generally undertaken to improve the costs and investments associated with manufacturing products. They track back the supplies of materials through the manufacturing process to discover means of reducing costs and improving throughput. Recently, these studies have been extended forward to examine the distribution problems giving a 360-degree view of material and product flow.

As production costs influence strategy, these studies can have a huge impact. Because they can be a large expenditure of resources and management time, they tend also to bias strategic thinking toward a production rather than a marketing orientation. This may or may not be a problem but it is a strong influence.

8.3.4.2.3 Safety Audits

Safety audits are done for insurance purposes, as part of OSHA and local safety requirements and as a part of "good" industrial practices. While these audits generally do not drive strategic considerations, they can affect it by limiting actions.

8.4 STRUCTURED PLANNING PROCEDURES

The Strategic Planning Guide is a compilation of tools and issues for broad based existing business planning. It is a “review” document covering a range of issues and tools that should be covered in most detailed business plan. However, it is not designed for self-execution. It is better suited for an auditing or overview approach to the planning process.

Strategic planning workbooks, on the other hand, are designed to provide self executing business analysis and planning procedures. They are roughly broken down into three groups: Definition and Initial Assessment, Venture Analysis, and Planning. The Definition group includes: (1) New Venture and (2) New Venture Evaluation Workbooks. These are designed to provide more an initial concept into a development project. The Venture Analysis group includes: (1) Product Offering & Quality, (2) Operations Development, and (3) Venture Analysis Workbooks and are design to provide a framework for selecting well-defined ventures. The Planning group includes: (1) Operations & Quality, (2) Marketing & Sales Plan, (3) Product Position, Promotion, & Distribution, (4) Strategy and Strategic Plan, and (5) the Information Plan Workbooks. These are designed to help the venture planning process.

BUSINESS PLAN GUIDE

This guide is intended to assist venture managers in developing a comprehensive business plan. It is intended to be a check-list of elements that could be included in the plan. It is understood that most plans will exclude some items. However, a review of those items that could be included should prompt the discussion of issues otherwise overlooked.

- Business Outline
- Annotated Elements of the Business Plan
- Outlines of Workbooks
- Guide of Business Conduct
- Quality Audit
- Requirements of Electronic Data Control

NEW VENTURE WORKBOOK

This workbook is designed to assist in the initial definition of the new venture concept and the scoping of a feasible development plan. It focuses on extending an initial product or market need concept into a full business concept, which then can be proposed for development. It is the first and critical step in the venture development process and is intended for the person promoting the concept.

- Business Definition
 - Products
 - Markets

- Means of Production
- Potential Business Value
- Critical Issues
- Development Elements
- Concept Test Design
- Plan

NEW VENTURE EVALUATION WORKBOOK

The purpose of this workbook is the evaluation of the new business concept. Much of the information for this workbook comes from the *New Venture Workbook* and it should be viewed as a companion workbook. It is intended for evaluation purposes, to be used by management with the person promoting the concept. The focus of the workbook is on potential financial performance of the proposed venture and the likelihood of success.

- Business Definition
- Venture Evaluation
- Fit
- Program Review
- Confidence in information
- Development Costs

PRODUCT OFFERING & QUALITY WORKBOOK

This workbook is designed to assist in clarifying the design of the product and identifying the elements of quality as viewed from the customer perspective. Quality is defined as "meeting or exceeding customers' expectations." In this context Quality has to be built into the product and the venture in order that the business will be successful. Early assessment of the capability of the venture to meet the customer expectations is critical to determine feasibility. This workbook is a companion to the *Operations and Quality Workbook*. That workbook focuses on the delivery of quality. That workbook appears later in the development process because the process is usually not developed sufficiently to allow detailed analysis. Both the workbooks should be filled out as soon as possible to ensure Quality from the beginning.

- Business Definition
- Identification of the Customer
- Product Characteristics
- Pricing
 - Customer Value
 - Pricing Policy

- Customer Expectations
- Measures of Quality
- Development Program

OPERATIONS DEVELOPMENT WORKBOOK

This workbook focuses on the design of the operations for the business. These include the methods of making and delivering the product and services. The workbook includes estimates of sales, costs, and investments. Manpower requirements for the venture are also reviewed. This workbook is intended to assist in the definition of the processes rather than detailing the economic issues.

- Process Design
- Operations Design
- Sales Forecasts
- Cost Structures
- Investments
- Operations Development Plan

VENTURE ANALYSIS WORKBOOK

This workbook assists the project leader or analyst in preparing trial financial analyses for the new venture. Many of the cost estimates are detailed in the *Operations Development Workbook*. This workbook should be considered its companion. The workbook focuses on economic evaluation and is intended to be used both by the project leader and management.

- Proforma Evaluation
 - Revenues
 - Operating Costs
 - Investments
 - Cost of Sales
- Financial Evaluation
 - Return
 - Present Value
 - Margin
- Sensitivity Analysis
- Risk Analysis
- Business Test Design
- Development Costs and Exposure

OPERATIONS & QUALITY WORKBOOK

This workbook is intended to assist in the development of the operations and to assure Quality. It is the companion to the *Product and Quality Workbook*. The workbook focuses on the design of the process and the organization to assure effective delivery of a quality product and services to the customer.

- Product Specifications
- Process Design
 - Monitoring
 - Continuous Improvement
 - Cost Control
- Quality Objectives
- Venture Organization
- Quality Program
- Production Schedule
- Production & Quality Plan

MARKETING & SALES PLAN WORKBOOK

This workbook focuses on the customer and the actions that we wish him to take in order to be successful. It is mainly directed toward the sales and customer support function. It is intended for the sales and marketing management function as well as the venture leader.

- Business Goals
- Customer Identification
- Customer Plan
 - Desired Customer Behavior
 - Action
 - Competitive Position
- Resource Requirements
 - Sales Aids
 - Product Information
 - Business Courtesies
 - Budget
- Overall Effect

PRODUCT POSITION, PROMOTION, & DISTRIBUTION WORKBOOK

This workbook takes a broad perspective on the marketing functions. It includes concerns on pricing, promotional programs, product specifications, and distribution. It is intended to assist in producing a consistent, effective, and efficient marketing plan. The *Marketing & Sales Plan Workbook* is a companion which provides customer input.

- Product Position
- Promotional Function & Strategy
- Advertising
- Show, Demonstrations, & Exhibits
- Distribution Channel Design
 - The Value Chain
 - Selection
 - Conditions and Agreements
 - Partnerships
 - Customer computing
 - Channel Management
- Information Strategy
 - Development Plan
 - Resource Requirements

STRATEGY AND STRATEGIC PLAN WORKBOOK

Previous workbooks focused on the immediate business opportunity. This workbook takes a strategic course, concern with long term competitive position and growth. Competitive pricing policy, global opportunities, technology development, new product opportunities, and manufacturing strategies are reviewed.

- Long Range Forecasts
 - Sales
 - Price
 - Costs
 - Technology
 - Investment
- Competitive Position
- Threat Assessment
 - Critical Issues
 - Scenarios
 - Risks
- Approaches
 - Product Strategies
 - Pricing Policies
 - Potential Promotional Programs
 - Technology Strategy
 - Manufacturing Strategy
- Feasible Business Goal and Mission
- Resource Requirements
- Alternative Earnings Forecasts

INFORMATION PLAN WORKBOOK

Information is both necessary to plan a business and to run it. This workbook focuses on both the need for information and the development of systems to run the business and monitor results. Running the business includes effective accounting and budgeting systems. The monitoring systems must allow for effective control. Finally, technical and business research programs need to be established to monitor competition, customer behavior, and apparent market needs.

- Accounting Systems
 - Invoicing
 - Paying Bills
 - Cashing Checks
 - Control & Monitoring
 - Consolidation
 - Consistency
- Product & Application Information
- Customer Support
- Market Information
 - Marketing Research
 - Customer & Sales Information
- Competitive Information
- Systems Support
 - Sales Force Support
 - Integrated Communications
 - Customer Computing
 - Integrated Business Information
 - Decision Support

E-COMMERCE WORKBOOK

The concept E-Commerce has become synonymous with new markets and business growth. However, it should be viewed, in most cases, to be new tools for the marketing mix. It is, therefore critical to understand its limitations and well as its potential value to the business. The E-Commerce workbook is intended to help in the planning process by providing a list of critical issues that need to be address before undertaking any new Internet based business activity.

- The Structure of the E-Business
 - Organization Mission and Vision
 - E-Business Function and Strategy
 - Objectives and Goals
 - The E-Commerce Markets and Customers
 - Sources of Competitive Advantage
- Site Strategy
 - Information Delivery

- Attracting Traffic (New Customers)
- Search Engine Strategies
- Keeping Customers (Returns on Customer Value)
- Site Design
- Transactions and Fulfillment
- Quality
- Preparing for the Future
 - Globalization
 - Future Expansions
 - New Technology

8.5 HEURISTIC PROCEDURES AND WORKSHOPS

Planning workshops are designed to facilitate the formulation of strategy and business direction decisions. These workshops are group activities to examine the business situation, compile and quantify organizational knowledge, identify alternative approaches, and determine satisfactory directions. These are group-processes which have been conducted on a face-to-face basis but could be performed either on an individual basis and compiled or using remote electronic media. In general, these workshops are designed for small groups making up the management teams, up to 15 people and for execution with a six-hour session.

These workshops are designed around internal available data and opinions. Marketing research data can supplement these sources but the focus is on internal information. External information is usually summarized in decision support systems developed prior to the workshops and used within them. Development of these decisions support systems and business models are covered in other chapters in these notes.

The following types of workshops are organized around basic procedures and methods. However, in practice each workshop utilizes a unique combination of procedures.

8.5.1 GROUP CREATIVE PROBLEM SOLVING

Several group creative problem-solving methodologies were pioneered during the 1960's. While these workshops tend to appear to be unstructured, the processes are well delineated. Most of these involve the following processes:

- Separating facilitation from clientship²¹;
- Establishing a supportive environment;
- Postponing and controlling critical review;
- Seeking the creative or underlying problem;
- Seeking a large number of alternatives (brain storming);
- Providing license for new ideas (visualizing);
- Merging different experiences;
- Forcing decisions;
- Building feasibility;
- Requiring future action.

We have undertaken many of these workshops and have incorporated the principles in other workshop situations that are discussed later. The following are workshops that follow the group creative problems solving procedures.

²¹ Many of the developers of these methodologies have indicated that knowledge of the subject is less important than proficiency in the process for the facilitator. However, we have found that this is not correct. Effectiveness of the sessions tends to require a knowledgeable facilitator in the subject being discussed.

8.5.1.1 Product Positioning and Naming²²

Developing creative positions and names for new products and concepts is a classic application of group creative problem solving sessions. The techniques were pioneered by the advertising industry for this purpose. For best effects, these sessions are general merge with concept testing (customer focus groups) and other sources of data and information. The key issues, however, is the identification of potentially unique effective product positions. The naming process follows from the positioning activity. The aim is to obtain an effective and memorable name for the new product.

