**Case Analysis: Appex Corporation**

**Hannah Sadikovic**

**Problem Statement**

Appex Corporation faced a problem throughout the late 1980s. As the company grew bigger and they acquired more employees, the CEO Shikhar Ghosh realized that the company’s current organizational structure was not working and that he needed to implement a new structure. He took the company, which started out as a small firm with an extremely loose, informal structure where everybody did everything and the employees worked closely together to get things done quickly and relatively cheaply, through a couple different organizational structures, and, as the company grew, problems arose with each new structure implemented. The structures he implemented included an innovative, functional, and divisional structure. In 1990, Appex Corporation was acquired by Electronic Data Systems (EDS), which was a large organization with a bureaucratic structure. Ghosh was tasked with figuring out how to further develop the structure of Appex to fit in with EDS.

**Industry Competitive Analysis**

I. **Mission Statement**

Appex Corporation is a high-technology company focused on managing information systems for financial service companies and the cellular industry, and their mission is to use their expertise in engineering, business, and systems management to provide services for those industries through a differentiation generic strategy. A differentiation strategy is one in which the business attempts to make themselves unique, whether in terms of their product or service, in the industry (Tanwar 13). This generic strategy applies to Appex as they are competing with other technology businesses to address a particular need in the cellular industry, rather than employing a cost leadership strategy where they would produce the same commodity as everyone else but for less or employing a focus strategy where they would do one thing so well that it’s difficult for others to compete (Barker).

**II. Five Forces**

Porter’s five forces are power of suppliers, power of customers, threat of new entrants, threat of substitutes, and competitive rivalry. The following is an analysis of each force and how it affected Appex and the company’s environment.

Power of suppliers explains the relationship between supplier and buyer where if the supplier holds bargaining power, then they can influence prices in the market and availability of supplies (Team FME 23). Since Appex provided cellular services and managed the information systems for financial service companies, they were not as concerned with the power of suppliers because they did not have suppliers for most of their services. Any suppliers such as the construction of cell towers would be a one-time cost and would likely be controlled by the firm itself, and so they would not need to worry about bargaining with suppliers to reduce the cost and increase their power in the market.

The second force, power of customers, explains the relationship between customer and seller, where if the customer holds bargaining power, then they can influence prices and quality of products in the market (Team FME 25). The more options there are for customers, the more bargaining power they hold, and in this case, they have significant bargaining power as Appex had several competitors within the cellular service industry, such as GTE, Cincinnati Bell, and McDonnell Douglas. Therefore, Appex had low bargaining power.

The third force, threat of new entrants, describes the threat companies face when there are new entrants in the market who can increase the bargaining power of customers. Current sellers in the market will try to erect entry barriers, such as copyrights, patents, or contracts (Barker). Since the cellular industry was a new booming industry in the 1980s, there was always the threat of new entrants in the market who could increase the bargaining power of customers by offering more options. This force was one of the more concerning ones for the company.

The fourth force, threat of substitutes, is a force that explains how the threat of substitute products or services, which meet a consumer’s need but in a different market, can affect the competitive environment and subsequently profitability for the producers of current products or services by allowing consumers to choose the substitute products or services instead. In Appex’s case, this was mostly not a concern as the cellular industry was itself a new substitute for the current systems of communication, and analysts predicted that the cellular industry would continue to boom and would become the primary telephone system globally, even in places were conventional telephone systems were not as developed.

The last force in the model, competitive rivalry, describes the threat to existing sellers in the market by other competitors in the same market. This is the force Appex would be most concerned with. As previously mentioned, there were several competitors in the cellular market who were all fighting to establish themselves as the top competitor in the market. Their competitors even went so far as to put out a Request for Proposal to form a joint entity known as ACT to address a specific need in the industry. Appex rejected this and created their own solution for the need in the market in order to differentiate themselves.

**III. Organizational Structure**

A firm’s organizational structure is determined by the environment. It is the way in which businesses deploy assets in an environment in order to achieve their organizational goals (Barker). In Appex’s case, the organizational structure changed often as the company grew, and with this, problems arose with each structure.

In the early days of start-up, the organizational structure was very loose and resembled a divisional structure, based on the six determinants of organizational structure: division of labor, decision rights, coordination mechanisms, organization boundaries, informal structures, and data/information flows. A few of these were already present in the structure. For division of labor, it was not really clear whose job was what, and Appex employees worked on what they wanted to work on. This goes with organizational boundaries as well; it was extremely flexible at Appex, and informal structures were weak. However, there were some discrepancies with this, as the company was project-based, which is typical of a matrix structure rather than a divisional structure where the business is organized around multiple products/services (Barker). This led to an unclear idea of what structure Appex was organized around, and as the company grew, and the number of projects increased, the atmosphere changed to chaotic, and it led to a lack of planning and cost monitoring. It became apparent that there needed to be a formal structure put in place.

When Ghosh came in, he decided to implement a circular innovative structure inspired by Japanese companies. This structure was meant to be non-hierarchical so that information could flow freely between the organization and the environment. There were immediately some issues with this. First, the employees could not relate to the structure as they were confused and did not know who had authority to make certain decisions and how to know if their performance was productive or not. Second, this structure did nothing to improve their existing problem of a lack of planning structure. Ghosh then tried implementing a horizontal structure, which also did not bode well with employees.

