IMPLICATIONS OF RAPID GROWTH ON ORGANIZATIONAL EFFECTIVENESS

by

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B.S., Mechanical Engineering, University of Illinois at Urbana-Champaign, 1997

Submitted to the Sloan School of Management and the Department of Mechanical Engineering in partial fulfillment of the Requirements for the Degrees of

Master of Business Administration and Master of Science in Mechanical Engineering

in conjunction with the Leaders for Manufacturing Program at the Massachusetts Institute of Technology
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Submitted to the Department of Mechanical Engineering and the Sloan School of Management on May 9, 2003 in partial fulfillment of the Requirements for the Degrees of Master of Science in Mechanical Engineering and Master of Business Administration

Abstract

Organizational effectiveness refers to an organization’s ability to achieve its desired goals through efficient use of its resources. To maximize organizational effectiveness, a group must adopt business management practices, such as effective communication system or a robust strategic planning process, which are appropriate for its industry environment and suit the internal culture. If the industry environment or internal situation changes, an organization must evolve its business practices. A systematic process to evaluate organizational effectiveness can empower an organization to effectively respond to its evolving needs. Improvements to organizational effectiveness will enable an organization to proactively respond to market or technological changes, become more cost effective, and deliver its products more efficiently to the customer.

The goal of this work is to develop and apply such a process for the Renagel product group at the Genzyme Corporation. The systematic process developed in this work is a combination of several existing academic frameworks, including the theory of the organizational lifecycle, change management practices and business excellence models. The Renagel case study is presented to demonstrate the application and outcome of the process. Other groups can apply a similar process to predict organizational challenges associated with its own period of growth.

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Introduction and Problem Statement

1.1 Introduction

An organization sustains success by evolving its business processes over time. Changes to business processes are periodically necessary in order to manage added complexity of its business as it grows or to respond to changes within its industry. A systematic process to evaluate organizational effectiveness can empower an organization to effectively respond to its evolving needs. In addition, such a process allows a group to retain organizational learning over time. The goal of this research is to develop and apply such a process for the Renagel product group at the Genzyme Corporation. The study of organizational effectiveness will be used to present methods and metrics to improve the Renagel group's effectiveness. The results from the Renagel case study can be generalized to allow other organizations to manage organizational challenges associated with different periods of growth.

A process to evaluate organizational effectiveness is most critical to organizations that are rapidly growing. Periods of growth can strain the effectiveness of an organization’s business systems. Groups that effectively improve organizational effectiveness during such times enjoy competitive advantage in several ways:

- Ensure consistent delivery of quality products and services to customers
- Contain cost by sustaining efficiency of operations during the growth phase
- Retain expertise of employees by fostering cooperative cultures, working relationships, and positive working environments

Ultimately, these advantages enable groups that actively manage organizational effectiveness to improve business results.

This project was conducted as part of the Leaders for Manufacturing (LFM) program, a dual degree program at the Massachusetts Institute of Technology. As part of the LFM curriculum, an on-site internship was designed to provide students with exposure and experience in leading change in a manufacturing organization. This work is based on the results gained from an internship conducted at Genzyme Corporation from June to December 2002 in Framingham, Massachusetts.
1.2 **Company Overview**

Genzyme Corporation develops and markets products and services designed to address significant unmet medical needs. Founded in 1981, Genzyme today is one of the largest and most well-established biotechnology companies in the world. Genzyme has approximately 5,500 employees working in 40 countries and annual revenues of more than $1 billion. ("Overview of Genzyme Corporation", 1/03/03)

The corporation is composed of three divisions, each which represent a major focus of the health care market in research. Genzyme Biosurgery focuses on therapeutic products that are implanted through surgery or other interventional procedures. Its products and pipeline are concentrated in the markets of orthopedics and heart disease. Genzyme Molecular Oncology develops products focused on cancer vaccines and angiogenesis inhibitors. The products in development include therapeutic vaccines that stimulate the immune system to find and destroy cancer cells and angiogenesis inhibitors that starve tumors of its needed blood supply. Genzyme General develops and markets therapeutic products and diagnostic products and services. The division is focused on developing products to treat genetic disorders and chronic debilitating diseases, and is the largest of the three divisions. ("Overview of Genzyme Corporation", 1/03/03)

Genzyme excels in the discovery, commercialization, and manufacturing of novel biotechnology products. Genzyme’s well-established products continue to fuel its broad pipeline. The long-term strategy of Genzyme emphasizes strength through diversification, growth through innovation, and delivery of its products globally (Genzyme 2001 Annual Report).

1.3 **Project Motivation and Setting**

This research is based on the Renagel product group within the Genzyme General Division. Renagel is a synthetic polymer product used in the reduction of serum phosphorus in hemodialysis patients. Since the product received Food and Drug Administration (FDA) approval in October 1998, product sales have grown significantly, from $0.3M in revenues in 1998 to $177M in revenues in 2001. The product is important to Genzyme’s overall revenue growth, and has grown from 7% of Genzyme General
Division’s total revenue in 2000 to 18% of its revenue in 2001 (Genzyme General 2001 Annual Report).

The rapid growth of Renagel has enhanced the business complexity and scope. A larger, globally distributed sales force and multiple manufacturing facilities are examples of the added complexity faced by the Renagel business. The Renagel product also faces more competition, higher annual volumes, and lower margins than Genzyme’s traditional products. The unique market and product characteristics enhance the importance of better coordination and cost efficiency to sustain Renagel’s initial success.

Renagel’s senior management team placed an internal emphasis on improving the effectiveness of operations due to the enhanced complexity of the business. However, the team has faced several obstacles in trying to instigate these improvements. First, the priority of tactical daily operations limited the amount of time available to improve the group’s organizational effectiveness. Next, the Renagel leadership team recently underwent several changeovers in senior management. These changes hindered improvements to organizational effectiveness, as the new leadership team needed to first gain experience with business processes before making improvements. Finally, although leaders agreed that better integrating various business groups would be beneficial to the business, there was less agreement as to the appropriate priorities to implement improvements to organizational effectiveness.

1.4 Project Goals and Objective
The goal of the internship was to review, improve and monitor organizational effectiveness of the Renagel business. The objectives of the internship included the following:

- Create a systematic evaluation process to examine organizational effectiveness of any organization or group
- Apply the process to the Renagel product group to identify less effective business practices or processes
- Recommend process improvements to enhance the ineffective business practices or processes for the Renagel product group
1.5 Thesis Structure

The first section, Chapter 2, introduces the Renagel product to the readers. The product's application is described as well as its competition and position in the marketplace. Chapters 3 and 4 are summaries of academic literature on organizational lifecycles and change management, respectively. In Chapter 3, an organization's evolutionary cycle is described to justify the value of monitoring organizational effectiveness. Chapter 4 continues the overview of academic literature with a summary of change management practices.

The change management practice developed by Beckhard and Harris (1987) is the basis for the remainder of the thesis. The process consists of defining the direction of change of a group, assessing the current situation, and managing the transition between the current situation and the desired future situation. Chapters 5, 6, and 7 apply this process to the Renagel product group. Chapter 5 applies the organizational lifecycle framework to the Renagel product group in order to set its direction of improvement. Chapter 6 is an assessment of the current situation for the Renagel group. In this chapter, a systematic process of self-assessment is developed and applied. The results of the assessment are the identification of relative strengths and weaknesses of Renagel's business practices. Chapter 7 concludes by presenting methods and metrics to manage and monitor the transition between Renagel's current and next stage of growth. The thesis concludes in Chapter 8 with a summary and conclusions based on this work.
Chapter 2: Introduction to Renagel

To begin the discussion, it is appropriate to provide some understanding of the product itself. This chapter introduces the reader to Renagel by describing the product’s application, competitors, product attributes, value chain, and position in the marketplace. It also describes Renagel in the context of Genzyme’s overall product portfolio.

2.1 Product usage

Renagel is prescribed to patients with End Stage Renal Disease (ESRD). ESRD is permanent kidney damage, and many patients with ESRD must undergo hemodialysis treatment to maintain proper health. Hemodialysis is a procedure that involves removing waste substances and fluid from the blood; a function normally performed by the kidneys. The procedure uses a dialyzer, or special filter, to clean the blood, as depicted in Figure 1. In the year 2000, there were approximately 280,000 patients undergoing dialysis for ESRD in the United States (Chertow et al., 2002).

![Figure 1. Diagram of Hemodialysis Procedure (source: http://www.niddk.nih.gov, 1/03/2003)](image_url)

Studies show that hemodialysis alone cannot adequately control excess levels of phosphorus (Lang, 2002). Phosphorus levels are important to control because of its close relation to calcium levels in the blood. Elevated phosphorus levels in the blood cause calcium to leave the bones. Over time, if untreated, bones deteriorate and joints may become enlarged or painful. Also, excess calcium can build up on the heart and other organs causing calcification, which can lead to the progression of a type of
cardiovascular disease. Hemodialysis patients are generally required to take a phosphate binder to control phosphorous between dialysis sessions.

2.2 Phosphate Binder Alternatives
Traditional phosphate binder therapies are aluminum-based and calcium based binders. Aluminum-based binders, such as aluminum hydroxide, are very effective at controlling phosphorus. However, because aluminum has toxic effects that can cause bone disease and damage the nervous system, it is rarely prescribed (Norris, 2001).

Although slightly less effective than aluminum-based binders, calcium based binders are the most commonly prescribed phosphate binders. Common types of calcium-based binders include calcium acetate and calcium carbonate. Calcium-based binders are effective, but patients using calcium-based phosphate binders may experience excess calcium load. Excess calcium can increase the risk of long-term metastatic calcification or calcium deposits in tissues and organs. The calcium deposits can affect normal lung or heart functions. (Norris, 2001)

2.3 Renagel Product Overview
Geltex Pharmaceuticals Inc. received FDA approval for a new product, Renagel, in October 1998. Renagel is a metal-free and calcium-free phosphate binder that does not cause problems with excess aluminum or calcium load. It is based on a non-absorbed polymer technology that was designed to act in the intestinal tract without absorbing into the bloodstream, thereby minimizing the potential for adverse effects. (http://www.geltex.com, 1/03/03)

Renagel is comprised of an active ingredient (Sevelamer hydrochloride) and several inactive excipients. It is an orally administered drug that is available in tablet and capsule formulations. The molecular structure of Sevelamer hydrochloride is comprised of cross-linked polymers as shown below:
A recent study determined that sevelamer and calcium treatments are equally effective in controlling phosphorous levels in the bloodstream (Chertow et al., 2002). However, patients exposed to the calcium treatment experienced higher levels of coronary artery and aortic calcification than those treated with sevelamer. The study also indicated that because sevelamer acts as a bile acid sequestrant, it is also capable of reducing LDL cholesterol levels.

