

“Measurable Increases In Customer and Employee Satisfaction, Through Standardization And Continuous Improvement Processes At The Offices Of Landmark Graphics Corporations Global Technical Assistance Centers – A Historical Review”

Introduction

Landmark Graphics Corporation operates a global network of Technical Assistance Centers (TAC) that provides customer support for its complex scientific and engineering software applications. In 1997, management sought an operations model for its North America TAC that would:

- Assure increased customer and employee satisfaction.
- Use measurable processes and results.
- Provide the TAC with a framework for continuous improvement.

This paper follows a chronological format as it covers the ups and downs of implementing the new processes and procedures that led to certification by an industry wide recognized organization, - first for the North America TAC and subsequently around the globe. Emphasis herein is placed on demonstrating the measurable customer and operational benefits realized from the certification program. Those benefits include:

- Higher levels of customer satisfaction, including annual increases in overall customer satisfaction as measured by an annual customer service survey.
- Increased employee satisfaction as measured by retention rates and surveys.
- Reduced costs per call handled by the TAC, measured on a cost per call basis.
- Framework for managing the TAC operations and for continuous improvement in its Technical Support offering.

Discussion

1996 – Management Seeks Formula For Growing Technical Support Organization

In early 1996 the management of Landmark’s Technical Support operations was seeking a formula or operations model that would lead it to improved customer service, and increased employee satisfaction and retention rates. The model would also be used to help management clearly demonstrate the value that the Technical Support organization brought to Landmark’s business.

This was a time in North America when the concept of remote customer support for highly technical computer applications was gaining greater and greater acceptance. Many industries were immersed in fast paced efforts to improve efficiency and reduce costs through the implementation of computing systems. Reductions in telecommunications costs made long distance and international phone services economically more acceptable. The use of the internet for email communications and transfer of digital data beyond company firewalls was becoming more common and accepted. All of these factors were leading to an increased acceptance and application of remotely based technical support for computing issues.

Across the computing and services industry, those responsible for management of this relatively new method of service – remotely based Technical Support - were seeking a model for guiding their operations during a period of significant growth. One answer to that need came about through the formation of the Service and Support Professionals Association (SSPA) in 1989.¹ This industry association was formed among companies

that were highly interested in defining a business formula and following best practices for managing and operating customer support call centers.

1997 – Defining Industry Best Practices, Implementing New Processes

Landmark participated with 44 other SSPA companies as a sponsor member in the development of the Support Center Practices (SCP) Certification program.¹ That certification program has become the formula by which Landmark has guided the growth of its Technical Support offering.

By 1997 the SCP certification standards had been developed and agreed upon by the SSPA. The first certification requirements were divided into 11 criteria that included over 110 elements with specific measurable results. The following table shows the 11 criteria for SCP Certification Version 4.0 that were in effect for the SCP certification audits completed by Landmark in early 2003.¹ As shown, each criterion has a weighted impact on the overall audit. (See Figure 1.)

Figure 1
SCP Certification Version 4.0 Criteria

Criteria Name	Weighted Impact
1.0 Customer Feedback	20 %
2.0 Customer Relationship Management	16 %
3.0 Performance Metrics	10 %
4.0 Training Programs	10 %
5.0 People Programs	10 %
6.0 Corporate Commitment and Strategic Direction	8 %
7.0 Productivity Tools	8 %
8.0 Electronic Service Delivery	8 %
9.0 Total Quality Management	4 %
10.0 Research and Development Interface	2 %
11.0 Sales Interface	2 %

In 1997 management completed an evaluation of the North America (NAO) Support Center operation with the purpose of identifying those procedures already in place that would qualify for meeting the requirements for certification. More importantly, SCP recommended practices not already in place that could lead to improved customer service and / or increased employee satisfaction were identified. A prioritized plan for implementation of any such processes new to the NAO TAC was developed so that they could be implemented within the next 12 – 14 months.

