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## Here's the Beef: A Case Study in Organizational Transformation

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### Introduction

One, and we believe the primary goal, of understanding the Total Quality Management (TQM) process is to transform an organization toward customer focus, employee empowerment, and system thinking. This transformation process is on-going within the Science and Technology Laboratory at the Stennis Space Center. As with all change efforts, vision, leadership and proper implementation are essential ingredients for success.

### The Challenge

The Science and Technology Lab (STL) is tasked with the design, development and application of science and engineering services. Formed in the early 1970s, STL adhered to many traditional attitudes including barriers to communication, excessive management control, parochial strategies, unclear measures of success, lack of customer focus, underutilization of people and excessive administrative burdens on scientists and engineers.

The challenge was to maximize customer satisfaction through the effective and efficient application of the notable skills and talents of the STL's workforce. In this way, the Lab would begin its exciting journey toward becoming world class.

### Implementation

In early 1992, the Director of the STL determined to lead the Lab into the mainstream of the Stennis Space Center and prepare for the anticipated changes in roles and missions. The Director, assisted by the "internal process consultant", set about understanding TQM principles and techniques and identifying barriers to the new vision. He initially addressed the 10% of the barriers normally caused by people. All division chiefs were reassigned, and a process of removing the other 90% of performance barriers resulting from system problems was begun.

The Director's vision of developing a world class science and technology organization focused on meeting and exceeding customer needs and wants was communicated during all-hands meetings. A great deal of discussion was generated, especially around the role of management and the future of the earth science function, scheduled to be phased out as part of the new roles and missions.

Following the all-hands briefings, a list of existing and potential customers was compiled and distributed to all employees. All STL people were asked to prioritize which customers they most wanted to serve, based on personal interest and/or applicable skills and talents. Among the customers listed were the ASRM, NLS, and NASP project offices, the environmental office, the education office and the Commercial Programs offices among others.

After the lab personnel returned their choices, a series of meetings was held and everyone who had indicated interest in serving a specific customer was invited to the meeting. A customer representative opened the meeting by detailing existing and future requirements as well as measures of success. Following the presentation by each customer, Lab personnel was asked to reassess their desire to serve on specific customer teams. Through this self-selection process, core team members were identified as well as technical and administrative support members. A facilitator was assigned to each team. Core team members were those who were assigned to each team. Core team members were those who were particularly dedicated to the customer in question and possessed the necessary skills to meet the customer's requirements.

At the same time, the middle managers began meeting as a team to redefine their role in this "new" organization. Also, the chiefs decided that as part of their role, they would identify those capabilities or services that were presently offered by the Lab and those that could be developed in the future both in response to anticipated customer needs and/or building on existing talents of the employees.

Clearly, not everything went smoothly. In the chiefs' meetings, a great deal of resistance and confusion surrounded the change effort. Several chiefs apparently were threatened by the proposed change and were very concerned about normal management issues. Among these, were issues of accountability and responsibility. Who proposed new projects? Who would make job assignments? Who would level manpower between tasks, assign resources, do performance appraisals, approve overtime, provide rewards, and set policy?

Each of these issues was addressed by the chiefs with the Director and his deputy during a full day "retreat". Several issues were resolved, and several more are being discussed a present. It was decided that the Director was still ultimately responsible and accountable for the performance of the Lab. Similarly, chiefs would be responsible and accountable for the success of the customer teams. As assessed in large part by the team members themselves. The chiefs agreed to provide a new set of services to the teams including facilitation, coaching, counseling, and integration. Most importantly, the chiefs would be responsible for developing new capabilities, finding new customers, prioritizing which customers needed to be served by employee teams and which activities could be further developed by Advanced Planning functions (which remained within mid-management's control) in anticipation of future customer needs.

Further, the chiefs began to redefine their role as "boundary managers". For each team, one chief would serve as a mentor, with the expressed task of managing the interface between customer teams and the rest of the Center. Chiefs would serve teams in providing the proper equipment, facilities and resources, completing the administrative tasks required to procure these needed resources and facilitating the interaction between teams and staff offices

such as human resources, legal and procurement. The evaluation of their performance on these tasks would be completed in large part by the teams who were their customers.

Team members were responsible and accountable for customer interface, developing thorough lists of customer requirements with measures of success. Team members were also empowered to make changes, solve problems and implement decisions that they believed would improve their customers' satisfaction. Each team selected a leader. Leaders, it was decided by the teams, would be chosen among those members who visibly exhibited a passion for the process and would therefore champion it. Further, team leaders must be good communicators, prepare meeting agendas, provide direct customer interface and be responsible for reporting results. Team leaders also were required to be the single repository of all current customer requirements together with the ever-changing measures of success.

#### Results.

Many issues remain to be resolved. Team members often feel quite out on a limb and are still wrestling with how to utilize resources, add new work, and interact with their bosses. Chiefs wonder what level of involvement they can attain without appearing to over control their teams and still be assured that the job is being done and done right.

Yet, many benefits are already apparent after three months of working in the "new culture". Customers report that lab personnel is providing outstanding service and appear very pleased and motivated in their jobs. New products and services are being "bought" from the Lab by their internal customers as the latter become aware of the talents and skills being offered by the new teams. This level of talent was often invisible since managers did not always provide opportunities for employees to apply their skills to particular customers.

Reporting has been integrated and several redundant reporting activities eliminated saving time and money. Customers are pleased with knowing not only that there exists for each of them a single point of contact, but that Lab person is backed by a considerable number of skilled and dedicated people. The match between customer needs and Lab skills is better than ever. The clearly evident "customer focus" of the Lab has made it a viable and fully integrated part of the Stennis Space Center operation. Requirements are clear, visible and measurable. Capabilities are being enhanced, as employees are asked to spend 20% of their time away from customer teams and on improving their capabilities through research, development and interaction with universities.

Customer teams are active in ASRM, Commercial Programs, Economic Development, and Education. A recent conference sponsored by the Information Technology group utilized the concepts of customer focus to bring industry, academia and government scientists together with the many customers at Stennis to identify needs, explain processes and procedures to potential support suppliers, and begin matching capabilities to requirements.

Future plans call for more teams, a more defined role of Advanced Planning, particularly in the area of SEI (HLLV), NASP and NLS. We are constantly refining our methods of tracking the Lab's performance to customer requirements and are beginning to improve our systems to exceed our baselines, reach new benchmarks and thereby constantly move toward being a world class NASA laboratory.