Comprehensive Facilities Management

“World Class” Facilities Aligned to Meet Institutional Goals

October 17, 2014

Dave Riker, CFM, MSCE, MSSM
Associate Vice President for Facilities
The University of Texas at San Antonio
What in the World is “World Class”? 

world-class (wûrld′klăs′) adj.
1. Ranked among the world's best; of the highest caliber: a world-class orchestra, or a world-class athlete

“An organization that is outstanding in every aspect of its performance is world class. Being world class is going beyond excellence to become great!” - Christopher Ahoy
Office of Facilities

Early History (1968-1970)
UTSA Property 1969
Office of Facilities

Campus Core 1983
Office of Facilities

UTSA Main Campus 2014
Circa 2005 Facilities – The “Rattlesnake” Analogy

- Major Capital Construction Program Underway
  - Largest Construction Program in School History
- Significant Failures in Recently Completed Capital Projects
  - Main Building and Biotechnology/Science/Engineering Building Water Intrusion
  - Chaparral Village Student Housing Construction
  - Downtown Campus stone facades
- Primitive Facility Management Organization
  - Ineffective Hiring Practices
  - Poor Supervisory Effectiveness and poor employee morale
  - No Preventive Maintenance Program
  - No Work Order Priority Approach
  - Very Few Performance Metrics
  - Many “One-deep” Positions and Insufficient Staffing
  - Poor Working Relationship between OFPC/UTSA
  - Poor Communication with Customers/Stake Holders
UTSA Facilities Organization
October 2014

Dave Riker
Associate Vice President for Facilities

Yolanda Ledesma
Administrative Services Officer II

Doug Lipscomb
University Architect/Facility Planning & Development Director

Patty Chaves-Reyes
Administrative Services Officer I

Paul Goodman
Assistant Vice President – Engineering/ Director of Engineering and Project Management

Belinda Dovalina
Business and Customer Services Director

David Oliver
Assistant Vice President - Operations

Todd Brant
Landscape Architect

VACANT
Assistant Director for Customer Services

Robert Espinoza
Asst Director - Capital Projects

Kim Norton
Work Control Manager

Kathryn Pearson
Asst Director – Institutional Projects

Administration

Rene Colunga
Utility Engineer

Cece Ortegon & Blanche Torres
Assistant Director for Customer Services

Enos Jones
Director of Operations & Maintenance

Fred Weidner
Interim Contract Administration Coordinator

Josie Izbinski
Housekeeping Manager

Information Technology

VACANT
Director of Operations

Moses Gomez & Walter Zuniga
Quality Assurance Manager

Ron Woltersdorf
DTC Facilities Services

VACANT
Senior Facility Planning Analyst

John Flores

VACANT
Interim Quality Assurance Specialist (Events)

Quality Assurance Coordinators Juan Reyes & Joe Alderete

VACANT
Assistant Director for Information Systems

Quality Assurance Manager

John Japhet
Interim Quality Assurance Specialist (Events)

Fred Weidner
Interim Contract Administration Coordinator

Josie Izbinski
Housekeeping Manager

VACANT
Assistant Director for Information Systems

John Flores
Senior Facility Planning Analyst

VACANT
Senior Facility Planning Analyst

Yolanda Ledesma
Administrative Services Officer II

Robert Espinoza
Asst Director - Capital Projects

Patty Chaves-Reyes
Administrative Services Officer I

Todd Brant
Landscape Architect

Belinda Dovalina
Business and Customer Services Director

Paul Goodman
Assistant Vice President – Engineering/ Director of Engineering and Project Management

David Oliver
Assistant Vice President - Operations

Doug Lipscomb
University Architect/Facility Planning & Development Director

October 15, 2014
Facilities Initiatives

Customer Services

• Customer Service Guidelines and Employee Training
• Regular Customer Meetings
  – Academic Affairs, Student Affairs, Research, Lab Safety, Auxiliary Council, Athletics
• Formal Notification Processes (Emergency and Non-Emergency)
• Developed Facilities Web Site
• Customer Satisfaction Surveys (Work Order and Project)
• i-Service Desk Automated Work Request Process
• Service Level Agreements with Auxiliaries/Fee Funded Organizations
Facilities Initiatives