In order to receive certification a support center must demonstrate a verifiable historical record of compliance with the various program elements and obtain a weight averaged score that exceeds a pre-established minimum value.¹ Therefore in order to build a historical record it was necessary for Landmark to begin preparations in 1997 for its first audit, which would be scheduled for the third quarter of 1998.

One certification element of particular significance requires measuring overall customer satisfaction via a survey that is sent to all customers. In order to qualify for certification, the Support Center must demonstrate an overall 80% customer satisfaction level.¹ Landmark had not previously conducted such a survey, therefore it was necessary to compose a customer satisfaction survey that followed certification requirements and to

implement the survey shortly so that the results could be compiled before the planned 1998 certification audit date.

This new process for Landmark provided an opportunity for management to collect data from the customers and to see the Support Center from the customer's point of view. Fortunately the results did show that the TAC received an acceptable level of overall satisfaction by its customers and therefore it should continue with the certification program. Since that time customer surveys continue to be conducted each year. Furthermore, an added benefit has been that these surveys have become a tool for other organizations within Landmark, such as Development, Training, Sales and Consulting to gain information on how customers perceive their services.

Interpretation and learning from the annual surveys have lead management to take actions toward meeting customer's expectations such as: changing telephone menus to offer "Quick Dial" options that reduce the time needed to reach a qualified analyst; adding new information to the Support web site such as a patch release matrix for all supported applications; and proactively engaging the users via automated email notifications of product patches and new releases.

1998 – Implementing Changes, North America TAC Awarded Certification

While dealing with an increasing case load in Customer Support, the management team began preparations for Landmark's first SCP Certification audit in the third quarter of 1998. There were various processes that needed to be implemented in order to comply with certification guidelines. Furthermore, much information on existing processes needed to be documented and analyzed to show compliance with audit requirements. For the Support Analysts this would become a time of significant change to their work environment. New operational procedures would be introduced and changes would be made to the way their performance would be measured. There would be a significant move to a more structured and monitored work environment. In order to make all of those changes easier for the analysts to accept and assimilate, management began a communications program on the certification and the benefits it would bring to the analysts and to Landmark's customers.

The first step toward winning the confidence of the Support Team for those changes was to seek out self motivated champions for certification from within the team. Management conducted informational meetings with all of the various work groups within the TAC with the goal of explaining the certification and the benefits it would bring to the analysts and to the customers. Following the meetings a call was made to the entire organization for those individuals who believed they would like to directly participate in the certification to come forward and get involved. The result was the formation of a team of people who volunteered to accept responsibility for the certification effort. Management then appointed a Certification Program Manager to lead the efforts of the volunteer team.

Under supervision of the Program Manager, the volunteer team divided responsibilities for obtaining and documenting compliance with the certification criteria amongst the team members. In the time leading up to the audit individuals responsible for distinct criteria or elements conducted informational meetings with the entire Support Team on the details of those elements. Individual champions took on the responsibility for implementing the changes necessary to comply with certification standards. The amount of acceptance and the great amount of change accomplished during the first part of 1998 demonstrates that the efforts of the volunteer analysts were successful at winning the support of their peers for the certification process, even though it meant significant change.