### 2.4 Value Chain
A simplified, yet representative, value chain for the Renagel product group is found in Figure 3. The main raw material, polyallalymine (PAA), is received into the upstream manufacturing process and is modified to produce the Renagel drug substance, Sevelamer hydrochloride. The upstream manufacturing process is completed both internal at Genzyme’s manufacturing facilities and externally at contract manufacturers. After quality inspections, Sevelamer hydrochloride is shipped to the downstream operation.
The downstream process forms the drug substance into its proper formulation (either tablets or capsules) either in Genzyme’s internal manufacturing facilities or at its contract manufacturers. A final QA/QC check is completed before the product is shipped. The distribution site at Genzyme is the center for packaging, labeling, and shipping the product to the appropriate region. Wholesalers distribute the product through different channels such as a pharmacy to ultimately deliver the product to the patient.

2.5 Product Positioning
The product’s usage, competitors and value chain provide initial insight to understand the competitive landscape for Renagel. An analysis of the phosphate binder market using Porter’s Five Forces framework expands on this basis by highlighting the strategic implications of the industry’s structure and level of competition (Figure 4). From this analysis, Renagel’s position in the market place becomes evident.
Figure 4. Porter’s Five Forces Analysis of the Phosphate Binder Market

- **Buyer Power.** Phosphate binders are prescribed by doctors, paid for by insurance companies or patients, and used by patients. The buying power of doctors, insurance companies, and patients is moderate. The necessity of controlling phosphorous levels to sustain a patient’s health makes the treatment desirable for ESRD patients. In addition, the existence of competition allows doctors and patients to select between several treatment options. However, the power of buyers is lessened by the fragmented nature of the buyers.

- **Supplier Power.** Suppliers in the phosphate binder market can include raw material providers or contract manufacturers. The power of suppliers varies with different products; however, suppliers are generally considered to have low to moderate level of industry power. The possibility of forward integration by suppliers is minimal because of significant barriers to enter the market. Supplier power is moderate because the industry is government regulated, and there are some switching costs incurred from qualifying new suppliers. Suppliers that understand this industry dynamic can capture more value from the drug manufacturers.

- **Threat of New Entrants.** Barriers to enter the market are significant. Large capital investments are required to take a drug from discovery to a commercialized product.
The capital investment is risky, as success rates of a drug from discovery to commercialization can be as low 0.005% and take as long as 15 years (Phrma, 2003). The time required to build human resources with clinical and regulatory expertise is a barrier to enter the market. Patent protection is another factor that somewhat mitigates the threat of new entrants in the market. Finally, the importance of having established relationships with doctors deters others to enter the phosphate binding industry. These barriers to enter the market reduce the potential of new entrants. However, as the industry proves to be lucrative, more entrants are likely to be attracted to the industry. In particular, established pharmaceutical firms that have capital and infrastructure to penetrate the market can pose a significant threat. The threat of new entrants is therefore considered moderate.

- **Threat of Substitutes.** Although there are choices between different types of phosphate binding treatments, there is no suitable substitute for phosphate binding treatments today. Improvements to dialysis treatment may be a viable alternative to orally administered phosphate binding treatments in the future.

- **Industry Rivalry.** Overall, rival power is moderate. Competition in the phosphate binding market does exist; however, lower cost sensitivity of buyers reduces the level of competition based on cost between treatment alternatives. Rather, products compete by differentiating treatments based on their effectiveness and long-term secondary effects.

Renagel is the newest treatment option in the market, and the five forces analysis points out strategic challenges associated with the product's position in the marketplace. The biggest threats in the market environment lie with buyer power, supplier power, rival power and the threat of new entrance of well-established firms. To reduce buyer and rival power, Genzyme must differentiate Renagel as the only viable treatment option to the medical community. Phosphate binding treatments are differentiated based on the ability to control phosphorous levels with minimal long-term secondary impact to the patient. To do this, Genzyme must provide clinical evidence of Renagel’s benefits over alternative treatment options. Genzyme can reduce supplier power by integrating the supplier
function into Genzyme’s operations or by qualifying multiple suppliers through the regulatory process. Genzyme must also continuously monitor investments of other well-established pharmaceutical firms to react to potential new entrants in the market.

Porter’s five forces analysis of the phosphate binding market illustrates a moderately positive industry environment for Genzyme’s product. However, in order to sustain this market position, Genzyme must ensure that resources are being used effectively to monitor and respond to potential threats to its position. Organizations that systematically improve their effectiveness are better prepared to respond to shifts in power in the industry environment.

2.6 Importance of Renagel to Genzyme

Examination of Renagel’s position on its S-curve provides insight into the importance of Renagel to the Genzyme portfolio. The S-curve is an analytical tool that plots the improvement in performance of a product against the effort that has been extended to gain that improvement (Foster, 102). S-curves show that products move through three stages: ferment, take-off and maturity or decline. The period of ferment is when the product is initially developed. Once the product has proved its potential and customers begin to demand the product, the product’s performance will quickly improve. The technology will develop until it reaches a stage of maturity or decline, or if a new disruptive technology becomes available.

![S-curve of technology](image)

*Figure 5. S-curve of technology*
Applying the S-Curve framework to the phosphate binder market reveals Renagel’s growth potential. As the newest entrant in the market, Renagel is a disruptive technology over traditional calcium and aluminum-based binders. The potential technology advantage of Renagel is the low level of coronary artery and aortic calcification side-effects given an equivalent phosphate binding capability. Evidence that Renagel has approached its “take-off” stage in its S-curve is apparent from its rapid revenue growth (see Figure 6). For Renagel to sustain the take-off stage in the S-curve, it must stimulate adoption of the product.

![Renagel Sales](image)

*Figure 6. Renagel Sales (source: Genzyme's 2001 Annual Report)*

The success of Renagel is important to the future growth of Genzyme. In its 20-year existence, Genzyme’s Cerezyme® product has historically been the major source of revenue for Genzyme. However, Cerezyme is likely to have entered its maturity stage, as sales have followed a S-shaped growth pattern. In the past, steady growth was achieved as doctors became familiar with the Cerezyme treatment and patients were identified. Now, the majority of patients requiring Cerezyme have been identified, and future revenue streams are predicted to flatten. Genzyme’s future growth depends on the success of its new market entrants, such as Renagel. With significant growth potential, Genzyme anticipates that additional growth in Renagel’s revenues will drive the overall growth of the company.
2.7 Conclusion

This chapter introduced Renagel, an important new product for the Genzyme Corporation. Renagel is a non-absorbed polymer that is used by ESRD patients as a phosphate binder. There exists several alternative treatments for phosphate binding, but the low level of coronary artery and aortic calcification found with Renagel differentiates it from other treatments. A Porter’s five forces analysis of the phosphate binder market shows a moderately positive industry environment for Renagel. However, the analysis also pointed out the unique challenges faced by Renagel as a new market entrant. In order to sustain its position in the marketplace, Genzyme must efficiently utilize its resources to monitor and respond to potential threats to its position. A systematic process to evaluate organizational effectiveness is recommended to ensure that business processes are appropriate for the industry environment and internal situation.
Chapter 3: Value of Organizational Effectiveness

This chapter summarizes the development cycle of an organization and makes the case for evaluating organizational effectiveness. According to Greiner (1972), a growing organization goes through five growth stages. A closer look at those phases of growth reveals the importance of a process to evaluate organizational effectiveness.

3.1 Evolution of Organizations

Academic research has examined the growth of many organizations, uncovered common patterns of development, and referred to these patterns as the organizational lifecycle. Greiner’s article “Evolution and Revolution as Organizations Grow” details an organization’s stages of growth from inception to maturity. Greiner’s premise is that an organization’s history influences its future direction. If a leader can recognize its current stage of growth, the manager can introduce change at an appropriate time and select the best solution for the next phase of growth. Although Greiner’s ideas were developed in the early 1970s, the validity of his analysis still holds true for today’s organizations, as will be shown by applying this model to the Renagel product group in Chapter 5.

3.2 Influential Forces in the Life cycle

Greiner lists five dimensions as the basis of his model for organizational development. These dimensions include the following:

- **Age of an Organization.** The passage of time in an organization influences its need to develop. For example, an organizational policy may become outdated or misinterpreted over time. In this manner, the age of an organization can influence an organization’s need to learn and develop.

- **Size of an Organization.** The size of an organization is defined as either the number of employees or sales volume of an organization. Increasing the size of an organization can place additional demands on it. For example, problems of coordination can be magnified or new functional voids may emerge as a result of an increase in size. The organization is forced to evolve to remedy these situations.
• **Stage of Evolution.** Greiner defines evolutionary stages as periods when management and organizational practices are adequate to sustain growth. In these stages, effective management practices drive incremental changes in organizational development.

• **Stage of Revolution.** Greiner defines stages of revolution as periods when significant upheaval of management or organizational practices is necessary to sustain growth. Revolutionary stages are periods of substantial turmoil in an organization. Organizational development is driven in these stages by adoption of new business practices or policies.

• **Growth rate of industry.** The growth rate of the industry has influence on the rate of organizational development. For example, a faster growing industry may require an organization to take on more employees quickly. In this manner, a faster growth rate will cause an organization to move through the phases of evolution and revolution more quickly.

### 3.3 Phases of growth

Greiner’s model of organizational development is built on the five dimensions of age, size, stage of evolution, stage of revolution and growth rate of industry. Each dimension effects the phase of growth of an organization, as graphically depicted in Figure 7. For each phase, Greiner describes the management style used to achieve growth and the dominant management problems that lead to the next revolutionary stage. Greiner asserts that for growth to continue, management actions must evolve in one direction. Greiner also observes that each evolutionary stage breeds its own revolution. Furthermore, the solution for the revolutionary stage sets the stage for the subsequent stage of evolutionary growth.
The first growth phase occurs during a period of **creativity**. Entrepreneurial leadership leads the development of creative solutions to drive growth. You may recognize this phase of growth as a typical start-up culture: feedback from the market is met with immediate action; tactics are communicated amongst the entire team; and long hours of work are rewarded by ownership benefits. As the organization successfully grows, a **crisis of leadership** emerges. The old informal business processes no longer get the job done. Job functions must be more clearly defined. Employees need new methods of motivation. The crisis requires the leadership to introduce new business techniques.

The subsequent solution to the crisis of leadership leads to the second phase: growth through **directive** leadership. Leaders must clearly define job assignments and responsibilities. Key decisions are still made by the leadership team, but lower-level supervisors are used as advisors for their functional expertise. Although growth through directive leadership is successful for a period, it is challenged by a **crisis of autonomy**. When lower-level management gains more experience and knowledge for their specific business function, they become equipped to make better decisions than their
management. In addition, the lower level supervisors usually desire to take on personal initiatives.

Growth only can continue if management responds by establishing a system of delegation. Lower-level supervisors must be given more autonomy to make decisions. The supervisors are held accountable by tying their incentive packages to performance. Departments with distinct leaders emerge and develop their own dynamics. Meanwhile, senior management then can focus on long-term strategy for the organization. Of course, as with each stage, the characteristics of any period of growth breeds its own revolution. The growth through the management system of delegation is challenged by an evolving crisis of control. Departments handle tasks with their own view in mind rather than considering the best interest of the overall business. Senior management feels that they are losing control over the diversified operations.

