

Applied Decision Making in Management Reporting

In the past, the Division of Management Information Systems, Technical Support and Data Analysis Branch had no methodology in place, manual or automated, to track Information Technology (IT) trouble calls. There are three basic types of "trouble calls," Service, Assistance, and Problem calls. Service calls refer to the installation of new Personal Computer (PC) hardware or software, setting up hardware and software for new employees, and moving hardware for existing employees. Assistance calls refer to helping users with the use of software applications, contacting various help desks, and assisting with procedures. Problem calls refer to currently malfunctioning software or hardware that previously worked correctly. Therefore, the situation at hand is the need to develop a methodology and accompanying tool(s) to track IT service calls and resulting end-user satisfaction levels. This is a new management-reporting requirement from the Cabinet's new Chief Information Officer (CIO).

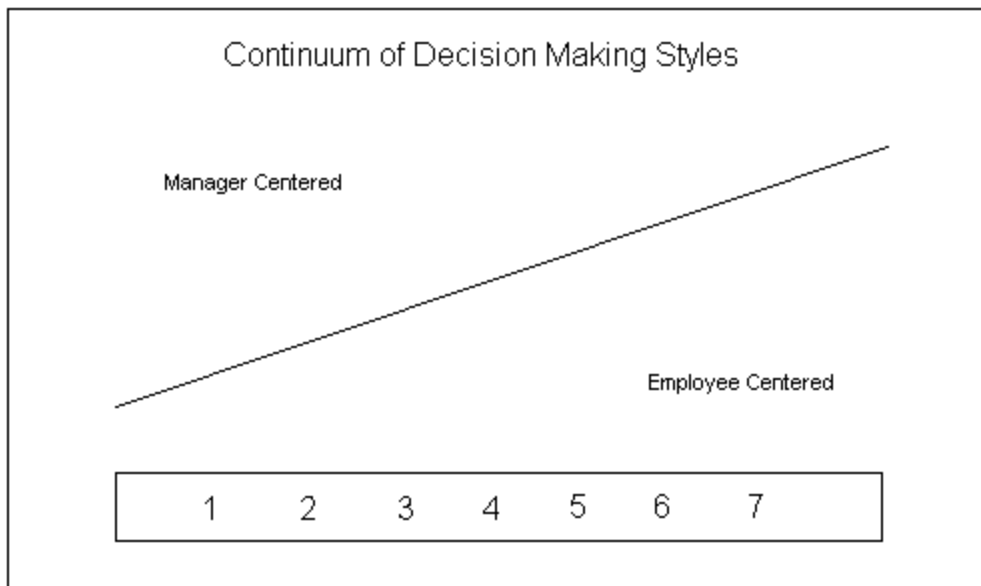
The expected outcome is the production of required management reports relating to the frequency of IT service calls, associated trouble types, average resolution time, solutions implemented, and PC user satisfaction with services. This will be accomplished through the application of the problem solving/decision making processes.

Primarily, the problem solving process in conjunction with the decision making process from the "Creative Problem Solving and Decision Making" workshop will be shown as the tools used in solving this problem. The change process from the

“Managing Organizational Change” workshop will also be discussed as it relates to this case as well. This information is applicable in this case because we faced a problem well suited to the problem solving process as depicted in the workshop. The resulting solution also lends itself to organizational change management as described in that corresponding workshop.

In looking at the decision making continuum for “situational decision making,” constraints faced include an immediate need to begin tracking trouble calls in a manner that provides all of the information required by the Cabinet CIO. After satisfying the immediate need for some form of trouble call tracking, a more detailed analysis could then be performed for a long-term solution.

From the “Decision Making” portion of the Governmental Services Center (GSC) Workshop, the decision making continuum between manager centered and employee centered decision making is described graphically and in text as follows:



Decision Making Continuum:

- (1) Manager makes decision and announces it.