8.5.1.2 Products, Markets and Applications

Creative problem solving workshops have been successful for developing products to meet new markets and application needs. While the initial goal is normally to identify new markets, in a broader sense these market applications are brought to the sessions. The problem is the matching products to the markets and the assessment of a unique fit. This matching is a process of identifying creative needs within the applications and modifying the existing offering to meet those needs. For these workshops to be effective the participants need to bring market applications, and product and process knowledge to the sessions.

8.5.1.3 Identity and Reorganization

The “identity” of an organization reflects what its purpose, function, mission and vision is to be. This is particularly a critical for functional organizations under change. Groups whose functions were dictated by older technologies, market conditions, or overall business mission often face changes that are not easily absorbed by the organization. While these sessions take on much of the traditional characteristics of a group creative problem solving session, there are normally great deal of other issues that need to be address. These are often highly “political” workshops with strong opinions. Furthermore, underlying problems such as contraction and personnel need to be addressed. These sessions become as much an exchange of information and opinion as they are creative problem solving.

8.5.1.4 New Manufacturing Routes

Identifying new manufacturing and process routes to products and services are technical applications of group creative problems solving workshops. These workshops generally require a significant technical background of the participants and the facilitator to be effective. Breadth of background is highly useful in these sessions. Often inside and external experts are used for these sessions and they become a structured means of exchanging knowledge and experience.

²² This is discussed in more detail in the section on Communications and Advertising Research Methods.

8.5.1.5 TRIZ

TRIZ is a Russian developed technique, by Genrich S. Altshuller, to help the inventive technical task for the invention new products and technical processes. There is some effort to expand the techniques to handle marketing and business problems. However, due to the need to develop a historically based problem-solution tool this had not been completed. The process is based on identifying generic problems based on fundamental contradictions that need to be overcome and a historical list of how they have been overcome in the past. Since general technical solutions tend to be limited by physical constraints and physical laws, there are a limited number of solutions. These become the creative input into the process. This has been automated to allow easier use²³.

8.5.2 STRUCTURED PROBLEM SOLVING

While the overall procedures for creative problem solving workshops are fairly well structured, the processes themselves are not. The direction of these sessions follows the ideas generated. In structure problem solving processes, on the other hand, are highly structured. The structured problem solving sessions are most effective for highly specialized applications where the direction approach are known and agree upon. The danger in these processes is that where the route is somewhat unknown, the resulting sessions may not be particularly useful.

8.5.2.1 Hierarchical Analysis

The Analytical Hierarchical Process for analyzing decisions was developed by Thomas Saaty²⁴. It is based on structuring the key issues of the decision in hierarchical fashion and assigning values to outcome and alternatives. The procedure helps both identify new options and evaluate alternatives.

Participants usually include mixtures of management, specialists, and implementers. Problems should be highly defined with market and business impact analysis already completed. Practitioners of the technique have indicated, however, that it is as much “politics” as it is analysis. The main use is to provide an organizationally acceptable rationality for making a difficult or politically charged decision and demonstrating “due diligence.” Software packages have been developed to simplify the process of both developing influence diagrams and the analysis of decisions²⁵.

8.5.2.2 Evaluation (Q-Sort and Similarities)

If there is no clear agreed upon criteria for deciding on options, the subjective ranking of alternatives and their evaluation can be used. The relative position of options can then be

²³ <http://www-linac.kek.jp/~mejuev/Triz/>

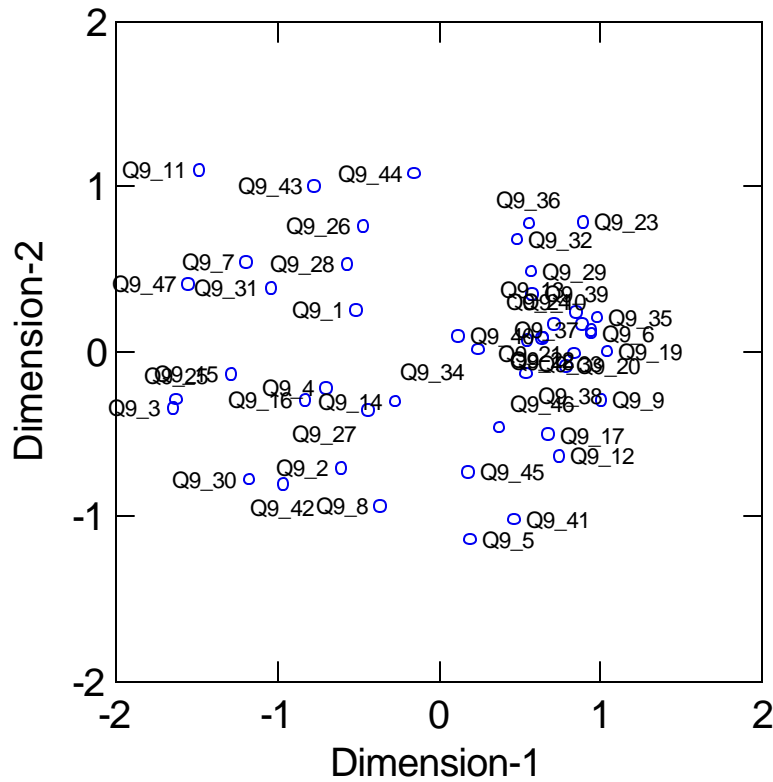
²⁴ Thomas L. Saaty, *Decision Making for Leaders, The Analytical Hierarchy Process for Decisions in a Complex World*, Wadsworth (1982)

²⁵ <http://www.expertchoice.com>, <http://www.palisade.com/html/ptree.html>

used to identify the “best” collective solution. Unfortunately, the resulting evaluation is highly subjective and is often not considered “defensible.” As such, it is not recommended for personnel evaluation or under conditions with external evaluation of “fairness” or “reasonableness” will be used. Typically these techniques are used for project and business segment prioritization and selection.

The workshops involve compiling a relatively complete set of alternatives and ranking them by use of a modified “Q-Sort” procedure. This procedure consists of options into a number of groups and then ranked within the groups.

A major problem with this method is the “halo” effect in the ranking. This involves placing disproportional value on option that are “liked.” As a means of reducing this problem similarity estimates can be used²⁶. Maps are generated using Multiple Dimensional Scaling (MDS) with this similarity data²⁷. MDS will also indicate the number of dimensions necessary to capture the similarities.



²⁶ If complete evaluations are desired there are $(N^2-N)/2$ comparisons required (assuming symmetry in the paired evaluations). For 25 items that would be 300 comparisons. However, it is feasible to only use a subset of these comparisons, if one can rely on consistency of evaluation. This would require using some method of accounting for missing data such as statistical average or an advanced method such as the EM algorithm.

²⁷ This can be done using SYSTAT and displayed using EXCEL.

Unfortunately, this analysis does not identify what those dimensions mean. However, it does indicate if the simple ranking is a consistent approach in grouping alternatives. As will all such workshops, the discussion of issues and alternatives generally is more important than the actual analyses.

8.5.3 DECISION CAPTURING

Decision rules and importance weights of criteria is often not explicitly known to the decision makers or management teams.

The purpose of decision capturing is to use perceived value techniques to identify the importance of criteria²⁸. These workshops involve both the use of individually executed exercises and group discussion to exchange underlying reasons for the decision rules. The goals of these sessions may be: (1) develop an overall organizational decision rule for prioritization of items, (2) determine individual decision rules for use with organizational voting simulators, and (3) developing group strategic insight revealed by the decision rules.

8.5.3.1 Evaluation Criteria

There are several areas that decision capturing has been used:

8.5.3.1.1 Business Opportunity Criteria

The most extensive use has been for business opportunity analysis. In particular, obtaining the relative importance within an organization of project, customer, and market criteria is used within the strategic planning process. In many cases we have found the differences in importance weight reflect different functions and needs. As such the decision capture process provides a means of exploring functional differences before they arise operationally.

8.5.3.1.2 Vulnerability and Risk Factor Analysis

Evaluating risk and vulnerability can be highly subjective. It is often based on previous experience. As such, decision capturing allows for an explicit statement of importance and provides a vehicle for discussion of experience.

8.5.3.1.3 Personnel Evaluation

Personnel evaluation often involves two processes: (1) assessment of performance of key criteria, and (2) evaluation of the importance of those criteria. We have found that the first phase, the assessment using some type of scorecard is fairly straight-forward and, while there may be some heated discussion, it is usually resolvable. Determining importance of criteria, however, is much more different and often inconsistent. Decision

²⁸ Details on the design of these tools is covered in a separate chapter of these notes.

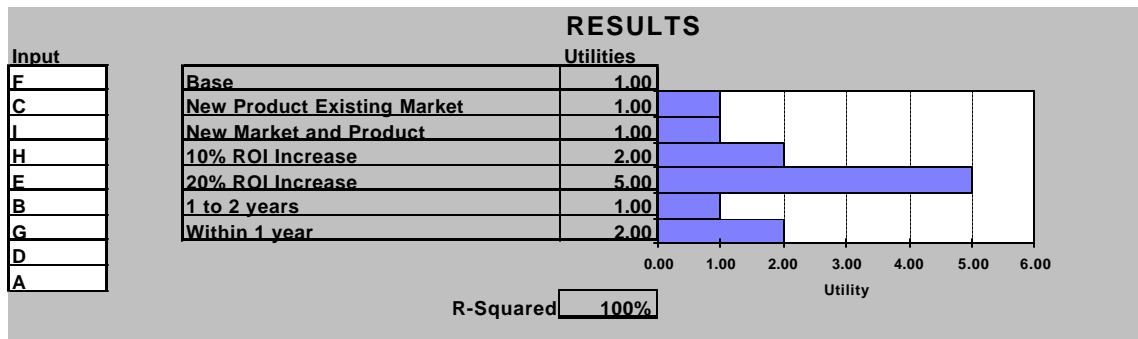
capturing can be used to establish standards as well as to compare results with organizational opinions.

8.5.3.2 Measurement Conjoint Procedures

Typically one of the “conjoint” perceived value methods is used as the measurement procedure. There are a number of techniques used. The most comprehensive method is “full profile conjoint” where the decision-maker is required to rank order a pre-selected set of scenarios. The design of the exercise allows the statistical (regression) estimation of the importance of the level changes²⁹. Full profile conjoint is limited, however, to relatively small number of attributes (in the order seven but usually four or less). For more complex problems compositional conjoint methods can be used. These involve ranking levels of various attributes against each other. Alternatively combinations of various full profile and compositional methods are used and referred to as hybrid conjoint methods.

