From Critical Success Factors into Criteria for Performance Excellence – An Organizational Change Strategy

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Abstract

As organizations learn to deal with significant change, research suggests a link between critical success factors and the need to utilize a more comprehensive framework by which the organization can continue on its quest for excellence. By utilizing a combined quantitative and qualitative research methodology and focusing on a single case study dealing with a Decision Support System, this paper examines that link. Organizations that go through a significant change transformation need to look beyond the critical factors for success and implement a strategy to continue their quality journey. Towards this end, developing a framework based on the Malcolm Baldrige National Quality Criteria for Performance Excellence is explored in-depth.

From Critical Success Factors into Criteria for Performance Excellence – An Organizational Change Strategy

How can an organization know that change will be worthwhile, effective, and successful? How can an organization evaluate the transformation of, and the impact on, itself resulting from a significant change such as the implementation of a Decision Support System (DSS)? The Malcolm Baldrige National Quality (MBNQ) Criteria for Performance Excellence is suggested as a potential tool to aid in this regard. Although these criteria do not spell out specific metrics to be used, they do provide a foundation and perhaps a better perspective on how an organization can approach the measurement of significant issues that impact organizational and cultural transformation.

A combination of both quantitative and qualitative methodology is used to investigate the transition from critical success factors, related predominately to localized significant change, to criteria for performance excellence. The research methodology confirms the successful change transformation, identifies the success factors in doing so, and points out the need for a more comprehensive framework by which the organization can continue on its quest for excellence. It is from this framework that a recommendation is made to employ a recognized tool set such as the Baldrige Criteria for Performance Excellence.

Although the emphasis is on a single organization dealing with a single significant change (e.g., the implementation of a DSS), there is the potential for these insights to be more broadly applicable. This in turn suggests the need to consider an action plan that will go beyond dealing with just a single significant change transformation.

Change and Significant Change

In today's environment, it is considered inevitable for organizations to undergo constant change (Roach & Bednar, 1997; Siegal, Church, Javitch, Waclawski, Burd, Bazigos, Yang, Anderson-Rudolph, & Burke, 1996; Romanelli & Tushman, 1994). Most of these changes are due to variables,

either internal or external, that require a response in order to stay productive and competitive. Change is happening constantly and in most cases is absorbed by the organization through minor adjustments to the tactical (daily) action plan (Roach et al., 1997). Even in nature, change is evolutionary and recognized as a relative constant in fundamental realities throughout the course of history (Huning, 1999). In the ongoing quest to be competitive, organizations are looking at, and are being exposed to, more comprehensive change. This type of comprehensive change is referred to as significant if it requires that an enterprise must respond in order to maintain its competitive advantage.

One may also describe significant change as any change where there is impact on the enterprise due to some radical organizational adjustment. Significant change is seen as having impact on the financial health of the operation and is often referred to as strategic in nature. This change is also considered to be morphogenetic, meaning that it takes on the nature of creating new forms, and it is permanent and pervasive (Roach et al., 1997). It can be considered frame breaking, culture changing, transforming, radical, and revolutionary, where one or all of the four components (people, tasks, technology, and structure) are at the impetus (Carr, 1994). Both Siegal et al. (1996) and Palvia & Chervany (1995) provide clarification on Lewin's fundamental description of change transformation within an organization by going through three phases: un-freezing, moving, and refreezing (cited by Siegal et al., 1996; Palvia & Chervany, 1995). It is from this perspective that one can examine the potential success of a change within the organization. Unfreezing is the recognition of potential opportunities that can be gained from the change. This is followed by the moving phase which involves the actual development aspects, and finally the refreezing phase which attempts to support and reinforce the change being incorporated within the enterprise (Palvia & Chervany, 1995).

Through the examination of the introduction of a Decision Support System (DSS) within an organization, the factors that maximize success can be examined. Mallach (1994) identifies a DSS as an information system having the following common factors: it is used by managers; it is used to make decisions; it is used to support people, not replace them; and it deals with either semi-structured or unstructured decisions, utilizes data in a database, and incorporates the use of models. Bhargava, Suresh, and Herrick (1999) define Decision Support Systems as software applications that allow the user to formulate a solution using some type of scientific or analytical algorithm. A more simplistic definition is provided by Wrenden (1997), who states that a DSS is a set of software applications that allows the end user to investigate the relationships that exist within huge volumes of data, in order to aid in making better decisions.

