# Making the Transformation from Entrepreneurship to Professional Management: The Case of Unitech Systems

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**Abstract**. This article presents a case study of the transition of Unitech Systems from an entrepreneurship to a professionally managed firm. It also describes an approach to the development of a system for "performance optimization" that involves reconceptualizing the role of strategic planning as a tool for overall organizational development and strategic management as well as certain "experiments" with the nature of reward systems used. The article also examines the benefits derived by the company as well as the challenges faced in making this transformation.

Keywords: firm growth, transformation.

#### 1. Introduction

This article presents a case study of the transition of Unitech Systems from an entrepreneurship to a professionally managed firm. It also describes an approach to the development of a system for "performance optimization" that involves reconceptualizing the role of strategic planning as a tool for overall organizational development and strategic management as well as certain "experiments" with the nature of reward systems used.

This type of study is important for several reasons. First it suggested the complexities of the necessary transformation from entrepreneurship to

<sup>1.</sup> This case study is a portion of a more comprehensive case study to be published by Eric Flamholtz and Yvonne Randle, *Leading Strategic and Organizational Change*, Cambridge University Press, forthcoming.

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professional management, which all new ventures must achieve if they are to continue to be successful. Second, it contradicts the conventional wisdom of venture capitalists that the founding entrepreneur must be replaced by professional managers if a company is to grow successfully. Similarly, it also contradicts certain academic research which has reached the same unhappy conclusion of the venture capitalists.<sup>2</sup> Finally, it describes a successful approach to this organizational challenge.

#### 2. About Unitech Systems

Unitech Systems, Inc. provides Information Integrity® software solutions that help major corporations assure the accuracy, consistency, and reliability of their operational, financial, and management information. It is a pioneer of the information integrity space. Today with nearly 200 team members, and offices in major cities across North America and Europe, Unitech Systems is a world leader in its market space. The organization has both an innovative set of software products and a range of professional services. Its customers include industry-leading organizations such as Citibank, American Express, Verizon, Target and Wal-Mart. Over 400 of the Global 2000 use Unitech's products and services. The Excellence in Information Integrity Award, which Unitech Systems has sponsored since 1995, recognizes organizations that have demonstrated exceptional progress toward achieving Information Integrity. Some of the past winners of this award include Sprint, Bank of Nova Scotia and TSYS.

## 3. Key Events in the Company's History

# Stage 1: Unitech as a New Venture

Unitech Systems was founded by Madhavan Nayar in 1982. It began as a one man consulting firm. Nayar, who holds degrees from universities in India and the Illinois Institute of Technology, pioneered the concept of "information integrity" software solutions at a time when few had realized the need for specifically designed systems that helped customer organizations ensure the validity and accuracy of information.

Unitech's founder, Madhavan Nayar, has described the need for information integrity as follows: "For us to effectively harness the benefits of the information

This does not support the conclusions of others such as Tushman et. al. See, for example, Tushman, M. L., Virany, B. and Romanelli, E. (1985), "Executive Succession, strategic reorientation, and organizational evolution: The mini-computer industry as a case in point", *Technology in Society*, 7: pp. 297-313.

revolution, and avoid the costs of widespread information pollution, we need to recognize and treat information as a shared, universal resource. We need to develop the science, technology, products and services to measure, monitor and manage its integrity, much like the environmental science, technology and industry emerged in the wake of the industrial revolution to answer our need for clean air, pure water, reliable power and safe food."

In 1982, Unitech developed its first software product, U/ACR, for, and in partnership with the Blue Cross Blue Shield of Illinois. During the next two decades, the company successfully developed a number of other products through similar strategic customer partnerships.

#### Stage 2: Unitech's Growth and Development

Through 1992, the company grew rapidly, reaching \$12 million in revenue and a cumulative annual growth rate of 65% for the first 10 years.