- (2) Manager sells his/her decision to employees.
- (3) Manager presents decision and invites questions from employees.
- (4) Manager presents tentative decision, subject to change based on feedback from employees.
- (5) Manager presents problem, gets suggestions, then decides.
- (6) Manager defines limits and asks group to decide.
- (7) Manager permits group to decide within prescribed limits (law, top management decisions, policies, etc.)

In the immediate to short-term, due to the constraints previously described, I selected the second approach (2) listed above. The immediate need to collect statistical data was accomplished by asking IT staff to carry small pocket notepads to record data regarding each trouble call. This data was then entered by IT staff into an Excel spreadsheet for tracking. Operationally, this was a cumbersome manual procedure that met with much resistance against its implementation by IT staff, requiring me to “sell” this approach to IT staff based on the CIO’s requirements and limitations set out above.

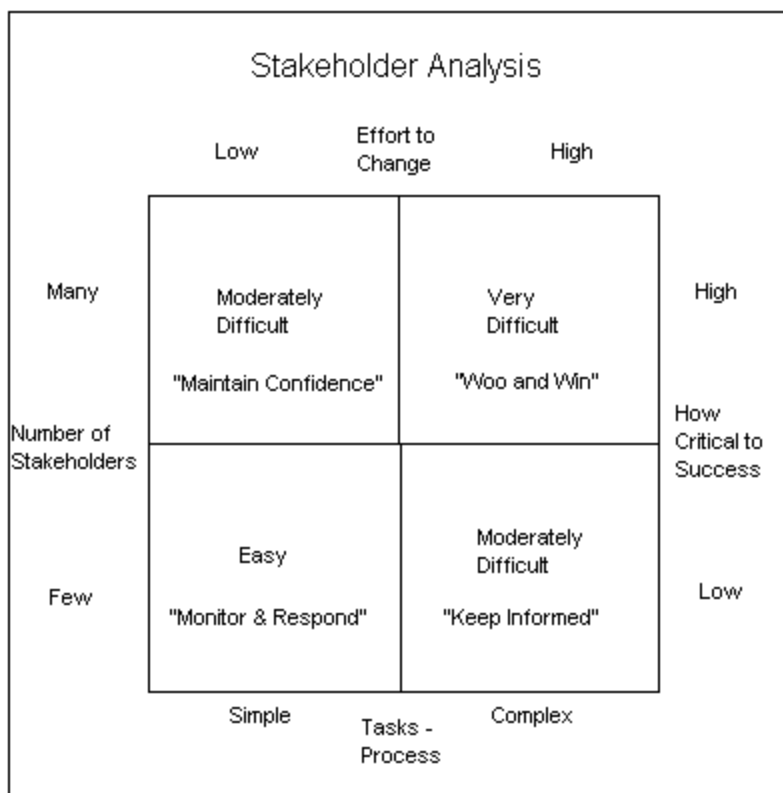
For the long-term solution, I chose to use the sixth approach (6) listed above. In this approach the manager defines limits and asks the group to decide. As the immediate need for trouble call data collection had been met, the constraints included ensuring the specific information the Cabinet CIO requested to be tracked was captured, and that output reports also met the need of the Fiscal Agent Contract Monitoring Branch.

I facilitated this application of the problem solving process as follows:

(1) Problem definition.

The problem is the immediate and long-term need to develop a methodology and accompanying tool(s) to track IT service calls and resulting end-user satisfaction levels. This is a new management-reporting requirement from the Cabinet's new Chief Information Officer (CIO).

The related charts on pages 47 and 48 of the "Managing Organizational Change" workbook were logically combined in performing the following stakeholder analysis.



In performing a stakeholder analysis regarding the task of IT trouble call tracking, the total number of stakeholders is high. Including Department for Medicaid Services (DMS) IT staff, Unisys IT staff and all DMS PC users, there are approximately 200 stakeholders. This task is deemed critical by the CIO to the success of the cabinet's IT management. The task encompassing IT trouble call tracking is rather complex, and

the effort required to change to accommodate IT trouble call tracking is quite high. Therefore, the task is viewed as very difficult, requiring my use of a “woo and win” managerial strategy.