A change such as the implementation of a DSS can be the spark that initiates another change, not necessarily predictable, which in turn starts a chain reaction of change (Roach et al., 1997). The question is, can the leadership have a positive influence in some way on the initial spark and guide the process. The chain reaction of change could then be focused in a positive way. In essence, the goal of the change transformation is to alter basic assumptions currently held in esteem by the organization, in favor of some altered version that leadership has deemed worthy (Roach et al., 1997). Through the review of a single incident such as implementing a DSS, one can gain insight as to why it is imperative that leaders look at formulating an overall strategy by which to guide the organization through ongoing change.

Critical Success Factors to Criteria for Performance Excellence

The DSS is a decision support system, not a decision maker. The ability to measure benefits for innovation can move from a quantitative to a more qualitative measure by taking into account the human interaction factor

within the DSS implementation. One might examine, for example, how the DSS is actually utilized and benefits the enterprise. Guimaraes, Igbaria, and Lu (1992) suggest that the success factors for a DSS can be categorized into four major areas: the implementation process, the business tasks involved, the decision makers, and the nature of the DSS. Averweg and Erwin (1999) discuss the success of implementing a DSS identifying guidelines for a successful implementation using "Critical Success Factors" (CSF), many of which overlap the findings of other researchers. A prescribed list of critical success factors for the implementation of a DSS, and for dealing with overall change, has been identified and is presented in Table 1(P. Weber & J. Weber, 2001; Graetz, 2000; Averweg & Erwin, 1999; Hotek & White, 1999; Underwood-Stephens & Cobb, 1999; Rothwell & Kazanas, 1998; Turban, 1996; Palvia & Chervany, 1995; Rouda & Kussy, 1995; Guimaraes et al., 1992).

Research supports that even though some of the factors stated above may influence success, the factors having the most influence usually stem from the early stages of the process (including the design), which in turn supports early user buy-in and the identification of a champion (McCune, 1999; Mentzas, 1996; Palvia & Chervany, 1995; Kivijärvi & Zmud, 1993; Guimaraes et al., 1992; Sage, 1981). It is important to not only evaluate the transformation solely by the Critical Success Factors noted in Table 1, but perhaps to consider other influences such as timing and overall communication.

Combining these critical success factors with the "Unfreezing, Moving, and Refreezing" theory of Palvia and Chervany (1995), one can look at the success or failure of a proposed DSS as depending upon how well the change process within the enterprise is managed. The Malcolm Baldrige National Quality "Criteria for Performance Excellence" can be introduced to suggest a framework by which an organization can manage their change processes. More specifically these criteria can complement an

Table 1. Critical Success Factors - Defined		
Factor Name	**Importance**	**Definitions**
Top Management Support	Critical	Active and visible support from the management of the organization, often in the form of a champion for the application.
User Training	Critical	Clear demonstrations as to how to use an application.
Perceived Utility	Critical	Belief by users of the DSS that it is important and has impact on the success of the organization.
Planning and Analysis*	Critical	Evaluation of the gap between where the organization is now and where it would like to be. Examination of all possible influencing variables.
Assessment	Critical	Evaluation of the effectiveness of change.
Comprehensive Communication	Critical	Communication of the change message to all levels throughout the organization.
Perception of Organizational Readiness to Deal with Change	Critical	Staff perceptions of organizational readiness to deal with change in terms of whether they will work to either undermine or facilitate a successful effort.
Curriculum dealing specifically With Change	Critical	Prescribed yet flexible instruction plans (roadmaps) based on contemporary ideas and theories by which the organization attempts to educate its staff about the important change issues dealing with both the technical and human aspects.
Perception of Personal Gain	Critical	Perception of how an individual's participation would provide any personal gain to himself or herself by being associated with the change or the process.
User Involvement	Important	Reality in which the ownership of the DSS is in the hands of the end-users.
Information Source	Important	Reality in which data are current and readily available.
Level of Managerial Activity Being Supported	Important	Location in the organizational structure where the DSS proves to be the most helpful and ultimately used.
User Information Satisfaction	Important	Satisfaction with the final product and its acceptability.
Relative Use	Important	Level of use of the DSS.
Goal Realization	Important	Degree to which the expectations for the DSS have been met
Ability to Utilize the DSS	Important	Overall ability of the end-user to utilize the DSS.