During this period, the company evolved from a one-person consultancy to approximately eighty people, with a President, Executive Vice President & Chief Operating Officer, and several Vice Presidents with Directors, Managers and employees below them. At the beginning of 1992, the company was reorganized into six operating Groups, each headed by a Group Leader, and the position of Executive Vice President & Chief Operating Officer was eliminated. Throughout this stage Unitech adopted a series of conventional business practices for a growing entrepreneurial company. This included the way the company was structured as well as the way people were compensated.

The Company sold its products through sales representatives who were paid a base salary, commissions and various incentives such as bonuses for selling new products, "salesperson of the month/quarter/year" awards and "100% Club" trips to exotic destinations for those who met their quotas.

Beginning 1993, the company initiated a series of changes many of which, in retrospect, may have impeded its continued rapid growth, but contributed to organizational learning. That year the company decided to decentralize sales management by hiring Area Sales Managers in North America and establishing a separate International Sales Group. By the end of the year, however, no Area Sales Managers had been hired, and there was no revenue growth. Also in 1993, the senior leaders of the company learned about the management philosophy of W. Edwards Deming, and after several months of study and deliberation, decided to adopt and implement it. The decision was implemented by holding a weekend retreat for influential team members from different groups in the company and then a two-day off-site meeting for everyone. The Deming philosophy was adopted on April 1, 1994.

Stage 3: Impact of the Deming Philosophy

The implications of the Deming philosophy were radical and extensive. Quotas and other numerical objectives linked to incentives and compensation were discontinued. Formal performance evaluations and salary adjustments tied to performance evaluation were also eliminated. All processes within the company were to be mapped, defined and improved.

The adoption and implementation of the Deming Philosophy is often difficult, if not impossible, in most organizations, particularly in the West. It requires the reorientation and alignment of many of the principles, policies and practices of running a business. It requires the optimization of the entire organizational system rather than each component; the understanding of the variation and fluctuation of performance across the system and over time; the use of data to understand performance and make decisions; and the recognition that each individual is different from every other. In order to benefit from Deming's philosophy, an organization must be prepared to abandon conventional practices, adopt a holistic approach and look for long-term results.

The reaction of most of the team members of the company was skeptical, if not negative. Many of the "star" sales people left the company, and over the next 18 months, almost 95% of the sales force turned over. Company wide, employee turnover exceeded 50% in 1994. An employee survey revealed that employee morale was far below industry average.

In 1994, it was also decided to organize the company into four geographic divisions: three (East, West and Central) in North America and one international. The senior executives (Group Leaders) in charge of Sales, Marketing and Finance were assigned the responsibility for the three North American Divisions. The International group already had a Group Leader. Additionally, each division was organized into Business Units. Business Units were established in Dallas, San Francisco, Atlanta, Cleveland, Boston, Philadelphia, Chicago, and Paris. Each Business Unit included three Sales Executives and one Application Consultant with the Sales Executive assigned 100 accounts in two or three industries.

All the changes during the year resulted in a great deal of uncertainty and anxiety throughout the company, especially among the Group Leaders. In February 1995, while Nayar was in Europe for a speaking engagement, all the Group Leaders met to discuss their concerns and decided to present a list of issues and recommendations to Nayar upon his return. The issues concerned primarily Nayar's leadership style. One of the recommendations was for him to play the role of a non-executive "Chairman" and for the Group Leaders to run the company. Shortly thereafter, two of the Group Leaders resigned from the Company.

In early 1995, the three divisions in North America were reorganized into two geographic locations: East and West. The Product Development function was distributed among the three Group Leaders responsible for East, West and

International Divisions. For the third year in a row, there was no revenue growth in 1995.

There were relatively few changes and a modest revenue growth in 1996. At the end of 1996, it was decided to combine the two North American divisions into one and designate a single Group Leader for North America.

In April 1997, to help revive the company "Project Oxygen" was launched. It consisted of establishing industry focused "Customer Teams" in the Business Units (now renamed "Customer Units"), each Customer Team consisting of a Sales Executive, a Solution Consultant and an Account Representative. Each Customer Team was responsible for a handful of major accounts in a specific industry group (banking and finance, insurance and healthcare, communications and utilities, distribution and manufacturing). All other existing customer accounts were assigned to the Customer Teams based on geographic proximity.

