

1993 SAVE PROCEEDINGS

VALUE OPPORTUNITY POTENTIAL (VOP) A VALUE MANAGEMENT PLANNING PROCESS

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J.J. Jerry Kaufman, CVS, FSAVE, is President of J. J. Kaufman Associates, Inc. He has engineering degrees from the Academy of Aeronautics and Johns Hopkins University. As Corporate Director of Value Management for Cooper Industries, Jerry developed and successfully implemented VE in the corporate organization. His 25 years of management positions with the Martin Co., Honeywell, and Cooper spans the industrial, energy, industrial and aerospace markets. Mr. Kaufman has written three books and many articles on Value Management. He is past President of SAVE, and past Chairman of the CVS Certification Board.

ABSTRACT

This paper describes a Value Management (VM) planning process based on the concept of product portfolio management. Value Opportunity Potential (VOP) supports senior management's goals by planning cost effective projects that complement the company's business plan and expands VM into other fruitful areas. The VM planning process focuses on the industrial sector and offers cost reduction as one of many effective VM resolutions to solve business problems.

INTRODUCTION

Peter F. Drucker, noted author, business analyst, professor, and founding father of the "discipline of management," once said that he would much prefer to arrive at the wrong solution to the right problem than find the right solution for the wrong problem. Value Managers face similar situations when seemingly very successful VM studies lack management's endorsement and commitment to realize the results of those studies. Selecting the right problem or opportunity for VM to resolve is more important than its magnitude of potential results.

The more popular way to evaluate VM's performance is the use of annual cost reduction goals. "Annualized potential dollar savings" is a poor way to justify VM's existence for three reasons. First, it limits the Value Analyst's activities to "after-the-fact" cost reduction opportunities. Second, VM does not have the authority to implement those cost reduction proposals that determine its performance, and third, product cost reductions are not the solution to all business problems or opportunities.

THE PROBLEM WITH "TARGETS OF OPPORTUNITY"

Targets of opportunity studies do not work well because they lack support and commitment by engineering, production and support managers responsible for implementing VM studies. On the surface this doesn't make sense. Most VM studies are technically and economically sound, so why shouldn't managers support their implementation? The major reason is that they involve the expenditure of unplanned expenses, time and people.

MANAGERS ARE PERFORMANCE SENSITIVE

Value Managers should appreciate that regardless of their potential benefits, implementing VM studies may require other managers to deviate from their planned programs. This could result in overrunning the implementing managers' expense budget, or leaving his goals unfulfilled. Under these conditions, product cost reductions are achievable and VM will make points, but too often, at the expense of the supporting department's performance rating. This would account for the general lack of support for VM, even when its goals are exceeded.

When a company is in a downturn economy the pressure to meet performance goals at reduced expense budgets intensifies. What little support VM had from its benefactors erodes away. As a result, seemingly successful VM units are among the first to be impacted when manpower is reduced. When that occurs Value Managers are often heard complaining that they failed because Senior Management would not support them. Well Mr. Value Manager, Senior Management did not employ you so that they could support VM. You were hired so that VM could

support Senior Management.

To understand the difference, one must first realize that cost reduction is not a problem, it is a solution to a problem. To properly define the problem (or opportunity) and the "right" solution requires good analysis, planning and execution techniques. When product cost reduction is the right solution, it should be well defined, planned and incorporated into the company's business plans and objectives.

VALUE MANAGEMENT; A RESOURCE NOT A PROBLEM.

If VM is to enjoy sustained success in its parent company it must become a valued resource to management, in good and bad times, rather than create other problems management must resolve. To become that valued management resource requires two important changes in the way VM operates:

1. VM must plan its projects and activities to support the parent company's commitments to its business and strategic plans, rather than simply seeking targets of opportunity.
2. The performance evaluation of the VM unit should be based on demands for its services and assistance by line and staff managers, rather than scoring "potential savings" points.

A point of interest is that if number 1 (above) is achieved, number 2 will follow.

VOP - A VM PLANNING APPROACH

Any technique that puts VM in the business planning process will work. The VOP describes how best to select and plan product type study projects that complement the company's business plan. VOP uses available business planning information for selecting VM projects that yield the priority benefits to the company. VOP is presented graphically, in a product data display. High potential return projects are highlighted, to allow management to select and track the results of VM projects.