(2) Idea production.

Brainstorming sessions were held with DMS and Unisys IT staff. Four alternative solutions were proposed. First, do nothing. This modeled the “if it ain’t broke, don’t fix it,” and/or “this is not the way we have done it in the past” sentiments. Second, continue taking notes in the pocket notepads during each trouble call, and then transcribe the notes into an Excel spreadsheet at the end of each day or week. Third, utilize the Commercial Off The Shelf (COTS) Track-It application software package. Fourth, Design and develop our own in-house software application.

(3) Idea evaluation.

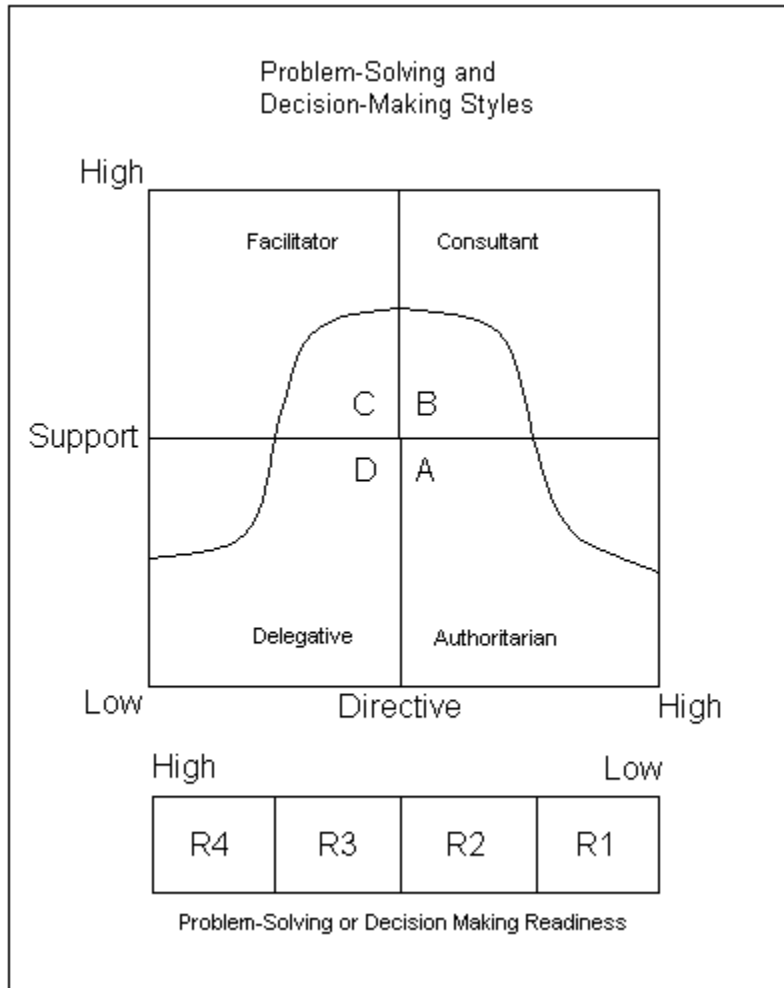
The “do nothing” alternative was discarded based upon the CIO’s initiative, and our upper management’s desire to cooperate with the Cabinet CIO. The “paper, pencil and spreadsheet” alternative was rejected due to the inherent cumbersome nature of the process. The “Track-IT COTS” alternative was investigated, but found unpractical due to prohibitive fifteen-minute connection times across the Wide Area Network (WAN). The “in-house development” alternative was initially resisted, due to the historically long timeframes associated with in-house application software development projects. After review of these four alternatives, option four (in-house development) was chosen by the group for further investigation.

The first in-house development alternative proposed was to utilize the tracking capability found within Outlook E-mail. However, the reliability of E-mail servers had been fluctuating, and no facility for management reporting was available.

The final in-house development alternative proposed was to utilize a web-enabled Access database application through the Internet Explorer Web Browser already loaded on each user's PC. We also discovered one of our Unisys IT staff resources had knowledge, experience and skill in web enabled Access applications.