An important element of this factor is the perception of fairness and justice in the management of the entire change process.

organization's methodology for implementing a DSS by providing, first a clearer understanding of how an organization might deal with significant change, and second, a method for gauging success as a measure of how changes impact the organization.

The Malcolm Baldrige National Quality (MBNQ) "Criteria for Performance Excellence" have evolved through time. Initial development work on the Awards began in 1983 and a milestone was reached in 1988 with the first presentation of the Malcolm Baldrige National Quality Awards (MBNQA). The award has now grown to be recognized as the highest honor for business excellence (MBNQA, 1998). Although the award is indeed a worthy trophy, the program itself serves a vital purpose in emphasizing the importance of quality in the workplace and improving upon the enterprise's quest for the competitive advantage. The MBNQA "Criteria for Performance Excellence" (CPE) prescribes, in a descriptive way, the seven major categories felt to be of importance to an enterprise. This breakdown, minus the descriptions, is provided in Appendix A. It is postulated that the critical success factors for a significant change, such as a DSS implementation, identified by Averweg and Erwin (1999) and supported by others, can be linked both directly and indirectly to the CPE. All of the critical success factors dealing with significant change identified in Table 1 can be compared with the "Criteria for Performance Excellence" as presented in Table 2.

In comparing some of the critical success factors, such as the first three listed in Table 2, the elements of top management support are given clarification in the "Leadership" section of the CPE. Top management support delves into how the leaders not only provide the support, but also deal with values, expectations, communication, and review. User training is specifically addressed in "Human Resource Focus," and is also dealt with in "Process Management." Perceived utility is viewed in potentially three areas, "Information Analysis," "Process

Table 2. Critical Success Factors Compared to Criteria for Performance Excellence

Critical Success Factor	Criteria for Performance Excellence
Top Management Support	Leadership and Strategic Planning
User Training	Human Resource Focus and Process Management
Perceived Utility	Information Analysis, Process Management, and Business Results
Planning and Analysis	Strategic Planning, Information Analysis, Process Management, and Business Results
Assessment	Information Analysis, Process Management, and Business Results
Comprehensive Communication	Leadership, Strategic Planning, Human Resource Focus, and Process Management
Perception of Organizational Readiness to Deal with Change	Leadership, Strategic Planning, and Process Management
Curriculum Dealing Specifically with Change	Strategic Planning, Human Resource Focus, and Process Management
Perception of Personal Gain	Human Resource Focus and Business Results
User Involvement	Human Resource and Customer & Market Focus
Information Source Results	Information Analysis and Business
Level of Managerial Activity Being Supported	Information Analysis, Human Resource Focus, and Process Management
User Information Satisfaction	Customer & Market Focus and Human Resource Focus
Relative Use	Strategic Planning and Process Management
Goal Realization	Business Results
Ability to Utilize the DSS	Strategic Planning and Process Management

Management," and "Business Results." It is also recognized that this factor, as well as all others, could be looked at in almost all CPE categories depending upon the nature of the DSS. A more in-depth presentation linking all sixteen identified "Critical Success Factors" to the "Criteria for Performance Excellence" is left for further discussions. In addition, even the highly desired, if not required, need for designers and users to cooperate during the DSS implementation process is addressed in the CPE in both "Human Resource Focus and "Process Management." The CPE goes further in attempting to also suggest not only looking at support from leadership, but also between peers. Bhargava et al. (1999) re-emphasize the importance of this aspect in pointing out that the future of decision-making is moving in the direction of using group forums. These particulars will only serve to compound the ongoing need to promote, support, encourage, and monitor cooperative efforts and coordination since these are also recognized as key elements for group decision support systems (Mentzas, 1996).

Methodology and Findings

The Facilities Planning and Management operations at Iowa State University went through the implementation of DSS, its Computerized Facilities Management System called FAMIS (Facilities Administrative Management Information System). The FAMIS system captures vital daily operational activity and allows management the functionality to both monitor and analyze this information, and aid in making both tactical and strategic planning decisions. The process started in late 1997 with the expectation to replace the organization's aging and non-Y2K-compliant legacy Computerized Facilities Management System. The new Computerized Facilities Management System went live in July 1999.