Organizational, Administrative and Staffing

• Flat Organizational Structure
• Facilities Strategic Plan aligned with Institution & Business Affairs
• Facilities Hiring Guidelines/Hiring Matrix/Salary Review Form
• Computer Replacement Guidelines
• Annual Shop Rate Update Process
• Building Attendant and Groundskeeper Progression Program
• Supervisor Training Curriculum
• Custodial Supervisory Training
• Quarterly “All-Staff” Meetings with Employee Awards
• Rosetta Stone Language Program
• Awards and Recognition
  • “Celebrating Facilities Excellence” Awards Program
  • Institutional/VPBA Awards
Facilities Initiatives

Operational Initiatives

- Operations Review Meetings/Key Performance Indicators
- Work Order Priority Categories with Target Response times
- Preventive Maintenance Program
- Deferred Maintenance Project Priority Process
- As Built, Floor Plan, and Room Signage Process
- Housekeeping Staffing/Workload Balance Analysis
- Zonal Maintenance Approach
- Weekly Action List
- Top 100 Priority List
- Facilities Job Families
- Archiving Storage and Retrieval Process
Facilities Initiatives

Project Development and Management

- Special Interest Project List
- Facilities Design Guidelines
- Capital Project Development Process
- Master Plan Management Process
- Cost Estimate Development/Project Funding Process
- Job Order Contracts
- Job Order Design Contracts
- Project and Budget Account Reconciliation Process
- Project Management Charters with OFPC and EHS&RM
- Monthly OFPC Project Update Meetings
- Project Management Staffing Approach
- “Swept” Deferred Maintenance Funding Process
Office of Facilities

Integrated Facility Strategic Plan
Master Planning
Facility Planning & Development
Measurement & Analysis
Performance Results: Benchmarking & Key Performance Indicators
Human Resources: Hiring, Development, Compensation & Recognition

Leadership
Customer Focus
Communication
Project Execution

“Comprehensive” Facilities Management

Automation & Information Management
Environment, Health, Safety & Risk Management
Sustainability

Financial Management
Preventive Maintenance
Material Management
Formal Work Management
Utility Management
Quality Assurance
Space Management
Corrective Maintenance
Planned Maintenance
Creating a high performance FM organization

• Fully supports strategic business initiatives
• Enhance operational efficiencies and effectiveness
• Reduce costs
• Optimize process performance
• Maximize return on investment (ROI)
• Minimize total cost of ownership (TCO)
• Maximize asset value and life cycle
• Continuously monitor improved performance excellence
• Build pride – and attract and retain the best employees

From: The Best Practices in Facility Management: Creating an Environment of Operational Excellence (Tuveson & Hodges)
Performance Categories

Leadership

Planning

Customer Focus

Performance Results

Process Management

Measurement & Analysis

Workforce Development

From: The Best Practices in Facility Management: Creating an Environment of Operational Excellence (Tuveson & Hodges)

Same Criteria as in Facility Management – Diagnostics (FM-D) facility management assessment software developed by Facility Engineering Associates (FEA)
APPAA Award for Excellence Program Criteria

1.0 Leadership – 150 points
2.0 Strategic and Operational Planning – 150 points
3.0 Customer Focus – 150 points
4.0 Information and Analysis – 100 points
5.0 Development and Management of Human Resources – 100 points
6.0 Process Management – 100 points
7.0 Performance Results – 250 points
8.0 Other Considerations – points as appropriate

Typically 1,000 points possible for award in APPA Award for Excellence Evaluation

Note: Same criteria used in the APPA Facility Management Evaluation Program (FMEP) “Peer Review” Program
"Give me six hours to chop down a tree, and I will spend the first four sharpening the ax."
- Abraham Lincoln
“Strategic and operational planning consists of the overall planning process, the identification of goals and actions necessary to achieve success, and the deployment of those actions to align the work of the organization. The successful facilities organization anticipates many factors in its strategic planning efforts; changing customer expectations, business and partnering opportunities, technological developments, institutional master plans, programmatic needs, evolving regulatory requirements, building organizational capacity, and societal expectations among other criteria.”