For use in a workshop environment, “live” *EXCEL* spreadsheet systems have been developed. These allow analysis of responses within the workshop. Below are two examples of this type of system being used for the evaluation of project selection criteria. The criteria here includes; (1) the uniqueness of the idea, (2) the return on investment and (3) the timing for commercialization. The figure below shows the analysis spreadsheet for a full profile conjoint, which is based on a nine-card design. Linear regression is used to compute the importance weight. The quality of fit is shown as the “R-Square”.

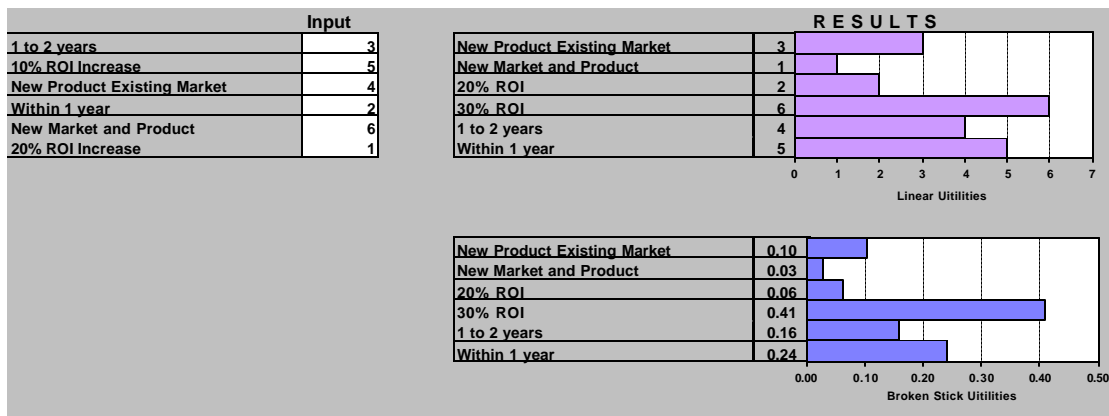
We have used up to 27 card sought to capture 7 attributes on three levels using “full profile conjoint”. However, if the number of attributes and levels increase significantly, the number of cards that need to be ranked becomes large and tends to be unworkable. Even the 27 card sought is fairly difficult to execute and can result in lower than desired quality of fit. Under these circumstances, we have tended to use compositional conjoint.



Below is the analysis spreadsheet for the same problem based on a compositional conjoint of ranking 6 changes from a base case. Usually for these small attribute sets, we

²⁹ In order to use the smallest number of scenarios in the ranking, only the principal or main effects are measured using these procedures. This excludes the measurement of any interaction among the criteria.

prefer to use full profile conjoint. The task is similar to the selection process itself and therefore it well simulates the decision process.



8.5.4 SCORECARDS

Scorecards are used to evaluate alternative options or choices. These are questionnaires filled out by internal personnel regarding each of the individual options based on a consistent set of criteria and attributes. They may be executed individually by the management team. However, within a workshop environment, they are filled out by conscience of managers and field personnel who have personal knowledge of the options. In general, the people who are most responsible for the option takes the lead in the evaluation. Open discussion is usually encouraged in order to help assure a fair evaluation.

It should be noted that typically different people are used to evaluate different options. The trick, therefore, is to establish a set of scorecard criteria that are as objective and well anchored as is feasible. While some subjectivity is inevitable, it must be made to be as consistent as possible. When using subjective criteria, we have found that shorter scales (three levels) are more consistent than longer (10 point) scales.

Scorecards are from the firm's perspective not from the customers or suppliers. As such, the criteria usually focus on the best interests of the firm rather than typical external attributes. As such, it is often useful to supplement scorecards with external survey research activities to verify that the internal perspective has a correspondence with the opinions of the outside world.

The importance of external standards of comparison can not be understated. The value of scorecards is greatly enhanced if the impact of those criteria is known objectively. Alternatively, decision capturing can be used to provide an internal evaluation scheme.

The major issue with scorecards is maintaining a small list of relevant criteria. If the number of criteria is relatively short, those decision-capturing results can be used to form a decision support model for analysis. Even if importance weights are not used, the results of scorecards can be used for positioning as a means to visualize the key issues.

Below are areas where they have been successfully used.

8.5.4.1 Projects Prioritization

The classical use of scorecards is with project portfolio selection where the major criteria are measures of the “worth” of the projects. Scorecards have been used in technical, marketing, and information systems selection. Similar procedures have been used on a corporate strategic level for business and market portfolio analysis and selection.

8.5.4.2 Customers Evaluation/Prioritization

Customer evaluation is used mainly for business repositioning for improved profitability and when product allocation is a problem. Here we need to differentiate among customers who have natural sales force advocates.

8.5.4.3 Risk Evaluation

Risk factor evaluation can use a standardized scorecard as a means of providing a consistent evaluation and prioritization. This is done both for routine maintenance and for audit purposes³⁰.

8.5.4.4 Internal Function and Corporate Culture

Evaluation of the effectiveness of a function can be done using a scorecard. This is done usually to improve the performance of the organization and as a benchmarking process. An example of this is Bob Cooper’s new product business scorecard. This involves self-evaluation of the business development function. Since external standards exist for this questionnaire, each function can be evaluated separately.

8.5.4.5 Suppliers Selection

Many firms maintain a supplier evaluation process. In general, however, these are informal processes and focusing only on qualification or disqualification. However, recently there has been a need for greater comprehensiveness in order to consolidate suppliers and restructure the supply chain. These have required more detailed and tended to use scorecard approaches.

8.5.4.6 Personnel Evaluation

Personnel evaluation often uses a scorecard approach. Being standardized, it provides a “objective” evaluation procedure and tends to have high “face validity.” The key issue, however, is how the scorecard is used to produce the final compilation and evaluation. Decision capturing can be used to provide a consistent model for that evaluation.

³⁰ Scorecards and decision capturing exercises were used to produce a risk based financial control (internal) auditing decision support system for Dupont.

8.5.5 POSITIONING

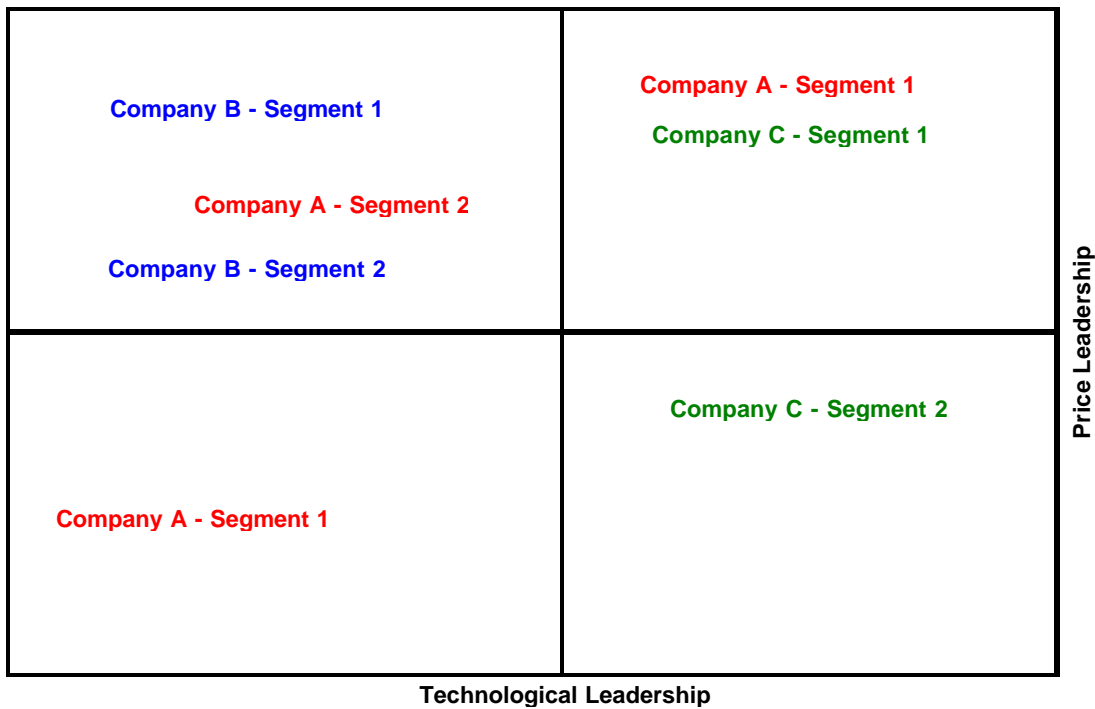
The purposes of positioning workshops are to: (1) determine who are the effective competitors, (2) determine what are the competitive dimensions and issues, (3) identify potential new products or changes in products that would provide significant competitive advantage, and (4) seek out underlying, inner mind, differences between competitors. These workshops are usually from an internal perspective. Data typically collected from internal sources involving both opinions and business information. It must be noted that using solely internal perspectives can be dangerous since it may not agree with external “reality.”

Both subjective and analytical methods are used. The choice of methods depends both on the prior knowledge of the dimensions for positioning and the orientation the management team towards the methods. Some organizations prefer a “soft” subjective approach where opinions are shared explicitly. Other cases, prefer “harder” analysis. The choice is based on what is expected to produce an understandable, compelling and implementable picture of the firm within a competitive market.

The tools for analysis follow those covered in the Psychological and Attribute Analysis chapters in these notes, but simplified for management workshop purposes. In order to maintain credibility of the process, it is critical to carefully identify the dimensions of position prior to the workshops. As such, a subjective session is usually done prior to more analytical workshop.