Project Oxygen was a significant effort, which required the hiring of over 50 new people in the field and training all of them for 3 weeks in the Home Office in Naperville, Illinois. However, some of the Business Unit Leaders were new, and there was much confusion about how the "team" concept was deployed and practiced. Some teams performed exceptionally well, while some others were dysfunctional and had to be rebuilt or disbanded.

In 1998, it was decided to align the Customer Unit Leaders also along industry lines. This meant that all the teams in a given industry group (for example, banking and finance) would be supported by a Customer Unit Leader for that market-sector. This was a major change for the teams and the Unit Leaders. Most teams no longer had a local leader they could go to, and the Unit Leaders had to travel and oversee the activities of teams based in several locations.

By 1998, Unitech had grown to be a \$20 million company with offices in North America and Western Europe.

# Stage 4: The Catalyst for Strategic Change

In March 1999, Nayar attended a Forbes Presidents' Conference where he heard Eric Flamholtz make a presentation about a framework for building successful organizations. The approach made sense to Nayar, and in late 1999, he invited Flamholtz to work with Unitech Systems and apply his approach.<sup>3</sup>

<sup>3.</sup> See Eric G. Flamholtz and Yvonne Randle, *Growing Pains: Transitioning from an Entrepreneurship to a Professionally Managed Firm*, Jossey-Bass Publishers, Inc., 2000.

#### 4. Organizational Transformation at Unitech Systems

The organizational development process began with a series of interviews with selected Group Leaders and Unit Leaders during the summer of 1999 to provide Flamholtz with an understanding of Unitech Systems and its development issues. The next step was a strategic planning retreat, attended by all Unitech leaders in early December. The retreat was to introduce all of Unitech's leadership team to the Management Systems pyramid framework and take Unitech to the next level of planning capability.

Planning has always been a part of Unitech's culture. The company has always had a well established strategic planning function, and the leaders of the operating groups have always prided themselves on their strategic capabilities. However, the growth and diversification experienced during the 90's demanded a new scale of planning altogether. Management needed to address not only new industry segments and larger operating units, but increased organizational complexity as well. The strong entrepreneurial spirit and autonomy that had long been part of Unitech's culture now presented a management challenge. While it had at one time helped to create a vibrant, nimble operating environment it had also resulted in counterproductive organizational "silos" that resisted cooperation.

While Unitech already had a formal strategy and planning process, the key was to improve the existing planning system and ensure that it became a way of life. The strategic planning process would also be the tool to align the objectives of the various business units.

#### 5. Transforming Unitech via Strategic Planning

At the retreat, a management planning simulation revealed the areas that needed to be strengthened internally. The group discovered that its planning was too grandiose to be feasible. The group also discovered that it had a tendency to get distracted by "noise".

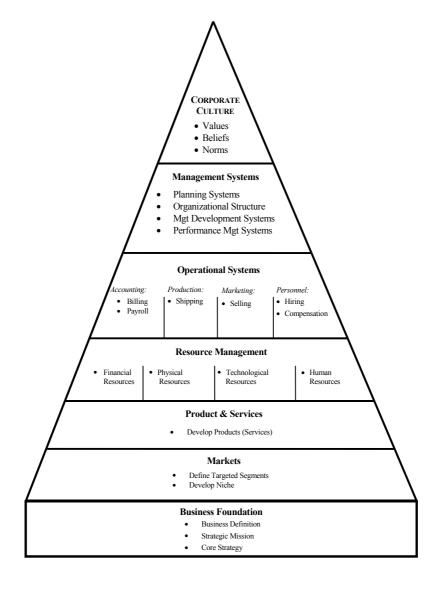
There are two major components to Flamholtz's approach to strategic planning: 1) a conceptual framework that serves as a platform for strategy, and 2) the strategic planning method per se. Both are described in turn below.

