

December 1999

# An Electric Utility Learns to Adapt: A Singerian Organization Approach

Sandra Richardson  
*University of New Mexico*

James Courtney  
*Texas A&M University*

Follow this and additional works at: <http://aisel.aisnet.org/amcis1999>

---

## Recommended Citation

Richardson, Sandra and Courtney, James, "An Electric Utility Learns to Adapt: A Singerian Organization Approach" (1999). *AMCIS 1999 Proceedings*. 226.  
<http://aisel.aisnet.org/amcis1999/226>

This material is brought to you by the Americas Conference on Information Systems (AMCIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in AMCIS 1999 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact [elibrary@aisnet.org](mailto:elibrary@aisnet.org).

# An Electric Utility Learns to Adapt: A Singerian Organization Approach

Sandra Richardson, Health Sciences Center, University of New Mexico  
Albuquerque NM 87131  
[Srichardson@salud.unm.edu](mailto:Srichardson@salud.unm.edu)

James F. Courtney, INFO Department, Texas A&M University  
College Station TX 77843-4217  
[j-courtney@tamu.edu](mailto:j-courtney@tamu.edu)

## Introduction

Electric utility companies, like many other organizations, are facing highly dynamic and unfamiliar environments. Sheltered from competition, and the corresponding push for profits, the utility industry has historically enjoyed a comfortable existence. Today, with the onset of deregulation, the players in this industry are finding themselves forced to adapt to a new competitive environment.

This paper discusses how one (anonymous) utility company is developing an Energy Service Company (ESCO) to prepare for the move to a competitive environment. ESCO's specialize in the design and implementation of energy conservation measures, such as lighting retrofit projects, updating heating, ventilating and air conditioning systems, and cogeneration projects. As the result of a recent federal mandate to update aging systems, military bases have become a primary client of ESCOs. Other clients include state and local governments, universities, and hospitals.

Organizational cultures found in many established utility companies, created by years of existence in a stable, non-competitive environment, do not lend themselves to rapid adaptation or steep learning curves. The ESCO was, from its inception, designed to adapt and learn; in other words it was designed to be a learning organization (see, for example, Senge, 1990; DiBella, 1995; Nevis, et al., 1995; Slater and Narver, 1995; Huber, 1991). It has characteristics of Singerian Inquiring Organizations (Courtney, et al., 1998; Croasdell, et al., 1998).

Singerian Organizations are enterprises in which employees are empowered to contribute to the decision-making process. Singerian working environments stress cooperation among employees, with fuzzy boundaries where teamwork and common goals are primary driving forces. Anyone may act as designer and decision-maker (Croasdell, et al., 1998). Also fundamental in Singerian Organizations is the practice of measurement. The

Singerian inquirer seeks to achieve progress using a system of measures that are continuously monitored, refined, compared and revised to assure that the results of observations of the world are in agreement, and represent valid knowledge (Churchman, 1971). Guidelines for developing these organizations include (Croasdell, et al., 1998): Build a system of measures; Replicate, replicate, replicate...; Rock the boat; and Quest for knowledge.

This paper describes the new ESCO within the context of Singerian Organizations. First, the ESCO's early experiences are interpreted in terms of such organizations. Then, some problems with measurement systems in dynamic environments are discussed.

## Measures of Progress

The ESCO's parent company is a 100 year old, mid-sized gas and electric utility providing retail electric sales to 350,000 customers and distribution of natural gas to 410,000 customers. In 1998 the company reported a net income of \$82.7 million or \$1.97 per share of common stock.

A small number of employees from the parent organization were charged designing the new ESCO. The first stage of development involved defining the new organization establishing both long and short-term goals, and the measures for determining progress toward those goals. The measures will be described in knowledge management terms, reflecting the learning orientation of the new organization. The measures relate to four basic areas, knowledge acquisition, knowledge sharing, knowledge use, and profit. The relative emphasis on the different measures was expected to change over time (see Figure 1), reflecting the evolution of the company.

The initial design phase involved a great deal of knowledge sharing among the team members planning the new ESCO. Figure 1 reflects this emphasis on knowledge sharing, and the concomitant unimportance of profit, and knowledge acquisition and use at this point.

The second phase of the project heavily emphasized knowledge acquisition, described in terms of the type and number of employees hired. Hiring the right combination of individuals was imperative to this organization, which needed to establish a tacit knowledge base quickly. The ESCO was envisioned as a dynamic, competitive, and intelligent organization. Its employees would have to be team oriented, adaptable to an ambiguous, fluctuating environment, comfortable with risk, and intelligent in business operations and competition.