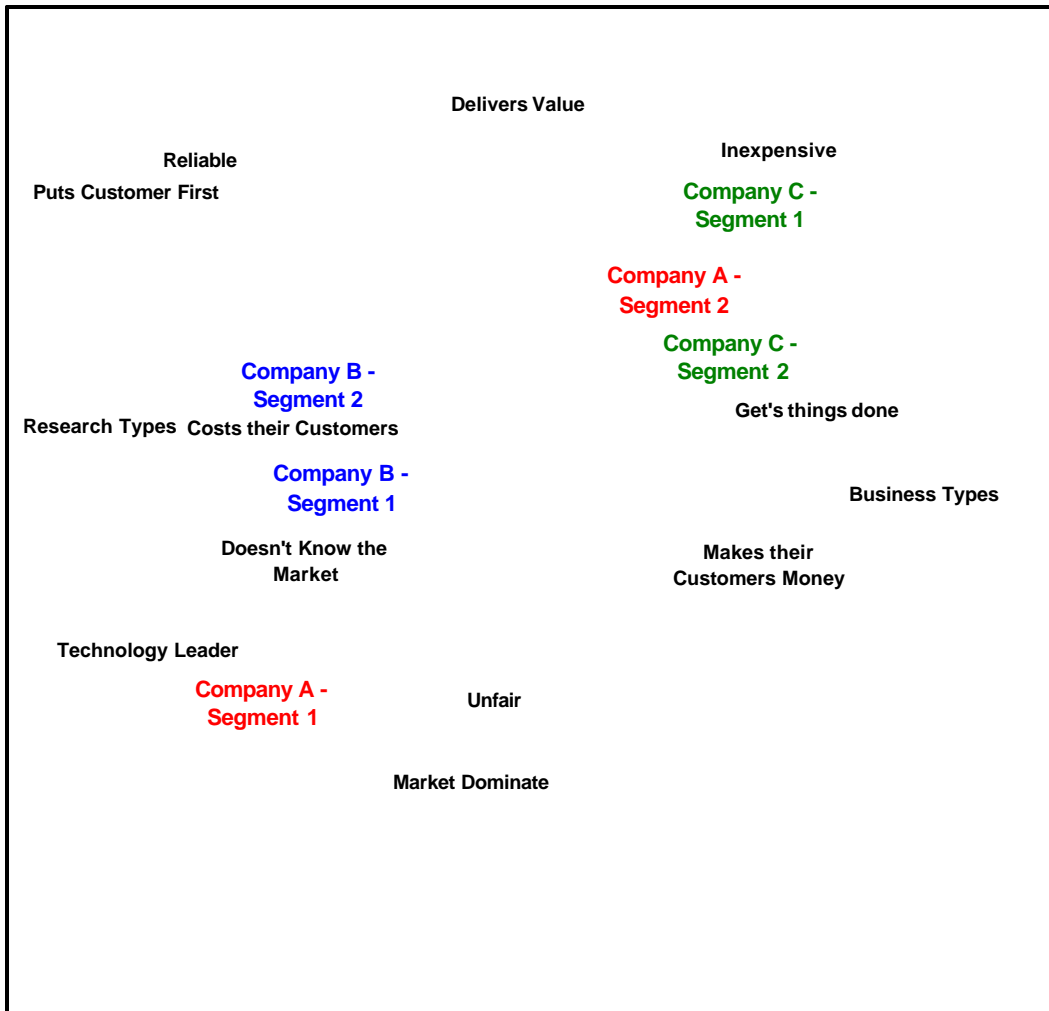
8.5.5.1 Product/Organizational (Subjective) Positioning

The purpose of subjective positioning is to gain insight into the dimensions differentiating competitors. Typically, this is done with a small management team workshop. “Post-its” are used to identify issues, dimensions, and product/supplier characteristics. They provide a simple way of physically positioning items among competitors, products and market segments. In a typical workshop, positioning of attributes onto competitors and segments is alternated with positioning of competitors and segments against attributes. The goal is to identify those attributes that are critical from those that are not. Usually two-dimensional maps are used in sequence. Role-playing can be used to capture the perspective of the competitor's intent and strengths. The figure below shows a typical subjective map.



8.5.5.1.1 Analytical Results from Subjective Data

In order to get a more collective view of the data analytical tools can be used. In this case, relative position of the competitors and segments are estimated based on relative similarities. Multiple Dimensional Scaling (MDS) is then used to construct a map indicating overall similarities and the number of dimensions needed to capture distances. The next chore is to determine the dimensions of the maps. This often requires analytical positioning.



8.5.5.1.2 Inner Mind Positioning

One of the major uses of subjective positioning is the application of projective techniques to probe fundamental “feelings” regarding competitors. This technique is particularly useful in considering internal reorganization. A typical procedure is using a series of pictures (often of animals) for which one wishes to assign a competitor, product, or organization. This can be done either explicitly or by paired comparisons. Below is an example of this comparison. This comparison is followed by a “laddering-down” to determine what are the underlying characteristics that determine the associations.



8.5.5.2 Market (Triangle) Positioning

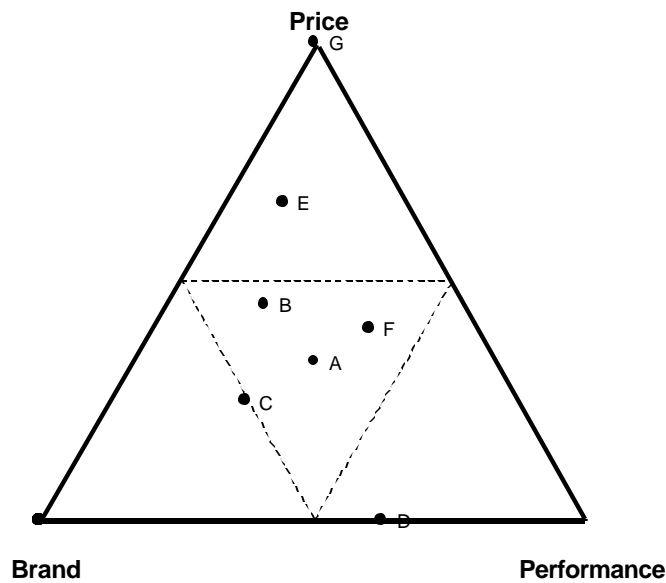
Triangle market positioning is among the simplest analytical workshop procedures for customer, business and segment positioning. It involves predetermining three key dimensions. As a standard procedure, we typically use: (1) price dominance (this differentiates commodity from specialty markets), (2) product performance/technology, (3) service and marketing. These dimensions also correspond to the resource allocation (as plant, R&D, and marketing investment) and a similar exercise from an allocation perspective is also undertaken³¹.

Rating, ranking, or constant sum exercises are used on a number of attributes to compute the map. In the example below six attributes are rated. This are then combined and normalized to give a percentage value on the three dimensions list above. The weights of the attributes are predetermined.

³¹ Alternatively this is done from financial data if available. However, we have found that data at this level of detail is not usually available.

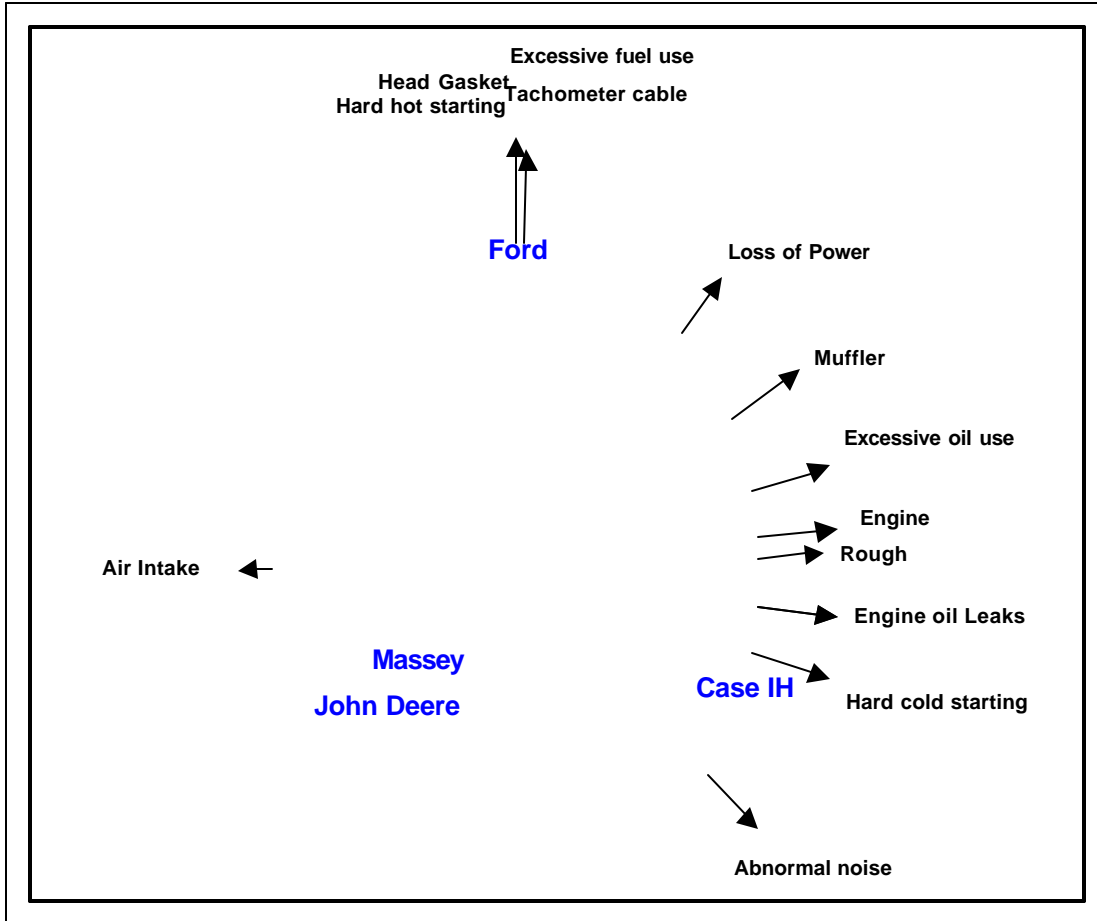
Customer	IMPORTANCE						TOTAL
	Price	Value	Customer Services	Supplier Reliability	In-Use Performance	Product Quality/Consistency	
A	2	2	2	2	2	2	12
B	3	2	3	1	1	1	11
C	1	2	3	3	2	1	12
D	0	0	1	2	2	3	8
E	3	3	1	1	1	0	9
F	2	2	1	1	2	2	10
G	1	1	0	0	0	0	2
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0
	0	0	0	0	0	0	0

A triangular map displays the results as the data is entered. Below is a typical map. Once completed, a system can be developed that allow the changes to be computed back from physical repositioning of the points. This allows running discussions in the workshop as to the proper position of customers, competitors, or products..



