The Department of Plant Operations initiated a Communication process to promote its mission, goals, objectives, and accomplishments throughout the campus community. Prior to this initiative, Plant Operations quality services were overlooked by most of the campus, viewed as unessential to the educational process, and minimally supported by top officials. Today, Plant Operations takes a dynamic approach to communicating internally within the Department; externally with customers and suppliers; vertically with top-down visions and bottom-up ideas; and horizontally with other departments. This approach champions reliable, efficient service and continuous improvement. In addition, Plant Operations established itself as an integral part of the educational process and conveys this message to students, faculty, and trustees through a variety of programs:

- Plant Operations Scholarship Fund
- Plant Operations Residence Life Management Team
- Recycling Program
- Opportunities for Interaction
- Customer Satisfaction
- Self-evaluation

This added dimension of communication enables Plant Operations to partake in the mainstream of the campus life and become an integral part of the educational process. The Communication process helped Plant Operations improve its performance, credibility, student involvement, staff visibility, and services to the campus, as well as lay the groundwork to win support for programs that promote continuous improvement.
Managing Change through a Team Environment

Elizabethtown College

http://www.bmpcoe.org/bestpractices/internal/etown/etown_6.html

Providing total quality service (TQS) is a team effort at the Department of Plant Operations. The Department employs 55 people who are distributed throughout three functional organizations: the Environmental Services Group, the Maintenance Group, and the Office Support Group. The Environmental Services Group manages academic, administrative, and residential issues. The Maintenance Group handles heating, ventilating, and air-conditioning; grounds keeping; general repairs; auto/fleet; safety; plumbing; carpentry; electrical service; and general maintenance. The Office Support Group addresses work orders; warehousing and delivery; and maintenance assistance.

Plant Operations established cross-functional teams to ensure high quality delivery of services and address issues associated with utility management, recycling, education, quality assurance, maintenance, and work orders. Teams are the essential ingredient for managing change throughout Plant Operations and ensuring consistency with the Department's mission, goals, and objectives. To promote team participation, everyone from the functional groups must serve on at least one team. Each team establishes its goals for one year. The team leaders work together with the Director and Managers as the management team.

Developing teams at Plant Operations has been an evolutionary process. See above website for more information.

Raising Staff Self-Esteem

Elizabethtown College

http://www.bmpcoe.org/bestpractices/internal/etown/etown_6.html

As part of its total quality and continuous improvement process, Plant Operations initiated several practices to raise self-esteem within the Department. The objective was to develop a staff that believed in itself and its purpose, and was willing to put forth extra effort. Plant Operations first step was the elimination of the night shift. By moving everyone to the day shift, students and faculty got to know the custodians. Plant Operations also holds a kickoff breakfast at the start of every fall semester. Invited guests include Elizabethtown Colleges President and others from outside the Department who speak on the importance of Plant Operations and offer encouragement.

Plant Operations takes full advantage of its educational surroundings by providing training to its staff in reading, writing, mathematics, computers, and communication skills. A typical workshop syllabus offers courses in Study Strategies, Basic Computing, Total Quality Service (TQS), and Working with Others with Differing Styles.

Each year, the Department conducts a Plant Operations In-Service Day where cross-functional teams work on various activities, and speakers discuss such topics as depression, stress, physical well being, and out-of-the-box thinking. Other practices include an employee of the month and an employee of the year program where employees nominate their peers.
Elizabethtown College saves approximately $18,000 each year through its Recycling program. The campus recycles various materials including paper, cardboard, cans, bottles, wood waste, dining hall scraps, paint, and asphalt paving. In addition, the program provides a valuable link between the Department of Plant Operations and the student population. Through the program, the Department educates and involves students in recycling responsibilities and operational issues which promote awareness, campus feedback, and continuous improvement. Plant Operations prides itself as an integral part of the learning community.