## 5.1. The Platform for Strategy

The Platform for the development of strategy created by Flamholtz consists of an organizational effectiveness model that serves as a "template" for the strategic organizational development of a business or subunit.<sup>4</sup> This template is known as the "Pyramid for Organizational Development." It is shown in Exhibit 1. This is

a framework developed by Flamholtz and used to assess the strengths and limitations or developmental needs of companies. There has also been a program of empirical research designed to assess the validity of the framework. <sup>5</sup>

Exhibit 1: The Pyramid of Organizational Development



<sup>4.</sup> Eric Flamholtz, "Managing Organizational Transitions: Implications for Corporate and Human Resource Management", *European Management Journal*, 13 (1), pp. 39-51.

<sup>5.</sup> For a summary of this research, see Eric G. Flamholtz "Towards an Integrative Theory of Organizational Success and Failure: Previous Research and Future Issues", *International Journal of Entrepreneurial Education*, 1 (3), pp. 297-320.

This template was used to assess the strengths and areas for further development at Unitech Systems. It was clear that Unitech was relatively strong at the bottom four levels of the Pyramid, but needed further development at the top two levels, which include management systems and culture management. It also required some redefinition or fine tuning of the business foundation to fit the founder's (Madhavan Nayar) vision.

#### 5.2. The Strategic Planning Method

Although there are many approaches to planning, Unitech Systems chose to adopt the method developed by Eric Flamholtz.<sup>6</sup> He had previously developed and used this methodology with such diverse companies as Starbucks, PacifiCare, American Century Investors, Simon Properties, and Navistar International as well as with many other companies, including entrepreneurial companies like Unitech Systems.

The planning framework used is shown schematically in Exhibit 2. The process begins with an environmental scan to assess the market, competition and trends. Once the external assessment is completed, the next phase is an organizational assessment. This involves determining the strengths and limitations or areas for development of the organization in several key areas. The organizational assessment component of this process is based upon "The Pyramid of Organizational Development", as shown above in Exhibit 1.

Once these assessments have been completed the organization then reviews its "business foundation." This involves reviewing the business concept, strategic vision or mission, and core strategy of the organization.

The "new" business foundation then becomes the basis for the development of objectives and goals in each of the company's "key result areas," the critical areas of organizational success or performance. These are operationally defined as the six strategic building blocks contained in the Pyramid of Organizational Development. Research has shown that there are six key "building blocks" of successful organizations: markets, selected products or services offered, resources and how they are managed, operational systems, management systems (including the planning system), and corporate culture.

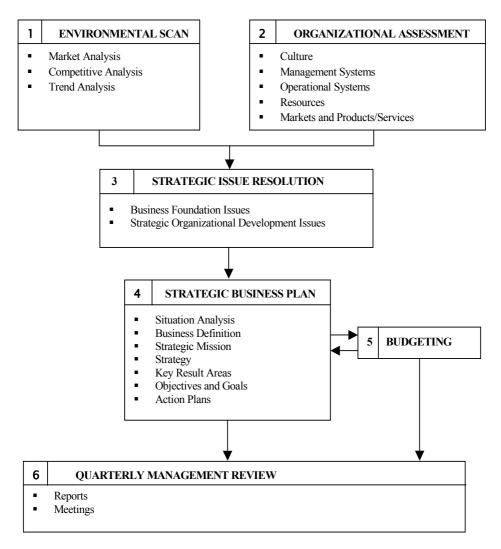
Research has also shown that these key variables are linked to financial performance and explain approximately 55-75% of financial performance, measured in terms of gross margin and EBIT (Earnings Before Interest and Taxes). Objectives are developed in each of these key result areas. Objectives are

<sup>6.</sup> For further discussion of this method of strategic planning see, Eric G. Flamholtz and Yvonne Randle, *Growing Pains: Transitioning from an Entrepreneurship to a Professionally Managed Firm*, Jossey-Bass Publishers, Inc., 2000, Chapter 7.