In response to this crisis, management needs to establish formal systems for achieving greater coordination. Effective coordination of activities will drive growth. In this period of coordination, organizations usually re-organize around product groups. Personnel are hired to initiate company wide programs centered on improving coordination and control. Product groups become profit centers, and these centers are accountable for their return on investment. The natural challenge to this period of growth is a crisis of red tape. The coordination can lead to a high level of bureaucracy. Corporate wide systems and programs start to exceed their benefit. Innovation can be dampened and the organization has difficulty in responding to changes in the external environment.

The crisis of red tape leads to a period of collaboration. Now, cross-functional teams are used to solve problems quickly. The formal systems set up in the previous phase are simplified and focused. The next crisis is waiting for sure, but Greiner only speculates as to the characteristics of the approaching crisis. Right now, insufficient information is available to describe the crisis. Table 1 summarizes the key characteristics of each phase of growth.
Table 1. Summary of Characteristics of Greiner’s Phases of Growth

<table>
<thead>
<tr>
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<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Phase 4</th>
<th>Phase 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management Focus</td>
<td>Make &amp; Sell</td>
<td>Efficiency of Operations</td>
<td>Expansion of the Market</td>
<td>Consolidation of the organization</td>
<td>Problem Solving &amp; Innovation</td>
</tr>
<tr>
<td>Organization Structure</td>
<td>Informal</td>
<td>Centralized &amp; Functional</td>
<td>Decentralized &amp; geographical</td>
<td>Line-staff &amp; product groups</td>
<td>Matrix of teams</td>
</tr>
<tr>
<td>Senior Management Style</td>
<td>Entrepreneurial</td>
<td>Directive</td>
<td>Delegate</td>
<td>Oversight</td>
<td>Participative</td>
</tr>
<tr>
<td>Management Reward Emphasis</td>
<td>Ownership</td>
<td>Salary/Merit Increases</td>
<td>Individual Bonus</td>
<td>Profit Sharing/Stock Options</td>
<td>Team Bonus</td>
</tr>
</tbody>
</table>

3.4 Implications for Management

Greiner recommends that management use the organizational lifecycle to predict and prepare for future problems. To do so, management must know where they are in the developmental sequence. This awareness helps management recognize the right time for change. Also, when a management crisis ensues, leaders can use the organizational lifecycle to guide themselves to choose the right solution. This thought process helps prevent management from reverting to previous solutions and from, in effect, suppressing the natural development of the organization. Finally, the organizational lifecycle helps management recognize that solutions breed new problems. With this acknowledgement, leaders are more prone to think through the problems associated with alternative solutions. This forward-thinking and dynamic mindset will enable management to make the best choice for an organization.

When a firm or organization has multiple products that are at different stages in the technology S-curves, each product may require a unique set of management practices. Organizations often use the same management system across an array of products. However, Greiner’s phases of growth highlights that a successful management system is one that appropriately fits the needs of the product’s external environment and internal situation.
3.5 Importance of Organizational Effectiveness

In this thesis, organizational effectiveness refers to an organization’s ability to achieve its desired goals through efficient use of its resources. The effectiveness of an organization is influenced by many factors. These factors may include the organizational structure, leadership style, communication methods, operational efficiency, responsiveness, coordination, employee motivation and many other factors. As shown by these examples, factors that influence organizational effectiveness are comprehensive and are a balance of financial and non-financial measures.

The organizational lifecycle shows that growth only can be sustained if an organization learns and develops as its external environment and its internal operations change. The ongoing examination of an organization’s effectiveness is a technique to support the learning and development cycle. The process of evaluating organizational effectiveness is a continuous process of ongoing questioning, developing and modifying of core elements of the business. Organizations that successfully build the process can enhance its ability to realize and respond to changes in the external and internal environment. During stable periods of growth, the evaluation process guides management’s efforts to make incremental improvements. When management crises ensue, the process of self-examination can alert management to the decline in the organization’s effectiveness.

3.6 Conclusion

Greiner’s work asserts that a successful, growing organization must learn and develop to manage added complexities of its business. For example, organizations may be required to adopt a new technology, develop new methods of communication, or evolve to a different leadership style to address new needs of the organization. The challenge is to recognize when it is time to change. This challenge can be addressed by instituting a process to evaluate the effectiveness of business practices. The results of the process can be used to plan the development path of an organization. In future sections, Greiner’s model will be applied to the Renagel product group to illustrate the process to determine if change is needed and to define the general direction of development for an organization.
Chapter 4: The Process of Change

In Chapter 3, Greiner's organizational lifecycle was used to describe the importance of evolving a business system in a background of business and technical change to remain effective. The organizational lifecycle can be used to identify the appropriate time and direction of change. The organization then faces the equally difficult task of effectively managing the process of change. To make change happen, it may be necessary to reexamine cultural assumptions, redirect organizational momentum, or rally a group of people around a transformation. Resistance to change is common, but academic research has compiled effective methods to support the change process. This chapter reviews the literature of change management practices, applies the principles to the evolutionary stages of a product or organization, and outlines the change process applied to the Renagel product group.

4.1 Need for Change

The organizational lifecycle model shows common patterns of organizational development, but it leaves the question open “What drives the evolution of organizations?”. In the book Organizational Transitions, Beckhard and Harris (1987) argue that external forces are the primary forces that drive change within an organization. In his discussion of reengineering, Hammer (1995) concurs with this reason for change. Specifically, increased customer demands, more aggressive competition and the rapid pace of change in industries are external factors that call for reengineering.

There are typically three scenarios of external change under which management initiates changes to business processes or practices. A leader may initiate change to business processes or practices because an organization is not meeting its expected goals. For example, the organization may be missing financial targets, losing market share, or experiencing high turnover in employees. Under these situations, the management must modify its current business practices to survive a business crisis. A second scenario of change is related to an identifiable change in the external or internal environment.

\[1\] Reengineering is a technique of process redesign.
Management must instigate change to an organization’s business practices or processes to respond to the change. For example, a new competitor can emerge, a senior leader may retire, or laws that govern the industry may change. Lastly, management may initiate change to business practices to proactively improve performance. An organization may be achieving its financial goals, but it seeks to further separate itself from its competition by evolving its business practices or processes. Each of these scenarios requires an organization to reevaluate existing business practices and modify them to be more appropriate for the new environment.

4.2 Academic Literature on Change Management

Change management is the process, tools and techniques to make changes to a method or system in a planned systematic fashion. It often revolves around the people-side of a business to make the change happen within the social infrastructure of the workplace. The change management process can be applied to many scenarios, including modifying an organization’s mission, reengineering methods of doing business, or challenging cultural assumptions.

Unfreeze – Change – Refreeze

A widely accepted change management process, as defined by Lewin, is a process of unfreezing, changing and refreezing. Unfreezing is a process to create motivation to change. Schein (1992) expands on the process of unfreezing by outlining components to unfreeze an organization:

- To begin the change process, Schein states that the problem must be recognized. Data must be presented that convinces the masses that goals are not being met. Hammer also concurs with this initial step. He discusses that firms that adopt reengineering must have a sense of urgency or pressure to reform the organization.

- Exposure to the problem must be followed by supportive data or evidence (provided over time) that allows the problem to “register” with the masses. The evidence must substantiate that the problem is related to important goals or ideals. According to Hammer (1995), change is hard, and the people within an
organization must understand what is at stake to be willing to participate in the change process.

- Finally, a change agent must frame the problem to minimize the threat to those participating in the change process. This tactic avoids stirring up defensive behavior and makes early strides in managing the resistance to change.

Once the motivation for change has been established, the change process begins. Effective change processes vary through different stage of development of an organization, and will be discussed in further detail in a Section 4.4.

An organization must then “refreeze”, or embed, the change into the organization. Leaders should reinforce the new behavior and new set of assumptions with supportive elements such as new incentives or promotion for people that embrace the change. Leaders must actively reflect to see if the change “sticks”. If there is no evidence that a change embeds itself in the organization, the change process must be reevaluated or reinitiated.

**Gap Analysis for Change Management**

Beckhard and Harris (1987) offer another widely accepted change management process. The steps in Beckhard and Harris’s change process are as follows:

- Determine the need for change
- Define the desired future state
- Describe the present state
- Manage through the transition

The first step in the change process is to determine the need for change. Critical mass must embrace the necessity of change to provide energy for change to happen. Commitment must be gathered at the beginning of the change process by developing a plan to secure the support of those subsystems (people, resources, etc) vital to the change effort.
The desired future state is a supplement to the overall vision of an organization. It defines an intermediary midpoint that is typically more concrete than the overall vision. Defining the ideal future states stirs up excitement about the outcome of a change effort. It is detailed enough to understand who and what will be involved to make a change happen. In addition, the rationale behind management decisions becomes more transparent when an intermediary state is well defined.

The next step is to describe the present state. To do so, a group must identify the priorities in the change process, identify the subsystems that are affected by the changes, and evaluate the readiness and capability for change of the subsystems. Assessing the present state is a baseline of current performance and helps identify relative strengths and weaknesses of an organization.

Managing through the transition is closing the gap between the present state and the desired future state. There are many methods to effectively transition an organization. These methods are all contingent on the culture of an organization, present state in the organizational lifecycle, scope of the change, and the readiness of the individual, group, or organization. Effective change mechanisms will be later described for different stages within the organization's lifecycle.

4.3 Impact of Culture and Leadership on Change Management

Academic literature on the change process highlights two elements that are intertwined with change management: culture and leadership. A champion of the change process that effectively manages cultural resistance is often the difference between a successful and unsuccessful change program. This section elaborates on the impact of culture and leadership on the change process.

Schein (1992) defines the culture of a group as “a pattern of shared basic assumptions that a group learns as it solves its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, are taught to new members as the correct way to perceive, think and feel in relation to those problems”. Schein further elaborates by stating when an external environment changes, cultural assumptions may inhibit effectiveness. The organization must then find a way to
change its culture. Adapting cultural assumptions generally occurs during periods of revolution rather than in periods of evolution. The process of change is most effective if it takes into account the dynamics of culture.

Leadership is also strongly related to the success of a change effort. The ability to recognize the need for a change is an attribute of a successful leader. “Leaders create and change cultures, while managers and administrator live within them” (Schein, 1992). Leaders must champion the change process by aligning the different aspects of the business to support a change program. However, this is often the hardest role for a leader to embrace, especially when it involves evolving a culture to the next stage. A leader usually rises to a senior level position because she has embraced and understood the existing culture. According to Schein, if change is necessary to remain competitive in the marketplace, a leader’s challenge is to step outside the culture that created the leader and instigate evolutionary change.