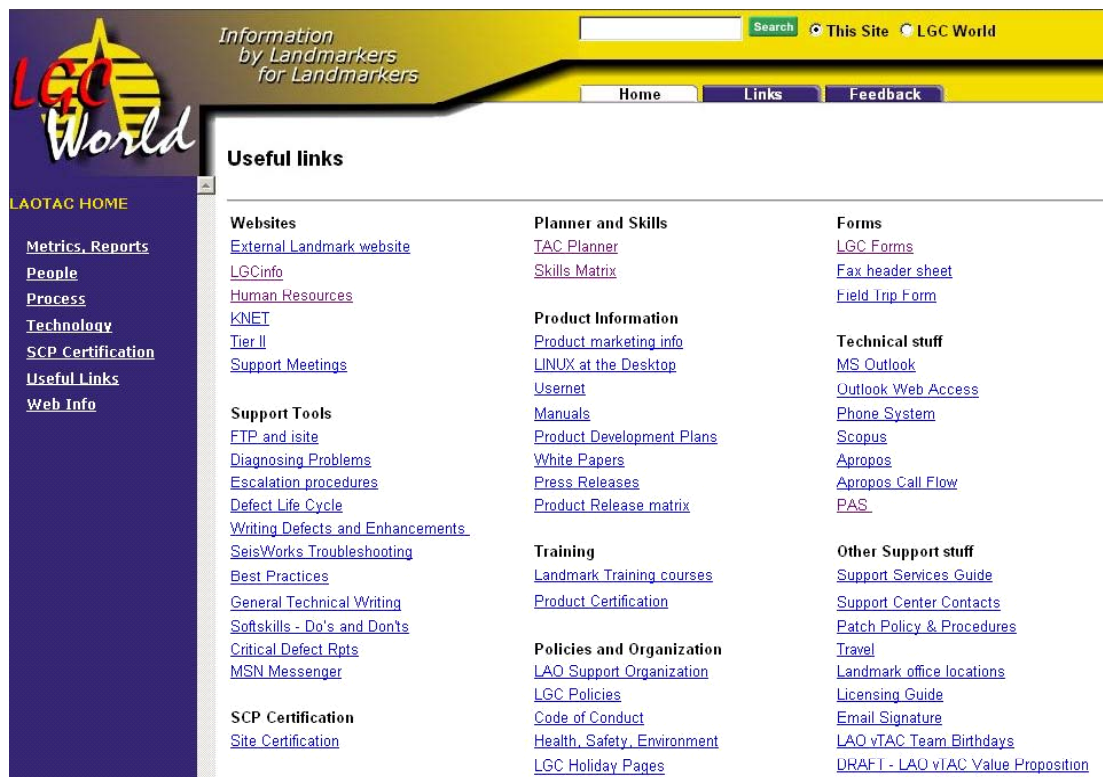
One of the more visible changes made to operations was the introduction of a computer based Automatic Call Dispatching (ACD) system. Acquisition of the ACD represented a significant investment on the part of management. Use of the ACD would mark a change in the way the clients interacted with Landmark and how the analysts conducted their work. Previously Dispatchers received customer calls and transferred them to available analysts. The ACD allowed the customers to use a telephone menu to indicate the service needed. The ACD made it possible for the analysts to proactively accept calls in their technical discipline. The end result was quicker and more efficient call routing to a qualified, available analyst. Nonetheless, this change represented a change in paradigm for the customers who were accustomed to having a person help them with their initial contact with the TAC. Over a period of months the acceptance level by the customers increased, as demonstrated by more and more callers opting to use the ACD telephone menu and not simply select the option to speak with the Dispatcher.

Management made it clear from the beginning that the reason for undergoing the certification audit was to improve TAC operational processes. The certification award itself was to be considered simply as recognition, not the reason for all the effort. As part of the certification process the TAC began to measure, document and analyze more and more information. It soon became apparent that the best way to manage all of this data was to use an electronic medium, that could be available to all. This practice has evolved so that by 2003, when all of Landmark's TACs certified, the use of internal web pages for reporting all operational and customer oriented metrics became standardized for all TACs (North America – NAO; Latin America – LAO; Europe, Africa and Middle East – EAME; Asia Pacific – APO).

A value added benefit of internal web based reporting is that information on customer service levels is available to the entire Landmark organization. For instance, before attending client meetings, now the Sales Team can review case volume, case resolution and customer satisfaction data about their clients. Also, the analysts can track and compare their individual statistics on customer satisfaction, case resolution time and case volume. Information on operational procedures, company policies, the team schedule, internal contacts and much more is available on-line to help the analysts meet their responsibilities. This has proved to be a highly efficient management communication tool. For an example of one of the web pages that contains many useful links to customer related and operational information see Figure 2.