Students are strongly encouraged to recycle. Recycling centers are established in each residence hall so students can separate and dispose of recyclable material. Incoming freshmen receive written information describing the Recycling program and its various incentives. Plant Operations gives 50% of the profits from the Recycling program to the Residence Hall Association so students can purchase items (e.g., furniture, televisions, VCRs, ping-pong tables) for use in their common living areas. The remaining 50% is placed in the Plant Operations Scholarship Fund. Elizabethtown Colleges students and employees take pride in recycling, and continue to develop new ideas for the program.
BEST PRACTICES, Physical Plant

Title: T.O.P.G.U.N. Customer Service
Source: University of Florida
Addl Info: http://www.appa.org/FacilitiesManager/article.cfm?itemnumber=1188&parentid=1188
Abstract: Scroll down on above URL

The University of Florida Physical Plant Division (PPD) is keenly aware that faculty, staff, and students have expectations for service delivery that we are responsible for meeting. Customer service is one of our most important responsibilities on campus. Data obtained from annual customer surveys was used to identify gaps in service and to develop corresponding service standards and training. Each employee at PPD attended a two-hour basic training (ground school) and a one-hour refresher training (preflight check-off/takeoff). Both classes are highly interactive, focused on improving customer service skills. Institutional benefits include:

1) Improved customer satisfaction levels and loyalty measures;
2) Increased employee commitment to customer service delivery;
3) Increased empowerment of employees through improvement in customer service skills;
4) High employee satisfaction with training;
5) Improved service levels recognized by customers;
6) Increased willingness to assist other team members in meeting customer needs, as well as a greater inclination to work directly with the customers;
7) Focused training on specific areas identified by customers, and tailored to facilities maintenance topics;
8) Avoided cost of $68,310 through in-house design and delivery.

Title: Water Runoff Management
Source: Mississippi State University
Addl Info: http://www.abe.msstate.edu/csd/NRCS-BMPs/water.html
Abstract: Large website related to Water Runoff Management - includes -
A. Construction Site Impact Reduction (8)
B. Source Reduction (16)
C. Erosion Control (19)
D. Water Volume Management (14)
E. Water Quality Treatment and Constituent Entrapment (vegetative and/or structural) (32)

http://abe.msstate.edu/csd/NRCS-BMPs/tree.html gives 3 Best Practices for Tree Protection and Restoration
**BEST PRACTICES, Physical Plant**

**Title:** Pest Management at NCSU  
**Source:** North Carolina State University  
**Addl Info:** [http://www.ncsu.edu/ehs/www99/right/handsMan/worker/pestpolicy.htm](http://www.ncsu.edu/ehs/www99/right/handsMan/worker/pestpolicy.htm)  
**Abstract:** Structural and landscape pests can pose significant problems to people, property, and the environment; however, the pesticides used to solve these problems carry their own risks. It is therefore the policy of NC State University to use best practices and procedures, as explained below, for control of structural and landscape pests.


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**Title:** Being Green: Changing Tomorrow, Today  
**Source:** University of Central Oklahoma  
**Addl Info:** [http://www.nacubo.org/Images/about/UniversityofCentralOklahomaSubmission.pdf](http://www.nacubo.org/Images/about/UniversityofCentralOklahomaSubmission.pdf)  
**Abstract:**  
1. The employees of the Physical Plant explored a move from Petrol-diesel to Bio-Diesel fuel for their equipment. Bio-Diesel fuel produced for diesel engines from vegetable oil or animal fat, which is normally costly to discard. The change allowed UCO to embrace a more economical fuel source, a more environmentally friendly fuel substitute, and create a template for other interested parties to implement.

A byproduct of the Bio-Diesel process is glycerin and is used as a degreaser and soap for the mechanics. The college of Math & Science and the College of Business have joined efforts in using Bio-Diesel as a medium for learning.

2. In 2004 UCO set a goal to become 100% Green energy dependent by 2007. During the process it was discovered that the resources were insufficient to undertake such a project. This led to an innovative partnership with Johnson Controls, Inc. relating to wind energy.
### BEST PRACTICES, Physical Plant

**Title:** Developing an Online Work Request System to Help "Close the Loop"

**Source:** Maysville Community and Technical College


**Abstract:**

The Finance and Facilities Department of the college heard complaints that service requests were not being managed and communicated back to department requestors in a timely manner. In 2005, the college purchased a software program called Workorderama™ that is now being used for the management of service requests, vehicle requests, asset management changes, and preventive maintenance due dates.

An important benefit of the system is the ability to show the academic departments, with reports and bar graphs, the quantity of work being done by the staff and how quickly it was being done. Also, it helped to answer inquiries and head off complaints by giving ongoing progress status reports to the requestors which helped to "close the loop."


