

## BEYOND SURVIVAL - A REENGINEERING CASE STUDY IN ACADEMIA

Amitabha Bandyopadhyay  
SUNY Farmingdale

### Introduction

Hammer and Champy define reengineering as “the fundamental rethinking and radical redesign of business process to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, service, and speed.”<sup>1</sup> It is an innovative and radical concept that touches core culture of an organization. It is not meant to fix short term problems or improving a particular aspect of an organization. The definition of reengineering points out four keywords for reengineering. They are Fundamental, Radical, Dramatic, and Process.

In doing reengineering, organizations must ask the most fundamental questions about the organization’s basic reason of existence. The latin word “Radix” means root. Radical redesign means getting to the root of things and not just making superficial changes. Reengineering isn’t about making marginal or incremental improvements but achieving radical or quantum leaps in performance. The fourth key word in the definition is “process.” Most of the organizations are organized as “task-based.” To make the reengineering work an organization must shift to “Process-based” format. Consideration of the “Whole” rather than “Part” is one of the prerequisites to be successful in a reengineering effort. A few of the major organizational elements that must be effected along with many other parts of the organization are: governance and management structures, organizational culture and climate, quality initiatives, measurement of customer satisfaction and overall service delivery.

Reengineering is distinctly different from traditional total quality management and continuous quality improvement. Reengineering triggers changes of many kinds -- anything associated with the process must be refashioned in an integrated way.

There are no industries today as difficult to change as in academia. In academia shared governance structure, faculty unions, accrediting agencies, student-faculty-industry--each-claiming-customerhip, and taxpayers interests makes reengineering confusing, difficult and interesting. Before examining the reengineering effort at the State University of New York, Farmingdale campus we need to look at the history of the college to understand the need and impact of reengineering.



## Background

The State University College at **Farmingdale**, which was established by the New York State Legislature in 1912, was originally known as the New York State School of Agriculture. Initially, the College offered a **four-year** agricultural program. In the decade following its founding, additional courses and programs were added in agriculture and ornamental horticulture. In 1920, the regular four-year offering was limited to a three-year program. During the depression years, the curriculum was reduced to two years. In 1946, to fulfill the increasing need for technically trained men and women during the post-war period, industrial-technical programs were added. In 1948, the college became a unit of the newly established State University of New York. In the 1950's the curricula of the Industrial-Technical Division emphasized practical aspects of the various technologies. Learning by doing was the dominant philosophy. Support courses in mathematics, the physical sciences, **english** and the social sciences were directly and specifically related to the student's major field of study and future employment. In the 1960's, the college began a decade of rapid expansion by tripling its enrollment and staff. In 1965, seven technology curricula achieved ECPD accreditation. In the 1970's unlike many other colleges, **Farmingdale** continued to experience growth in demand for its program. The freshman class was increased by 30% between 1970 and 1974. However, due to abrupt cancellation or indefinite postponement of the planned building program, combined with shortage of state funds in all other areas, the college was forced to reduce the size of its entering class by 22% between 1974 and 1976. In 1985, the SUNY Board of Trustees approved the addition of two upper division Bachelor of Technology degree programs.

### Initiation - Change in Missions

Frank **Cipriani** first came to SUNY **Farmingdale** in 1964. He was named President in 1978. One of President **Cipriani's** major priorities was raising the college's classification from an essentially lower division institution to a specialized four year college. The administration believed that change in mission will offer a way to differentiate **Farmingdale** from other institutions on Long Island. It was also an opportunity to define and focus the college's institutional niche.

Any change in the institutional mission would require approval from the SUNY Board of Trustees, the New York State Board of Regents, and ultimately the Governor. Changes in mission are very rare. In fact, there had been only one other such request in the past decade.

The college consulted with various representatives from business and industry who served on **Farmingdale's** dozens of Advisory Committees. The other SUNY campuses on Long Island - Stony Brook, Old Westbury, and the community colleges were kept fully informed from the early stages. Old Westbury expressed some concerns about the proposal since it was also **re-evaluating** its identity. All other campuses supported the mission charge.



