CASE ANALYSIS 2.1

APPEX CORPORATION

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Overview

In 1988, Shikhar Ghosh accepted the position of Chief Operating Officer of Appex Corporation, and shortly after assumed the position of Chief Executive Officer of the company. As an expert in organizational structure, it was Ghosh's mission to restructure and control the rapidly growing company in a way that would allow the business to function optimally, continue to be profitable, and facilitate future growth.

The Problem

Appex Corporation was formed in 1986 in Massachusetts as the result of a merger of Appex, Inc., formed in 1984, and Lunayach Communication Consultants (LCC). The company provided management information systems and intercarrier network services to cellular telephone companies. The young company soon faced rapid expansion, growing revenues by 1,600% in three years, with the expectation that the company would continue to grow at a fast rate. In 1990, the same year that *Business Week* rated Appex the fasted growing high-technology company in the United States, the company employed 172 people, with the expectation that the company would be adding about 10 new people each month.

Once Ghosh arrived at Appex, he recognized that he would need to establish control in the business if it were to succeed. The environment he arrived in was not well organized or controlled, and allowed employees to function as they saw fit. As the cellular telephone industry in the United States grew rapidly, with potential for expansion beyond the United States, Appex also saw its business grow. As a company that functioned around projects, it was

quickly acknowledged that the current structure was untenable. Workers functioned in a chaotic environment, addressing emergencies with little time to focus on establishing control and normalcy in order to do business. There was a great need for accountability and structure if the business was going to succeed.

The Solution

Ghosh has explored some innovative organizational structures when addressing how to structure Appex corporation. He began by implementing a circular structure, with the intention of creating a nonhierarchical organization, which would easily facilitate the flow of information within and without the organization. This first approach did not suit Appex, as employees were not familiar with the structure and found it confusing with little clarity on to whom employees reported for decision making. Soon after the failure of the circular structure, Ghosh implemented a horizontal structure, which presented its own challenges in the same vein.

In 1989, Ghosh implemented a hierarchical, functional structure. Each function was organized as a team, being careful to construct it in a way that minimized the sense of hierarchy. This structure did allow the company to focus on tasks and planning, and each team evolved into a structure that allowed employees to establish their roles, leading to the organizational chart sprawling. Eventually, this structure lead to teams having no working relationship, office politics and clashing personalities prevented growth, and managers of teams – while perhaps experts in their fields – lacking managerial tools that would allow them to successfully lead their perspective teams.

In the wake of the shortcomings of that structure, Ghosh then implemented a structure that focused on product teams at the suggestion of his senior Vice President of Sales, Paul Gudonis. The product teams worked with the functional teams, which addressed some of the issues that had arisen from the functional structure, but also created its own issues. There was confusion about authority in decision-making, prioritizing between teams, pricing, and resource allocation. In order to address the issues of authority and resource allocation, the next structure tried by Ghosh was to create business teams, which would act as intermediaries between general management and product teams. During this time, Appex was facing rising costs associated with training, as many of its workforce were new hires without previous experience in the cellular industry. Additionally, focus diminished and employees were no longer focused on the product, but rather the processes.

A divisional structure was established in 1990 with two product divisions – intercarrier services and cellular management information services – and a third division devoted to operations. This move improved accountability, budgeting, and planning, and helped employees focus on financial targets, as well as facilitated more inter-department cooperation. Eventually, problems arose with the divisional structure that saw a re-emergence of issues with resource allocation, control, and coordination. Product development suffered, and the two product divisions began functioning essentially independent from one another.

It was Ghosh's philosophy that the structure of Appex should be changed regularly – every six months – in order to move toward a more optimal functional structure as the company continues to expand. As problems are identified, as are potential solutions when considering the next structural move. Ghosh was unconcerned about continual changes causing anxiety for employees, because as the business grows and changes, so do the needs of the business. In late 1990, Appex was acquired by another information systems management company called Electronic Data Systems (EDS), changing the context in which Appex faced challenges within its divisional structure.

Industry/Competitive Analysis

Appex Corporation

Appex provided service to cellular carriers for managing their customers within (Home) and outside of (Roam) their territories.

Threat of New Entrants

The threat of new entrants to the cellular industry is relatively low, as a new company would face expensive startup in regards to establishing networks and attracting new customers that likely already have a service carrier. The businesses established in the market enjoy a relatively large market share.

Bargaining Power of Buyers

The power customers in this industry is medium. As the industry grows and the territories different companies cover grows, as do options for customers that are looking to switch providers. Because the industry was growing so rapidly, new customers were entering the market at an exponential rate, and each one that did not choose Appex was a strength for its competitors. However, many of the customers that Appex served had contracts with the business that spanned markets and years, making switching to a competitor more difficult.

Bargaining Power of Suppliers

Bargaining power of suppliers in this industry is low, as Appex offers a service that does not require raw materials or a shipping and delivery service to customers.