(4) Decision.

In this case, a low amount of managerial directive behavior was required. However, a comparatively high amount of managerial support was required in order to facilitate the participative decision making process. This situation can be described as falling within quadrant C of the "problem solving and decision making style" variation of the Hershey and Blanchard situational leadership model matrix as shown below. This also corresponds to an R3 employee readiness level regarding problem solving/decision making for this project, "able & unwilling or insecure." Based upon the information described above, the group decided to implement the web enabled in-house development alternative.



(5) Detail and optimization.

Originally, Access database software was used as the web enabled application running within the web browser environment. However, for added flexibility in customizing the functionality of the application, it was rewritten using a Simplified Query Language (SQL) Server. Systematically generated E-mail to the customer was also added so that when IT staff close a trouble ticket, a user satisfaction survey is automatically E-mailed for the customer to complete and forward to our Contract Monitoring Branch for improved accountability tracking.

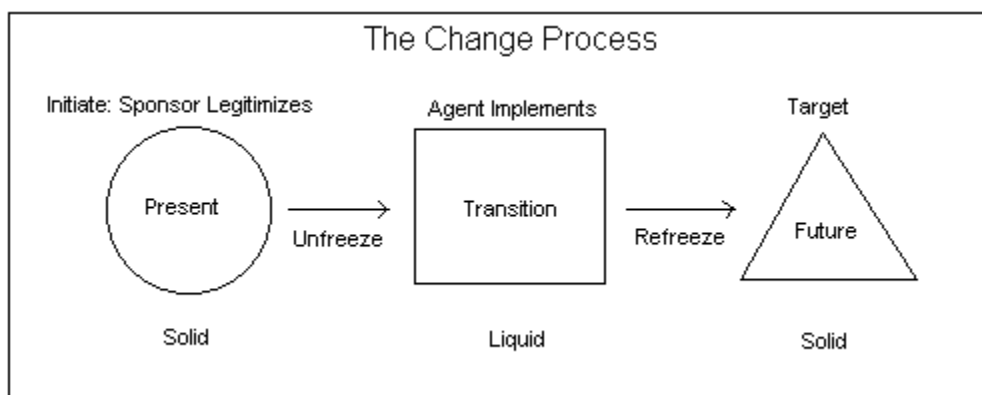
(6) Action planning.

The CIO's reporting specifications including the required metrics and a copy of the trouble call customer satisfaction survey were provided to the in-house developer. Close coordination through scheduled meetings and E-mail occurred between me and the in-house developer regarding approval of the formatting of the application's screens.

(7) Implementation and feedback.

Upon implementation and review by coworkers, modification of the formatting of the management reports was required to more accurately and concisely reflect the information (metrics) requested to be tracked by the CIO and DMS' Contract Monitoring Branch. Additional feedback received after implementation and action taken in response is more fully discussed in the change management section that follows.

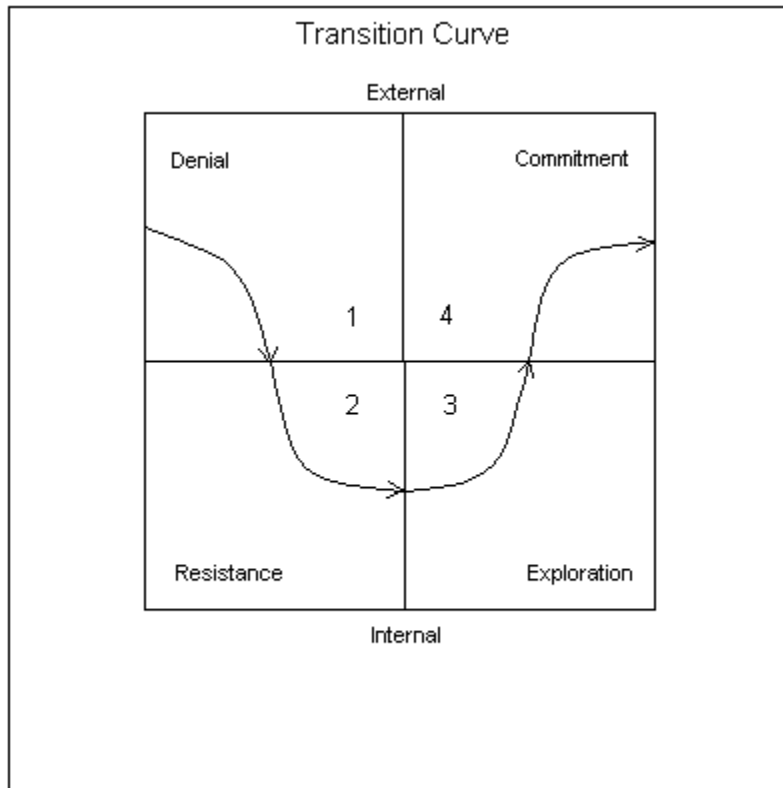
Now that we had successfully navigated the decision making process as a group, a few group members mounted some resistance in actually using the resulting application. This inspired me to apply some of the principles from change management.