President **Cipriani** made an initial proposal for the new institutional mission to the SUNY Board of Trustees in the fall of 1990. The main theme of the new mission was stated as: "Within SUNY, **Farmingdale** has the distinct mission of serving the traditional and non-traditional student through a balanced combination of associate and upper division baccalaureate degree programs; curricula awarding the bachelor's degree resemble in purpose those traditionally found at **Polytechnical** Colleges in their application orientations but also reflect the newly emerging fields of the applied sciences and **technologies**."<sup>2</sup> After considerable discussions and waiting, at the end of Fall 1991 the mission change was approved.

### Budget Situation -- Incentive for Change

At the same time that senior administrators were fashioning an expansive and forward looking vision for SUNY **Farmingdale**, the institution was facing some significant and persistent **budgetary** problems. **Farmingdale** had been forced to endure several years of budget reductions. Specifically, the college's 1989-90 base budget had been permanently cut by 14 positions. The 1990-91 base budget was permanently cut by an additional 7 positions. In September 1990, the college had submitted and original FY 1992 budget request of \$34,741,700 to SUNY's Central Budget Office. The New York State Legislature reduced this original request to \$33,543,000 in January 1991. In March, 1991, a finalized base budget of \$32,576,600 was approved for SUNY **Farmingdale** by the SUNY administration. (Table 1).<sup>3</sup> The unions representing faculty, professional, and classified staff developed the term "creeping workload: to characterize complaints from members who felt that they were working beyond and/or beneath their stated position description. Some faculty and administrators were answering their own telephones, typing their own grant proposals, and assuming other extra duties. Some inter-departmental hostility also began to surface as some departments lost staff positions through attrition, while other departments kept their full number of professional and support staff.

Table 1  
Enrollment and Budget Data - FY 1988- FY 1994

Year	Budget Appropriation From State	Employee FTE
1987-88	\$ 28,900,900	720
1988-89	30,251,100	721
1989-90	32,325,800	706.9
1990-91	33,219,200	696.9
1991-92	32,576,600	667.3
1992-93	32,692,100	667.3
1993-94	32,535,800	659.43



In a letter dated August 5, 1992, the SUNY System Provost Joseph Burke wrote<sup>4</sup> to Farmingdale's President Cipriani "All of us in the Central Administration are convinced that Farmingdale needs a total restructuring of its image, programs, enrollments, faculty, facilities and budgets in order to support its substantial mission change." The college was already ahead in the game. A plan was submitted to reduce full time equivalent (FTE) enrollment (Table 2).<sup>3</sup> Burke stated that Farmingdale will have to share in any expenditure reductions that the SUNY System must absorb during 1992-93, 1993-94, 1994-95; however, to assist in the restructuring and the reallocation of funding and positions to areas of primary need, Central Administration will hold in escrow approximately \$3.5 million in funds that would normally be withdrawn through the bench mark process based on an enrollment reduction of 1104 FTE. Based on trends and comparative data, most SUNY campuses are underfunded. Allowing Farmingdale to have the opportunity to retain funds that would have been lost due to a large enrollment reduction is unusual, and it places a special responsibility on Farmingdale for effective use of the resources. The SUNY Central Administration made these funds available to give Farmingdale time to implement a reallocation plan that supports the new mission. These funds, along with campus reallocations will allow to do the following:

- recruit new faculty
- update equipment required for existing and new programs; and
- implement a salary adjustment plan.

The salary plan is intended to eliminate the practice of faculty using teaching overload as a means of supplementing relatively low comparative salaries, thereby, allowing them to engage more in applied research and service activities compatible to the new mission of the college.

Table 2  
Farmingdale Proposed Enrollment Revisions

Academic Year	Original Campus Plan	Revision Proposed by Campus July 29, 1992	Difference from Original Plan	Difference from Planned 1992-93
1992-93	6,281	5,746	-535	-535
1993-94	6,149	5,177	-972	-1,104

Provost Burke's letter also stated: "The teaching load and salary adjustment plan for faculty should reflect the individual contribution necessary to make a successful transition to a highly respected institution recognized for quality throughout all of its programs and services, especially in centers of excellence in the applied sciences and technologies.



"The salary plan developed must be selective and it should not include across-the-board salary increases. For the restructuring to be successful, the salary adjustment plan must provide the means to enable participating faculty to make a full commitment to the total mission of Farmingdale."