Landmark's NAO TAC was awarded it first SCP Certification in 1998.

Figure 2
Example Of LAO TAC Web Page - Useful Information Links



1999 – A Year For Learning, Planning For Expansion Of TAC Certifications

The possibility of applying the certification experience to the other Landmark TACs was evaluated. Each region found itself dealing with distinct circumstances that would lead to a decision to follow or not follow the certification path at that time. Principally those circumstances were shaped by the level of telecommunications infrastructures in their region.

Telecommunications between Landmark's Weybridge, England based TAC and the Middle East and with Africa were improving. The EAME TAC was growing and strengthening its support team. It was decided that the EAME TAC would begin to organize its efforts for a certification audit in 2000.

Starting in the second half of 1999 the core team for support efforts for Latin America was moved to Houston, Texas so they could take advantage of the more advanced level of telecommunication services between most points in Latin America and the United States. They would continue to work under a virtual team model with the existing Technical Support analysts distributed across Latin America. No plans for certification were made at that time.

The APO TAC was also developing under the virtual team model, while dealing with their own set of problems related to a limited telecommunications infrastructure. The core team was based in Perth, Australia and was strengthening its presence in Malaysia and Indonesia. No plans for certification were made in 1999.

The NAO TAC continued to make improvements to its processes and procedures. It was awarded a second certification in 1999.

2000 – Measuring Customer Satisfaction, Second TAC Certified

In January 2000 the NAO TAC received its third consecutive certification. Later that year, in September and following a rigorous schedule of preparations for certification, the EAME TAC was awarded its first certification. The certification process continued to show its value as a tool for operational improvement and a path to improved customer service.

One of the certification elements that stands out as a tool for improvement of customer service is the event survey. The event survey is conducted following the closure of each customer case. It consists of an email with five questions around the customer's perception of the service provided for an individual case. The event survey uses a five point rating scale with: 1 - "Poor Service"; 3 - "Satisfied"; 5 - "Very Satisfied". (See Figure 3.)

Figure 3
Event Survey Example

Please use this scale to rate your answers to the following questions.				
1. Poor	2. x	3. Satisfied	4. x	5. Very Satisfied
Q1. Were you able to communicate with an analyst in a timely manner?				
Q2. How would you rate our ability to address this issue in a timely manner?				
Q3. How courteous and professional was the analyst?				
Q4. Please rate the accuracy of the technical advice given.				
Q5. With respect to this issue, please rate your overall satisfaction with the support service provided.				

While the event survey has provided the customers an opportunity to express their level of satisfaction with the service received, its greatest value could well be the way it motivates the Support Analysts to be actively engaged in providing satisfactory service to the customer. Annual Technical Support staff performance evaluations now include a requirement to meet predefined acceptable levels of customer satisfaction as measured by the event survey. Each Technical Support Analyst knows he/she will be evaluated according to the customer's responses to the event survey. Since implementation of this connection between the event survey and performance evaluations, management has noticed that the analysts are more focused and motivated to work with the client to achieve a high level of customer satisfaction. This is one example of many tools from the certification that have provided measurable metrics useful for managing the TAC.

The APO TAC began preparations for a certification audit in 2001. No plans were made for the LAO TAC to seek certification.

2001 –Global Support Procedures Established, Three TACs Certified,

In 2001 the NAO, EAME and APO TACs worked closely together in their certification efforts. A common web site was established to track data and demonstrate compliance for certification. Each certification element was reviewed and a decision was made amongst the TAC managers to either work toward a company wide response, or to have the response be distinct according to the circumstances of the particular TAC. When possible, local TAC procedures were altered in order to establish more corporate wide procedures. This collaborative effort introduced efficiencies and reduced the overall time invested in preparation for the three certification audits. Of course another highly beneficial outcome was a closer alignment of processes and procedures amongst the TACs.

