An Engineering Approach to the Management of a Small Business

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INTRODUCTION

The science of business management has progressed as rapidly in recent years as the science of engineering. However, much of this knowledge has been utilized by only the larger businesses with professionally trained managers. The manager of a small business has frequently come from another profession, such as engineering, and was not exposed to management training during his formal education; and since going into business for himself, he has had neither the time nor the financial resources to re-educate himself in the field of business management. Fortunately, many of these managers by experience, observation, or perhaps native intelligence have acquired and put to use much of this new knowledge. Because this knowledge is essential to survive in competition with larger and better-financed competitors, the more successful small companies have acquired the knowledge through some source.

The purpose of this paper is to present some of these new management practices and show how they apply to a small business. Since many of the readers are from the consumer side of the oil industry, I shall also point out some recognition symbols of a well-managed company. This will assist the buyer of goods and services in identifying the well-managed companies to use, because good management results in fair prices, good service, and a quality product.

Since most of us are engineers I shall attempt an engineering approach to management by first asking the question, "What is your business?" With this determined I will discuss goal setting, the plan of action for achieving these goals, and the timetable. With the direction established, the planning phase of business management is discussed. This includes the marketing plan, the financial plan, the personnel plan, and the operating plan. With the planning phase complete, the implementation, the control, and the modification function of business management are discussed. From the customer's point of view the paper will point out how well-managed companies can be recognized.

WHAT BUSINESS ARE YOU IN?

The first question a management consultant will ask a client is, "What is your business?" Quite often the answer is an incredulous stare or maybe a sweeping answer such as "the oil business". It is very important to have a specific picture of your business and its purpose, for only with this picture can you define your goals. A classic example of misidentification of business was the railroads. They thought their business was railroading when they were really in the transportation business. This mistake has been responsible for the present plight of the railroads and the rapid expansion of motor and air transportation. The small business manager must define his business to the point of saying, "My business is to provide contract pumping and roustabout services within the Permian Basin of Texas and New Mexico". The distinction between a service business and a manufacturing business is most important also. The function of a service business is to serve the needs of a customer on his demand. A manufacturing business manufactures a product and sells it to the customer. There is a big difference. I know of one manager that is less than successful simply because he thinks he is in the manufacturing business rather than in a service business. He is therefore always in conflict with his customers because the customer won't schedule work to conform with his manufacturing schedule. The first step toward taking an engineering approach to management is to specifically and completely define the business you are in and write it down.

GOAL SETTING

Once you have defined your business the next step is to decide what you want to do with it. In other words, establish your goals. They may be to grow to a size to compete with IBM, or they may be to maintain your present size, take out maximum cash and enjoy life. Either goal can be equally good depending on the company or individual manager. Again, the goal established should be quite specific. A typical goal might be to increase sales to $2,000,000 annually, net $150,000 after tax and employ one-hundred people from four service points within the Permian Basin.

In addition to being defined, goals must be communicated to all management personnel. Obvious problems can erupt when the president of a company wants maximum short-term profits so he can sell and retire to Las Vegas while the vice-president thinks the company goal is growth, and he is willing to sacrifice short-term profits for long-term growth.

TIMETABLE

When the goals of a company are established, a timetable to reach these goals should be set up. This timetable should be set for each step toward a goal or goal segment. For example, if your goal is to reach sales of $2,000,000 annually, the timetable should include something similar to: in 1971 you will have sales of $500,000; in 1972 sales of $1,000,000; in 1973 sales of $1,500,000; and in 1974 your goal of $2,000,000 annual sales will be reached. This timetable should be set up for other goal segments such as number of people employed, profitability, and operating points.

PLAN OF ACTION

Now that the point you want your company to reach and the time you want to get there have been defined, it is time to work out your route, your plan of action. This plan of action is simply a statement of what you are going to do in order to reach your goals.