The VOP process is based on comparing cost-to-price (CPR) product performance against a given target, then analyzing the difference (delta) to market growth, to identify potential VM projects. A modified version of a concept called "Product Portfolio Management" by its creator, The Boston Consulting Group, is used to display and develop a VM strategy to support the company's business plan.

The selection of VM projects involves identifying products that have a high potential for reducing the projected CPR considering such factors as sales forecast, anticipated market growth, and the market share held by the company's product line. This data should be available in the profit and market planning sections of the business plan.

COST-TO-PRICE RATIO

The CPR of a product is determined by dividing the product cost by its sales price. The "cost" is the standard, or inventory cost consisting of direct labor, burden on direct labor (or fringe) and direct material.

As an example, if a product sold for \$1,500 per unit, and its standard cost was \$990, the product CPR would be 990/1500 or .66. Note that the inverse, or (1.00 - .66) .34 is the gross margin,

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not profit, because it does not separate cost of sales, or period costs.

In the industrial products market a CPR of .68 or higher will leave little if any profit. It may also indicate a loss position if the company has high overhead expenses. Target CPRs, used to track product performance, could be selected from government agencies that collects such statistics by industrial segment, or established internally as a company's business performance goal.

Continuing with the example, lets assume that the target CPR for a product line of "air motors" is set at .45, and that annual sales of 8,500 units is projected for the business planning year. To calculate its VOP:

Planned sales = \$1,500 per unit (8,500 units) = \$12,750,000

VOP = Planned sales X (current CPR - Target CPR) or:
 VOP = \$12,750,000 [(Plan CPR.66) - (Base CPR.45)] = \$2,667,500

If a planned CPR is greater than the target CPR a cost reduction opportunity exists.

The above example shows that if the CPR is not improved (lowered) the company will miss its planned earnings by \$2,667,500. Since we are working with cost to price ratios the potential loss can be recovered by reducing cost, raising prices, or a combination of both. A planned VM cost reduction effort seems obvious but it may not represent the best solution. To determine a VM support strategy we need more information about the product and market in which the product is sold.

THE CUSTOMER SALES DISPLAY

A Customer Sales display showing multiple products in a market segment, their history, projected CPR and VOP appears in Figure 1.

VALUE OPPORTUNITY POTENTIAL

CUSTOMER SALES

DIVISION _____ 1993 (Ref. Profit Plan) BASE CPR .45

PRODUCT LINE		HISTORICAL (LAST YEAR) 1992			FORECAST (THIS YEAR) 1993			PLAN (NEXT YEAR) 1994		
NO.	DESCRIPTION	SALES (\$1,000)	CPR	VOP (\$1,000)	SALES (\$1,000)	CPR	VOP (\$1,000)	SALES (\$1,000)	CPR	VOP (\$1,000)
01	Air Motors	5,250	.68	945.0	5,700	.62	963.0	12,750	.66	2,677.5
02	Air Hoists	—	—	—	—	—	—	1,550	.49	62.0
03	Screw drive	855	.58	111.2	832	.57	99.8	925	.58	120.3
04	Cycloblowers	1,665	.56	183.2	1,652	.56	181.7	2,550	.57	306.0
05	Rotary Blowers	954	.47	19.1	1,110	.46	11.1	1,200	.44	—

Figure 1

The example discussed above is shown as product line No. 01 "Air Motors" in Figure 1. Note that next year the company is planning to more than double the sales of its principal product,

the Air Motors. A hint as to this aggressive plan can be found in Figure 2.

VALUE OPPORTUNITY POTENTIAL

MARKET GROWTH & RATIO

1993

DIVISION _____ FROM PROFIT PLAN. FROM MARKET PLAN

NO.	PRODUCT LINE DESCRIPTION	THE PLAN YEAR		% MKT GROWTH			SALES RATIO		
		SALES	VOP	92	93	94	92	93	94
01	Air Motors	12,750	2,667.5	3	6	8	.98	1.12	1.73
02	Air Hoists	1,550	62.0	9	14	16	—	—	0.23
03	Screw drive	925	120.3	0	-1	-2	.25	.28	.22
04	Cyclobolwers	2,550	306.0	1	0	1	1.35	1.33	1.40
05	Rotary Blowers	1,200	—	3	3	4	.85	.88	.89

Figure 2 (Y Axis) (X Axis)

MARKET GROWTH AND RATIO

This display carries the products' plan year sales and VOP and adds the marketing data needed for analysis. The column titled "% Market Growth" shows the behavior of that market segment in the last, current and planned years. The "Sales Ratio" indicates the market share of the product, for the same periods.