A change agent can exploit these aspects of culture and leadership using different change mechanisms. Hammer (1995) describes several effective change mechanisms that enable a program’s success. Leaders can take initiative to redesign incentives, both positive and negative, that align reward systems to the desired change. Leaders can also focus on sharing information to minimize resistance to change. Information about a change program helps overcome cultural resistance by dispelling uncertainty and fear of those people vital to the change effort. This technique can manifest itself in education and training systems. Leaders can intervene through one-on-one conversations. Again, listening to people’s concern can dispel uncertainty, and allows people in the business to justify the rationale behind the change. Another recommended technique is making change seem inevitable. Introducing change in parallel with adopting new technology can signal that change is inevitable. Finally, involving those effected by the change in the process is an effective change mechanism. Making people part of the change effort often breeds a solution that works within the boundaries of the social workplace.
4.4 Change Management throughout Evolutionary stages

The effectiveness of the change mechanisms varies throughout different stages of an organization’s lifecycle. The dynamics at each stage affect the impact of change mechanisms. Schein describes characteristics of culture and effective change mechanisms for each stage of development.

Early phases of founding and initial growth, as defined by Schein, coordinate with growth through creativity (Phase 1) in Greiner’s organizational framework. During this period, culture is created through the actions of strong leaders. The leadership team can therefore easily manipulate the culture by adapting their actions. However, this is often more difficult than it seems. Most leaders attempt to enhance and preserve the existing culture because it has directly contributed to their success in the organization.

Because the leadership is strongly linked to the culture, the most effective method to transition the culture is to transition the leadership. Individuals whose behavior matches the desired overall organizational behavior should be promoted. However, this change mechanism requires that a leader with authority recognize the need to change.

An organization will then progress to its midlife. Schein’s description of midlife most closely coordinates with Phase 2 and Phase 3 in Greiner’s framework. In this period, the culture is well defined and embedded within the organization’s structure and processes. The leadership team has grown, and individual leaders find it difficult to instigate change alone. In addition, different areas of the business have developed subcultures. This means that cultural change is not always a global change.

In this stage, change is brought about to respond to external developments or to appease power struggles between groups that inhibit internal integration. Effective change mechanisms include promotion of subcultures and coupling the change with other developments such as the introduction of new technology.

The final stage is maturity and sometimes decline, and is related to Phase 4 and 5 in Greiner’s framework. This stage is characterized by a misalignment of cultural assumptions with the realities of the external context. Schein argues that culture is
influenced more by the interaction of the organization with its environment than by its internal dynamics alone. In this period, effective change mechanisms include the infusion of outsiders, reengineering business processes, and reorganization.

4.5 Summary and Application to the Renagel Product Group

Academic literature describes techniques that have been successful at implementing change within an organization. Two widely accepted change management techniques are Lewin’s “Unfreeze – Change- Refreeze” and Beckhard and Harris’s gap analysis. Academic literature also argues that the effectiveness of change mechanisms vary through the different stages of an organization’s lifecycle.

In future sections, the three-step process described by Beckhard and Harris will be used as the basis of the process to evaluate organizational effectiveness within the Renagel product group. The first step, defining the future direction, will utilize the framework of the organizational lifecycle. Next, the present situation will be assessed using an objective, factual appraisal of the all aspects of the business. The final step, managing the transition, will involve building, implementing and monitoring solutions to improve organizational effectiveness.

Of the three sources of change described in Section 4.1, the process of evaluating organizational effectiveness defined in this work is most appropriate to proactively improve performance. The process is not a quick fix. Rather, it works best as a long-term strategy to drive cumulative improvement. For this reason, the process is most effective at proactively evolving an organization’s business practices to respond to accumulation of changes in the environment.
Chapter 5: Setting the Direction of Improvement

The next chapters apply the concepts reviewed thus far to the Renagel product group. As described in Chapter 4, the initial step in establishing change is to define the future. In order to define the future and set the direction for change, the current stage of Renagel in its organizational lifecycle must be identified. To do this, characteristics of the Renagel organization are described and linked to its organizational lifecycle. These characteristics include Renagel’s management focus, organizational structure, senior management style, and management reward emphasis. Once Renagel’s phase of growth is identified, the organizational lifecycle is used to predict the next management crisis or key drivers for growth. The information in this section is based on interviews by the author with personnel, presentations from senior management, and the author’s observation of the Renagel group.

5.1 Management Focus

The Genzyme General annual report of 2001 states several factors that are key to sustain the growth of Renagel. A summary of these factors serves to describe the focus of Renagel’s management.

As the newest entrant in a competitive market, the Renagel group faces the challenges of converting the patient population from calcium-based treatments to treatment with Renagel. Renagel’s management focus is on gaining acceptance by the medical community for Renagel as a preferred phosphate binding treatment for ESRD patients. Genzyme has sponsored clinical studies to prove Renagel’s benefits for the patient. Genzyme’s CEO Termeer stated “We expect that the publication of these important findings will help drive the further adoption of Renagel worldwide” (Genzyme Press Release, June 27, 2002). Genzyme also expanded its sales force in both the United States and Europe (Genzyme Press Release, June 19, 2002) to continue to drive Renagel’s adoption. The expanded sales force enables Genzyme to aggressively market Renagel’s benefits.

Renagel’s management also has focused on its ability to manufacture sufficient quantities of Renagel to meet demand. Multiple projects, both internally at Genzyme’s
manufacturing facilities and externally at contract manufacturing, are underway to expand capacity significantly over the next few years.

The third area of emphasis for Renagel's management is to manufacture Renagel more efficiently, thus reducing the cost of goods. Genzyme also has invested in new technology to increase the efficiency of its manufacturing operations. In addition, the internal capacity expansions mentioned above will also serve to improve the cost basis of Renagel. The Renagel product group has also made an effort to reduce dependency on single suppliers by qualifying backup suppliers. This effort could potentially provide additional control to the Renagel product group over the cost basis of the product by minimizing supplier power.

In summary, Renagel's management team is focused on expanding Renagel's market by driving adoption of the product, ensuring manufacturing capacity meets the expected demand, and controlling the cost basis of the product. Genzyme has invested to expand manufacturing capacity, adopted enabling manufacturing technologies, built its relationships with various suppliers, and sponsored clinical studies to achieve these objectives. The areas of management focus suggest that management has been on long-term strategic initiatives to sustain the continued success of Renagel.

5.2 Organizational Structure
Three business units within Genzyme jointly manage the Renagel product: the Renal Business Unit, Geltex Pharmaceuticals, and the Corporate Operations Group. The Renal Business Unit manages the commercialization of Renagel including sales and marketing. Geltex Pharmaceuticals, the original development center for the product, supports the research and development and clinical activities for Renagel. Finally, the Corporate Operations group supports the operations-related activities of Renagel. Manufacturing, materials management, supplier management, and other operation functions of the Renagel product all fall under the responsibility of Corporate Operations. Ven diagrams, similar to the one in Figure 8, are sometimes used internally at Genzyme to show the overlap in authority between the groups.
In addition to the joint management structure, the functional groups that comprise the business units are geographically dispersed. For example, the employees that support the upstream manufacturing operation, which report to the Corporate Operations Group, are located in the Haverhill, England site. In contrast, the majority of the Materials Management group is situated in Framingham, MA; however, these employees are still involved in site operations, European planning and Global planning for Renagel.

The Renagel group maintains a loosely defined organizational structure. Along with several key roles for integration, the loose structure was intentionally established by Genzyme to promote flexibility, an entrepreneurial work environment, and innovative problem solving. Many employees are grouped together based on their functional expertise. However, the Renagel management team also wanted to ensure a common focus between groups. It established several integration roles that report into multiple functional managers. For example, a project manager position was created to better link the commercial business to operations. This manager reported into both the head of operations and head of commercial group.

From the loose organizational structure, a system dependent on individual initiative and informal networks has emerged. In general, employees generally have limited supervision, but rely on their personal leadership and initiative to achieve their tasks. An informal project management system has recently developed from the loose structure, and thus far, has proven successful in its early stage. In the informal system, a project
manager requests key project stakeholders to serve on a steering or oversight committee. The steering committee receives project updates, guides the project direction, allocates resources as necessary, and advises on overcoming hurdles in the project.

In general, functional and geographic groups primarily form the formal structure of the Renagel organization. However, the management of some recent initiatives demonstrates a new, informal project management system that may potentially move the group towards a product-focused organizational structure.

5.3 Senior Management Style
This section investigates the Renagel senior management team’s style. The initiation, endorsement, and execution of the author’s LFM internship are used to illustrate the characteristics of the Renagel senior management style.

The project chosen for the LFM internship was initiated when the senior management sponsor selected the organizational problem as the general topic. Although the sponsor chose the subject matter, the intern was given significant leeway to choose the project objective and approach. After presenting several options for the project, the senior management sponsor and intern collaborated to select the project direction. This example illustrates how senior leaders offer general guidance to define initiatives, but individuals drive the specific approach for the initiatives.

The sponsor of the project encouraged the intern to solicit endorsement of the project from the sponsor’s staff. An overview of the project was presented at a staff meeting and each staff member was asked if he/she was willing to participate in the project. The majority of the sponsor’s staff supported the project, and thus the project was adopted. This example demonstrates that senior managers do not direct subordinates to participate in initiatives. Rather, leaders use their influence to gain support for the project, and leave the decision to endorse a project to the functional area leaders.

The intern utilized the informal project management system described in Section 5.2. The project was managed by the intern and reviewed by a steering committee. The steering committee received a periodic progress report, advised on the project
direction/decisions, and assisted in removing product roadblocks such as resource constraints. This project management system illustrates that communication between senior management and individuals is infrequent and focused. In addition, the steering committee ensured that all individuals with joint responsibility of the product were informed and engaged in the project.

The initiation, endorsement and management of the internship project illustrate Renagel’s senior management style. Based on the observations of the author, the senior management style can be described as one of delegation, an advisory role, and based on influence. In this management style, key stakeholders (including project leaders, functional leaders and senior management) make key decisions collectively.

5.4 Management Reward
Genzyme’s management reward system includes tangible compensation and intangible incentives. According to the article “Blending Two Worlds: How Genzyme attracts Experienced Scientists”, Genzyme’s compensation package includes industry standard salaries, bonus compensation, and stock options. Other non-tangible incentives such as the opportunity to deliver life-saving products provide additional incentives for employees. Finally, Genzyme has offered its employees excellent work facilities. Its investment in a new Genzyme Corporate Headquarters facility located in Cambridge, MA is a testament to this intangible benefit. The information available indicates that Genzyme is using multiple forms of compensation for its employees.

5.5 Conclusion of Analysis
This discussion of Renagel’s management focus, organizational structure, style of the senior management team, and incentive system now can be used to determine the Renagel product group’s current phase of development within its organizational lifecycle. The analysis shows that Renagel has achieved growth by establishing a system of delegation. Senior management relies on lower-level functional leaders to autonomously make day-to-day decisions. Departments with distinct leaders have emerged and developed their own dynamics. Meanwhile, the senior leadership team is focused on
long-term strategic investments and initiatives. However, key decisions are made through a collaborative decision-making process.