In this particular case, the Cabinet CIO is the sponsor who legitimized the change. As I was the manager responsible for implementing the change, my role was that of change agent. The change targets included Unisys and DMS IT staff, and DMS

PC users. Both groups of stakeholders were required to alter their approach to IT trouble calls.

The transition curve tool/diagram depicted below from “Managing Organizational Change” was invaluable in navigating through the implementation of this change process.



At the beginning of the change process, the IT staff were certainly in denial.

Statements abounded, such as:

- “We won’t have to do this,”
- “Our users immediately complain if things aren’t right , and we fix it,” and
- “We are good, we don’t need metrics to prove it.”

As the change agent, I described the CIO’s role within the Cabinet and the rationale behind his directive to initiate IT trouble call tracking. I provided support and

reassurance by stating my commitment to involve IT staff in the decision making process to ensure we implemented the most user friendly IT trouble call tracking system possible that would still capture all of the required information.

As it became clear that a change was imminent, IT staff progressed into resistance. Statements flourished, such as:

- “Don’t do it,”
- “We have never had to do this before,” and
- “This isn’t workable, we will never get anything done for the paperwork.”

As the change agent, after allowing IT staff time to vent their frustrations and concerns, I pointed out that by tracking our trouble calls we could identify PC user’s training needs. We could potentially use this new information to justify a request for PC user training, which should then result in a reduction in the number of trouble calls. Therefore, this would also potentially reduce a rather mundane portion of current IT staff workloads. I provided support and reassurance by reiterating my commitment to involve IT staff in the decision making process to ensure we implemented the most user friendly IT trouble call tracking system possible that would still capture all of the required information. I also stressed that we were beginning something new, a system that we would create together to meet our needs.

As nerves calmed, the group moved into exploration. At this point, the problem was well defined. The group brainstormed alternative solutions, then investigated the practical feasibility and functionality of each in turn. All ideas were welcomed and considered by the group.

After analysis, one alternative solution stood out from the crowd so much that the group agreed on the decision enthusiastically. This event marked the turning point to commitment. As change agent, I publicly thanked each group member, and noted how the proposed solution would minimize IT staff disruptions in accomplishing the goals set forth by the CIO. Feedback was provided between the group and in-house developer to facilitate some mid-course corrections during programming. Each of these adjustments improved the ease of use of the resulting application for IT staff (a shared goal), reinforcing group commitment throughout implementation.