Air Motors accounts for more than 35% of sales in the PROJECT SELECTION GRID

A modified version of the Product Portfolio Management grid, called "The Project Selection Grid" is used to display these

current year, and the market segment for that product is rapidly expanding. The company is planning an aggressive promotional campaign to gain the dominant market share which may account for a worsening CPR (.66). Gaining market share will improve sales and also support the introduction of a companion product, No. 02, the Air Hoist line. This is a new high (16%) growth market, with potentially strong profits (CPR .49) and future year sales

products and the conditions governing their behavior, is shown in Figure 3.

VALUE OPPORTUNITY POTENTIAL PROJECT SELECTION GRID

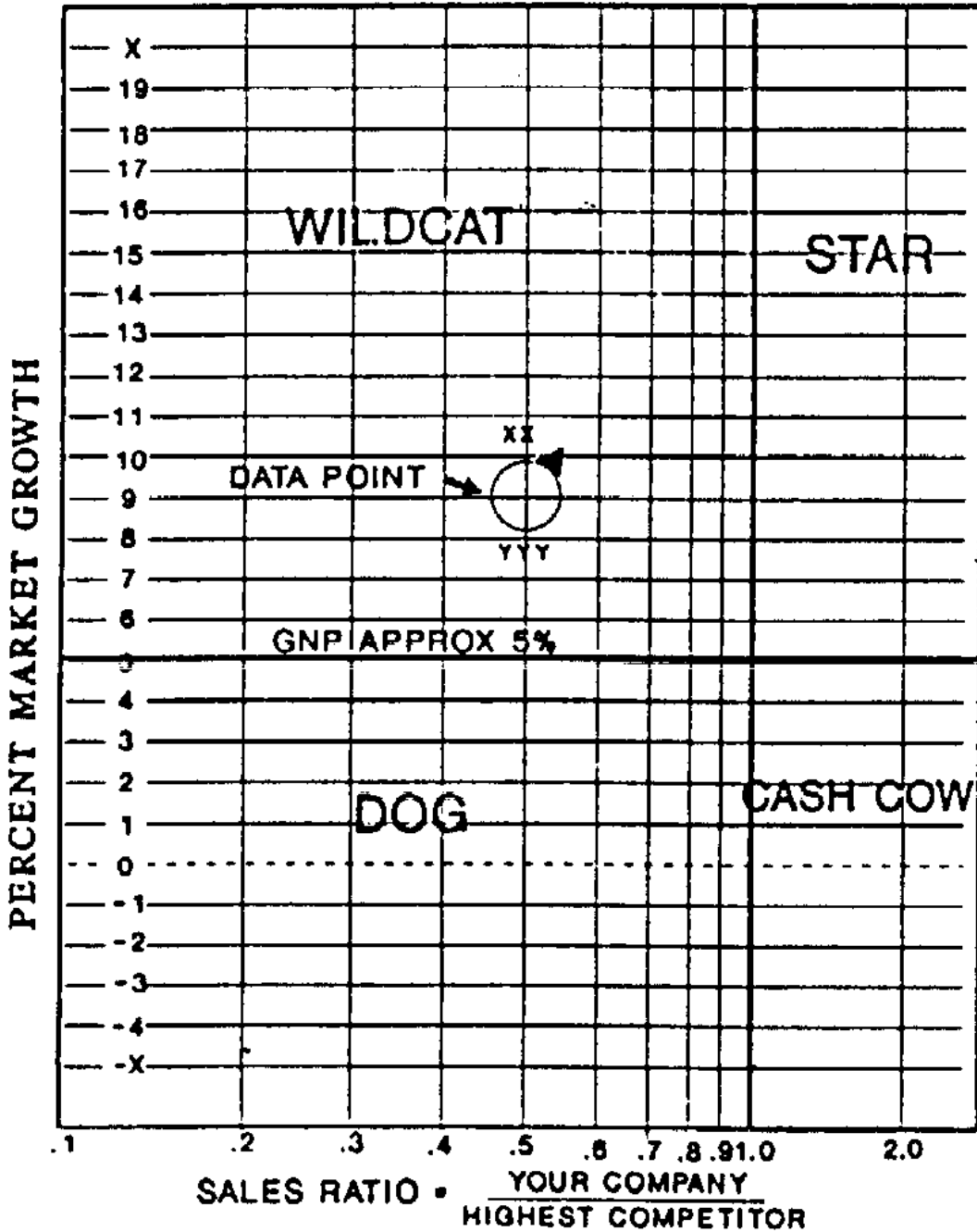


Figure 3

The "X axis" is configured to show a company's relative market

share. The break between high and low market share is the point

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where the company's share is equal to its highest competitor. Using a log scale will compress and focus on the areas where most of the data points should fall.

The "data point" positions the product line on the grid. "XX" identifies the product by product number, "YYY" shows the VOP. The data point is positioned to show the current (forecast 93) year (see Fig. 2) with the "teat" pointing in the direction of the plan (next 94) year's growth. The teat indicates the approximate vector resultant direction for the growth of the market and the company's sales ratio.

The "Y axis" in Figure 3 shows market growth. The upper end of the scale indicates a rapidly growing market. The low end of the scale is considered a mature or no growth market. The line separating the two segments can be established by using the projected Gross National Product (GNP) (as in this example), global market trends, company growth strategy, or other strategic factors.

The Project Selection Grid is now divided into 4 quadrants and labeled as follows:

- WILDCAT - High growth potential, low market share.
- STAR - High growth potential, dominant share holder.
- CASH COW - Low growth potential, dominant market share.
- DOG - Low growth potential, low market share.

WILDCAT describes entry into a new market segment with an innovative product. This commitment to a strategic market plan is a risky venture. Once that commitment is made the aim of the company should be to fund the WILDCAT generously so that it can move into the star quadrant as quickly as possible.