Now that the system has been in place for several years, a thorough post-implementation review of the process can be done. To explore more in depth, the use of Critical Success

Factors and the migration to Criteria for Performance Excellence a survey was conducted of the staff who were both employed at the time of implementation and who now use the system. The first step was a self-administered questionnaire patterned after typical, structured interview questions. This was judged to be the most effective way to collect preliminary data and provide confidentiality (see Appendices B & C).

From this survey response, the data were analyzed with descriptive statistics looking at the means, standard deviations, and the skew (see Appendices B & C). Results confirmed that the implementation of the DSS was a significant change to the organization and that the sentiments in the organization are that it was successful. Confirmation of the presence and importance of the majority of the "Critical Success Factors" identified in Table 1 are supported by the quantitative findings from the survey where mean values are greater than "3.4." The survey instrument was judged to be reliable based on Chronbach's alpha ($\pm = .89$) for the survey data. A qualitative research methodology was used to further supplement and explore the findings of the quantitative results. This methodology not only provided a plausible research framework to complement the results of the quantitative survey analysis (Glesne, 1999; McCutcheon & Meredith 1993; Eisenhardt, 1989; and Yin, 1981), but also provided the segue into exploring potential linkages between the use of "Critical Success Factors" and "Criteria for Performance Excellence." The confirmation of the critical success factors listed in Table 1 was established by using the qualitative data single subject case study methodology (McMillan & Schumacher, 2001; McCutcheon & Meredith 1993). The methodology employed emphasized the examination of organizational documentation combined with ongoing observations (McMillan & Schumacher, 2001; Glesne, 1999; McCutcheon & Meredith, 1993; Eisenhardt, 1989; and Yin, 1981). The use of a qualitative methodology not only confirmed the presence of all the

"Critical Success Factors," but also aided in exploring the organization's initial use of the Criteria for Performance Excellence.

Further investigation uncovered that parallel to the implementation and companion processes, staff were encouraged to attend continuous quality improvement training. There was no demonstrated link between this training and the specific significant change initiative that the organization had experienced, nor was there any attempt to relate the training back to any practical application in the work environment. The linkage of training from these sessions back to the actual work environment was lacking, thus devaluing the potential gain from the effort. Since that time, the organization has concentrated efforts on promoting the more extensive use of the Baldrige criteria as a framework by which staff can examine individual operating units and related processes for overall improvement. From these observations the importance of combining a curriculum with incentives becomes apparent. The curriculum introduces and encourages staff to utilize the CPE tools to promote change, while appropriate incentives are useful in promoting continuous follow-through. A theme echoed by many in the organization was that without this buy-in, no matter how well a program is provided, it is unlikely that the practices endorsed would be applied.

Limitations of This Research

Some areas of potential concern that need to be taken into account are the sample size, respondent biases, lack of a control group, and employee-employer relationships. Another concern is that a self-reporting questionnaire is recognized as being subjective rather than objective. The author attempts to address some of these by using a combined quantitative and qualitative research approach. When and where it was feasible, confirmation from more than one source was sought to verify and possibly triangulate findings. While the data supported the findings that the identified critical success factors were

indeed present in the implementation of the Decision Support System for the Facilities Planning and Management organization, caution may need to be exercised in extending these findings to an organization outside of the institution as well as outside of higher education. Although emphasis was on the "Critical Success Factors," indications of "Criteria for Performance Excellence" were found to be present. It was discovered that the majority of the staff within the organization at the time did not have an understanding of the Malcolm Baldrige National Quality Awards or the CPE. This made it difficult to specifically link and accurately measure the overall influence that the CPE had from the perspective of the staff. Finally, it is also recognized that the organization did not have any formal metrics for measuring the extent of any of the "Critical Success Factors" or the "Criteria for Performance Excellence" with regards to this project.