The organizational lifecycle predicts that this phase of growth will be challenged by a crisis of control. The crisis will ensue when departments handle tasks with their own view in mind rather than considering the best interest of the overall business. In addition, senior management will feel that they are losing control over the diversified operations. The Renagel senior management team must either instigate incremental improvements to the existing system of delegation or establish formal processes to stimulate growth through better coordination.
Chapter 6: Assessing the Current Situation

Chapter 5 established the direction of development for the Renagel product group as improving the existing system of delegation or moving towards systems that improve coordination. Now, let’s shift the focus to assess the aspects of the current situation that inhibit the Renagel organization from achieving the desired direction. To do this, the business processes and practices of the Renagel product group will be evaluated against a comprehensive and objective organizational model. The comparison against the model will be used to identify relative weak business practices compared to industry best practices. The analysis is based on input from employees from across the organization and is used to identify key improvement opportunities for the business.

6.1 Overview of Business Excellence Evaluation

In this internship, an evaluation of the Renagel group against a Business Excellence model (BEM) was used to evaluate the group’s effectiveness. The BEM framework is a tool for gauging an organization’s overall effectiveness. The framework breaks the organization into component systems that can be evaluated for effectiveness. The performance of the individual systems together defines an organization’s overall ability to achieve its desired goals. Organizations use Business Excellence models to gauge its performance against industry best practices. The outcome of the assessment is a profile of the relative strengths and weaknesses of an organization.

Business Excellence models are frameworks that outline a set of criteria that are commonly adopted by well-performing organizations. The two most readily used models are the Malcolm Baldrige Quality model and the European Foundation for Quality Management Business Excellence model. These models were originally developed as part of the Total Quality Movement, and have been refined over more than a decade of organizational research. The Baldrige framework\(^2\) was selected as the basis for the evaluation of the Renagel business in this internship. This selection was made because of the comprehensive or holistic nature of the framework and in-house expertise with the Baldrige criteria.

\(^2\) For more information on the Baldrige framework, refer to Hutton’s *From Baldrige to the Bottom Line.*
A description of how the Baldrige criteria were created will serve to explain the Baldrige framework in more detail. The criteria are built around linking operating principles to various areas of the business. Each criterion within the framework is a measure of how a particular operating principle is practiced within an area of the business.

The Baldrige framework is based on the following operating principles:

- Customer-Driven Excellence
- Visionary Leadership
- Organizational and Personal Learning
- Valuing Employees and Partners
- Agility
- Focus on the Future
- Managing for Innovation
- Management by Fact
- Public Responsibility and Citizenship
- Focus on results and creating value
- Systems Perspective

The Baldrige framework organizes business areas into an interdependent system of business drivers, business enablers, and business results (see Figure 9). In the framework, the management or leadership system, the strategic planning process, and the focus on the customer & market are the areas that drive the business. Information management systems and analysis tools are considered business enablers or support systems. Finally, the business results include human resource focus, efficiency of process management, and financial performance.

Figure 9. The Malcolm Baldrige Framework
The criteria of the Baldrige framework link the operating principles to the areas of the business. Several examples will serve to illustrate this linkage:

- One criterion is used to link the operating principle of customer-driven excellence to the business driver of leadership. The criterion is a measure of leadership’s commitment to value for the customer. Leadership is evaluated based on the level of engagement with the customer. In addition, the frequency that the leadership team reviews the effectiveness of customer-related activities is explored.

- Another criterion evaluates the strategic planning process against the operating principle of management by fact. The data used in the strategic planning process is examined for completeness. Examples of data that should be used in the strategic planning process include customer needs or requirements, organization capabilities, human resources available, state of competition, potential risks, resource availability, and supplier capabilities. This criterion asks the respondents of the questionnaire to assess if Renagel is actively considering these factors in its strategic planning process.

- The link between the operating principle of producing results and the system of process management examines the focus of the organization on minimizing costs. The organization is evaluated on its ability to reduce defects, utilize effective inspections or tests, and employ problem-solving techniques.

By examining the application of the operating principles within different areas of the organization, the overall effectiveness of the organization relative to industry best practices is measured.

6.2 Applying the Methodology

The steps used to execute the assessment are described in detail so as to provide a guide for other organizations seeking to apply this methodology. The steps to complete the assessment included gaining endorsement from the organization, developing & conducting the assessment, analyzing the data, and identifying improvement areas based on the results.
**Gaining Endorsement**

Gaining internal support is critical to the overall success of an assessment. A series of presentations and one-on-one discussions with the senior management team were conducted for this purpose. The forums were used to gain consensus on the objective of the assessment, educate senior management on the research technique, and set the expectation to act based on the assessment results. The discussions were also valuable to identify internal supporters of the process. These supporters transitioned into internal champions over the duration of the project, and became critical to the project’s success.

**Development of the Assessment**

Extensive preparation was required before actually conducting the assessment. The assessment content, format, length, and participant sample were key decisions made in developing the assessment. The analysis methodology also was outlined prior to developing the assessment.

Three different methods for customizing the content of the Baldrige model to fit the Renagel organization were considered. If a group chooses to execute an organizational assessment, similar modifications to the assessment can be applied to tailor the assessment as appropriate for another organization. A standard assessment would limit change to only clarify criteria for the organization. For example, a criterion appropriate for an incremental manufacturing process would be minutely modified to be applicable to a continuous manufacturing process. The second option, a filtered assessment, would reduce the questions to only investigate criterion that are pertinent to an organization’s current stage in the organizational lifecycle. Alternatively, the assessment could be customized by limiting questions to those questions relevant to a participant’s particular business area. A fully customized assessment required a modification of the Baldrige framework to develop a unique business excellence model for the Renagel organization. Questions in the assessment would have to be altered or modified according to the emphasis in the new framework.

In applying this process to the Renagel organization, a perception-based, standard assessment was used. This type of process was selected to allow the results to be
compared to other organizations, enable a rapid turn around time for results, while still collecting cross-functional feedback on the effectiveness of all business processes.

The format selected was a combination of a questionnaire and interview. A questionnaire was chosen to provide measurable metrics, allow straightforward data analysis, and eliminate bias introduced by an interviewer. The questions asked respondents to assess the organization based on their own exposure to the business. To compliment the questionnaire, a one-on-one interview was conducted to better engage participants, and uncover cultural assumptions or biases within the organization.

The remaining decisions for developing the assessment was the length of the assessment and the participant sample. The main consideration in determining the length of the assessment was to manage respondent fatigue. The key considerations in choosing the participant sample was to allow appropriate geographic representation, equal representation of business functions, and representation of different levels in organization. Surveying mid-level employees was valuable to verify the effectiveness of management. In total, there were 38 participants that completed the Renagel Excellence assessment.

**Analysis of the Data**

Outlining the analysis methodology in advance guided the questionnaire’s format and content. Different analysis techniques were used to process the information from the questionnaire and personal interviews. In the questionnaire, two types of information were collected for each category. Respondents first gauged Renagel’s maturity level for each criterion. Descriptions of each maturity level were provided in the questionnaire to guide the participants ranking. The responses were aggregated to identify the average and median maturity level of each criterion. Second, participants indicated which criterion was most important for the Renagel organization to improve now. A Pareto graph was created to highlight the most frequently selected criterion.

The quantitative results from each category of the assessment were graphically summarized. An example of such a graph is the Leadership Summary Graph included in Figure 10. The graph includes the results of the average maturity rating and importance
ranking for each criterion. The criteria are organized from left to right based on the frequency of selection as the most important criterion to improve. In the example in Figure 10, the criterion that was most frequently selected as an improvement area was Criterion 1-5, Setting Appropriate Priorities and Following through. The secondary y-axis of the graph shows that 24 of the 38 respondents selected this criterion as a critical improvement area. Also included in the summary graph are the average, median and spread of the responses of the maturity rating for each criterion. In the example in Figure 10, criterion 1-5, Setting Appropriate Priorities and Following Through, had an average maturity rating that was slightly less than mature. The median response indicated that this criterion was mature. The spread of responses, as indicated by the white box, indicates that 50% of the respondents rated the criterion between basically effective and advanced.

![Leadership Diagram](image)

Figure 10. Assessment results of Leadership Category

An affinity diagram was used to analyze the qualitative data collected in the one-on-one interviews. Comments made during the one-on-one interviews were grouped together to identify common ideas, opinions, issues or themes. A frequency table was used to show the number of times a comment or idea was mentioned in the interviews. Both the
qualitative and quantitative data were analyzed to compare the results across demographics groups.

**Processing the Feedback**

A team representing various business groups was gathered to review and discuss the results. The group’s objective was to narrow the feedback into a few “high leverage” areas of improvement. “High leverage” improvement areas are defined as areas that will have the most impact to enhancing organizational effectiveness if improved.

A cross-functional discussion of the results was deemed as the best method to process the feedback for several reasons. Involvement of cross-functional players in the process allowed for a validation of the assessment results with the team members’ personal experiences and observations of the business. In addition, the discussion around the results would identify potential roadblocks to successful change in the areas of improvement. Potential roadblocks include organizational, cultural, strategic and political barriers to successfully change in business practices or processes.

The team followed a process to review the assessment results. First, the results of each category were validated against the team member’s personal experiences. This initial step in the process brought about agreement amongst the team members. Next, the team then narrowed each category to two or three high leverage criterion that needed improvement. Now, the high leverage improvement areas between categories were compared. Common themes between categories were bundled together and rephrased to better represent the discussion about the business. The team then considered which improvement areas could be improved independently, in parallel, or must be improved serially. Finally, a prioritization matrix, pictured in Figure 11, was employed to assess the payoff to the organization.
The results of the cross-functional forum were two-fold. First, areas in which the Renagel business excels were recognized and documented. In addition, the workshop resulted in a short list of critical areas for improvement for the Renagel business. The short list was presented to a senior team to obtain endorsement for the next set of initiatives.

6.3 Results of Evaluation
This section summarizes the results of the assessment by describing the areas of excellence and improvement opportunities identified for the Renagel product group. The graphical summaries of the results are available in Appendices A-1 thru A-6.

Areas of Excellence of Renagel
As previously mentioned, areas of excellence were recognized within the Renagel organization. First, the customer & market category received the highest maturity ratings compared to other categories (refer to Appendix A.4). The respondents indicated that effective processes have been established within Renagel to gather information on the customer & market, build customer relationships and sustain customer satisfaction. The leadership team of Renagel also was commended on its commitment to delivering value to the customer (refer to Appendix A.1, Criteria 1-2).
The leaders within Renagel received positive feedback on their personal sense of responsibility to the public. The policies and practices of the Renagel organization were considered to reflect a commitment to ethical business practices and regulatory compliance in products, services, and business operations (refer to Appendix A.1, Criteria 1-7). The Renagel organization also was considered to take into account how its products, services, facilities, or operations are likely to affect the public (refer to Appendix A.1, Criteria 1-8).

The Renagel organization also received positive feedback for its use of new technology or science in its development, production & support systems (refer to Appendix A.5, Criteria 6-2). The group felt that the organization was open to applying new technology, and had effectively made progress using new technology as appropriate.