A VM FAST (Function Analysis System Technique) project that defines market entry functions and those responsible for the function interfaces can greatly assist the WILDCAT project in meeting critical market window opportunities. VM multi-disciplined task teams have succeeded in reducing production start-up time by 50% or more, significantly reducing rework, resulting in product introductions coming in on time and under budget. Cost reductions would result with improved process effectiveness, but cost reduction is not the primary objective in this quadrant. Time is the significant target area for improvement.

For STAR products large investments are required to protect or enlarge market share. Profit goals are equal to, or sometimes secondary to market share. To hold its dominant position a company seeks to discourage growth of competitors' market share by reducing price or adding value features. VM's contribution to this quadrant should be cost reduction through design simplification while improving quality and enhancing those innovative value functions and features that the market is willing to pay for. This would also include studies to improve after market services, model extensions, and other non-hardware related opportunities.

STAR markets eventually become CASH COWS (or unfortunately, DOGs). Successful CASH COWs generate the major profits and are the source of capital needed for new ventures into the WILDCAT market. CASH COWs call for production oriented, efficiency minded managers. In this quadrant VM's focus will be on improving processes and reducing production costs. VM study areas could include work in process, raw and finished inventory expenses, material cost, scrap and rework, and returned goods, to name a few. Little if any investments will be approved to reduce cost by changing the products' design. Design changes can change customer sensitive functions which can knock the product out of its CASH COW position. If this occurs new market strategies and investments to support sales would be needed.

DOG products receive no investment other than the minimum needed to sustain its production. Products in this category must continually justify their existence because the resources necessary to sustain DOG products could be invested in higher yield projects. Sometimes DOG products are maintained to support other more profitable product lines. The Sales Department may justify a DOG product as needed to "round out the line." Unless specifically asked by management to participate, VM should not initiate any projects in this quadrant. High cost reductions are possible, but the product's future is limited and would not attract cost reduction investments.