See Flamholtz and Aksehirli (2000); Flamholtz and Hua (2002 A); Kurland and Flamholtz (2005).

defined as things that the organization wants to achieve in each key result area. For example, an objective might be to increase market share or increase profitability. The objectives are broad and relatively undefined. They are accompanied by "smart goals", goals which are specific, measurable, actionable, realistic, and timed dated.

Exhibit 2: Flow Diagram of the Strategic Planning Method



## 5.3. Applying the Framework at Unitech Systems

As noted above, the base of the organizational development Pyramid is the "business foundation". This consists of three components: 1) a business definition, 2) a "strategic vision", and 3) a "core strategy".

By the end of the initial planning workshop, the leadership team had defined their business as that of "helping Global 2000 organizations improve the quality of their information through information integrity systems." This meant that the organization was going to evolve from one which was currently focused upon selected tools for automated balancing of accounts and statements to a total information integrity solutions business. An intermediate step was for Unitech to evolve from its current product portfolio to a business with automated controls, services, and processes for information integrity. This was to happen through three stages:

Stage 1 - Pre 1999: Automated balancing

Stage II - 1999: Automated controls + services + processes

Stage III - 2003: Unitech will be true Information Integrity business

# 5.4. Building Upon the Business Foundation

Once the new business definition and strategic vision for the organization had been established, there was a need to complete the plan to the level of developing goals and assigning priorities and roles. Another related key challenge now was to make planning a way of life.

A "secret" key to this was to hold a series of quarterly planning meetings. At some organizations, planning is episodic. It occurs and then stops. The plan is there but it is not reviewed on a regular basis or updated. At Unitech Systems, planning was done on an ongoing basis.

Quarterly planning retreats facilitated by Flamholtz and Management Systems would become an opportunity for the organization to reflect on the progress through the quarter and to set goals for the next quarter.

# 5.5. Developing "Priority Objectives"

Although there are many objectives in any strategic plan, a well thought out set of "Priority Objectives" (key objectives that receive the most management focus) is another of the "secret ingredients" that were important to make planning work at

Unitech Systems. These objectives are derived from the strategic vision and related key result areas.

#### 6. Creating a Strategic Management System for Performance Optimization

Another strategic innovation at Unitech Systems was the creation of a unique "performance optimization system" that combined with the planning system to create an overall "strategic management system." In order to strengthen the levels of accountability and enhance the execution of the strategic plan, a "performance optimization" process was introduced. "Performance optimization" is a term we have coined at Unitech Systems to refer to an innovative alternative to the conventional notion of performance management, as described below.

Exhibit 3: The Performance Optimization System



This model links several critical features of the organization such as the planning system with operations and measurement of results and this in turn with the evaluation and reward systems within the organization. One thing that is very different about the concept of performance optimization at Unitech, as compared with the conventional concept of performance management, is that the former does <u>not</u> link performance directly to rewards. This is for philosophical reasons (examined below), and suggests an important difference in the culture at Unitech Systems.

Madhavan Nayar, Unitech System's Company Leader, believes strongly that rewards ought to be based upon company performance rather than individual performance.

The overall objectives of Unitech's rewards philosophy are:

- 1) to attract top industry talent compatible with the unique characteristics of the Unitech environment;
- 2) retain team members in a long-term developmental relationship;
- 3) foster an environment which promotes teamwork through collaboration and cooperation;
- 4) foster an environment for personal and professional development;
- 5) maintain equity across the Company;
- 6) compensate Leadership Group members based on overall company performance and
- 7) manage fixed costs by providing higher variable pay.

Thus the term "performance optimization" used at Unitech Systems is intentionally different from the more conventional term "performance management". The latter term would include rewards as a key component of the system, while performance optimization intentionally does not include rewards for the reasons outline above.

# 7. The Role of Culture in Transformation to Professional Management

While it was relatively easy to introduce the model to the core team at the quarterly planning retreat, several internal issues would require resolution for the model to really work effectively. There were elements of Unitech's special culture which made it difficult to integrate the model into the organization. These were to come up many times before they could finally be resolved.