- APPA Facility Management Evaluation Program (FMEP)
Office of Facilities

Planning

Integrated Facility Strategic Plan

- Perform a **Comprehensive crosswalk** of Institutional, Divisional (Business Affairs), and Facilities Strategic Planned Goals to **assure alignment** between the Facilities organization and the goals of the institution.

- Develop the Facilities Strategic Plan using a **balanced scorecard approach** to focus attention on people, customers, process, and financials and to help measure success of the strategic plan.
Office of Facilities

Example: Institutional Strategic Initiative V: Expanding Resources and Infrastructure

Goal 1: Retain and Recruit faculty and staff who are committed to our vision, mission, and values who diligently contribute to excellence.

Business Affairs Goal 2: Cultivating human capital that is aligned with our mission, vision, and values through the identification, recruitment, retention, management and development of our staff, and promoting an organizational culture of excellence wherein our employees might excel.

Business Affairs Goal 5: Practicing stewardship and transparency and ensuring compliance.

Facilities Strategic Goal #6
Develop internal hiring practices to attract, recruit and retain qualified staff committed to our vision, mission, and values, and who contribute to excellence. (SI I G 2, SI II G 4, SI V G 1, BA G 2, BA G 5)
Balanced Scorecard

A strategic planning and management system used extensively in business & Industry, government and non-profit organizations worldwide to align business activities to the vision and strategy of the organization, improve internal and external communications, and monitor organization performance against strategic goals.

Master Planning

- Development of an effective Master Plan is essential to assure consistent implementation of the institutional strategic plan
Master Planning

• Must be current, well developed, well accepted, and well managed

• Need mechanism to manage the master plan and assure development consistent with master plan (UTSA uses Master Plan Management Council)

• Need strong design and construction standards, uniform sign standards, integrated wayfinding signage

• Other Master Plans, including environmental, utility, infrastructure, landscaping are important for consistent, effective campus development
Facility Planning and Development

- Facility Planning and Development is an essential planning component that is often overlooked. Includes capital renewal/deferred maintenance project planning.
Facility Planning and Development

• Understand the condition and life cycle age of campus facilities and infrastructure (Condition assessments, current replacement value, deferred maintenance/capital renewal requirements)

• Long-range capital renewal plan to address aging and failing systems

• Objective and collaborative priority system to identify the higher priority/urgency work and sustainable funding provided

• Chief Facilities Officer informs senior institutional leadership of the essential requirements and funding needed to address those requirements and impact if funding is not provided
Facilities Condition Index (FCI) History

UTSA FCI

FY13 APPA FPI Survey Average – 11.45%

Data from UT System Facilities Resource Renewal Model
• Existing Capital Renewal Needs are $110M or 8.9% of the Current Replacement Value of the Campus.
• To maintain existing ratio of Renewal Needs to Replacement Value will require an annual expenditure of $10M
Deferred Maintenance Priority Management

Objective Project Scoring Criteria
• Human Safety
• Regulatory Compliance
• Program Support
• Asset Preservation
• Community/Sustainability
Formal Work Management Planning involves understanding available resources and applying them against known work requirements to develop a formal annual work plan that becomes more firm the closer you get to the date in which work is planned to be accomplished.
Goal: To Optimize our ability to satisfy (and delight) our customers and assure their success.