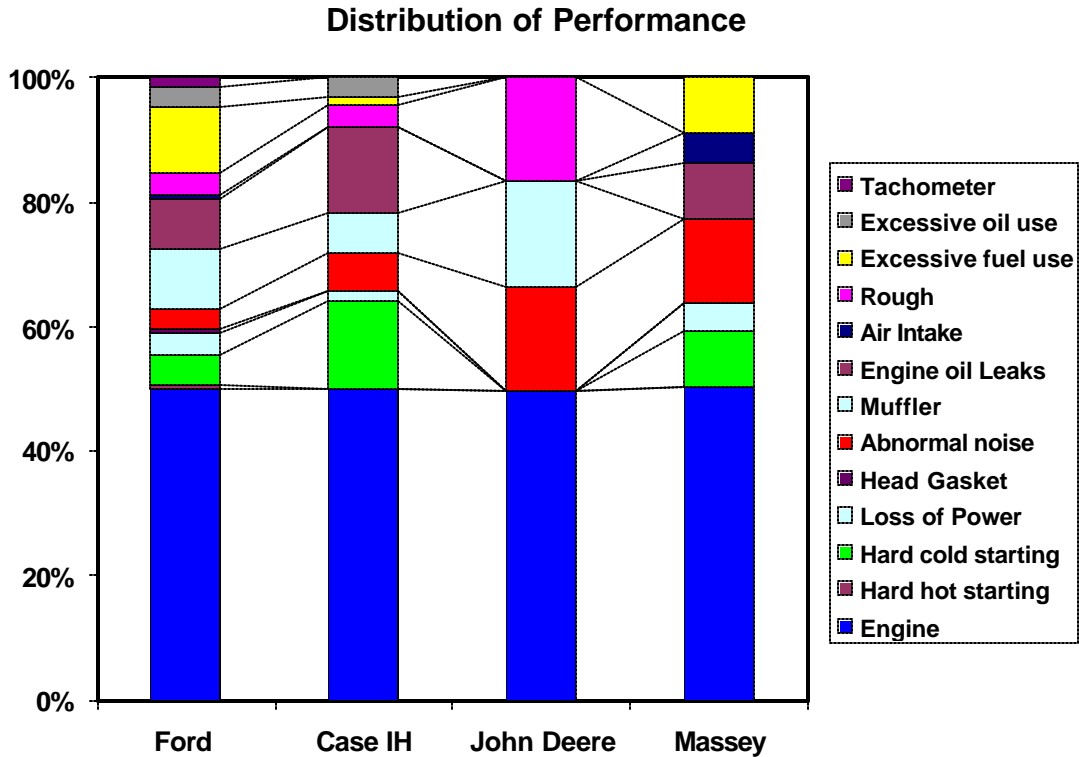
8.5.5.3 Competitive (Analytical) Positioning

The goal of competitive positioning is to identify difference among offerings in such a way to highlight sources of competitive advantage. This is similar to the positioning using attribute data but is done within a workshop based on internal opinions. Ratings are usually used based on general group agreements. Similar consensus building procedures are used as with scorecards but evaluation of all significant market participants are made. Below is a typical positioning attribute evaluation map.



Position maps of this type are created using either “Perceptual Mapping,” Factor analysis, or Multiple Dimensional Scaling Procedures. As with all dimension reducing techniques,

the resulting maps are only approximate. Line and segmented bar graphs are then used with the maps to pin point specific issues, as indicated on the graph below.



It should be noted that discussions of issues are usually far more important than the maps themselves. The objective is to identify actionable programs that would change the maps in the interest of the organization.

8.5.6 MARKET (HEURISTIC) MODELING

Business models are powerful tools to examine the impact of decisions. The advent of high-speed personal computers and electronic spreadsheets, such as *Microsoft's EXCEL*, provides the means to dynamically manipulate these business models during workshops. These heuristic modeling workshops try to expand the use of models beyond analysis to become tools for creative strategic thinking. These models contain three types of elements: (1) measured characteristics such as market opinions and historical trends, (2) structural relationship inherent in the models, (3) assumed relationships based on internal opinions. All three types of elements contain uncertainty and are open to interpretation. However, it is the assumed relationships that are usually the most open to creative thought. It is here that we explore with a "heuristic" or interactive mode the potential for various strategic changes.

The workshops start with the development of an industry or appropriate market model, which allows forecasting of the impact in changes in underlying assumptions. These

models are based on (1) market and industrial information, (2) marketing research results such as price sensitivity and (3) internal opinions of the market place. Development of these models is not simple and usually involves the effort of the planning team. The effort required varies widely from a short project to a major organizational effort.

The following are areas that we have used heuristic modeling workshops.

8.5.6.1 Vulnerability and Threat Analysis

The impact of potential competitors and the selection of alternative strategies is always difficult. This is particularly the case in formerly stable industries. Industry market models have been developed that capture expected market segment vulnerability and price sensitivity. Potential competitive reactions to market changes are assumed and various strategies tested. Since the competitive reactions or policies are usually assumed by the organization, they are the key elements that need to be tested within the workshops. The goal of these workshops is typically to identify attractive competitive strategies and develop a consensus among the management team as to its implementation.

8.5.6.2 Capacity Expansion Evaluation

Industry models can be used to develop the anticipation for expansion. The Federal Group (a consulting firm) has pioneered industrial models based on dynamic systems modeling. These models assume “rational” business-to-business industry and customer behavior for pseudo-commodity³² products. Customers are assumed to purchase the least expensive products adjusted for brand that is suitable for their process. Specific plant expansion by competing firms is based on share, anticipated market growth, and profitability.

The underlying assumptions that need to be evaluated are those related to competitive profitability, include costs, share, suitability of product, and expected market growth. These become the basis for discussion in these sessions with the results being the expected profitability of any new expansion. The objective of these workshops is to determine a reasonable and attractive expansion plan and to provide “due diligence” for upper management's financial evaluation needs.

8.5.6.3 Strategy Evaluation

Recently, extended marketing research data has allowed modeling of broader strategic alternatives including communications strategies and product offerings. Workshops built around these models allow for examination of differentiated offerings and target marketing. However, these models are always limited by the data was used in building them. The range of possibilities is always greater than those included in the research. As

³² A pseudo-commodity is a product category where any product differentiation is captured by a relatively small price premium that the brand generally commands. All other price differentiation beyond brand is in transportation costs.

such, these models and workshops should not be viewed as an end-point but mainly for discussion purposes.

8.5.6.4 Idealized Complex Decision Support

When there are a large number of items involved in a decision process it is often not feasible to approach it in an idealized fashion. For example, deciding on what should be audited, or what projects should be undertaken, or who should be promoted within a large organization is difficult due to the sheer size of the problem. Historically, there have been two approaches: (1) imposing a rule or policy for selection or (2) allow local evaluation. The former approach requires a top down edict which reduces the impact of local information and inhibits “buy-in” for those who are most responsible for implement the policies. The latter approach can produce large inconsistencies and inefficiencies while encouraging divisive behavior. An alternative approach is using a decision support system, which merges the opinions of the organization with local evaluation of options. This is a modeling approach, which again requires the introduction of a number of assumptions.

8.5.6.4.1 Synthetic Voting

One method of developing this type of system involves simulating a voting process whereby a population of decision-makers rules is combined with the evaluation of options to develop a collective prioritization of the items. The decision rules can be captured using perceived value methods as discussed above. In one example, 33 evaluators (the broad management team of internal auditors) evaluated 10,000 possible audit sites. The system assigns a position for each item based on its characteristics and how each evaluator should appraised it. This is referred to as “synthetic voting.” The final portfolios is selected by using the results of the voting (risk assignment) along with a set of other constraints.

8.5.7 RISK CONTAINMENT

Standard heuristic modeling workshops are designed to produce small numbers of specific solutions or examine possibilities in terms of specific forecasted outcomes. However, often we need to deal with uncertainty. Risk containment workshops are designed to force the management team to think in terms of the range of possibilities rather than in terms of simple goals. We seek to find conditions that will minimize reasonably results of “bad things happen” while maximizing potential positive outcomes.

These workshops deal with a much softer type of decision making. The objectives of these workshops are to develop an understanding of reasonable risk and develop a consensus of how to minimize its effects. There are two general methods that are used: (1) decision analysis and (2) modeling.

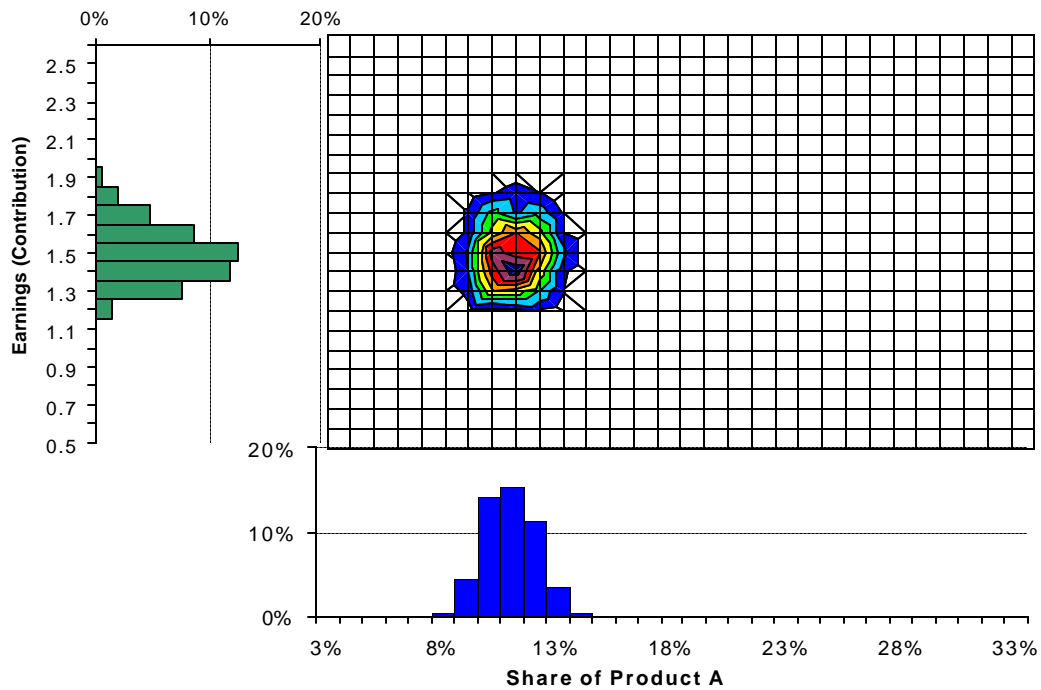
8.5.7.1 Risk Event (Monte Carlo) Analysis

The simplest method is based on tabulating possible events with their likelihood and the

potential impact on earnings, revenue, cost and capital. Using Monte Carlo³³ analysis these estimates are then combine to produce composite impacts on earnings, revenue and investment. In general, a simple independent model usually is sufficient to capture the relative importance of the factors. However, there are a couple ways by which more complex relationships can be captured. These include using (1) cross impact matrices to capture interdependencies among the events and (2) distributed values of the likelihood.

8.5.7.1.1 The Envelope of Opportunity³⁴

The “Envelope of Opportunity” analysis is based on examining the resulting distribution of earnings and revenue from event driven Monte Carlo simulations. This concept has been extended to examine capital investment as well. Distributions of Return on Investment can also be computed and examined. Below are a number of charts that have been used in this analysis. The chart below is a dynamic contour map of earnings and share. This has been developed as a dynamic decision support tool in *EXCEL*. We have favored this approach since it can be easily incorporated into an heuristic risk capturing workshop.