Unitech had an organizational philosophy that was different from most companies; the unfamiliarity with many of the elements of the Deming philosophy necessitated a greater degree of communication than may have been required in many other companies. Discussions at the planning meeting revealed that the Deming philosophy had in fact often been misunderstood, resulting in the misinterpretation of company values, practices and policies. The lack of a formal statement articulating the desired organizational culture further exacerbated the problem.

There were similar difficulties of understanding the accountabilities and responsibilities within self managed work teams. There were several situations where team members could take advantage of the system to suit their needs. This had several important implications for Unitech's competitive position within the industry, with more recent entrants threatening Unitech's industry leadership.

#### 8. The Use of Measurement in Planning and Performance Optimization

One of the key things that ultimately contributed to the success of Unitech's strategic innovation with planning and performance optimization was the development of detailed measurements for objectives. As one CPA once told an author of this paper, "What gets measured gets counted!" This means that the things which get measured are the ones which are most important in influencing people's behavior in organizations.

At Unitech Systems a great deal of time and care was put on the development of measurements of goals. In part, this is because Unitech is a highly intellectual organization with many well educated and highly technical people. In addition, this is the orientation of the Company Leader, who is very precise about terminology and the need for operational definitions.

The net result is that it led to a detailed set of measurements for every objective and goal. These measurements are critical to making the plan operational and specific.

## 9. Results and Benefits of the System at Unitech

The transition from entrepreneurship to professional management at Unitech Systems remains a "work in progress". The strategic planning/performance optimization system at Unitech also remains a "work in progress". Nevertheless, significant benefits (both tangible and intangible) have been realized.

First, there is a clarity and focus to the vision of the company, which did not exist to the same extent in the past. People understand that Unitech is in the information integrity business. This broader concept has replaced the more narrow focus upon specific information integrity products such as automated balancing and controls. People now also understand that its long term vision is to help create and ideally to dominate the information integrity space. This provides a 'big picture" context for short term decisions and actions. One of the company's "growing pains" was that a relatively large number of people did not understand "where the company was headed". This is no longer the case.

Another benefit of the planning/performance optimization process is greater focus on priority objectives. In a business there are always almost countless things to deal with. The Unitech plan provides focus upon the priority objectives. People understand what the priorities are and where the emphasis must be for the company to achieve its longer range vision.

A third benefit concerns the productivity and accountability of people. The specificity of the measurements has increased the extent to which people are accountable for specific results rather than just vague responsibilities. The plan provides a tool which can be used to monitor overall performance of the company as well as that in specific business units on a systematic basis.

Another benefit is that, as a result of the strategic innovations described above, there has been a cultural change at Unitech Systems. One dimension of this is that planning and performance review has become a way of life at Unitech. It is part of the "Unitech Way". This, in turn, has led to other significant aspects of cultural shift at Unitech. Specifically, at the commencement of this process the organization was operating in "silos", and there was a considerable degree of internal conflict. One of the byproducts of this process is "team building". By continually discussing the issues and working to resolve them, the leadership team tends to come together with a common mind set and focus. During this type of process, there is some turmoil as certain leaders are shown not to have bought in or committed to their own agendas. Over time, these people tend to leave or change, with the result that the company develops a more cohesive leadership team. This was the case at Unitech, and there was significant turnover. However, today the company has a core team of capable senior leaders who operate as a true team

One of the ultimate tests of a company is its financial performance. Venture Capital funded firms are generally characterized by emphasis on financial performance, short term results and exit strategies that yield the maximum return to the venture capitalists. Unitech has followed a different path. It has been focused upon building a strong business for the long term; it has been focused upon building the products and the infrastructure for the business, even if this took a great deal of time and investment.