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**Title:** Green University: Changing Tomorrow, Today

**Source:** University of Central Oklahoma


**Abstract:**

The increasing cost of energy has been a substantially impacting issue that UCO chose to overcome. UCO came to a crossroads. How can we curb the cost of energy while being stewards of the environment in which we reside? UCO focused on the following innovative facets:

1. **100% Green Energy use, on-site creation of Bio-Diesel, Performance Contracting, Lean, and Recycling Campaign.**
2. **Green/Wind Energy -** To date, UCO has saved over $51,000 in purchasing over 50,000,000 kwh of electricity provided via wind.
3. **Bio-Diesel -** The Physical Plant invested time, money, and labor into the development of Bio-Diesel. Through this investment there has been a reduction of hazardous fuel use on campus and fuel budget savings by utilizing university produced Bio-Diesel fuel.
4. **Performance Contracting -** Since its implementation more than $3.8M has been saved and we have reduced our CO2 emissions by 60,000,000 pounds which equals nearly 90,000 trees needed to absorb that amount of CO2.
5. **Lean University -** The outcome was a need to overhaul a multitude of administrative processes that over time had strangled the university’s ability to function efficiently. One focus is the effort to move processes to paperless.
6. **Recycling Campaign -** The program is designed to make recycling easy and accessible to all students, faculty, staff and campus guests.
### BEST PRACTICES, Physical Plant

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<tr>
<th>Title:</th>
<th>California Higher Education Sustainability Awards</th>
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<tbody>
<tr>
<td>Source:</td>
<td>California State University, Calif C/C &amp; Univ of Calif</td>
<td>Co Area:</td>
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<td>Addl Info:</td>
<td><a href="http://www.greenbuildings.berkeley.edu/best_practices.htm">http://www.greenbuildings.berkeley.edu/best_practices.htm</a></td>
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<tr>
<td>Abstract:</td>
<td>Lists best Practices for 2005 through 2008. The Best Practice case studies showcase each award-winning project, making the strategies and achievements available as an educational tool to assist all campuses in achieving energy-efficiency and sustainability goals. California State University (CSU), California Community College (CCC) and University of California</td>
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<td>Source:</td>
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<td>The Finance and Facilities Department of the college heard complaints that service requests were not being managed and communicated back to department requestors in a timely manner. It began looking for a mechanism to replace the paper work order requests that departments were sending to the Maintenance and Operations section. The college has a small staff and no computer programmers. As an interim measure, Finance and Facilities developed a system using the Task Manager feature of Microsoft Outlook but it did not have the historical reports capability that was needed to track improvement in this area. A search began for programs that could be used. In 2005, the college purchased a software program called Workorderama™ that is now being used for the management of service requests, vehicle requests, asset management changes, and preventive maintenance due schedules. First, an important benefit of system is the ability to show the academic departments, with reports and bar graphs, the quantity of work being done by the staff and how quickly it was being done. Second, it was also beneficial to have an outside programmer help the network administrator with the training, tailoring, and set up since the college is small and has no programmers on its staff. Finally, it helped to answer inquiries and head off complaints by giving ongoing progress status reports to the requestors which helped to “close the loop.”</td>
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<th>Diversifying Suppliers and Vendors</th>
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<td>Source:</td>
<td>Purdue University</td>
<td>Co Area:</td>
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<td>Abstract:</td>
<td>Purdue University has embarked upon an aggressive initiative to increase business opportunities to minority and women-owned businesses through a race and gender neutral strategy. This initiative is within a larger framework of university economic development and community outreach efforts. This presentation shares the fundamental structure of the program and the goals therein.</td>
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<tr>
<td>Title:</td>
<td>High Efficiency Cleaning</td>
<td># 1042</td>
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<td>Source:</td>
<td>Wright State University</td>
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<td>Abstract:</td>
<td>For a number of years, Wright State University has used a combination of university employees and a contractor to provide custodial services to its main campus. In 2005, we took on a project to reengineer our custodial function to improve campus satisfaction and to reduce costs. Wright State University takes pride in their High Efficiency Cleaning Program utilizing the Kaivac No-Touch Cleaning System for restroom cleaning, ProTeam Super Coach Back Pack Vacuums for office cleaning along with task specialist training and implementation which provides greater productivity, more thorough cleanliness, increased employee accountability and quality customer satisfaction.</td>
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<th>Title:</th>
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<th>Title:</th>
<th>Red and Black and Green: How Green Cleaning Has Improved the Environment, Worker Safety and the Bottom Line</th>
<th># 1154</th>
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<td>Source:</td>
<td>University of Georgia</td>
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<td>Abstract:</td>
<td>The University of Georgia’s (UGA) Physical Plant Division - Services Department has broken new ground with its innovative process improvement focused on green cleaning, environmentally sound purchasing and workplace safety. In fall 2008, the Physical Plant (PPD) earned Certification with Honors in the International Sanitary Supply Association’s Cleaning Industry Management Standard (CIMS), making the University of Georgia only the second university in the United States to earn this designation and the first to earn it under the recognized practices of green cleaning. UGA’s award-winning facility cleaning program gives “cleaning for health” in the campus environment an entirely new cost-saving and workplace safety focus. The program encompasses efficient business processes, standardized employee training, customer training modules for facility building inhabitants, and a defined emphasis on indoor air quality and sustainability.</td>
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**BEST PRACTICES, Physical Plant**