The shared effort and resulting integration amongst the TACs also helped move Landmark forward with its vision of providing “24 x 7” technical support using a “Follow-The-Sun” approach. “Follow-The-Sun is a service model where responsibility for resolving a customer case is passed from one TAC to another as daylight hours move around the globe. With such a model, it could be possible for a customer to initiate a case and then the case would be worked by different analysts as time progressed until a solution was found. The result would be a solution waiting for the client when they enter work the next day, even though the local support organization had been out for the night.

Late in 2001 marked the fourth consecutive renewal for the NAO TAC, the first renewal for the EAME TAC and the inaugural certification for the APO virtual TAC.

Certification guidelines on the acceptable length of time between certification audits for renewals, and Landmark operational pressures, lead to scheduling the next round of certification audits for April 2003. The LAO TAC would participate in that round of audits.

2002 – A Framework For Integration

Improvements in company wide network connections in the Latin America region were possible in 2002. Those improvements allowed for all members of the virtual team to be equally connected and thereby participate fully in LAO TAC operations. The LAO Virtual TAC Team was formed through the merger of: 1.) The core team in Houston; 2.) Four small teams from four countries; 3.) New analysts in a fifth country. The merger of these 6 groups meant that regional processes and procedures would have to be established in order for the virtual team to be able to provide uniform service across Latin America. The certification process provided the framework for bringing the local teams together and working with one set of common, best practices. In every instance possible the LAO TAC implemented procedures that the other TACs had previously decided should be Landmark standards.

The web based model for TAC operational information and all data related to certification proved to be essential for the highly distributed, virtual LAO TAC. Development of a LAO regional operations model which followed Landmark global practices was greatly facilitated by the accessibility of the web based information.

2003 – Certifications For Landmark’s TACs, Global Procedures Implemented

In preparation for the 2003 round of certification audits the four TACs (NAO, LAO, EAME and APO) worked closely together. Consensus was reached on whether a

certification element would be addressed globally (the same procedure by all TACs) or regionally (different response according to the local TAC needs). Then responsibility for establishing compliance was distributed amongst the TACs. This collaborative effort greatly reduced the overall effort by distributing the work load. The LAO TAC would be certifying for the first time. It benefited greatly from the operations model and support it received from the other TACs.

One week in April of 2003 the NAO and LAO TACs underwent two days each of extensive audits in Houston, Texas. The following week the EAME TAC was audited for two days in Weybridge, England. This was the time of the SARS epidemic in southeast Asia therefore it was decided that the APO TAC audit would be conducted virtually from Weybridge, and it would immediately follow the EAME audit. This relatively short and efficient sequence of audits was possible due to the high level of collaboration and virtual integration between the four TACs. Especially significant toward this effort was the web based model for documenting compliance with the certification elements.

In 2003 the NAO TAC was awarded its fifth consecutive certification, the EAME TAC its third consecutive certification, the APO TAC its second certification and the LAO TAC its first certification. Certification audits are already planned for the third quarter of 2004.

Since the first certification awarded in 1998 to the NAO TAC much growth has been realized by the global Technical Support Organization at Landmark. As previously stated management was seeking a formula for operating the Technical Assistance Centers with three principal goals in mind: 1.) Improve customer service; 2.) Increase employee satisfaction; 3.) Identify a formula for operating the TACs.

We believe the direct benefits of the certification process can be measured by the following:

- Increased customer satisfaction (See Figure 4 below.)
- High employee retention rates (See Figure 5 below.)
- Reductions in the cost per call (See Figure 6 below.)

