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APPA’s 2010 Annual Report
MAINTENANCE PARTS AND MATERIALS PROCESS REENGINEERING

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CHANGING THE WAY FACILITIES TECHNICIANS OBTAIN PARTS & MATERIALS

How does a large research university move its maintenance supplies stockroom off campus while simultaneously increasing the actual amount of technicians' “wrench time on equipment,” and raise the completion rate of preventive maintenance work orders? Facilities Management Services (FMS) at the University of Southern California’s (USC) University Park Campus simply changed its service paradigm. Instead of technicians hunting down parts and supplies, parts and supplies were brought to them.

CAMPUS SPACE: A PREMIUM

USC decided to move FMS off campus to make a building site available for the School of Cinematic Arts. Of primary concern to FMS was the relocation of the maintenance stockroom located only a few yards away and used by technicians in the completion of more than 1,000 stock issuances each month. The new location, approximately a quarter mile off campus, was inaccessible via its fleet of electric golf-cart maintenance vehicles. Despite the change in location, FMS established a goal to improve the level of maintenance services to the campus.

FINDING OPPORTUNITY AMIDST LONGSTANDING PROCESS AND PROCEDURE

The FMS Organizational Development (OD) department worked with Hickling & Associates to create the internal climate and infrastructure conducive of supporting organizational change. The Steering Committee -- front-line staff as well as operations and administrative managers -- provided input on the existing acquisition process, which was unpredictable with high variation in cycle time and a significant amount of technician time spent on travel. This low-value use of high-value technician time was inefficient and contributed to the difficulty in scheduling work and informing customers of project timelines.

THE NEW DESIGN COMES ALIVE

We facilitated the process of overcoming perceived barriers, and with the Steering Committee brought the customized system to life by:

- Defining the goal
- Facilitating the development of the redesign
- Developing detailed Standard Operation Procedures (SOPs) to support the new process
- Testing the process to ensure its viability
- Establishing metrics to evaluate and monitor the process
- Developing and delivering training to everyone that touched the process
- Implementing, monitoring, and measuring the process to get expected results.

BUILDING CAPACITY: THE ORGANIZATIONAL SKILL SET GROWS

The Steering Committee became involved in activities and processes that were normally not part of their work day. This led to skill development which is being used for other initiatives across the organization such as:

- Marketing the new process design to the organization and obtaining operational buy-in from front-line staff
- Creating Standard Operating Procedures as well as skills for tracking and maintaining updated SOPs
- Selling the use of reliable and relatively easy-to-use mobile technology to their colleagues
- Establishing the parameters for monitoring, and providing feedback on a pilot test of the process
- Developing a training program and training their colleagues on the Standard Operating Procedures in both Spanish and English
- Developing project management, teamwork, and problem-solving skills to address each stage of the project.
AND THE RESULTS WERE ...

The Steering Committee created a set of metrics to track success and potential problem areas that focused on nine major parts of the work processes created by the redesign. The committee found that:

1. The use of existing communication technology to order parts and materials from the job site has increased service efficiency and effectiveness.
2. The amount of time technicians spend performing maintenance work has significantly increased by eliminating excessive travel time to retrieve parts and materials.
3. Technicians now receive work orders for the week, allowing them to scope the work in advance and order needed materials. This scheduling provides the opportunity to more accurately inform customers when a job will be completed.
4. The new process has improved performance management by allowing Facilities Management Services to set and adhere to performance standards for various priorities of work (e.g., emergency, routine, preventive maintenance, etc.).
5. There was an initial reduction in the cost of materials and supplies consumed.
6. Preventive maintenance work order completion rates increased from approximately 62 to 78 percent within six months.
7. The stockroom technicians track delivery schedules and accuracy of deliveries. Deliveries are 96 percent accurate. During the first three months, will-calls to the stockroom decreased to 13 per month while there was an increase in use of the system to nearly 100 percent of all orders.
8. With the use of two-way text messaging, voice traffic over the two-way radios has declined increasing the airspace availability for emergencies and other critical organizational communication.
9. The initiative provided a unique opportunity for employee participation in problem solving and opportunity for cross-departmental collaboration, which resulted in enhanced morale, improved interdepartmental communication, and greater organizational capacity to successfully complete other continuous improvement programs.

Both John Welsh, associate vice president of USC Facilities Management Services, and Chuck O'Regan, executive director of operations, agree that the primary reasons for the success of this initiative are that FMS partnered with the consultants to establish the vision, concrete objectives, and the approach to effectively accomplish the endeavor. Most importantly, FMS included a diverse cross-section of the organization, including frontline workers, in the analysis and reengineering effort. The Steering Committee's ongoing stewardship has also been a crucial factor.

To view the full report, which includes performance metrics and flowcharts of both the old and new processes, visit the USC Facilities Management Services website: http://www.usc.edu/fms/documents/WhitePaperUSCInnovativeEffectivePractices.pdf.