The final area of excellence within the Renagel product group was its policies and processes related to workplace health & safety (refer to Appendix A.6, Criteria 5-9). The Renagel product group is perceived to ensure a safe and healthful work environment. The group is viewed as having the proper focus on health and safety issues that are of a top concern to employees. The group regularly exceeds many mandated requirements.

Alignment around Priorities
Several common themes emerged from the results of the Leadership and Strategic Planning Categories. The conclusions were inferred based on the assessment results. In addition, the cross-functional discussion of the results deemed these areas as “high leverage” improvement opportunities. This section describes in more depth the details of the improvements suggested in the following areas:

- Setting clear priorities
- Commitment to plans & priorities
- Communication of priorities, plans and information to people in the business
- Alignment of leadership team around priorities

For more details, Appendix A.1 and A.2 summarize the results of the topics covered in both categories and the corresponding results.
Respondents placed an emphasis on improving the Renagel management team's ability to set priorities and commit to a plan. The capability of the leadership team to set priorities was the most frequently selected improvement area in the questionnaire for the leadership category. The discussions from the interviews were consistent with this feedback. Participants often raised concerns that priorities in Renagel shift frequently, which ultimately holds up the execution of action plans and sometimes leads to wasted efforts. Resource allocation was perceived to be extremely difficult with limited information to distribute resources.

This area overlapped with improving Renagel's level of commitment to its plans. Participants suggested improving the commitment to plans by clearly establishing priorities, improving accuracy of data used in plans, and expanding level of accountability to plans.

Respondents also rated the communication of values, performance goals and expectations by Renagel's management team as a lower area of maturity. Other improvements to communication also were suggested in the questionnaire for the Strategic Planning category and in the personal interviews.

Renagel employees discussed a wide-range of communication-related topics. One assessment participant captured the essence of the comments around communication in the following statement: “Communication is good, but it needs to be great. The business is quite volatile, and we need great communication to be able to deal with that.” The cross-functional team agreed that improvements to communication would reinforce Renagel’s ability to set priorities and commit to plans. Examples of communication-related observations included the following:

- Participants indicated that information tended to break down as it travels from higher levels of management to lower levels of management.

- Participants noted that customer & market information was infrequently communicated outside of the sales and marketing organization. This perception was confirmed by the low response rate for questions regarding Renagel’s
customer & market focus (37%, lowest of all categories), indicating a limited awareness of customer needs outside of market focused business groups.

- Respondents suggested that cross-continental communication and the regularity of communication forums from the leaders of Renagel could be improved.

The personal interviews also revealed an interest to better align the goals of business groups. Renagel employees discussed that localized leadership often lead to different, sometimes conflicting, agendas. Respondents sited a lack of willingness to share of information between business functions as concrete evidence of this cultural challenge. This example highlights the difficulty faced by Renagel in promoting decisions that support global rather than local optimization. Also, interviewees questioned whether all tasks within the Renagel group supported the overall goal.

The cross-functional team agreed that improving coordination of various business groups would ultimately improve the execution of strategic and tactical plans. To accomplish this objective, improvements would require strengthening the link between overall strategic objectives and mid level strategies. The cross-functional team recognized that improving the alignment of business groups only could be successful if priorities were clear, accountability was established and communication was effective.

**Data-Based Decision Making**

A common theme emerged from the questionnaire results in the Strategic Planning and the Information and Analysis categories. The most frequently selected area to improve in the assessment was a need to make more data-supported decisions within the Renagel business (Appendix A.3, Criteria 4-1). In particular, this improvement was suggested to enhance the strategic planning process (Appendix A.2, Criteria 2-1).

Further analysis revealed that other improvements suggested in the assessment reinforce improving data-supported decision-making. For example, enhancing the ease of data systems simultaneously improves makes data more available to support decisions. In addition, improving the accuracy and reliability of the data often results in more planning
Using data in decisions is a reinforcing loop. If decisions made based on data prove to be more effective than decisions based on intuition, there is more pressure from management to base more decisions on data. As decisions become more dependent on data reliability and accuracy, improvements to enhancing data quality will be initiated. In time, people begin to trust their data sources more. The end result is that the quality of the data is improved and the data are used more regularly in decision-making.

Stimulating this reinforcing loop is a challenge. A key decision is whether to “pull” or “push” the change. “Pulling change” in this context, means that the process for making decisions is revamped to incorporate data in the decision-making process. Increasing data usage then would stimulate improvements to data quality. Another approach is to “push change”. This approach first improves the quality of the data. Then, as data sources are more trusted, decisions begin to be made based on data. (Klein, 2003)
To understand the method that is most likely to be successful for the Renagel product group, the cross-functional team extensively discussed the reasons behind limited data-supported decisions within the business. The team first recognized that business decisions made with inaccurate or outdated information can and have led to sub-optimal situations. The feedback from the assessment confirmed that obtaining consistent, accurate, and timely information about the state of the business was becoming increasingly difficult. People in the business weren't making decisions based on data because the data were not always available in a usable form and there was a distrust of the data integrity. To address this, the Renagel product group needs to enhance the availability of data and improve the integrity of data.

Data availability can be improved by enhancing the appropriateness of measurements, timeliness of data and ease of data systems. Progress in these areas would address concerns raised by the people in the business. For example, one respondent cited an example where it took one week and three people to compile the necessary data to create a graph for the management team. The key to resolving this challenge was in making accurate data available when and where it was needed. Enhancing the ease of data systems was cited as a method to making data more available and accessible. Data systems are defined as all of the electronic and paper systems in which data are stored. On average, respondents felt that the data systems of the Renagel organization were only basically effective. Difficulty in using the data systems has lead to incomplete data collection or difficulty in accessing data.

Data integrity is a term that describes the accuracy or reliability of data. There is a limited amount of trust in data integrity within the Renagel business. Respondents in the personal interviews indicated that updating information is a manually intensive process, which is more prone to error. The personal interviews also cited examples when data has been misused because of limited understanding of assumptions behind the data. A frequently mentioned improvement opportunity was improving the consolidation of data across business functions. This concept reinforces the concept of improving alignment of different groups that was discussed in the previous section.
Data systems were deemed as needing a more effective process to integrate data systems and align redundant information. To improve consolidation, three areas were suggested. A process to regularly converge data between independent data systems was suggested. Addressing the cultural issue of a lack of willingness to share data between autonomous groups was also deemed as an area to address. Finally, it was suggested to improve consistency in reporting data and stating assumptions to aid in better consolidation of data.

6.4 Conclusion

This chapter assessed the current situation of the Renagel organization by evaluating the business practices against a Business Excellence model. The four-step process used to execute the evaluation is described. The result of the evaluation is a set of high leverage improvement areas and areas of excellence for the Renagel organization. Several common themes emerged from the results. It was diagnosed that Renagel organization could become more effective by setting clearer priorities, enhancing commitment to plans and priorities, expanding communication of priorities, plans and information to people in the business, and improving alignment of leadership team around priorities. A second area emerged from the assessment results. Respondents indicated a need to make more data-supported decisions within the Renagel business through improvements to data availability and data integrity.
Chapter 7: Managing the Transition

Thus far, Chapters 5 and 6 predicted the future direction and assessed the current situation of the Renagel product group, respectively. It was concluded that Renagel’s growth was currently supported by an effective system of delegating tasks. However, a crisis of control is predicted to limit that growth. In turn, the product group must establish practices to improve coordination within the organization.

The current situation was assessed using a holistic, perception-based survey and one-on-one interviews. Two areas were identified as improvement opportunities that improve coordination within the product group. The assessment results indicated a need to improve alignment around priorities. Second, a need to more regularly use data to make decisions was an area to improve. Renagel is in the take-off stage of its S-curve, and it can expect rapid growth to continue in the immediate future. This anticipated growth could exacerbate these current limits on effectiveness of the organization, is therefore important to address.

This chapter is a recommendation to manage the transition between where the product group needs to evolve and where it is today. Specifically, two programs are described that will lead the transformation and close the gaps in these areas. In addition, metrics are recommended to continue monitoring overall organizational effectiveness, gauge the effectiveness of each program, and monitor the acceptance of the change by those parties affected by it.

7.1 Formalized Project Management Approach

The respondents in the assessment indicated the following improvement areas:

- Setting clear priorities
- Commitment to plans & priorities
- Communication of priorities, plans and information to people in the business
- Alignment of leadership team around priorities

Each of these recommended improvements promotes better alignment across the business. To advance in this area, it is recommended that Renagel product group adopt a
formal project management system. The framework will establish standards for each project to follow, and centralize a database of the ongoing projects. The benefits of this change effort are creating visibility to priorities, ensuring accountability and project control, optimizing the utilization of resources, and promoting commitment and ownership of outcomes for tasks. In addition, it offers a common language or platform for easier communication between groups.

As described in 3.4, it is important to recognize that the proposed solution can breed a new set of problems. A formalized project management system may create non-value added work, decrease flexibility for project management, and require monitoring or enforcement by the management team. However, it is believed that the value added by adopting a formalized project management system will outweigh these drawbacks.

**Recommended Process of Improvement**

It is recommended that the Renagel group engage in several activities to adopt this program. To begin with, buy-in for the change effort must be obtained from across business functions. Feedback should be actively solicited in order to minimize cultural resistance when the program is rolled out. It is suggested that managers detail each element of the project management system including setting objectives, budgets, schedules, project review, resource allocation, decision-making, and project reporting and documentation. Education & training programs are effective ways to then communicate the elements of the project management system to Renagel groups. The projects then can be formalized within the Renagel product group for all ongoing initiatives. After some months of implementation, a survey should be completed to evaluate the robustness of project management solution.

**Managing the Barriers to Implementation**

To gauge if this program will be a success, it is important to consider the potential barriers to implements a formalized project management system. If subgroups do not readily adopt a global project management system, it most likely caused by limited awareness of the system or concern about relinquishing locally established systems. Awareness can be managed by providing the information to all people affected by this
change through education and training programs. Soliciting buy-in early in the process and keeping those affected by the change involved in developing the project management system are effective methods to mitigate unwilling participation. In addition, the benefits of the system must be clearly communicated in a personal manner. Finally, the project prioritization piece is difficult to implement if there is no clear strategy within an organization. Adopting a project management system after an effective strategic planning process has already been implemented minimizes this risk.

7.2 Data and Information Management Improvement Program
Feedback in the assessment indicated that decisions needed to be more reliant on data. Without data-supported decision making, sub-optimal decisions have occasionally been made in the past. For example, Genzyme revised its financial guidance in June 2002 to reflect a reduction in forecasted sales. This reduction was a result of “limited exposure to inventory levels in the warehouses reflecting some continued reduction of higher-than-anticipated wholesaler inventory. Genzyme has taken steps to better understand the buying patterns of its Renagel wholesalers, and it will establish new controls based on this analysis.” (Genzyme Press Release, June 19, 2002)

This example highlights the recent difficulty in obtaining consistent, accurate, and timely information about the state of the business. The feedback from the assessment also indicated that data-supported decisions were limited (see Appendix A.3). The team involved in the assessment discussed this behavior and felt that the challenges around data-supported decisions were a result of limited data access and reliability. It can sometimes be difficult to obtain accurate data in a timely fashion. To address this, the Renagel product group needs to enhance the information and data systems. Better information and data management systems will improve the ability to share data as needed and will result in improved coordination between groups.