After implementation of the IT trouble call tracking software solution we had developed, an advertising campaign had to be implemented for our PC user community. After first notification that PC users should now call the help desk with IT trouble calls, rather than calling IT staff directly, PC users either refused or resisted the change. When IT staff were contacted directly by users, IT staff were then reluctant to take the time to go back to their desk after resolving the issue to enter the trouble ticket into the tracking system themselves. As a result, we implemented an awareness program to our PC user community consisting of the following:

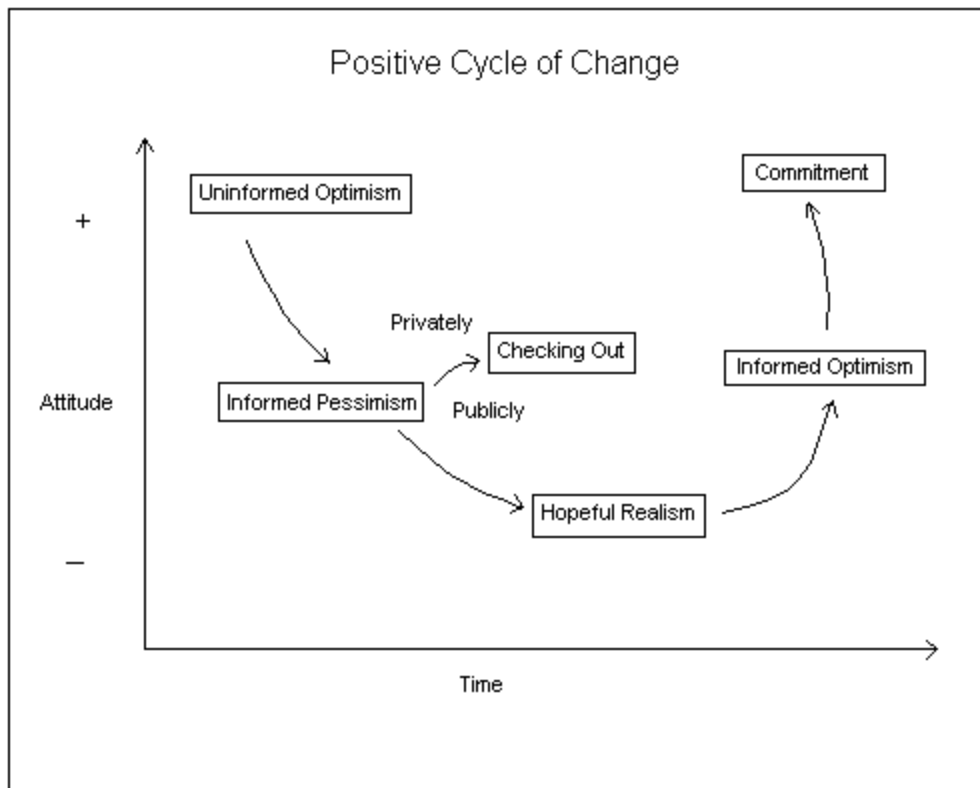
- Adding a reminder (with telephone number) to call the help desk for IT trouble calls to each routine E-mail message distributed to the Department.
- Adding this same reminder with telephone number toward the top of the first page of our in-house departmental intranet web page.
- A special department-wide notification, including a plea to help reduce the workload on our IT staff. If PC users call the help desk with their trouble calls, IT staff do not have to enter a trouble ticket into the system themselves, thus

helping to reduce IT staff workload and improving their response time to PC users. This strategy has proven most effective.

- A reminder with telephone number will regularly appear in our departmental newsletter.