DISPLAYING PRODUCTS IN THE PROJECT SELECTION GRID

VALUE OPPORTUNITY POTENTIAL PROJECT SELECTION GRID

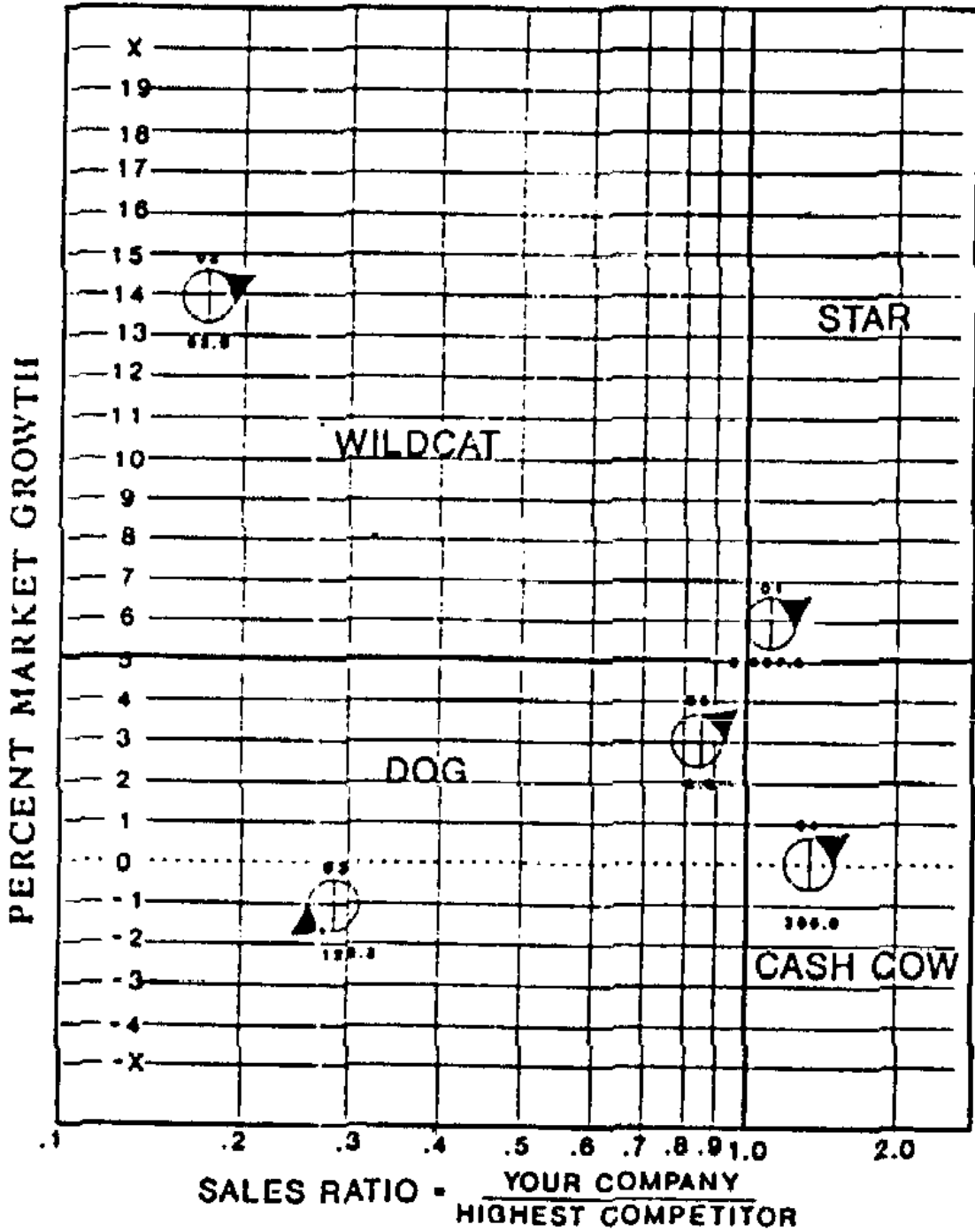


Figure 4.

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Figure 4 shows the five product examples displayed in the "Project Selection Grid."

A VALUE MANAGEMENT PLAN

Considering the characteristics of the 4 quadrants described above, the following strategy is recommended for planning VM projects in support of the Company's business plan. The plan should lay out the full planning year efforts for VM, with performance goals that complement product line management objectives.

Product line No. 02 "Air Hoists" would be the first priority for VM. As a WILDCAT project it represents a high risk venture. This will attract management's attention and will make VM's performance highly visible to management. The VM project emphasis should focus on timing and getting high quality, good performing products to market by the planned product introduction date. Meeting or beating the investment budget is important, but not as a trade-off against missing the market window of opportunity (see WILDCAT above).