Implications and Conclusion

The MBNQ "Criteria for Performance Excellence" do not provide the actual measures an enterprise needs to use to obtain success, nor does it provide a specific methodology. An organization must determine these factors for itself based on the multiple influential variables that the enterprise deems valuable. These factors and criteria need to involve the staff of the enterprise. It is through a curriculum of education that an organization can introduce its desired change philosophy by which the individual staff person gains while the organization as a whole benefits. The organization must also determine the methodology as well as the actual metrics regarding how it will determine success within its environment. Some of the critical success factors to implement a DSS, or deal with significant changes that have been identified and suggested, offer the enterprise some guidance in change transformation. There is no panacea that can be offered with respect to measuring any of the critical success factors, nor is there a magic formula to mix these critical success factors, or

any others, to suggest the best plan of action. Investigations only point out that the perceived presence of critical success factors is important. The actual metrics must be determined by the enterprise, based upon what the enterprise views as being most important. The "Criteria for Performance Excellence" suggest areas of sensitivity, provide a framework that encourages the enterprise to look at its processes, aid in determining critical success factors, and most important of all, put emphasis on going through the exercise. The greatest gain, however, is through actually doing it and harvesting the most from its investments.

References

Averweg, U.R, and Erwin, G.J. (1999). Critical Success Factors for Implementation of Decision Support Systems in South Africa. *Proceedings of the 32nd Hawaii International Conference on System Sciences*, IEEE, 1-10.

BNQP — Baldrige National Quality Program – (2002). Criteria for Performance Excellence. *U.S. Department of Commerce – Technology Administration – National Institute of Standards and Technology.* Retrieved March 8, 2003 from the World Wide Web: http://www.quality.nist.gov/bcpg.pdf.htm.

Bhargava, H., Suresh, S., and Herrick, C. (1999, March). Beyond Spreadsheets: Tools for Building Decision Support Systems. *Computer*, *32*(3), 31-39.

Carr, A. (2000). Critical Theory and the Management of Change in Organizations. *Journal of Organizational Change Management*, *13*(3), 1-11.

DiBello, L. (1997). Measuring Success in Non-Trivial Ways: How Can We Know That a DSS Implementation Has Really Worked. *1997 International Conference on Systems, Man, and Cybernetics (IEEE)*, 2204-2209.

Eisenhardt, K.M. (1989). Building Theories from Case Study Research. *Academy of Management Review*, *14*(4), 532-550.

Glesne, C. (1999). *Becoming Qualitative Researchers*. New York: Addison Wesley Longman.

Graetz, F. (2000). Strategic Change Leadership. *Management Decision*, *38*(8), 550-564

Guimaraes, T., Igbaria, M. and Lu, M. (1992, March/April). The Determinants of DSS Success: An Integrated Model. *Decision Sciences*, 409-429.

Hotek, D., White, M. (1999, Winter/Spring). An Overview of Performance Technology. *The Journal of Technology Studies*, *XXV*(1), 43-50.

Huning, A. (1999, Summer). Preferences and Value Assessments in Cases of Decision Under Risk. *Society for Philosophy & Technology*, *4*(4), 15-20.

Kivijärvi, H., and Zmud, R. (1993). DSS implementation activities, problem domain characteristics and DSS success. *European Journal of Information Systems*, *2*(3), 159-168.

Mallach, E. (1994). *Understanding Decision Support Systems and Expert Systems,* Richard D. Irwin, Inc.

MBNQA — Malcolm Baldrige National Quality Award – Ten Years of Business Excellence for America, 1998, Retrieved March 8, 2003 from the World Wide Web: http://www.nist.gov/public_affairs/baldrdist.pdf

McCutcheon, D.M., and Meredith, J.R (1993). Conducting case study research in operations management. *Journal of Operations Management,* (11), 239-256.

McCune, J. (1999, July/August). Data Warehouses. *Beyond Computing*, *8*(6). Retrieved March 8, 2003 from the World Wide Web: http://www.beyondcomputing.com/archive/1999/06-99/soft.html.

McMillan, J.H., Schumacher, A. (2001). *Research in Education*. New York: Addison, Wesley Longman

Mentzas, G. (1996). Team coordination in decision support projects. *European Journal of Operational Research, 89*(1), 70-85.

Palvia, S. and Chervany, N. (1995). An experimental investigation of factors influencing predicted success in

DSS implementation. *Information & Management*, (29), 43-53.

Roach, D., & Bednar, D. (1997, June). The Theory of Logical Types: a Tool for Understanding Levels and Types of Change in Organizations. *Human Relations*, (50), 671-99.