Let's assume the company now has operating points in Levelland, Andrews, and Brownfield. The manager, having determined he wants sales of $2,000,000 and profits of $150,000, decides it will be necessary to put a full-time salesman in Midland to call on the main offices and open operating points at Hobbs, Denver City, and Odessa. Obviously these things require people, equipment and money. But, as yet, you aren't concerned with how, only what you need to do. It is from this "what you need to do" that you prepare an action plan and put a timetable on it. This action plan should include an operational plan, a marketing plan and the personnel plan. In the operating plan, land, buildings, equipment, and operating procedures should be considered. This part of the planning function covers how you will do the work or provide the service once it has been sold.

A second action plan is the marketing plan. If you are going to increase sales, money must be spent on salesmen, sales promotion and advertising. Market research should be done covering the size of the market, competition, pricing, advertising procedures, and industry practices. From the market research, a detailed plan of marketing strategy should be developed, including number of salesmen required, call patterns, sales promotion items, and advertising backup. Most of all, this plan should include expected results from this marketing effort.

Now you are ready for the phase of planning that is most overlooked, the personnel plan. How many people will be needed? Are they available? How much will they cost? How much training will be necessary? All of these questions must be answered in a systematic manner. A good first step is the construction of an organization chart for the new operation. This chart will determine what positions are needed and how they interrelate, and how many jobs must be filled. From the organization chart a job description, complete with standards of performance, should be prepared for each job on the chart. From it you will clarify in your mind and in the mind of the employee exactly what his job is and what is expected of him in that job. This description will also help you in selecting the proper man to fill this job. Also at this point you should develop your personnel guidelines. These should include your working hours, your pay scales, your holidays, vacation policy, sick plan, promotion, salary increase policies, and causes for termination. Even the smallest company should take time to prepare a basic set of personnel policies. The dividends returned will many times pay for the original investment in time of preparation.

BUDGET AND FORECAST

We are now ready for the area with which most engineers are quite familiar, the budget and forecast. Little needs to be said about this area except that this is where the costs of all the planning that you have previously done are tabulated and compared against projected income and profits of the planned expansion. From the budget and forecast, cash flows can be calculated and added to those of the present operation to determine what kind of financing, if any, is necessary for the expansion. It is here that modification of the plan usually begins. Quite often the money required isn't available from cash flow or borrowings and it is necessary to go back, alter goals, stretch out timetables, and try again. As disconcerting as it may be, this is the time to find out if money problems exist. Unfortunately, too many companies implement the program without proper planning and run out of money.

IMPLEMENTATION

After the critical test of the budget and forecast has been met, it is time to implement the plan. My recommendation for a good first step in implementation of your plan is to have a good lawyer go over your plans. He will make sure that your company is properly organized and set up to do the things that you have planned. For example, real difficulties can arise when after opening a new operation in Hobbs you find out you are not qualified to do business in New Mexico. Other professionals that should be consulted at this point are your insurance advisor and your accountant. Let them in on the planning prior to taking action.

The next step in implementing your plan is the most crucial one of the entire operation; the future of your company depends on it. This step is locating, selecting, training, and motivating your personnel. This is also where most new operations fail. It is surprising how many good managers hire consulting engineers to do their engineering, lawyers to do their legal work, accountants to do their accounting then suddenly believe they are the world's best personnel man just because they have several years' experience at being a person. Working with people is the most demanding and difficult of all jobs, and I strongly recommend the use of personnel specialists for assistance in this area. For rank and file workers there are a number of good local personnel firms ready to assist you. They will locate, interview, screen, and test applicants for your final review and decision. If you have prepared the job descriptions, they will know exactly what type person you are seeking to fill each job and in most cases will be able to supply you with two or three good applicants from which you can make the final decision. For the key people in your organization you should use the most professional help available to you. In this case I recommend the use of professional industrial psychologists. Contrary to most popular beliefs they are not unreasonably expensive. By doing the testing locally and forwarding the results to Houston or Dallas, $75 will usually give you a complete psychological profile on your applicant. Should you desire, the applicant can visit one of these cities for a personal interview by the psychologist. Since the entire future of your company depends on the quality of the people you select in the initial stages, the amount of money spent in finding the right person is insignificant compared to making a wrong selection. Believe me, professional help in people selection and motivation will pay dividends.