Figure 4
Overall Customer Satisfaction From Annual Survey

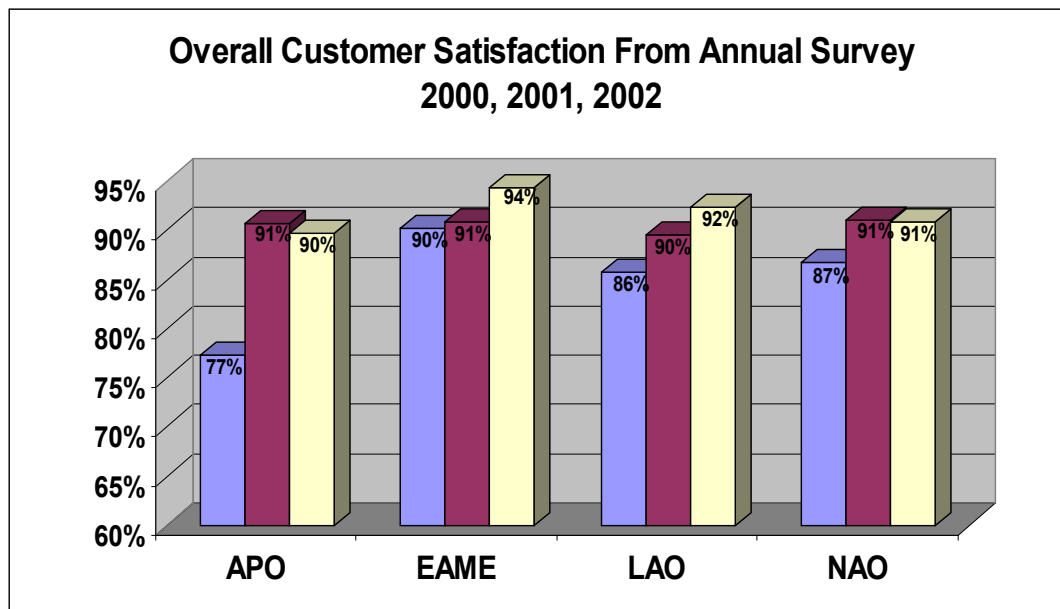


Figure 5
LAO TAC Employee Retention Rates

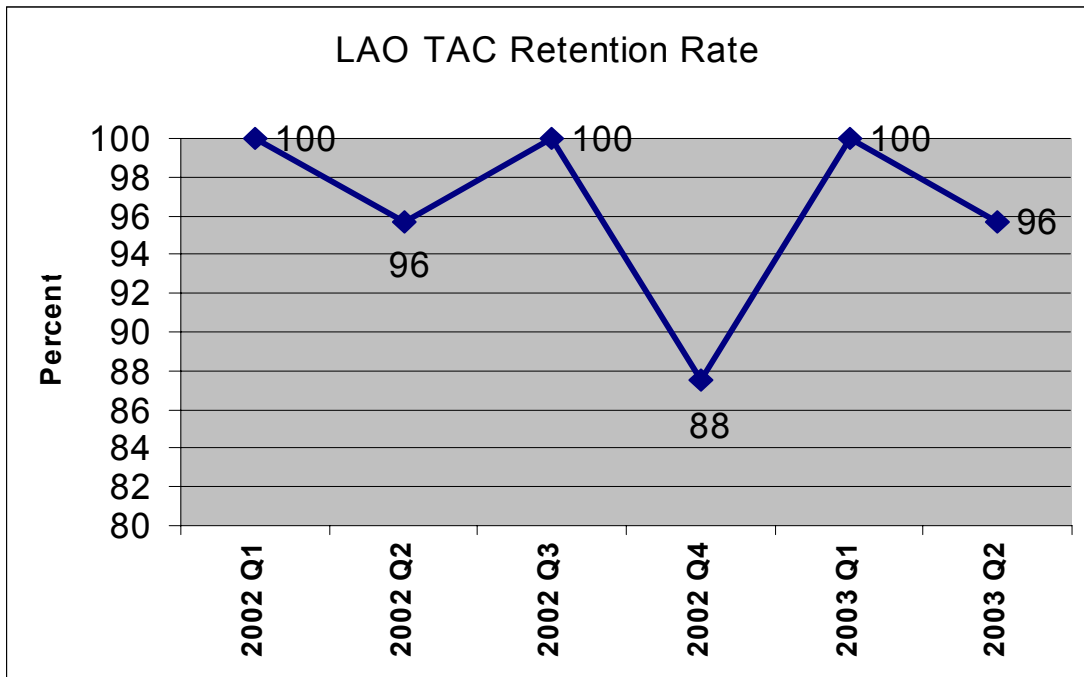
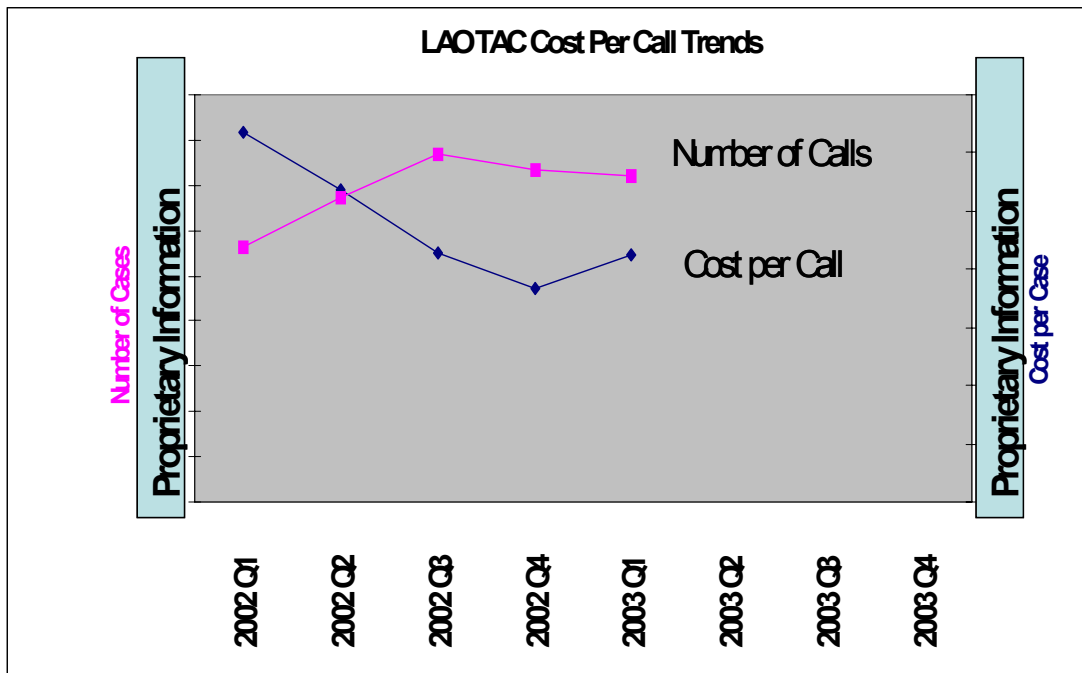


Figure 6
LAO TAC Cost Per Call And Call Volume Trends



Conclusions

Since 1997 Landmark has been implementing, on a global basis, a best practices operations model for managing and evaluating its Technical Assistance Centers. Through participation in the SSPA, and as a sponsor to the SCP Certification program Landmark, has accumulated practical experience and knowledge in the area of Support Center management.

This paper has documented some of the hurdles that needed to be overcome to achieve certification of its TACs. We have also demonstrated how the certification process has helped Landmark grow and achieve its original goals which were:

- Assure increased customer and employee satisfaction.
- Use measurable processes and results.
- Provide the TAC with a framework for continuous improvement.

Bibliography

1. Support Center Practices Certification, Defining the Best Practices For Delivering Service and Support, Fourth Edition, 2001. Services Strategy Corporation, San Diego, California.

Figures

- Figure 1 SCP Certification Version 4.0 Criteria
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- Figure 4 Overall Customer Satisfaction From Annual Survey
- Figure 5 LAO TAC Employee Retention Rates
- Figure 6 LAO TAC Cost Per Call And Call Volume Trends