Romanelli, E., and Tushman, M. (1994). Organizational Transformation as Punctuated Equilibrium: An Empirical Test. *Academy of Management Journal*, *37*(5), 1141-1166.

Rothwell, W., Kazanas, H. (1998). *Mastering The Instructional Design Process: A Systematic Approach* (2nd ed.), San Francisco: Jossey-Bass Publishers.

Rouda, R., Kusy, M. (1995). Development of Human Resources – Part 2: NEEDS ASSESSMENT the First Step. *Technical Association of the Pulp and Paper Industry*, Retrieved March 8, 2003 from the World Wide Web: http://alumni.caltech.edu/~rouda/T2_NA.html

Sage, A. (1981, September). Behavioral and Organizational Considerations in the Design of Information Systems and Processes for Planning and Decision Support. *IEEE Transactions on Systems, Man, and Cybernetics,* SMC-*11*(9), 640-677.

Siegal, W., Church, A., Javitch, M., Waclawski, J., Burd, S., Bazigos, M., Yang, T., Anderson-Rudolph, K., Burke, W. (1996). Understanding the Management of Change, An Overview of Managers' Perspectives and Assumptions in the 1990s. *Journal of Organizational Change Management, 9*(6), 1-20.

Turban, E. (1996). Implementing Decision Support Systems: A Survey. *1996 IEEE International Conference on Systems, Man, and Cybernetics*, *4*, 2540-2545.

Underwood-Stephens, C., Cobb A. (1999). A Habermasian Approach to Justice in Organizational Change Synthesizing the Technical and Philosophical Perspectives. *Journal of Organizational Change Management*, *12*(1), 1-11.

Weber, P., Weber, J. (2001). Changes in Employee Perceptions During Organizational Change. *Leadership & Organizational Development Journal*, *22*(6), 291-300.

Wrenden, N. (1997, May). A Desktop Window on Corporate Data*, Beyond Computing*, 6(4), Retrieved March 8, 2003 from the World Wide Web: http://www.beyondcomputing.com/archive/1997/5-97/soft.html.

Yin, R.K. (1981). The Case Study Crisis: Some Answers. *Administrative Science Quarterly,* (26), 58-65.

See pages 9-11 for Appendicies

Appendix A
Baldrige Criteria for Performance Excellence (BNQP, 2002)

1. <u>Leadership</u>
   - 1.1. Organizational leadership
     - a. Senior Leadership Direction
     - b. Organizational Performance Review
   - 1.2. Public Responsibility and Citizenship
     - a. Responsibilities to the Public
     - b. Support of Key Communities

2. <u>Strategic Planning</u>
   - 2.1. Strategy Development
     - a. Strategy Development Process
     - b. Strategic Objectives
   - 2.2. Strategy Deployment
     - a. Action Plan Development and Deployment
     - b. Performance Projection

3. <u>Customer and Market Focus</u>
   - 3.1. Customer and Market Knowledge
   - 3.2. Customer Satisfaction and Relationships
     - a. Customer Relationships
     - b. Customer Satisfaction Determination

4. <u>Information and Analysis</u>
   - 4.1. Measurement and Analysis of Organizational Performance
     - a. Performance Measurement
     - b. Performance Analysis
   - 4.2. Information Management
     - a. Data Availability
     - b. Hardware and Software Quality

5. <u>Human Resource Focus</u>
   - 5.1. Work Systems
   - 5.2. Employee Education, Training, and Development
   - 5.3. Employee Well-being and Satisfaction
     - a. Work Environment
     - b. Employee Support and Satisfaction

6. <u>Process Management</u>
   - 6.1. Product and Service Processes
     - a. Design Processes
     - b. Production/Delivery Processes
   - 6.2. Business Processes
   - 6.3. Support Processes

7. <u>Business Results</u>
   - 7.1. Customer Focused Results
   - 7.2. Financial and Market Results
   - 7.3. Human Resource Results
   - 7.4. Organizational Effectiveness Results