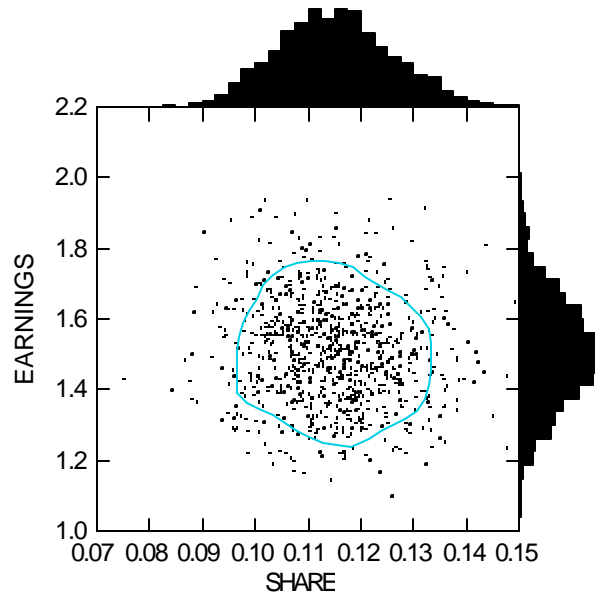


Below is a more traditional graph indicating a region of capturing 90% of the results. This has been referred to as the “Envelope of Opportunity”. On this graph individual

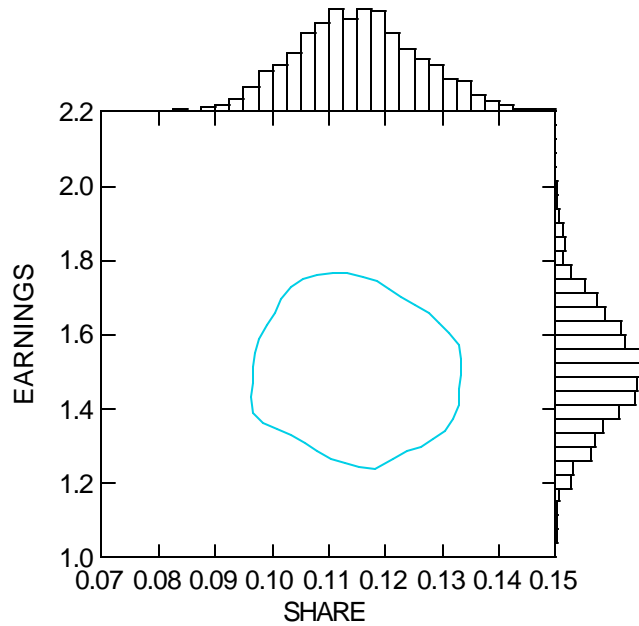
³³ There are a couple add-in packages to *EXCEL* to assist doing Monte Carlo analysis. These can be found for *Crystal Ball* at http://www.decisioneering.com/crystal_ball/index.html and for *@Risk* at <http://www.palisade.com/>

³⁴ Braxton Associates originally proposed the presentation technique of "The Envelope of Opportunity", now part of Deloitte Consulting Group.

solutions are plotted as well as the envelope and marginal distributions.



Because these solutions are generated by random selection, Monte Carlo analysis, the specific values are not meaningful. Only the overall statistics indicate the collective risk.. As such, the individual solutions are often not shown on the graph. Only the outline capturing 90% of the results indicating the “Envelope of Opportunity” and marginal distributions are typically shown on the graph below.



8.5.7.1.2 Goal Achievement

An alternative way of looking at the distribution of outcomes is in terms of the likelihood of meeting goals. In the graph below, a set of risk analyses are shown. This tends to help the decision process by focusing on “optimum policies.”³⁵ Workshops can use either or both of these types of tools in examining alternative actions.



“Decision and Risk Analysis”

In “Risk Event” Analysis the focus is on things that can happen rather than the results of specific decisions. “Decision and Risk Analysis” (D/RA) procedures focus on the outcomes of decision processes. “Decision and Risk Analysis” is an extension of Hierarchical Decision Analysis procedures whereby outcomes are derived from the structured tree relationships. Probabilities of events are used rather than weights in developing a model reflecting the overall impact. The form of these models is restricted to discrete probabilities³⁶ with only limited use of cross impact matrices. However, these limitations allow for the complete description of results as opposed to the approximate (sampling) simulated results using Monte Carlo analysis.

D/RA is a fairly complex process involving: (1) identification of a hierarchical structure, (2) development of influence diagrams, (3) identification of alternative solutions, (4) estimation of weights, probabilities, and impacts, and finally (5) presentation of results.

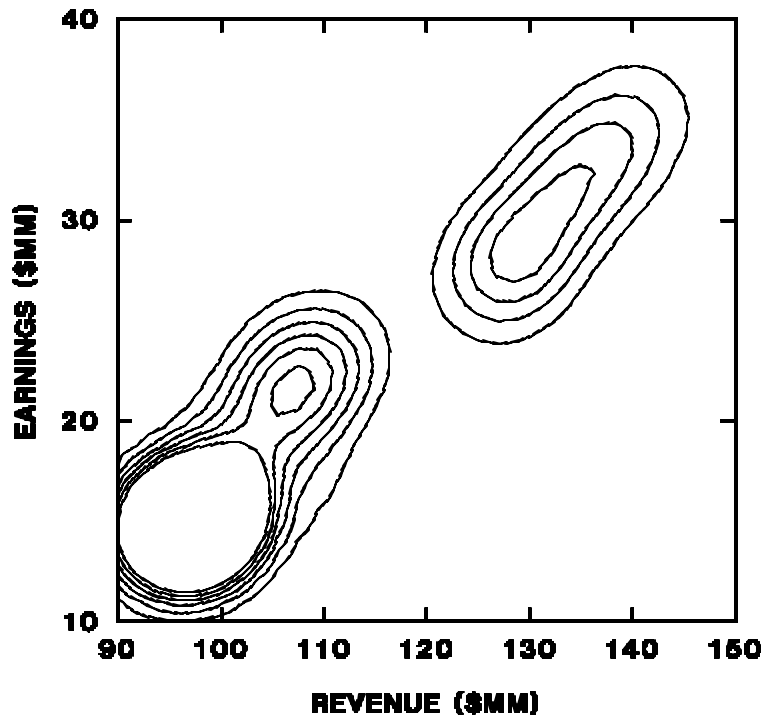
³⁵ This tool is motivated by “optimum control theory,” where the objective is to maximize the likelihood of meeting criteria rather than maximizing return.

³⁶ While “Risk Event” Analyses can use distributions of the likelihood of events and incorporate any form of cross impact analysis, they typically do not. However, stochastic business models usually are based on distributed rather than discrete probability values.

Because of the complexity of this process, these workshops are usually done in multiple stages.

8.5.7.2 Stochastic Business Models

Stochastic business models introduce uncertainty into the standard business and industry models. These models are often based on the dynamic financial proforma format. Distributions of parameters are introduced to capture uncertainty. These models usually focus on uncertain competitive reactions. Internal policy decisions, such as: pricing, capacity expansions, product introductions, withdraws, and repositioning, are taken as given or non-probabilistic. Alternative results are generated by Monte Carlo analysis similar to “Risk Event Analysis.” Below are the “Envelope of Opportunity” results for two potential outcomes based on responding to a competitor’s action. The lower values indicate the cases where “price matching” was used and the upper in cases where the new competitor actions were ignored. Note that there are two parts to the lower values. The upper part resulted when the competitor withdrew and the lower part took place when the new competitor’s continued his actions. For this case, it appeared that the firm would be better off not to respond to the competitor.



This type of analysis is fairly complex and the workshops are multi-staged. Several workshops are usually necessary to construct the model, a few more to make it stochastic and finally a number of additional sessions to handle alternative solutions and creative approaches.

8.5.8 “BOARD-ROOM VOTING”

Voting systems are designed to collect opinions individually from management team and aggregate results anonymously. The objective is to reduce or (hopefully eliminate) bias due to position and reputation. The goal is to produce an inquiry of reasons for opinions and a free discussion on the consequences of actions. Several computerized systems have been commercially available³⁷ but tend to be expensive and difficult setup and use. However, recent developments with on-line, web-based, systems allow for asynchronous distant participation.

8.5.8.1 Scorecard Applications

The simplest application of Board-Room Voting sessions is with Scorecard applications where participants estimate characteristic values of projects or businesses. Distributions and statistics of values are computed and returned to the participants. In most cases, the average values are used; however, other voting rules can be applied. Only when there are a large number of decision-makers involved is this found to be an effective technique. In many cases, the organization wishes to consider itself acting as peers and therefore do not wish to use these procedures.

8.5.8.2 Event Timing (The Delphi Method)

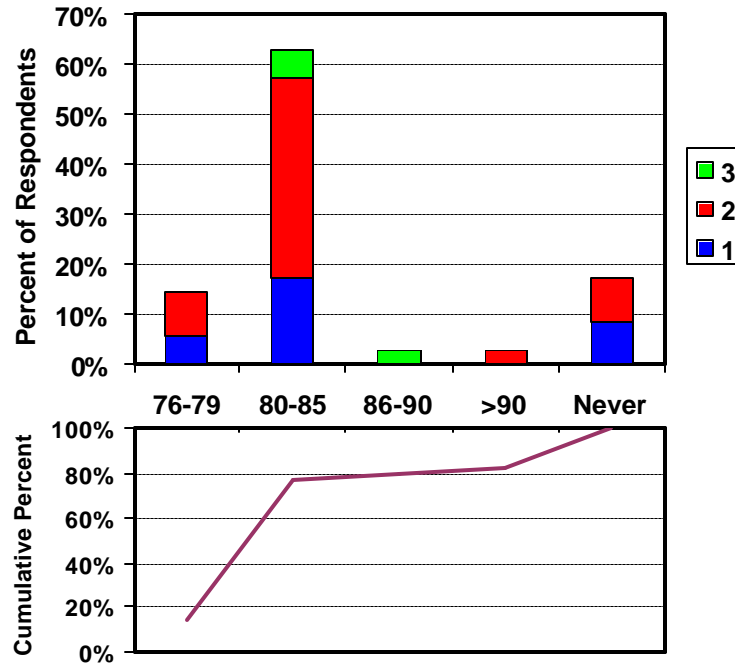
The classical application of Board-Room Voting is with “The Delphi Method” of technology forecasting. Identifying potential events and capabilities, while not simple, is not the most difficult task in technology assessment. The key problem is determining the timing of these events. The timing is traditionally thought to depend on: (1) value, (2) capabilities, (3) expectations, and (4) barriers. These arise all along the supply chain from the provider of the basic technology to the ultimate user. As such, an effective means of obtaining timing estimates is by combining the expertise from representatives throughout the industry including both providers and users. There have been some proposals to use “The Delphi Method” for business forecasting involving providers, dealers and customers.

The Board-Room Voting system is used in the Delphi method to stimulate discussion. It is an iterative process by which estimates of the timing of events are sought from the panel. The distribution of results is then returned to the panel with a request of those individual significantly below and above the average values to explain their opinions. These are then circulated to the panel with a request for updated timing estimates. This process can be continued through several iterations until the distribution is stable. A resulting distribution is shown below³⁸.