Recommended Process of Improvement
To accomplish this objective, a data and information management improvement program is recommended. This program would have several objectives to determine the insufficiencies in the information management system. It would map the current data
systems, such as a database of customer preferences, by describing the input and output to the system, as well as key decisions that utilize the system. Simultaneously, processes to make key decisions, such as the order fulfillment process, will be mapped. Mapping the information and data systems will ideally generate improvement ideas and projects. Potential projects will be compared, prioritized, and refined to develop a set of both short term (to deal with the current issues) and long-term (to ensure adequate infrastructure for the future) improvements. Sub-teams then will be formed to implement the high priority projects.

Greiner states that every solution breeds new problems. The potential negative development of this improvement program is creating overly formal data systems. Eventually, a crisis will stem from the bureaucracy created by inflexibility of the information management systems. It is difficult to assess when the new crisis will emerge. However, it is likely that the benefits of enhancing data systems in the current situation will last for a significant time before the new problems surface. Nevertheless, an organization must continue its process to evaluate organizational effectiveness to recognize when new limitations emerge. The organization then must respond by reevaluating its systems in the context of its new internal environment.

**Managing the Barriers to Implementation**

It is important to assess if the recommended program will be successful. To do this, the challenges that face the program are described. A key challenge to the success of this program is defining a reasonable goal for improving the information management system. If the vision for the information management system is very grand, it is sometimes difficult to accomplish. If the improvements are minor, it may not have significant impact in improving coordination across the business. The program manager must be conscience of this balance when prioritizing projects. Cultural resistance can be also be effectively managed by linking the change to the introduction of a new technology. A parallel introduction of a cultural change with a technology change can make seem inevitable to those affected by it.
Another potential limitation of the program is insufficient representation from any area of business. Groups may be unwilling to participate in the effort if it conflicts with other local efforts. Because the nature of the assessment created consensus, this problem is likely to not surface. However, if there is resistance to participate, providing information to those affected by the change is the most effective change mechanism. The benefits of the change program must be communicated to those concerned, and the assessment results can be used to emphasize the global need for the effort.

A final hurdle to successful implementation of the improvement program is lack of resources to support the project. The leadership team should be used to provide the necessary resources for the program.

7.3 Monitoring Progress of Organizational Effectiveness

The progress of organizational change programs is difficult to monitor. However, it is important to learn to monitor the adoption of change programs to gauge the success of the program’s implementation. “Change agents must monitor the introduction and implementation of the program, observe the work of change agents and program participants, assess the effect of the environment on the outcomes, and evaluate the program both as to intended and unintended results” (Seashore et al., 1983).

Three types of monitoring systems are available to continuously monitor changes in organizational effectiveness. First, the quantitative assessment based on the Business Excellence Model (BEM) can be reused to gauge progress year after year. Reusing the assessment will measures the impact of a solution once an organizational change is initiated. Although it is based on perceptions, reusing the assessment provides quantitative numbers to track progress. An assessment based on a Business Excellence Model can also be filtered to reduce the questions to only investigate criterion that are pertinent to the change program. The BEM criteria could also be used to execute an evidence-based assessment. Rather than surveying the opinions of people involved in the business, evidence-based assessments seek out documentation or other types of evidence to evaluate if a criterion is being practiced. For example, in a perception-based assessment, participants are asked to gauge the level of maturity of workplace health and
safety. In contrast, an evidence-based assessment would gather records of safety incidents and numerically evaluate the workplace health and safety. Whether an organization chooses to adopt a perception-based assessment, a filtered assessment, or an evidence-based assessment, the same type of assessment should be reused to monitor improvements over time.

Next, each change program can also be independently monitored for progress. The programs should set success criteria to evaluate if the program is delivering its expected results. For example, a formalized project management system has been recommended for the Renagel product group. This program could monitor the attendance and cross-functional representation at the training programs. In the proposed data and information management improvement program, one can monitor the percentage of data systems that have been mapped.

A final technique to monitor the adoption of improvement programs is observation and reflection by the primary change agent (usually the project manager of an initiative). Those that are driving the improvement programs should reflect on the commitment of top management to the program, the adoption of the change by middle management, and the effectiveness of the change program. The following are some examples of areas that a change agent should reflect on:

- What is management’s level of awareness of the program’s progress?
- What is management’s level of participation?
- How would you characterize the time pressure put on the program? Is it urgent or less than urgent?
- Do people desire to participate in the change effort?
- What are the attitudes toward the change program?
- Are the activities of the program directed to meet the initial goals and objectives?
- Have resources been made available as needed?

If adoption of the change program is less than desired, the change agent must reflect on the source of the barrier to adopt, review change mechanisms to overcome barriers to
implement (such as those included in Section 4.4), and incorporate those change mechanisms.

7.4 Conclusion

This chapter outlined methods to manage the transition between Renagel's current business practices and the desired future state of the business. Two improvement programs were identified. First, a formalized project management system was recommended to strengthen the alignment across groups around priorities in the business. Second, an improvement effort to update data and information systems was recommended. The goal of the program would be to enhance data collection, reporting, and integrity across the business. Three types of monitoring systems are presented as options in this section to continuously monitor changes in organizational effectiveness.
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Chapter 8: Conclusions and Recommendations

This work developed a process to review, monitor and improve the effectiveness of a product group. Organizational lifecycles were used to show that a group must evolve to respond to changes in its external environment and internal efficiency. A process to evaluate organizational effectiveness is a technique to drive that change process. The outcome of the process pinpoints business practices or systems that must evolve to be more appropriate for the current situation of the business.

8.1 Overview of Process

The process of evaluating organizational effectiveness defined in this work is most appropriate to proactively improve performance. It is most effective if used to evolve an organization’s business practices to respond to accumulation of changes in the environment.

The process combines several academic frameworks to create an end-to-end methodology for evaluating organizational effectiveness. The basis is from change management theory, theory of organizational lifecycles, and business excellence models from the Total Quality Management movement. Figure 13 is a depiction of the recommended methodology to review and improve organizational effectiveness:

![Methodology Diagram]

Figure 13. Methodology to Evaluate Organizational Effectiveness

The first step is to set the direction of improvement. The organizational lifecycle is an appropriate tool to recognize the right time for change and to set the direction of improvement. To apply the organizational lifecycle framework, management must know
where they are in the development sequence. Characteristics of an organization’s management focus, structure, senior management style, and management reward emphasis can be studied to identify the current stage of an organization in the development sequence. The organizational lifecycle then is a guide to choose the right direction of evolution for its business practices.

After a vision of the future state of the change is established, management must assess the current situation. The goal of this step is to prioritize improvements to current business practices to move towards the desired future state of the business. The holistic framework of Business Excellence Models is the recommended tool to assess an organization’s business practices and systems. Business Excellence models allow an organization to gauge its performance against industry best practices, and identify relative strengths and weaknesses of its business processes. As shown in Figure 14, the framework of the business excellence model is appropriate because it emphasizes global issues that affect the whole enterprise. The holistic and comprehensive assessment is a compliment to focused, business process improvements that are often utilized in organizations.

![Table showing Focus on Enterprise vs Focus on Business Process Area]

\[
\begin{array}{|c|c|}
\hline
\text{Focus on Enterprise} & \text{Focus on Business Process Area} \\
\hline
\text{"Wide Angle Lens"} & \text{Self-assessment of business against excellence areas} \\
\text{(Evaluate all excellence areas)} & \text{Improving key processes (e.g., focus on effectiveness of sales force)} \\
\hline
\text{"Zoom Lens"} & \text{Focus on specific results of Enterprise (e.g., financial results, developing leadership skills)} \\
\text{(Evaluate specific excellence area)} & \text{Results in a business function (e.g., budgeting process for capital projects)} \\
\hline
\end{array}
\]

*Figure 14. Fit of Business Excellence Evaluation within an Organization*

The assessment results identify less effective business processes. Cross-functional teams are then used to validate the assessment results and prioritize the efforts to improve business processes based on the impact to achieve the desired future vision and ease to implement.
The final step in the process is to manage the transition between the desired future state and the current situation. The step is aimed at designing and implement methods or programs to bridge the gap. In addition, an important portion of the step is to develop metrics. Metrics are critical to monitor overall organizational effectiveness, gauge the effectiveness of improvement programs, and monitor the acceptance of the change by those parties affected by it. Once a change program is implemented, the process to evaluate the organizational effectiveness begins again to identify new constraints to the effectiveness of an organization.

To continuously stimulate improvements to organizational effectiveness, the process defined in this work should be repeated. Repeating the process also verifies that the desired future state is still appropriate for the business, and evaluates if each change programs have accomplished its goals.

8.2 Application of Process to the Renagel Product Group

The process described above was applied to the Renagel product group. In the first step of the process, it was concluded that Renagel’s growth was currently supported by an effective system of delegating tasks. According to Greiner’s research on organizational lifecycles, this stage in the development sequence will eventually be challenged by a crisis of control. The Renagel management team can proactively manage the predicted crisis by establishing practices to improve coordination within the organization.

The current business practices of the Renagel product group were assessed using a holistic, perception-based survey and one-on-one interviews. Two areas were identified as improvement opportunities that would potentially improve coordination within the product group. The assessment results indicated a need to improve alignment around priorities. Second, a need to more regularly use data to make decisions was an area to improve.

Two improvement programs were recommended to manage the transition between the desired future state and the current situation. It is first recommended that Renagel product group adopt a formal project management system. The goal of the formalized project management system is to improve alignment around priorities across different
business functions and units. The second initiative is to evolve the data and information management systems. The goal of the initiative would be to improve data collection, reporting, and integrity across the Renagel business.

To monitor the transition stage and the success of the implemented changes, three options for monitoring systems were described. First, the quantitative assessment based on the Business Excellence Model can be reused. The assessment is systematic and repeatable, which allows it to be utilized year after year to measure progress along the way. Each improvement program can also have its own set of metrics to monitor its successful implementation and adoption. Finally, a checklist for the change agent is described to reflect on the progress of the change programs, adoption of change programs, and overall improvements to organizational effectiveness.

8.3 Positive Attributes of process
When applied to the Renagel product group, the process to review, improve and monitor organizational effectiveness was found to be effective for several reasons. First, the process was designed with the consideration of mobilizing people around the change effort. Using a self-evaluation to assess the current situation was an effective method of consolidating feedback from across the organization and simultaneously strengthened support for the change effort.