Appendix B – Survey Summary

Section I questions deal with the benefits of FAMIS as a change in the FP&M **organization**.
It addresses the question of how FAMIS has helped the organization.

```
Strongly                                        Strongly
Disagree      Disagree        Neutral    Agree    Agree      (SAMPLE)
1 -------------------2 -------------------3 -------X-------4 ---------------5
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Question Number	Description	CSF	Mean	STD	Skew
1	*Do you feel that the implementation of FAMIS was a significant change for the organization?*	Change	4.29	.47	-1
2	*Do you feel that the implementation of FAMIS Within FP&M was successful?*	Successful Goal Realization	3.92	.38	-.3
3	*Do you feel that a strategy was used for the implementation of FAMIS?*	Plan & Analysis	3.84	.57	-.4
4	*Do you feel that you were informed of the strategy to implement and use FAMIS?*	Communication	3.67	.65	+.19
5	*If a strategy were used, do you feel that you were part of that strategy?*	Involvement (early)	3.25	.85	-1.5
6	*Do you feel that as a user you were sufficiently involved with the implementation?*	Involvement	3.63	.77	-.75
7	*Do you feel that the organization was prepared adequately to handle this type of change?*	Readiness	3.42	.63	-.23
8	*Do you feel that the way the organization implemented FAMIS followed a method that could be used in the future?*	Plan & Analysis	3.57	.71	-.48
9	*Do you feel that FAMIS <u>overall</u> serves the organization well in what it is suppose to do?*	Utility	3.98	.66	-.18
10	*Do you feel that FP&M Administration was supportive of the implementation?*	Admin. Support	4.43	.43	-.53
11	*Do you feel your direct supervisor was supportive of the FAMIS implementation?*	Admin. Support	4.11	.70	-.81
12	*Do you feel that the use of FAMIS aids the Organization in accomplishing its mission?*	Utility & Info Source	4.20	.64	+1.14
13	*Do you feel that FAMIS provides valuable Information to the organization?*	Utility & Info Source	4.32	.56	4.68
14	*Do you feel that user training for FAMIS was adequate?*	Training	3.58	.80	+.02
15	*Are you aware of how the organization has and continues to measure whether the use of FAMIS is successful?*	Assessment	2.5	.82	-1
16	*At implementation startup, do you feel the seasonof the year had impact?*	Startup	3.23	1.16	-1.18

Please rank the top five (5) attributes in this Section I! 1 (highest rank) and 5 (lowest rank).

Appendix C – Survey Summary

Section II questions deal with the benefits that you have **personally** or could have gained by FAMIS being implemented and used in FP&M. It addresses the question of your personal gain.

Question Number	Description	CSF	Mean	STD	Skew
1	*Do you feel that there was adequate communication about the implementation and the progress?*	Communication	3.67	.74	-.16
2	*Do you feel that there was adequate training for the staff in how to implement this type of a change in the organization?*	Curriculum	3.39	.80	-.24
3	*Did the gender of the FP&M organizational FAMIS coordinator have impact on your involvement?*	Gender	1.71	.71	+.97
4	*Do you feel that supporting the FAMIS implementation and use of FAMIS has aided your standing in the organization?*	gain	3.02	1.31	-.14
5	*Do you feel that FAMIS provides you valuable information to perform your job?*	Utility & Satisfaction	4.22	.73	-1.14
6	*Do you feel that the implementation and use of FAMIS has allowed some individuals within the organization to advance themselves?*	gain	3.44	1.04	-.44
7	*Do you wish you could have been more involved with the implementation and now the use of FAMIS?*	Involvement	3.02	.98	+.08
8	*Do you feel that your education, experience, and background were sufficient to deal with the implementation and use of FAMIS?*	Readiness	4.15	.68	-.94
9	*Do you feel that you have a clear understanding in how the organization deals with change of this nature?*	curriculum	3.35	.84	-.71
10	*Do you feel that the organization would allow you to become more informed on how it deals with change?*	support	3.62	.80	+.15
11	*Does the organization provide sufficient information and opportunity for staff to become more familiar with the organizational change process?*	curriculum	3.14	.89	+.36
12	*It would greatly benefit me personally if I were to become more knowledgeable in how the organization deals with organizational change like implementing FAMIS.*	curriculum	3.39	.86	-.19
13	*Do you feel that you have a sufficient knowledge in using FAMIS?*	Ability to Utilize	3.92	.67	.0
14	*Did the name of the software application "FAMIS" have impact on your involvement?*	name	1.70	.77	+1.1

Please rank the top five (5) attributes in this Section II! 1 (highest rank) and 5 (lowest rank).