Ghosh then decided to move onto a new organizational structure: a hierarchical, functional one. A functional structure is bureaucratic in nature because they are highly centralized structures that are slow to react to stable and static environments (Barker). However, while the functional teams that Ghosh created helped gain a sense of control among the chaos, and helped to improve basic operations, the teams became more divided over time, creating their own subfunctions naturally. This caused Appex needing to spend more money on system development and operation as the working relationships between divisions were inhibited. They also ran into an issue with new managers having difficulty gaining respect from their teams as they did not know the product as well as the teams did. An emerging need for quality control came about eventually, and Ghosh yet again adjusted the structure of the company to adapt to the constant changes.

Ghosh kept the functional structure but introduced product teams to co-exist with the functional teams. Of course, conflicts arose yet again. It soon became unclear who had the authority to make decisions for product teams, and this also led to conflict between product managers and operations people. Ghosh tried to solve this by having senior executives attend product team meetings to make the decisions, but it proved to be a waste of time as they had other responsibilities to attend to. Then the product teams began to cause resource allocation problems, which Ghosh tried to solve with business teams to serve as intermediaries between the corporate management and product teams.

Although Ghosh tried to tweak the functional structure to fit the never-ending problems, it proved to have too many shortcomings. This eventually became too costly for the company, and on top of this the infrastructure costs kept rising as they hired more and more employees. Eventually the focus on customers’ needs shifted to internal processes and controls.

Ghosh then made the switch from a functional structure to a divisional structure. The two divisions he established were the Intercarrier services (ICS) and cellular management information systems (IS). There was also a third division for operations established to service the two divisions. This helped tremendously to improve accountability, budgeting, and planning. There was increased cooperation within divisions, meaning Ghosh was able to focus on strategic planning of the company rather than spend all his time aiding in day-to-day operations. However, there were still some problems that arose.

The first problem was resource allocation, which led to antagonism between divisions. They did not want to share resources, and each wanted control over their own resources. This was costly for the company as it meant they had to have resources bought in triple. The second problem was the lack of communication flow between divisions, which meant a lack of information flowing across the functions. The divisions were becoming too divided, acting as small companies in time. The third problem was that the divisions began to provide an unrealistic view on their numbers and senior executives were unable to get a good sense of where the company stood financially.

**Key stakeholders**

A stakeholder of an organization is anyone who is affected by the organization’s operation and performance, and he or she typically has a vested interest in the company, either internally or externally. The internal stakeholders of Appex Corporation include: 1. All senior executives, including CEO Shikhar Ghosh, and 2. All staff members, who can be divided up into the ICS division led by Paul Gudonis, the IS division led by Bob Lentz, the Operations division led by Ted Baker, and the Finance and Human Resources division led by Mark Lohr and Catherine Lathan. The external stakeholders consist of all Appex Corporation’s customers.

**Possible Solutions**

After EDS acquired Appex, Ghosh needed to figure out how to further develop the structure of the firm to be able to have a role within EDS, a much larger and bureaucratic organization. There are three solutions Ghosh could implement: 1. Choosing to change nothing and continue to further develop the divisional structure Appex had, 2. Go back to the functional structure he briefly implemented, or 3. Implement a matrix structure.

The first option, continuing to develop the divisional structure, would affect stakeholders in the following ways: first, the CEO and other senior executives would continue to do what they have been doing mostly but would need to work closely with each division to make sure that the financial status of the company is clear and not being muffled by divisions. Second, all staff members would be affected in that they would be able to continue to do mostly what they were already doing and would not have to make yet another drastic change in structure, which could cause more confusion and hinder cohesion within divisions. However, they would continue to struggle working under a lack of flow of communication. The external stakeholders (all customers) would continue to receive relatively the same customer service.

The second option, implementing a functional structure, would impact stakeholders in the following ways. First, the CEO and other senior executives would need to give much of their time and attention to the daily operations of the teams and would be unable to focus on strategic planning as much, which would hinder long-term planning. Most staff members would need to shift drastically in their roles, which like in the past, would leave them confused on who has the authority to make important decisions. External stakeholders would likely receive decreased customer service.

The third option, implementing a matrix structure, which has not been tried on Appex in the past, would impact the stakeholders in the following ways: first, the CEO and other senior executives would need to take on a completely new structure and would need to closely monitor everything to make sure it is going smoothly. There are potential initial cost increases to develop a new structure, but overall decreases in expenses as the organization becomes more cohesive. Most staff members would need drastically shift in their roles, which could lead to confusion and a loss of productivity if not implemented smoothly. External stakeholders would either receive increased or decreased customer service.

**Recommended Solution**

The recommended solution for Appex is the third solution: implement a matrix structure. A matrix structure is organized around projects, it allows for reactivity to a dynamic market, and it focuses on a differentiation strategy, all of which align with Appex’s current processes. Additionally, a matrix structure would fulfill all six of the determinants: the division of labor would be narrow and deep, meaning employees would have specific job descriptions that have many responsibilities; the decision rights would be vertical and decentralized, which would fit with the vertical structure of EDS; the coordination mechanisms would allow for exceptions; the organizational boundaries would be fixed and rigid, meaning employees would know exactly what their roles are and how to do them, eliminating the confusion they experienced in the past; the informal structures would be strong; the data/information flows would allow for data to flow bottom-up and information to flow top down as well as cross-functional, which would help solve their current problems with a lack of cross-flow. Option one is not recommended because, although a divisional structure allows for a cross-functional flow of information, allows reactivity to a dynamic market, and is built around the idea of creating differential advantage, it is not recommended to continue development as there would still be issues with resource allocation and knowing where the company stands financially. For the same reasons, option two, implementing a functional structure, is also not recommended, as it has the same problems with resource allocation and infrastructure costs, along with additional issues. Overall, a matrix structure would be best suited for Appex to continue to grow as they become integrated with EDS.