When an employee is finally selected and introduced to the company he should be familiarized with the organization chart, his job description, his standard of performance, and the company personnel policies. He should know exactly what is expected of him and you should know it too. Some type of training program is a must and it should be formalized. It might be having the new salesman travel with the old one for only a week, but it should be programmed. For production or service workers a more complete training program will be required. No matter how long a man has been in a particular field it should not be assumed that he is familiar with your standards and your way of doing things. Too many serious quality control errors have resulted because a new man was expected to receive his training by osmosis.

CONTROL

Once your company is in operation, the manager's job becomes one of control and modification. In this operation the most assistance can come from the accountant. In the early stage of any business or business expansion you simply cannot over account. Give your accountant plenty of data and good data and let him tell you how you are doing. He will tell you, good or bad, but you need to know. Attempt to set up cost accounting systems as soon as possible. From this you can obtain your pricing parameters. At the end of your first year of operation I recommend an audit of the company by an outside accountant. This audit is not to just check the books to see if they are correct. A good audit will review procedures, check for redundancies, examine omissions, and in general give your company a thorough checkup. Most audits will more than pay for their cost by the resulting increase in efficiency.

The other phases of control are up to you, but by using the tools that you have developed such as your operating plan, your marketing plan, your budget and forecast, your organization charts, your job descriptions and your standards of performance, you will be able to compare actual results to your predictions, note discrepancies, and take appropriate timely action. Unless yours is a most unusual company, things will not go as planned and modifications will be necessary; but because of your prior planning these modifications can be quickly and easily made and crises avoided.

GOOD MANAGEMENT AS A CUSTOMER BENEFIT

Since many of you work on the other side of the desk you might not be called upon to do the things I have just finished describing, but you will want to know they have been done because you and your supplier form a team, one dependent upon the other. His success will enhance your success. To identify well-managed companies some recognition signs are almost always evident.

Obviously, one of the first recognition symbols of a well-run company is its profitability. Does it meet its obligations on time and have enough left over for future expansion, equipment renewal, a little above average salaries, and even enough money for some charitable causes? If the company does not, beware, because in all likelihood it will not be around when you need it. Profitability is the final test of good management.

A second major recognition symbol of a well-managed company is the lack of labor turnover. A well-managed company will have developed salary, personnel and management policies that are so attractive to its people that they will want to stay with the company. In fact, the key test of management in the coming decade will be the ability to attract, keep, and motivate its personnel because jobs will be plentiful. A successful company must have employee dedication. If you observe a constant flow of people into and out of a company it has serious problems.

A third recognition symbol of a well-managed company is adequate and adequately trained personnel. In today's mobile society a company should plan on some personnel replacement. This replacement will be the result of expansions, retirements, deaths, transfers, and labor turnover. Also in our society, vacations, sick pay, and holidays will require that standby personnel be available. This personnel must be adequately trained and indoctrinated or quality control and service problems will result when he is thrown into the breach. If a company requires six men to do its job, and it has only six men on payroll, you can believe that one day at least one man will be off and an untrained or pickup man will be placed on the team and quality and service will suffer. A well-run company will have backup personnel and personnel in training at all times.

A well-managed company will have uniform pricing policies. It will have determined its cost and a fair profit on these costs and its prices will be determined accordingly. A company that has no set prices or prices vary from job to job probably doesn't know what its costs are and consequently will not remain profitable.

There are many other minor signs of a poorly run company; some of these are poor personnel policies, lack of delegation of authority, poor equipment and poor maintenance of equipment, inconsistent actions, and absentee management. Of course, no company is perfect and even the best run of companies will occasionally exhibit some problem symbols, but in general a well-run and well-managed company will always have the appearance of being so managed.

SUMMARY

In summary, there is no sure road to success for the small business, but the opportunities have never been as great as they are today. My best advice for achieving success with a small business today is to plan for it.