A close second priority is No. 01 "Air Motors." This STAR product shows a VOP of over \$2.667 million dollars. It is a very active VM project opportunity. VM projects should concentrate on a fully staffed product design simplification and cost reduction effort. Equally important is seeking out areas to improve product value features. The position of this product in the STAR quadrant, its market growth potential and link to the "Air Hoists" product line make it a prime candidate for an active, long term VM effort (see STAR above).

The CASH COW product line No. 04 "Cycloblowers" would be VM's third priority. A cost reduction potential is indicated by its VOP of \$306,000. The VM effort would focus on achieving that VOP, but confine its activities to areas that do not affect customer sensitive functions. Cost reduction changes to the design are only permitted if they are not visible to the customer (see CASH COW above).

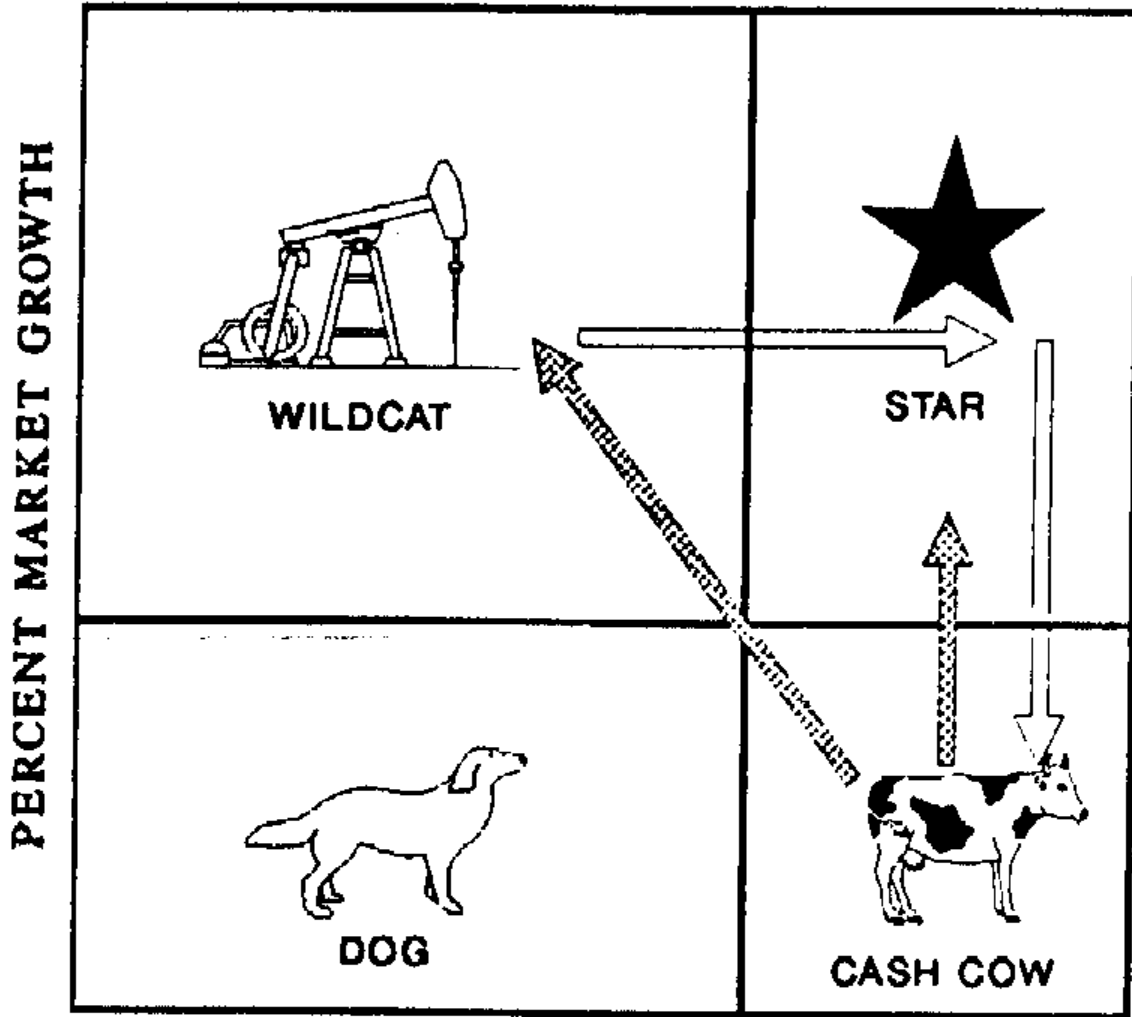
Unless VM can fully support the above product lines, active VM projects for No. 05 "Rotary Blowers" is not recommended. Although it is located in the DOG quadrant it is comfortably close to the CASH COW area to be considered a VM project candidate. However, this product line seems to be doing well. Its market share is slowly expanding in the CASH COW direction and the VOP for the Rotary Blowers indicating better than planned profit margins. VM could help "push it along" by improving processing costs, but limited VM resources could better be employed serving the other priority product lines.