A second attribute of the process was raising awareness by the management team and individuals in the business around broader improvement efforts. The process encouraged key players within Renagel to reflect on the business processes that they used everyday. In a fast paced work environment, there is often little time for reflection and even less time to change the situation based on that reflection. The ‘big picture’ criteria also identified wider improvement initiatives that impact multiple functions and often have higher impact to the business.

The systematic approach to evaluate the organizational effectiveness of the business is a proactive method to improve performance of an organization. The approach also is repeatable, which allows it to be used to continuously measure improvements to organizational effectiveness year after year.
8.4 Critical Considerations Prior to Applying the Process

The process designed can be used generally by any organization to proactively improve organizational effectiveness. However, there are still considerations to understand when the process is not appropriate for a business:

- As described in Section 4.5, the process defined in this work is most suitable for situations of proactive change. Because the broad improvements that are identified by the process take time to implement, the process is less appropriate in situations when a company is responding to a specific change in the environment or is facing a crisis of survival.

- The success of the process is strongly influenced by commitment of management team to act on the findings of the assessment. In situations where management is not committed to changing the business, the process has significantly less chance to be successful.

- The process draws conclusions from a perception-based assessment. Perception-based feedback can result in misleading conclusions if a representative sample of employees does not participate in the assessment. In addition, if the organizational culture is one where people are disinterested in improving the business or candid feedback isn’t encouraged, a perception-based assessment can result in misleading conclusions. An alternative in these types of situations is to employ an evidence-based, rather than perception-based, assessment, as described in Section 7.3.

- The conclusions of the evaluation can be biased by the perceptions of those involved in the process. For this reason, it is important to have an impartial change agent leading the process. In addition, it is recommended to involve a variety of business groups when reviewing and drawing conclusions from the results. If an impartial leader and cross-functional team are not available to drive this effort, the effectiveness of the process may be undermined.
The process was designed to fit within the culture of Genzyme. In certain other cultures, the process to evaluate organizational effectiveness may not be appropriate. For example, an entrepreneurial environment may reject the formal, systematic nature of the process. Before applying the process, a change agent must consider if the methodology fits within the cultural of an organization.

8.5 Summary
The goal of this research was to develop and apply a systematic process to review, improve, and monitor organizational effectiveness from the Renagel product group at the Genzyme Corporation. Several academic frameworks were combined and expanded, including the organizational lifecycle, change management practices and business excellence models, to create a systematic process. The Renagel case study was presented to demonstrate the application and outcome of the process.

The results from the evaluation of the Renagel product group can be used generally by organizations to predict and manage organizational challenges associated with various stages of development. Organizations experiencing periods of rapid growth have the most to gain from applying the process because rapid growth requires an organization to adapt faster to the changes in its external and internal environment.
Bibliography


<http://www.genzyme.com/corp/media/CorporateBackgrounder.pdf>


Appendix
A.1 Leadership Results

Criteria in Leadership Category

1-1. Communication
1-2. Commitment to Value for Customers
1-3. Establishing Working Environment
1-4. Assess Progress to Goals
1-5. Set Appropriate Priorities and Follow Through
1-6. Improving Leadership Effectiveness
1-7. Meet Public Responsibilities
1-8. Reduce Public Risks and Concerns
1-9. Provide Community Support

Quantitative Results In Leadership

Qualitative Results in Leadership Category (Frequency Table)

<table>
<thead>
<tr>
<th>Theme</th>
<th>Number of Positive Comments</th>
<th>Number of Needs Improvement Comments</th>
</tr>
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<tbody>
<tr>
<td>Communication of Leaders</td>
<td>5</td>
<td>16</td>
</tr>
<tr>
<td>Leaders setting priorities</td>
<td>0</td>
<td>16</td>
</tr>
<tr>
<td>Alignment of Leadership</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>Changeover in Management</td>
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<td>10</td>
</tr>
<tr>
<td>Monitoring and improving leadership</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>Setting strategic direction</td>
<td>6</td>
<td>9</td>
</tr>
<tr>
<td>Clarity of action plans to achieve goals</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Customer connection</td>
<td>8</td>
<td>5</td>
</tr>
<tr>
<td>Public Responsibility</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>Clear leadership</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>Realistic objectives</td>
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<td>4</td>
</tr>
<tr>
<td>Employee Empowerment</td>
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<td>4</td>
</tr>
<tr>
<td>Work environment</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>
A.2 Strategic planning results

Criteria in Strategic Planning Category

2-1. Strategic Planning based on Data
2-2. Setting Objective and Timetables
2-3. Addressing Business Challenges with Strategic Objectives
2-4. Action Plans to Support Objectives
2-5. Human Resource Plans to Support Objectives
2-6. Measure Progress of Action Plans
2-7. Communicate and Execute Strategy

Quantitative Results In Strategic Planning

[Graph showing role model: Advanced, Mature, Basically Effective, Beginning, Not Evident.

Themes

<table>
<thead>
<tr>
<th>Themes</th>
<th>Number of Positive Comments</th>
<th>Number of Needs Improvement Comments</th>
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<tbody>
<tr>
<td>Development &amp; Execution of tactical plans</td>
<td>4</td>
<td>12</td>
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<tr>
<td>based on long range goals</td>
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<tr>
<td>Commitment to plan</td>
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<tr>
<td>Availability &amp; Allocation of resources</td>
<td>5</td>
<td>10</td>
</tr>
<tr>
<td>Alignment of plan across groups/Organizational Structure</td>
<td>1</td>
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<tr>
<td>Data used in plans</td>
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</tr>
<tr>
<td>Established Vision &amp; long range plan</td>
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<td>8</td>
</tr>
<tr>
<td>Communication of priorities &amp; long range plan</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Established &amp; Realistic timelines or targets</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>Overall Process Critiques + Improvements to Process</td>
<td>12</td>
<td>8</td>
</tr>
<tr>
<td>Established priorities by leaders</td>
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<tr>
<td>Clarity of roles/responsibilities</td>
<td>0</td>
<td>3</td>
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<tr>
<td>Completeness or appropriateness of plans</td>
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<td>3</td>
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<tr>
<td>Measurement of progress of plans</td>
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<td>2</td>
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</table>
A.3 Information & Analysis results

Criteria in Information & Analysis Category

4-1. Data Supported Decision Making
4-2. Using Measures to track Performance
4-3. Benchmarking
4-4. Use Data Analysis in Plans
4-5. Communicating Data Analysis
4-6. Tying Analyses to the Business
4-7. Availability of Data and Information
4-8. Integrity of Data
4-9. Ease of Data Systems

Quantitative Results In Information & Analysis Category

Information & Analysis

Role Model
Advanced
Mature
Basically Effective
Beginning

Number of Needs
Positive Improvement

Ease of data systems
Consolidating data across groups
Accuracy & Reliability of Data
Planning Based on Data
Data availability
General Analysis of data
Timeliness of Data
Stability of Data
Appropriateness of measurements

Qualitative Results in Information & Analysis Category (Frequency Table)

<table>
<thead>
<tr>
<th>Theme</th>
<th>Number of Positive Comments</th>
<th>Number of Needs Improvement Comments</th>
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</thead>
<tbody>
<tr>
<td>Ease of data systems</td>
<td>4</td>
<td>19</td>
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<tr>
<td>Consolidating data across groups</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>Accuracy &amp; Reliability of Data</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Planning Based on Data</td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Data availability</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td>General Analysis of data</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Timeliness of Data</td>
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<td>8</td>
</tr>
<tr>
<td>Stability of Data</td>
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<td>5</td>
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<tr>
<td>Appropriateness of measurements</td>
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<td>4</td>
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</table>
A.4 Customer & Market focus

Criteria in Customer & Market Focus Category

- 3-1. Defining Customer Segments
- 3-2. Gathering Competitor’s Customer Information
- 3-3. Identifying and Using Customer Preferences
- 3-4. Understanding what Customers Value in Products
- 3-5. Strengthening Customer relationships
- 3-6. Building customer loyalty
- 3-7. Determining Customer Service Requirements
- 3-8. Preventative Action based on customer complaints
- 3-9. Determining and Acting on Customer’s Satisfaction
- 3-10. Following-Up on Customer Feedback
- 3-11. Understanding Customer Satisfaction of Competitors

Assessment Results of Customer & Market Focus

Customer & Market Focus

Role Model
- Advanced
- Mature
- Basically Effective
- Beginning
- Not Evident

Number of Hits

- Average Level
- Median
- Hits

- 3-1. Defining Customer Segments
- 3-2. Gathering Competitor’s Customer Information
- 3-3. Identifying and Using Customer Preferences
- 3-4. Understanding what Customers Value in Products
- 3-5. Strengthening Customer relationships
- 3-6. Building customer loyalty
- 3-7. Determining Customer Service Requirements
- 3-8. Preventative Action based on customer complaints
- 3-9. Determining and Acting on Customer’s Satisfaction
- 3-10. Following-Up on Customer Feedback
- 3-11. Understanding Customer Satisfaction of Competitors
### A.5 Process Management Results

**Criteria in Process Management Category**

<table>
<thead>
<tr>
<th>Process Management Result</th>
<th>Role Model</th>
<th>Development Processes</th>
<th>Delivery</th>
<th>Growth Processes</th>
<th>Support Processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>6-1. Using Customer Input in Next Generation Products</td>
<td>Advanced</td>
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<tr>
<td>6-2. Using New Technology</td>
<td>Mature</td>
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<tr>
<td>6-3. Establishing a Process for Development</td>
<td>Basically Effective</td>
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<tr>
<td>6-4. Ensuring Consistent Product and Service Delivery</td>
<td>Beginning</td>
<td></td>
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<td>6-5. Efficient Core Work Processes and Improvement Systems</td>
<td>Not Evident</td>
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<tr>
<td>6-6. Maximizing Output of Production</td>
<td></td>
<td></td>
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<tr>
<td>6-7. Designing and Managing Key Business Processes</td>
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<td>6-8. Minimizing Costs of Key Business Processes</td>
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<tr>
<td>6-9. Designing and Managing Key Support Processes</td>
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<tr>
<td>6-10. Ensuring that Support Processes Meet Performance Requirements</td>
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<tr>
<td>6-11. Minimizing Costs of Support Processes</td>
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</tbody>
</table>

**Assessment Results of Process Management Category**

![Process Management Chart](chart.png)
A.6 Human Resource Results

Criteria in Human Resources Category

- 5-1. Promote Positive Work Environment
- 5-2. Internal Communication
- 5-3. Encouraging Employees
- 5-4. Supporting Goals through Compensation Packages
- 5-5. Leadership succession
- 5-6. Building workforce
- 5-7. Relevance of Education and Training systems
- 5-8. Breadth of Training Programs
- 5-9. Workplace Health and Safety
- 5-10. Providing Appropriate Services and Benefits to Employees
- 5-11. Assessing Employee Satisfaction

Assessment Results of Human Resources Category

HR Focus

Role Model

- Advanced
- Mature
- Basically Effective
- Beginning
- Not Evident

Number of Hits

- Average Level
- Median
- Hits