**Title:** Apprenticeship Training - A Continuing Commitment in Difficult Budgetary Times

**Source:** University of South Carolina

**Addl Info:** [http://www.sacubo.org/docs/bestpractices/2010/Apprentices.pdf](http://www.sacubo.org/docs/bestpractices/2010/Apprentices.pdf)

**Abstract:** In 2006, the University of South Carolina began a five year project to improve the quality of maintenance services on the campus and address long standing salary issues for service personnel. The plan included implementing apprenticeship based training for all service trades in both the Facilities and Housing areas. The voluntary program would allow employees to receive additional training, obtain certification in their trade, and receive periodic salary adjustments by registering the program with the U.S. Department of Labor’s Apprenticeship Office and using the federal guidelines to develop training standards and salary steps. As the program enters its fourth year, the positive results are measurable on both technical skill enhancement and customer satisfaction.

**Title:** Tightening The Belt On Lean Six Sigma

**Source:** University of West Georgia


**Abstract:** Lean Six Sigma (LSS) is a problem solving methodology that is applied by means of specific projects, focused on the customer, driven by data, and supported by analytical tools. LSS supports continuous improvement and leads to improved processes and greater customer satisfaction. The University of West Georgia’s (UWG) division of business and finance has launched a Lean Six Sigma initiative that:

- Supports the Chancellor of the Board of Regents challenge to implement systematic process improvement efforts in order to improve effectiveness; and
- Supports Goal Six of the University System of Georgia Strategic Plan to increase the efficiency of business functions, developing a leadership culture and engaging the workforce in process improvement, and establishing accountability metrics for the System.

**BEST PRACTICES, Physical Plant**

**Title:** Developing an Online Work Request System to Help “Close the Loop”  
**Source:** Maysville Community and Technical College  
**Addl Info:** http://www.sacubo.org/docs/bestpractices/2011/ClosetheLoop.pdf  
**Abstract:** The Finance and Facilities Department of the college heard complaints that service requests were not being managed and communicated back to department requestors in a timely manner. In 2005, the college purchased a software program called Workorderama™ that is now being used for the management of service requests, vehicle requests, asset management changes, and preventive maintenance due schedules.

The college now has an effective online Work Order Management System to facilitate the processing of service requests. Employees at all three campus locations can go to a Workorderama™ link that is located on the college intranet webpage and submit an electronic work request from their desk for several types of services.

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**Title:** Vendor Invoice/Payment Status Lookup  
**Source:** University of Virginia  
**Addl Info:** http://www.sacubo.org/docs/bestpractices/2011/VendorInvoice.pdf  
**Abstract:** Due to Procurement Services’ involvements with departments and vendors through the entire procure-to-pay process, our Buyers, Receptionist and Accounts Payable staff were constantly on the phone assisting University staffs and vendors. The phone log and staff feedback indicated that the majority of the calls was from vendors inquiring about their invoices and/or payments status.

The question of "What ifs …"came into play. What if vendors can
- See their invoices?  
- Tell when the invoices were received and processed?  
- See if the invoices were on hold?  
- See the invoices payments status?  
- Tell when and if payment is being paid?  
- Tell which payment method was made to the invoice?  
- Etc.