Like other information technology companies, Unitech has had to deal with the collapse of information technology investment since the boom that led up to Y2K. Unitech is a privately held company, and financial information is proprietary. Nevertheless, we can say that the company is strong financially and has gotten stronger over the past five years in contrast to some of the larger companies in this space like Compaq, Hewlett Packard, and Sun Microsystems. The ultimate criterion for any company is: are we stronger at the end of a time period than at the beginning? The answer for Unitech Systems is definitely yes.

# 10. Challenges and Limitations

Although there were clear benefits for this process, there were also challenges to its implementations. One challenge was to build upon the existing systems and culture at Unitech and integrate this approach with what already existed. Unitech already had a planning process and its culture, as described above, was different from most companies. The challenge was to understand the Unitech way and to integrate the new concepts and methods into the existing approach. This was done by the two authors working closely together, so that we could create a synthesis of the two approaches. For example, in some cases we had to create new

constructs such as "performance optimization", rather than use a traditional construct which was not quite what we had in mind.

Another challenge of limitation was that this process took time, experimentation and patience. Management systems and culture are not things which can be purchased "off the shelf"; they need to be custom designed for a company. Like the installation of any complex system, people must be trained, and they must embrace the new way of doing things. This takes time and effort.

We also encountered some resistance to change. The organization as a whole was slow to embrace the changes. Some changes in team members occurred along the way. Some people left voluntarily and a few were terminated. It took quite some time for a team to be assembled that embraced the new Unitech way of doing things.

All in all, the process of development and application of the approaches described above took about 5 years. This required patience by the Company Leader and an investment of time and financial resources.

#### 11. Conclusion

This article has described how one company, Unitech Systems, has made the transition from an entrepreneurship to professional management. It also describes how selected management tools, including strategic planning and an innovative system of "performance optimization" have produced both cultural and tangible results in the business.

We also hope that the experience of Unitech will demonstrate that the transition from entrepreneurship to professional management is both necessary and possible.

#### References:

- Flamholtz, E. (1995), "Managing Organizational Transitions: Implications for Corporate and Human Resource Management", *European Management Journal*, 13 (1), pp. 39-51.
- Flamholtz, Eric G. and Aksehirli, Zeynep (2000), "Organizational Success and Failure: An Empirical Test of a Holistic Model", *European Management Journal*, 18 (5), pp. 488-498.
- Flamholtz, E. (2001), "Corporate Culture and the Bottom Line", *European Management Journal*, 19 (3), pp. 268-275.
- Flamholtz, E. and Hua, Wei (2002), "Strategic Organizational Development and the Bottom Line: Further Empirical Evidence", *European Management Journal*, 20 (1), pp. 72-81.
- Flamholtz, E. and Hua, Wei (2002), "Strategic Organizational Development, Growing Pains and Corporate Financial Performance: An Empirical Test", *European Management Journal*, 20 (5), pp. 527-536.
- Flamholtz, E. G. (2002/2003), "Towards an Integrative Theory of Organizational Success and Failure: Previous Research and Future Issues", *International Journal of Entrepreneurial Education*, 1 (3), pp. 297-319.
- Kurland, Stanford and Flamholtz, Eric G. (2005), "Strategic Organizational Development, Infrastructure, and Financial Performance: An Empirical Investigation". Unpublished working paper presented at the UCLA/Oxford University Research Conference on Empirical Research in Entrepreneurship, June 24-25, 2005.
- Flamholtz, Eric G. and Hua, W. (2003), "Searching for Competitive Advantage in the Black Box", European Management Journal, 21 (2), pp. 222-236.
- Flamholtz, Eric G. and Randle, Yvonne (2000), Growing Pains: Transitioning from an Entrepreneurship to a Professionally Managed Firm, Jossey-Bass Publishers, Inc.
- Flamholtz, Eric G. and Randle, Yvonne (1998), Changing The Game: Organizational Transformations of the First, Second, and Third Kinds, Oxford University Press (1998).
- Tushman, M. L., Virany, B. and Romanelli, E. (1985), "Executive Succession, strategic reorientation, and organizational evolution: The mini-computer industry as a case in point", *Technology in Society*, 7: pp. 297-313.