³⁷ I am uncertain if any of these systems are presently being marketed. Several marketing research firms, however, have set up sites which can be used for this purpose.

³⁸ This is one of the resulting distributions from three iterations from a 1975 Delphi study on the future of the adhesive industry. The three levels represent familiarity with the problem. Thirty five respondents

Except for small, specialty applications, solvent based adhesives will not be used in automotive assembly after the year:



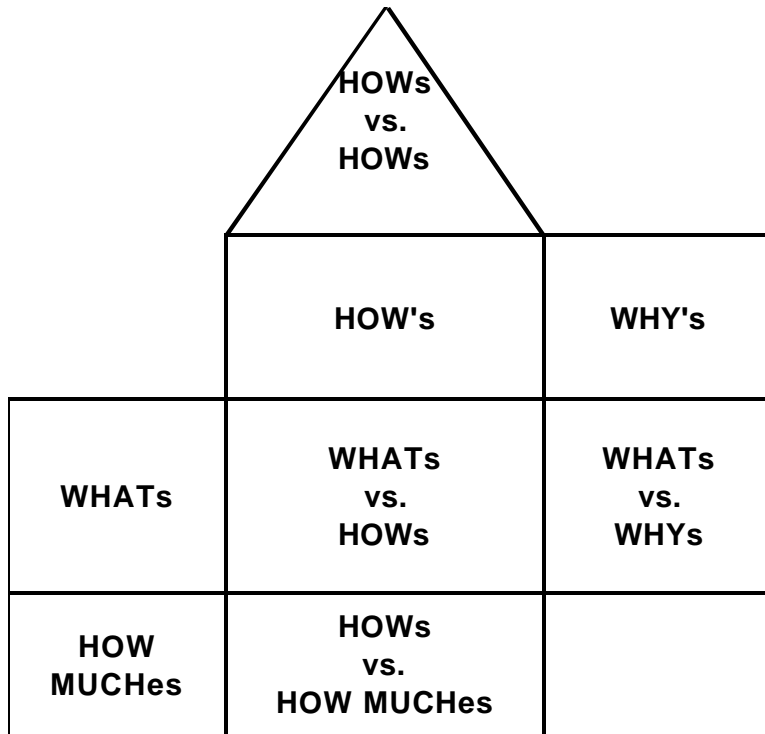
The value of this approach is usually in the discussion of events rather than the resulting distributions. There has been a tendency, though incorrect, to associate the resulting time distribution with a probability distribution for the events. This is not correct. It is a distribution of time estimates not the distribution likelihood.

QUALITY FUNCTION DEPLOYMENT³⁹

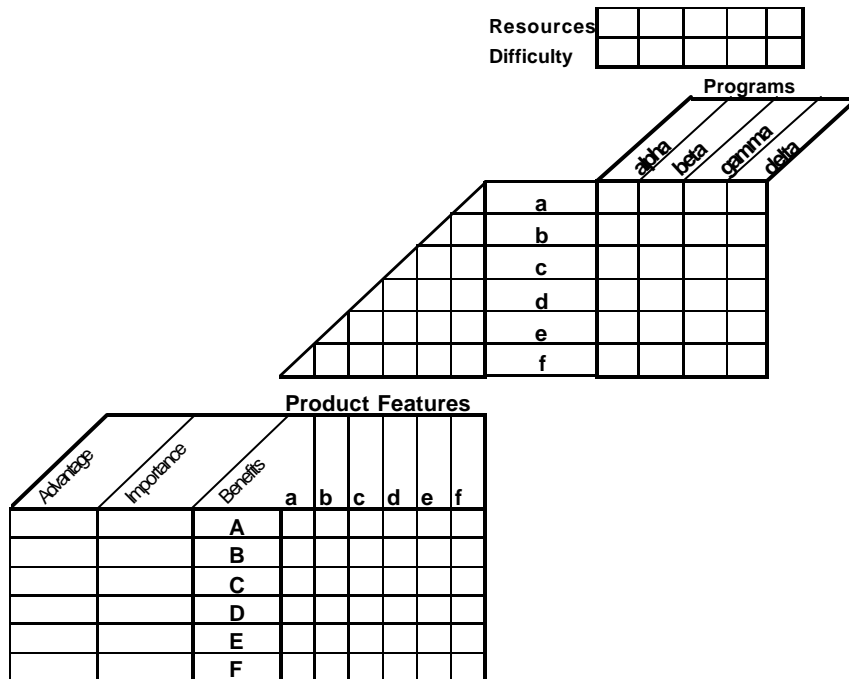
The goal of Quality Function Deployment (QFD) is to connect proposed operational improvements with market and business impact. In general, a number of external and internal data collection processes are used to provide insight into: (1) market desires and needs, (2) the potential new product introductions and (3) manufacturing improvements. The results are displayed in a number of standard Total Quality Management (TQM) charts. These are discussed below. However, the key problem is linking this information together to provide insight as to what is worth doing. This usually involves a collaborative effort of a multi-functional group. This effort is usually undertaken in the form of a “House of Quality” chart workshop that connects the customer needs with operational programs by a series of cross impact matrices. These are usually filled out by the group. An *EXCEL* spreadsheet can be used to evaluate the overall impact of these estimates. Diagram below shows the general structure of the “House of Quality” Diagram.

from various parts of the industry responded to this question.

³⁹ For more information see: <http://www.sern.enel.ucalgary.ca/yip/613/QFD.htm#b31>



Typically this is expanded to separate benefits from features and attributes from programs. The goal is to evaluate the impact of programs on customers' benefits. The cross impact matrix description is shown on the following chart. It summarizes all of the collected data and connects the market to the root cause problems and solutions.



8.5.9 SCENARIO BUILDING

The term “Scenario Building” is used to cover a broad range of activities targeted at identifying future opportunities. The concept is to develop a picture of a likely future from which expected outcomes or unmet needs can be identified. Against these outcomes potential products and services can be developed which are expected to be profitable given the scenario’s projected situation. It is a process of inventing the organization’s future. This is both an analytical procedure in that it uses knowledge of the potential changes in the world and a creative process of developing opportunities. To be truly effective, the process needs to be iterative with multiple scenarios generated. There are typically at least four stages in the process: (1) developing a vision or situation statement of the future, (2) identifying needs or outcomes that are dictated by the situation, (3) develop potential products and services designed to deliver those outcomes, and (4) assessing the results.

8.5.9.1 The Timeframe

As previously noted, the process of scenario building is one of inventing the future. The ability to invent the future, however, depends directly on the timeframe chosen for the scenarios. Too short a timeframe will tie the situation tightly to the present structure of the firm. Development of scenario for the near term will be merely extrapolation of what presently exists. While this is not necessarily bad, the results will reflect present programs and activities. The purpose of the scenario building process is to go beyond those activities. It should be a “blank sheet” exercise of what could be. However, a timeframe that is too far into the future makes the future situation totally hypothetical. The concepts and potential opportunity is so far forward that it could not be implemented. The trick then is to choose a timeframe or planning horizon long enough to allow for the evolution of action and short enough to be meaningful. That timeframe will depend on the nation, industry and the nature of the firm.

8.5.9.2 Situations

The situation, which is the core of the scenario, is built based on the occurrence of a set of “events”. There are number of different procedures that are used to develop and evaluate these potential events including:

- Trend extrapolation based on economic, social, political, and demographic macro data;
- Technology Forecasting
- Survey (Delphi type) analysis of the likelihood of events; and
- Risk modeling and simulation

The situation scenarios are based on the occurrence of a number of key events. A “**Situation Theme** statement” is used of clarify the collective meaning of the various situations.

8.5.9.3 Outcomes and Opportunities

Note, however, that the focus of the scenario is on the identified outcomes; the function of the situation is to stimulate the identification of outcomes. These are usually associated with stress points which represent the differences between expected events. These are the social, economic, and technical needs. The outcomes and the situation together suggest possible products. This is a highly creative process.

The detail to which the concepts can be described will depend on insight, technical and creativity of the team. Note that a high degree of detail in the description of concepts is usually unnecessary. Only that it is sufficiently understood for evaluation.

8.5.9.4 Consequences and Themes

Often the collection of potential new ventures represents changes in the underlying business model of the firm. That is the new ventures may be distinctly different from the present businesses. These consequences should be viewed as major themes of the scenarios. Notice that we can have many of these “**Business Themes**” for each of “**Situation Theme**”. These themes are critical for analysis. They represent the fit of the scenario with the existing business and the need for organizational change if necessary.

8.5.9.5 Assessment

Assessment of the scenario business concepts is usually in two phases. First, a **Future Business History** is usually desired to drive backwards the consequences of the new business concepts. That is we need to understand the requirements and implications to the new venture concepts. Secondly, those concepts then need to be assessed from a commercial perspective; are they worth the trip.

8.5.10 FUTURE BUSINESS HISTORIES

The purpose of **Future Business Histories**⁴⁰ is to develop a strategy to deliver long term goals by identifying necessary shorter-term actions. It can be viewed as a feasibility test for those long-term goals. It is often undertaken as part of the scenario building process to provide a feasibility test. If no reasonable path to reaching a goal can be identified, that goal is infeasible. The procedure is to identify: (1) conditions, (2) milestones, and (3) resources that are required to meet the long-term goals. The process becomes more valuable when “creative” elements are added in the form of multiple paths, alternative directions, and the impact of new technologies.

The process involves a sequence of:

1. Listing conditions on “Post-It” sheets,

⁴⁰ The source of this procedure has been attributed to a host of “inventors” including Apple Computer and Bell Laboratories.

2. Positioning those sheets on a chart indicating a time line,
3. Repeating the process for milestones and resources, and
4. Iterating back including more conditions, milestones and resources as well as readjusting timing to build an agreement.

Finally, it is useful to identify the “critical path” for meeting each of the goals. A typical chart is shown below:

	2001	2002	2003	2004	2005	2006	> 2006	Goal
Financial Performance								
Programs Initiated								
Programs Completed								
Milestones								
Impact								
Resources Required								

8.5.10.1 Business Strategy Formulation

It is often useful to layout a reasonable financial forecast that would lead to the desired long-term goals. To produce such a forecast, two steps are usually required: (1) a projection based on historical data indicating continuity of practices and (2) a gap analysis reflecting the required growth by either radically new products, new markets or by acquisition. The General Sales Growth Curve⁴¹ is useful for these forecast procedures. Usually the Future Business History is separated for the “base” business and the gap filling exercise. It must be recognized that the gap filling activities are generally

⁴¹ The General Sales Growth Curve (GSGC) is discussed in detail in the chapter on Forecasting.

much more uncertain than those associated with continuing the existing business.

8.5.10.2 Technology Strategy Development

Future Business History is highly useful for project and technology strategy development. In this case, the categories usually include infrastructure and capability development as well as commercially achievable events. Since technology strategy is often folded into business strategy, financial forecasts are usually not included.