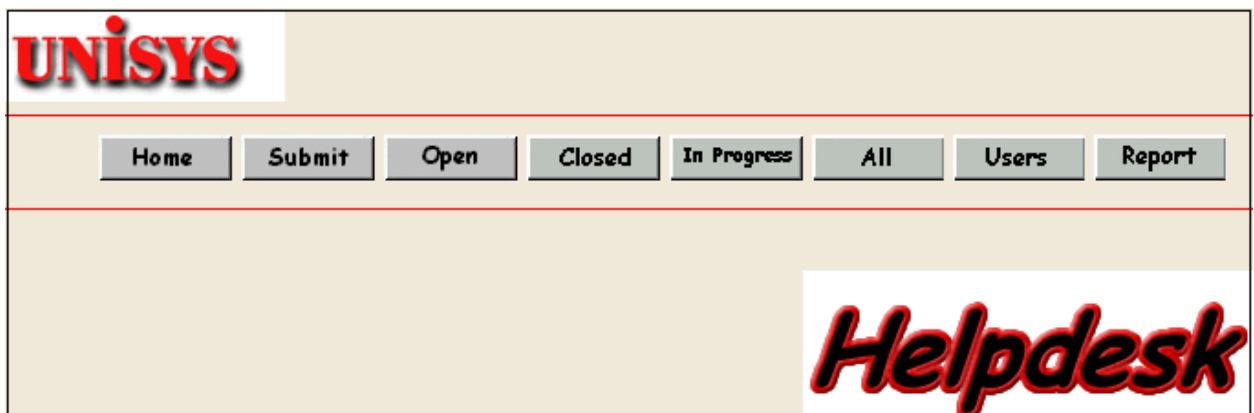
As a result of these advertising efforts, the majority of PC users now call the help desk with their IT trouble calls. IT staff have also mentioned how the software application saves them time in responding to trouble calls. The management reports generated from the system are also regularly used as input in the contract monitoring of the Local Area Network (LAN) help desk portion of our Fiscal Agent contract with Unisys.

The application of this model of the change transition stages resulted in a positive cycle of change, as depicted in the diagram below.



In this case, uninformed optimism was apparently skipped as the cycle described in the preceding paragraphs began with informed pessimism, progressed through hopeful realism and informed optimism together in attaining commitment. The success of this effort is reinforced in that no group members publicly checked out of the cycle. Based on participation in group discussions, apparently no group members checked out privately either.

The result of this project was the creation of a web enabled IT trouble call tracking software application. A portion of the help desk home page is shown below.



- Home: takes you to the page above,
- Submit: takes you to the problem submission page,
- Open: lists all open issues,
- Closed: lists all closed issues,
- In progress: lists all issues that are being fixed,
- All: lists all issues,
- Users: lists all current users and allows you to add new users, and
- Reports: generates management reports.

A portion of a sample report generated from the system follows:

Trouble Call Performance Report - By Technician									
4/26/00 - 10/27/00									
Ticket	Call Date	Name	Phone	Problem Description	Resolution	Minutes to Respond	Minutes to Complete	Total Time	
Problem									
179	6/23/00	Jane Doe	364-7340	CANNOT GET INTO COMPUTER. ScanDisk begins running and stops around 33% completion.	Ended the ScanDisk utility and continued into Windows. Everything is working correctly. Unable to determine the reason for ScanDisk to run and/or the reason for locking up at 33% completion at this time.	1	2	3	
121	6/26/00	John Smith	364-3217	Norton's Intelligent Updater froze-up on boot.	Ended the Intelligent Updater Program from the Task Manager and had the user logon then reinstalled the Intelligent Updater.	0	1	1	
133	6/26/00	John Doe	364-7340	CANNOT LOG IN TO COMPUTER.	Closed all programs that were not responding and rebooted the system.	6	3	9	
Average for Problem						2	2	4	

Reports are generated for each IT staff technician, by each type of call. The reports show the ticket number, call date, caller's name, telephone number, problem description, resolution explanation, minutes to respond, minutes to complete, and total time. Averages are listed at the end of each report. From these reports it is a simple matter to determine the frequency of IT service calls, associated trouble types, average resolution time, and solutions implemented. PC user satisfaction with services is tracked through the surveys completed and returned. Therefore, this project was a complete success in accomplishing the desired functions.

The application of the workshop principles described in this project resulted in a greatly facilitated implementation of an IT trouble call tracking solution that was primed to be difficult. Resistance was overcome, making the development and implementation flow smoothly by applying these structured decision making and change management processes. I have learned a deeper appreciation and validation for a participative approach to decision making, and the advantages gained from employees buying into the decision making and change processes.

The management reports generated are currently used to track IT technician service levels and PC user satisfaction levels. Over time, they can potentially be used

to identify both technician-training needs and PC user training needs. The management reports are also now depended upon and regularly used as input in the contract monitoring of the LAN help desk portion of our Fiscal Agent contract with Unisys.

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