### Downsizing Continues: Next Step in Reengineering

To support the new mission, the college needed further downsizing. Parallel cuts do not help the reengineering process. So decisions were made for vertical cuts or elimination of some programs. All the departments were asked to submit immediately departmental revised goals and objectives and a plan for implementation for the next five years. All departments and programs were evaluated on the basis of 1) Centrality to the mission of the college, 2) Enrollment trends, and 3) Cost of the program. On the basis of these three criteria the administration decided to eliminate 1) the department of Early Childhood, 2) the department of Office Management, 3) the department of Veterinary Science, and 4) a program called Automotive Service in the department of Automotive Technology. A total of twenty three faculty and staff positions were eliminated.

### Reinvestment Plan: A Step towards a Cultural Change

A major step in a reengineering process is to change the culture in an organization. Farmingdale being a two-year college for such a long time - the organizational culture resembled more of a community college than a four-year college. Faculty used to teach overload course(s) to supplement their income. The commitment towards scholarly pursuit was less than desirable because of a number of reasons. The administration along with faculty governance and the faculty union drew up a plan to address the cultural change in Farmingdale.<sup>5</sup> This reinvestment plan meant for Farmingdale's faculty and professional staff to implement a salary adjustment plan so that faculty will no longer have to depend on extra service assignment freeing them to engage more fully in the total mission of Farmingdale.

### Reinvestment Process: Implementing Reengineering

All full-time academic and professional employees were eligible to participate in the reinvestment plan. Those who wished to participate in this plan developed proposals which outline a commitment to Farmingdale consistent with accepted definitions of scholarship. The proposal described broad areas within the proposer's discipline that might be both multi-faceted and flexible in nature. Proposals were reviewed by a departmental committee whose membership included the chair of the department and one elected member for each three faculty or fraction thereof. The departmental committee verified, but did not rank, the scholarly nature of a proposal. This committee returned to the originator any proposal deemed not scholarly with advice on improving the proposal. Proposals submitted followed a standardized format. These proposals were then submitted to a school committee. The School Committee consisted of the dean and one departmentally elected representative from each academic department.



The School Committee reviewed and ranked them and forwarded to the academic vice-president. The academic vice president identified all accepted proposals. Academic and professional employees whose proposals were accepted for implementation were no longer able to earn extra-service pay at Farmingdale through additional class assignments. The participants received a permanent adjustment to their annual base salaries from \$7,200 to \$8,000 depending upon their rank.

### Conclusion

The effects of the reengineering effort can be felt in every aspect of campus life at Farmingdale. A center of excellence in technology transfer was established. Farmingdale subsequently won over two million dollars in a grant from NSF under advance technology reinvestment program. A part of the fund is being used to experiment with distance education and other modes of technology education delivery system. A group of faculty members is experimenting with "process" education. Another group is deeply involved in enhancing the core curriculum. The college tenure committee is looking at the criteria and procedure in the new light of a four-year college. These are just some of the examples. A small college like Farmingdale cannot be all things to all people. One needs to focus on a well articulated mission and needs to believe in that mission. The University and its Trustees allowed Farmingdale to develop new opportunities and a blueprint for growth. Farmingdale is the only state-operated campus within the last four decades to have gone from a two-year college to a four-year college. The college currently offers eight Bachelor degree programs along with associate degree programs and half a dozen Bachelor level programs are in various stages of preparation/approval.

### Bibliography

- <sup>1</sup>Hammer, Michael, James Champy, Reengineering the Corporation, Harper Business, New York, 1993.
- <sup>2</sup>College Catalog 1991-92 SUNY Farmingdale, Farmingdale, 1990.
- <sup>3</sup>Honan, James P. and Lewison Leun, Strategies for Dealing with Limited Resources. Case Study: The SUNY College of Technology at Farmingdale, Harvard Graduate School of Education, Cambridge, 1992.
- <sup>4</sup>Burke, Joseph C., Letter to President Frank A. Cipriani dated August 5, 1992, Albany, 1992.
- <sup>5</sup>Joint Labor-Management Agreement on the SUNY Farmingdale Reinvestment Plan, Farmingdale, 1993.

### Biography

AMITABHA BANDYOPADHYAY - is an Associate Professor and Chairman of Construction Management Technology and Architecture Engineering Technology at SUNY Farmingdale. Dr. Bandyopadhyay holds a Ph.D. in Civil Engineering from Penn State University. He is a member of ASCE, ASEE, ASA, and New York Academy of Science. He is listed in American Men and Women of Science.