Although product line No. 03 "Screw Drive" has a projected VOP of \$120,300 its position deep in the DOG market and its stagnant market share indicates that VM should not support the product line. Even if specific assistance is requested, it is doubtful if funding would be approved to conduct VM studies or implement resultant proposals (see DOG above).

THE BUSINESS CYCLE

Using the Project Selection Grid illustrated in Figures 4, a picture of the business cycle that sustains the growth of a business and the success of its business plan begins to emerge.

**VALUE OPPORTUNITY POTENTIAL
PROJECT SELECTION GRID
BUSINESS CYCLE**



SALES RATIO = $\frac{\text{YOUR COMPANY}}{\text{HIGHEST COMPETITOR}}$

 Movement of cash

 Movement of business over time

Figure 5

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As shown in Figure 5 above, a share of profits generated through CASH COW products are invested in higher risk, new venture WILDCAT products and in support of the STAR products. After successfully moving WILDCATS into, and maintaining its position in the STAR quadrant, that market will gradually mature and descend to the CASH COW area to START another business cycle. VM planning that leverages off the company's business plan will support the objectives of the business cycle and can measurably contribute to the successful growth of the parent company.

THE EXECUTIVE REVIEW BOARD (ERB)

Many Value Managers complain that they do not have access to their company's business plan. To be included in the business planning process and have access to the data requires satisfying 2 main prerequisites:

1. Value Managers must demonstrate to Senior Management that they know how to use the business data and that its use by VM will contribute to achieving the objectives of the plan.

Developing VM plans, similar to the VOP process described above, will assist in satisfying this condition.

2. Ready access to Senior Managers involved in the business planning process is essential. The Executive Review Board (or VM Steering Committee) that supports funding for the VM unit and the implementation of VM proposals is the ideal approval body to guide the Value Manager and approve the VM plan.

The essential role of the Executive Review Board is to review, accept and authorize funding for VM activities. That role can be extended to include active participation in VM's planning process.

Unless the Value Manager reports directly to the Chief Operating Officer (COO) the creation of an ERB is key to VM in achieving its objectives. Regardless of the VM's organizational home its activities will take it across organizational lines of authority. This requires coordination and planned access to affected line and staff managers. The ERB need not be another management committee. The senior management staff that reports to the COO has all the functions necessary to fill the role of the ERB. All that is needed is to add the ERB functions to the COO's staff meeting agenda. However, The COO and his staff must be convinced that the investment of their time, in performing the role and responsibilities of the ERB, will measurably contribute to meeting their business plan commitments.

CAUTIONARY NOTE TO VALUE MANAGERS

Product portfolio management is a complex process involving many variables. Experience and good judgment is needed to supplement the process. Likewise, the VOP process described above barely scratches the surface of marketing and planning knowledge used to develop an effective VM plan. Even with the availability of detailed information, the VOP processes should be used as a guide, rather than a decision formula, to help the Value Manager plan effective VM activities. Conversely, the proper use of the VOP process will keep VM in the main stream of the business by demonstrating to Senior Management that the VM methodology works well in helping to achieve the objectives of the business plan.

CONCLUSION

In the industrial sector advanced manufacturing technology and the shift to low cost specialty suppliers are making the cost-to-produce products a smaller and smaller part of the cost of doing business. VM must break from its traditional role of performing after the fact hardware cost reduction activities and position itself directly in the business management process to maintain and expand its effectiveness. Leading edge Value Managers have proven that the VM methodology works very well in improving business processes. The opportunity exists and is expanding. Paraphrasing Peter Drucker, VM represents the right solution applied to the right problem.

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