8.6 TUTORIAL WORKSHOPS

The tutorial workshops have been mainly designed for technical personnel (R&D) and are typically highly customized to reflect the needs of the organizations. As such they reflect the industries, technologies and business practices of the client firms. These workshops typically run approximately 2 days but have varied from a day and half to five days depending on the material that the client wishes to cover and the extent of student interaction. Some teleconferencing of these workshops has been undertaken but only on a limited basis. The objectives of these workshops are as much to change behavior as they are to convey new information. As such, extensive written material is provided to reduce the need for the students to take notes. The students devote much effort in these workshops to participation. In typical sessions, lunch and refreshments are provided. While off-site sessions are preferred, we have accommodated other locations.

The following tutorial workshops have been successfully delivered to a number of Fortune 500 corporations including Dupont, Rohm & Hass, and Uniroyal Chemicals. In most cases, as with the tutorial seminars, cover later, pre and post workshop questionnaires are used to measure the effectiveness of the learnings transferred.

TURNING IDEAS INTO BUSINESS CONCEPTS

This workshop is intended to help R&D people structure their new research ideas into well formed business concepts. It is designed to provide a review of business principles from an internal perspective. However, it should also provide a general overview of business principles applicable to the customers' perspective. The participants are required to prepare an abstracted business description of a research project. Included in the workshop is a workbook (the *New Ventures Workbook*) for in-depth project evaluation. The emphasis of the workshop is to identify key necessary market information for the development plan. Included in these sessions are:

- Defining the Product
- Identifying the Customer
- Defining the Market
- Knowing the Competition
- Evaluation the Market Potential

VOICE OF THE CUSTOMER

This workshop is intended to prepare R&D personnel for customer contact. It is a customer sensitivity program where the participants prepare interview discussion outlines. It is designed to provide basic marketing principles in the context of the customers' use of firm's products. Included in these sessions are:

- Identifying the Problem
- Selecting Respondents

- Limiting the Coverage
- Developing a Discussion Outline
- Preparing for the Interview
- Working with the Sales Force
- Summarizing Results

R&D PLANNING

Effective product and process R&D must be both market driven and technologically creative. Market needs form an excellent way to channel technical talent. The Market Driven R&D Workshop is designed to provide an overview and skills for project identification, evaluation and R&D portfolio selection based on marketing information. Included in these sessions are:

- R&D's Strategic Role
- Product and Project Value
- Push versus Pull Development
- Project Portfolio Value Models
- Decision Rules
- Perceived Risk Analysis
- Technology Value

TECHNICAL & BUSINESS PRESENTATIONS

Effective presentations are key to the R&D, technical service and sales functions. The purpose of this workshop is to enhance presentation skills of technical professionals in process and technology oriented businesses. The participants in this two-day workshop learn communication techniques and skills through seminars, discussion and video recorded practice. Coaching is provided in a supportive manner to reinforce a team building environment.

- Presentation Goals and Purposes
- Preparing a Presentation
- Preparing and Using Visuals
- Delivery Skills
- Handling an Audience

8.7 SEMINARS

Seminars are designed to convey information to the participants. While discussion is encouraged, the presentation takes most of the time. These seminars typically run between four to eight hours depending on the extent of customization and the desires of the clients. When a shorter seminar is required, the remainder of the day is usually made available for meetings and consulting on the same topic. In many cases, pre and post seminar questionnaires have been used to measure changes in attitude, learnings and beliefs. We have found this useful both as a learning tool and as a measure of the effectiveness of the seminars.

Recently we have allowed seminars to be taped and prepared as self-executing CD ROM's. This, however, only a beginning process and we will need to rely on the client of their preparation. Copyrights beyond the use within the client organization will belong to Custom Decision Support, Inc. unless other contractual arrangements are made. The following are seminars that have been delivered by Custom Decision Support Inc.

THINKING AS AN ENTREPRENEUR

Not only is your firm a business but usually your customers and clients are. Entrepreneur thinking is very different than that within a function such as research or marketing. The objectives, time frame, and needs can radically different. This seminar is designed to highlight those differences. The goal of these seminars is to heighten the awareness of the issues surrounding running a business both for their internal perspective and as a window to the mentality of their business-to-business customers.

Topics covered:

Running a Business

Economic Reality of a Business (**Cash Flow**)

Business Perspective of Quality and Revenue (**Customers**)

Controlling **Costs**

Managing Assets (**Capital**)

Reflecting on the **Competition**

Leveraging Uncertainty and **Change**

THE PRINCIPLES OF MARKETING

Marketing has become a watchword for modern business management. It is not merely selling but extends to the totality of communicating with the market. This seminar is design to review the principles of marketing mainly to a technical audience. Fundamental principle of segmentation, value and strategy is discussed.

Topics covered:

Marketing and R&D Strategy

Identifying the Customer and Segmenting the Market (**Practice**)

Designing the **Product** for the Customer

Pricing the Product and Identifying Value

Getting the Product to the Customer (**Place**)

- **Promoting** the Product and Communicating to the Customer

FINANCE: A WINDOW TO SUCCESS

Financial measures are the score cards to business. Net Present Value, Return on Investment, Internal Rate of Return are the financial metrics by which all businesses are measured. These financial measures reflect different risk perspectives on business. This seminar will introduce these financial measures for different situations and how they are used to judge the prospects of new business opportunities.

Topics covered:

Managing Income and Costs

Managing Assets and R&D (Make or Buy)

Measuring Success (Net Present Value, IRR, and Return)

Time and Return

MARKET INFORMATION RESOURCES

Knowing the market is critical for success. There is much information that is available. Unfortunately, it may be disguised, misinterpreted, and hidden. Searching for knowledge in the jungle of facts and data requires creativity, persistence and, in many cases, luck. The seminar is intended to help identify approaches and resources for estimating business opportunities from published resources.

Topics covered:

Competitive and Business Research

Market Research

Using the Internet

Developing Analogies

Going to the Source

THE STRUCTURE OF THE MATERIALS INDUSTRY

The firm's business is providing its customers with new materials and

chemicals. All materials business tend to be capital intensive, technologically driven, with few in-kind competitors, and many customers. Because of the similarity of these businesses, their characteristics of growth, competition, costs and prices tend to be similar and interrelated. This seminar will discuss the similarities among these businesses and how those characteristics can be used to help develop forecasts for new products.

Topics covered:

General sales dynamics of material businesses

"Quantized" markets and market share

Value and Volume with the "Exclusion Curve"

Industry modeling

MEASURING THE MARKET

(Conducting and Using Survey Research)

Information is power only if it is used! This seminar presents a framework for designing, executing and using survey research. The key to effective survey research is asking the right questions of the right people. This seminar discusses choosing the right individuals and sample size as well as choosing the correct questions. But asking the right questions is still not enough. We need to extract insight from the data. The focus of the seminar is on using survey research information for business development.

Topics covered:

- Determining the Survey Researchable Problem
- Selecting Respondents
- Asking the Right Questions
- Determining Price Sensitivity
- Determining the Value of Product Features and
- Determining Market Intent

THE PRICE IS RIGHT

(Selecting the Right Pricing)

Price holds a unique position in the pantheon of marketing tools. Not only is it a key product attribute, but it conveys product value and represents the gain to Rohm and Haas. This seminar examines the place of price in marketing strategy and focuses on optimum strategic pricing.

Topics covered:

- Pricing in Segment Marketing Strategy
- Product-line Pricing
- Competitive Pricing and Market Models
- Customer Value and
- Cost-based Pricing

PRODUCT DESIGN

The battleground of the market is in the mind of the customer. Product positioning describes how customers perceive competitive products. Effective new products enhance position and help in making other products profitable.

Topics covered:

Value directed product design

Product Positioning

Measuring Value and Benefit Segments

PRESENTING IDEAS

(Promoting Concepts)

Having a good idea is insufficient; the idea has to be communicated. This seminar discusses the issues, techniques and skills for effective promotion of concepts and ideas. Much of the techniques are derived from the advertising industry and to some extent it should be viewed as "Distance Marketing." The goal is to create retained interest and ownership in an idea.

Topics covered:

- Goals and Objective of Project Promotion
- Perception of Reality
- The Target Audience
- Concept Positioning

BUILDING RELATIONSHIP

(Relationship Marketing)

Relationships are the basis of all marketing, development and sales. Ultimately, all transactions and arrangements rest on trust. This seminar discusses the issues of limited trust, power, and the building of mutual confidence. The focus is on skills and practices needed to build and

maintain business relationships.

Topics covered:

- The Elements of Power
- The Elements of Trust
- Relationships in Marketing Strategy
- Team Building Skills, and
- An Integrated Total Quality Management Approach

TARGETING A MARKET

(Implementing Effective Segment Strategies)

Businesses have specific advantages that give them a competitive edge. These advantages are likely to be different depending on the needs of the customers and their perceptions. This seminar discusses determining effective market segment strategies. New products, service orientation, brand management, distribution selection, pricing and promotion are elements of these strategies. The same type of product may call different strategies and tools depending on the targeted customer segment.

Topics covered:

- The Nature of Market Segments
- Different Values and "The Strategic Triangle"
- An Environmental Perceptive
- Commodities, Specialities and Services
- The Role of Technology or What Can Be Done?
- Niche Marketing or What Should Be Done? and
- The Role of Brands

BETTING ON TECHNOLOGY

Selecting Promising Capabilities)

All technologies evolve, change and improve. Business history is covered by the disasters of firms that have ignored technology change or were powerless to prevent its impact. However, not all potential technologies are created equal. The promise of some will not be realized and some technologies will be irrelevant to the firm's future. The selection of which technologies to exploited for competitive advantage is the theme of this seminar.

Topics covered:

- Evaluating Technologies

- Technology Relevancy Trees
- Customer Value and Robustness
- Figures of Merit and Technology Development
- Technology Positioning
- Future Business Histories, and
- The "Delphi Method" of Technology Assessment

FINANCIAL DECISION MAKING

Financial analysis is key tool of business decision making. This seminar reviews the principles of financial decision-makers and is designed for senior financial and executive officers⁴².

Topics covered:

- Decisions as Financial Choices
- Handling Uncertainty
- Outcome Matrices
- Evaluating Decisions
- Explaining Results

BECOMING PRODUCTIVE

Personal computers have offers the potential for increased productivity. However, in most cases, that productivity particularly in the office environment has not be met. This seminar discusses the sources of difficulty and opportunity for productivity improvement with information technology. The goal is to focus on encouraging and exploiting training.

Topics covered:

- Information Systems as a Source of Productivity
- The Promise of Productivity
- Barriers to Productivity
- Building in Value
- Implementation
- Measuring Productivity

⁴² This seminar was delivered to a meeting of the financial officers of the Society of Associations.