Threat of Substitutes

Threat of substitutes in the cellular industry is high, as another company with similar levels of infrastructure could provide comparable service to Appex. This is restricted somewhat by geography – many companies may dominate a market in a specific geographical region, but a company with the same growth trajectory as Appex could easily consume some of Appex's consumer base as it grows its service area.

Competitive Rivalry

Though still a relatively young company, Appex has been able to expand rapidly and grow its consumer base in order to compete with other businesses in the industry. However, poor customer service could lead to customers seeking other companies to do business with, who

may also be facing the same rapid expansion that Appex has. For these reasons, competitive rivalry remains high.

Stakeholders

Appex Corporation

The Appex Corporation and its board of directors have a large stake in their success or failure.

Though the company was acquired in 1990, it must still remain profitable and innovative in order to compete with other companies that it competes with, or it may face dissolution.

Employees

Appex's ever-growing pool of employees have a large stake in the success or failure of the company. Many employees are new to the industry, which could lead to big opportunities as technology grows and advances, and having spent time in a burgeoning technology company would be an important learning opportunity. Because the company needs to continue to develop products, innovate, and manage a growing pool of customers, employees have a vested interest in continuing to see Appex be successful. Addressing the issues that arose during each iteration of restructuring should be paramount in employees minds.

Consumers

Customers of Appex are cellular carriers, and would benefit from continued success of Appex Corporation, and generally have multimarket multiproduct, and multiyear service agreements

with Appex. Though the customers could potentially switch to a competitor after a contract was up, there would be a time where this was not possible. Customers with long-term contracts with Appex have higher stakes in the success of the company.

Potential Solutions

Remain a Divisional Structure

The divisional structure adopted in 1990 had many advantages and addressed several of the issues that had arisen in previous structural attempts. Because the company can be divided into logical divisions, it would make sense to continue operating it in this way, as long as the issues of too much independence in divisions is addressed, and more cooperation is facilitated.

Because there may be additional changes resulting from the recent acquisition of Appex Corporation, it may be wise to focus on integrating into EDS's structure in the short term, and looking for change – if necessary – after a period of adjustment.

Return to Functional Structure

This option minimizes the hierarchical structure of the company. The company could use the lessons learned from the first implementation of functional structure to address the communication shortcomings between functions.

Implement Hierarchical Structure

Though Ghosh initially wanted to implement a structure that would minimize the hierarchical nature of the company, now that it is a part of a larger business it may want to re-assess whether this structure could serve their needs. Establishing a clear line of accountability can help employees understand their role in the company as a whole.

Implement Matrix Structure

This structure was not yet implemented by Ghosh by the time the company was acquired in 1990. This model is similar to the current divisional structure, as employees are grouped by both function and product. The business could piggyback on the success of the divisional structure and incorporate some of the successful elements of the functional structure.

Selected Option: Matrix Structure

Because Ghosh seems to view the business as an organism – with a need to constantly assess, restructure, and adjust to the environment, I would recommend that Appex next implement a Matrix structure next. Though there was measured success when implementing the divisional structure, I believe this move could further strengthen the company by facilitating more cooperation between divisions with a little bit of integration. Implementing this new structure wouldn't put too much of a stress on the employees as it would retain some elements of the already established divisional structure. Because Appex continues to grow, adopting a structure that better facilitates flexible and adaptive behavior could be a real asset to the company.

Rejected: Divisional

Although Ghosh was seeing success with his divisional structure, I believe that he would wish to

continue looking for the next step for the structure of the organization. As the company and its

environment changes, the business must remain flexible. Remaining with the same structure

could result in further issues of control with divisional leaders, further cementing the divide

between the divisions.

Rejected: Functional

Due to the shortcomings experienced when implementing a functional organizational structure,

I would not recommend returning to this structure.

Rejected: Hierarchical

Though having a clear chain of command could be helpful as the company adjusts to being part

of another company, I would recommend that Appex focus on strengthening the successes it

has already experienced by enhancing the divisional structure, rather than tearing the divisions

down and building back up in a structure that Ghosh initially wanted to avoid.

- 9 -

Resources

Cash, James I. Building the Information Age Organization: Structure, Control, and Information Technologies. CIS 410 Course pack; Dr. Robert Barker. Print.

Fried, Louis. *Managing Information Technology in Turbulent Times*. CIS 410 Course pack; Dr. Robert Barker. Print.

Gladstone, Julie A. and Professor Nitin Nohria. Case 2-1: Appex Corporation. Harvard Business School case 491-082. 1991. Management of Information Systems, CIS 410 Course pack. Dr. Robert Barker.

Goldratt, Eliyahu M., and Jeff Cox. *The Goal*. North River Press Publishing Corporation. 1984. Print.

Morgan, Gareth. *Images of Organization*. Sage publications, 1997. Print.

Porter, Michael. "Porter's Five Forces".