The answer was an online web application – the Vendor Invoice/Payment Status Lookup. With one simple web application all the "What ifs …" became reality. A usual ten minute call is now reduced to less than two minutes to direct the vendor to the web.
### BEST PRACTICES, Physical Plant

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In March 2010, the department of campus planning and facilities (CP&F) was recognized for its efforts in LSS by receiving the FMXcellence Recognition award – a new initiative from Building Operating Management magazine that praises those facilities departments that embrace and respond to their organization's initiatives. Other organizations (10 total) that received the inaugural recognition included Nike Inc., Bayer Corporation, and the Smithsonian Institution.


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#### Title: Developing an Online Work Request System to Help "Close the Loop"

**Source:** Maysville Community and Technical College


**Abstract:** The Finance and Facilities Department of the college heard complaints that service requests were not being managed and communicated back to department requestors in a timely manner. It began looking for a mechanism to replace the paper work order requests that departments were sending to the Maintenance and Operations section. The college has a small staff and no computer programmers. As an interim measure, Finance and Facilities developed a system using the Task Manager feature of Microsoft Outlook but it did not have the historical reports capability that was needed to track improvement in this area. A search began for programs that could be used. In 2005, the college purchased a software program called Workorderama™ that is now being used for the management of service requests, vehicle requests, asset management changes, and preventive maintenance due schedules.

See original submission - record #889
**BEST PRACTICES, Physical Plant**

**Title:** Red and Black and Green: How Green Cleaning has Improved the Environment, Worker Safety and the Bottom Line

**Source:** University of Georgia

**Addl Info:** [http://www.sacubo.org/awards/bestpractices/archive/2012bp/](http://www.sacubo.org/awards/bestpractices/archive/2012bp/)

**Abstract:**
The University of Georgia’s (UGA) Physical Plant Division Services Department has broken new ground with its innovative process improvement focused on green cleaning, environmentally sound purchasing and workplace safety. UGA’s award-winning facility cleaning program gives “cleaning for health” in the campus environment an entirely new cost-saving and workplace safety focus. The program encompasses efficient business processes, standardized employee training, customer training modules for facility building inhabitants, and a defined emphasis on sustainability and indoor air quality.

The impact of this comprehensive process improvement has been substantial, resulting in:
* a marked decrease in the number of employee injuries and lost work hours;
* a decrease in the number of respiratory complaints associated with cleaning chemicals;
* the awarding of certificates to 350 employees who have completed the standardized training offered through the Building Service Worker Academy;
* a dramatic reduction in the line item for cleaning chemical expenditures—from $1.5 million in 2007 to just $61,000 in FY11.

**Title:** Simple Steps to Significant Change

**Source:** University of Georgia

**Addl Info:** [http://www.sacubo.org/awards/bestpractices/archive/2012bp/](http://www.sacubo.org/awards/bestpractices/archive/2012bp/)

**Abstract:**
The University of Georgia (UGA) aims to reduce the amount of its waste by 65% by 2020 in order to improve campus sustainability. A mapping of all trash and recycling locations at UGA’s Miller Learning Center (the primary instructional facility on campus) showed that visitors at the center were 10 times more likely to dispose rather than recycle.

A pilot program created more than 100 interior waste-reduction stations, each offering three disposal options: paper recycling, bottle and can recycling, or landfill. Results from the program have shown that the Miller Learning Center, which once sent over 580 pounds of trash to the local landfill each day, is now producing only 260 pounds of landfill-bound waste daily and capturing approximately 42% more recyclable materials than before the program was implemented. Further benefits of the program include reduced University contributions to the overburdened county landfill, cost avoidance in landfill tipping fees of more than $2,400 per year and increased annual income through the sale of additional recyclable materials.
The University of Louisville (UofL) has three campuses in different parts of town. It is necessary to keep faculty, staff and students informed of emergency procedures but this is difficult to do in our mobile world. The university’s Emergency Manager attended a conference and learned of other universities looking into developing a smart phone application for emergency information.

The free smart phone application is available in the Blackberry, Android and iPhone markets. Not only can faculty, staff and students access the phone application and download it to their phone, but the surrounding community can take advantage of the same information. The application provides the following sections:

1. Procedures for 20 different emergency situations
2. Crime prevention information
3. University Emergency Web Site Links
4. Interactive Campus Maps
5. One-Touch Phone Dialer for 911, Campus Police and Campus Escort Service