## **The Quest for Knowledge**

The organization was enormously successful in this effort. By bringing on such employees a great deal of knowledge was acquired and compounded rapidly by interaction and sharing of ideas, as the organization moved into the third phase of development, where knowledge sharing was again emphasized. From this point on, internally, the company became an organic enterprise exhibiting a quest for knowledge, skilled in open communication, sharing of knowledge and ideas, and group decision making. A conscious effort was made to hire from a number of geographical areas around the country, thus bringing to the organization a mix of both technical and regional knowledge. The company was built from the top down, hiring department directors in the areas of engineering, sales and marketing, business development, and finance. The engineering director, experienced in startup businesses, had been the owner/operator of a large construction company in New England, experienced in start up businesses, as well as holding a wealth of technical knowledge. The sales and marketing director was an attorney from the southeastern U.S., who had been successful in establishing such departments for similar organizations. The director of finance had experience in the establishment of small business, working in engineering related companies, and in the software development industry. And lastly, a retired Navy officer was hired as the director of new business development, specifically to monopolize on the demand created by the federal mandate for upgrading systems on military bases. Each of these individuals hired additional staff members with equally diverse backgrounds.

In the early phases, the emphasis on the ESCO's goals and measures evolved as planned, moving from defining the organization, to more specific knowledge utilization and implementation tasks, such as establishing standard operating procedures, client data bases, sales and marketing tactics, and accounting systems. Keeping one eye on new ventures and ideas, such as the development of new products, and one eye on current practice, ineffective projects were abandoned and new projects and

ideas welcomed, with knowledge gained from both incorporated into the ongoing learning process.

During the early stages, goals were "activity specific" and measurement of accomplishment fairly black and white. As some of the goals were inevitably missed, there was a look inward to isolate problems and develop solutions. The lack of success was noticed by the parent company, which up to this point, had remained at a constructive distance. The parent company began to believe that the ESCO needed to be a different type of organization to succeed in a competitive market.

## **The Sweeping in Process (Not!)**

In the Singerian approach, when the measurement system indicates that the organization's actions are ineffective, a "sweeping in" process should be employed to bring in additional concepts and variables that improve its image or model. As the ESCO missed its goals, perhaps the parent company should have renewed efforts to bring in additional ideas, concepts and knowledge, and to broaden its perspective and capability.

Instead, the opposite approach was taken, as illustrated in Figure 2. Profit and loss increasingly became the yardstick used to measure the successes of the organization much sooner than originally planned. The solutions proposed began to mirror the staid business practices of the parent company. Controls became tighter and the freedom of self-exploration, self-expression and risk taking were devalued. A more conservative "utility" approach to business was suggested. These new developments affected morale and knowledge sharing and utilization dramatically. When goals were not met, the movement within the company was to fragment. As a result, communication decreased, individualistic attitudes surfaced, and for the first time internal competition appeared.

Organizations are evaluated not only as to whether what was promised was produced, but also by how effective the organization is in monitoring and surfacing information when what was promised is not being produced. To do so, barriers to knowledge sharing, such as internal competition and politics must be eliminated (Croasdell, Courtney and Paradice, 1998). The ESCO had seemingly forgotten this point and as a result productivity went down, potential sales were lost, and internal politics and competition were taking up valuable resources.

## **Problems with Measures and Replication**

The ESCO case illustrates the fact that problems arise in both theory and practice with regard to measurements. As businesses grow, they become more complex, and activities more difficult to measure. This is

a Catch 22 situation. Measurements are needed to validate success and recognize failure, but what and how to measure become increasingly difficult to establish as the complexities of an organization compound over time. In a dynamic and uncertain environment such as that faced by the ESCO, the problems of measurement are magnified.

On the theoretical side, given the nature of the interactions between systems and individuals in a Singerian enterprise, measurement of anything other than overall profit and loss becomes extremely difficult. If a tool of measurement can be developed, it is questionable as to how useful the information acquired will be. One could ask, “Can the dual fundamentals of measurement and replication in Singerian theory coexist in dynamic environments?” In an environment where change and risk taking are sometimes the only constant, measurement and repetition are difficult at best. While reviewing and redefining exist in these organizations, they happen quickly with little time for replication, a fundamental in the Singerian organization. It is quite problematical as to whether replication and rapid change truly exist in the same model, at least in dynamic environments.

In addition, as a small company grows, effective communication becomes increasingly difficult. Large organizations must focus on Singer’s model, or ineffective communication practices may become permanently entrenched. The strengths of the Singerian approach lie within the emphasis open communication, group cohesion, and knowledge sharing. Information technology in the form of groupware and knowledge management tools can be valuable in this regard.

References available on request.