Deliverables:

Develop and implement a formal Facilities Annual Work Plan
- Create a master schedule for aligning Facilities resources
- Create new or refine existing processes
- Maximize use of CMMS and mobile technology
- In weeks preceding to scheduled work, assure work well planned/coordinated, and materials/equipment is obtained
- Firm scheduling the week prior to the scheduled work
- Assure excellent work is delivered on time & within budget.
Ideas for “World-Class” Planning

- Facilities Strategic Plan integrated with institutional plan using balanced scorecard
- Employee and Stakeholder involvement in development of Facility Strategic Plan
- Effective master plan and mechanism to assure develop consistent with MP
- Strong design and construction, signage, & Way-Finding standards
- Environmental, Utility, Infrastructure, Landscaping, and other master plans
- Condition assessments, deficiency list, current replacement value, FCI
- Long range capital renewal and deferred maintenance plan
- Objective and collaborative priority mechanism to allocate scarce resources
- Sustainable funding mechanism to address support institutional plans
- Analysis of essential requirements, funding required and impact if not provided
- Formal annual work plan and scheduling mechanism
- Emergency Management and Business Continuity Plans
- Establish furniture, fixtures, & equipment (FF&E) standards practices/procedures
- Periodic zero-based budgeting review to allocate funding priorities
“Senior Leaders in effective facilities organizations set direction and establish a customer focus, clear and visible values, and high expectations in line with the institutional mission, vision, and core values.

Effective facilities leaders facilitate the dialogue around larger issues such as total cost of ownership, sustainability, recapitalization requirements, and facilities reinvestment.

Leaders inspire the people in the organization and create an environment that stimulates personal growth. They encourage involvement, development and learning, innovation, and creativity. Leaders act as both educators and change agents.”

– APPA FMEP

“Leadership is a potent combination of strategy and character. But if you must be without one, be without the strategy.” - Gen. Norman Schwarzkopf
Leadership

- Know the Business
- Get to know your employees and give them respect
- Give them the support and “tools they need to do their job”
- Cultivate Diversity
- People Development
- Get out of your comfort zone

From Mari Kay Scott, Executive Director of Global Facilities, General Motors
Ideas to Provide “World-Class” Leadership

- Character and strategy (direction, customer focus, high expectations) aligned with institutional mission, vision and core values
- Strategic thinking around larger issues (TCO, sustainability, ROI, Recapitalization, and reinvestment)
- Inspiration and creation of environment that stimulates personal growth
- Educate and be a change agent
- Know the business
- Respect employees - get them the “tools they need to do their job” and to succeed
- Cultivate diversity and develop diversity of thought
- Develop people
- Get out of your comfort zone
- Clearly and effectively communicate roles and responsibilities and expectations to staff and the greater community at large
- Effective alignment of the organization and get “right people in the right jobs”
- Annual 360 degree leadership performance evaluation
- Develop brand promise, brand, purpose statement, guiding principles
- Establish a recognized quality improvement program
- Character (yes, this is a repeat) – Lead ethically and communicate transparently
Ideas to Provide “World-Class” Leadership

- Regular scenario planning to support updates to the strategic plan
- Trusting relationships with executives within the overall organization
- Protocols for running effective meetings throughout the organization
“Customer focus is a key component of effective facilities management. All Stakeholders must feel their needs are heard, understood, and acted upon. Various tools must be in place to assure customer communication, to assimilate what is said, and implement procedures to act on expressed needs. To be successful, a facility department must ensure that its customers have an understanding of standards, tasks, roles, frequencies of services, etc.”

- APPA FMEP

“A man without a smiling face must not open a shop” – Chinese Proverb
Customer Focus

“The new Paradigm of world class to meet competitiveness for companies is customer focus. The three areas of customer focus are:

1. Customer Satisfaction (Meeting customer’s expectations)
2. Customer Delight (Exceeding customer expectations by providing goods, products, & services beyond normal expectations, delighting the customer)
3. Customer Success (Going beyond exceeding expectations or delight and assuring customer success)

- Christopher Ahoy, APPA Fellow, Customer-Driven Operations Management
Work Order Customer Satisfaction O & M Tri-Campus

Types 1, 4, & 6

August 2014 Data:
- 96 surveys mailed
- 20% response rate
- 1,183 work orders
Survey Comments

“I guess this is the work order to replace bulbs in my office. Took at least 6 weeks to get to it? A little excessive I think, since my job requires contact with external clients/visitors.”

“UTSA Facilities Grounds has always done a wonderful job attending to HRL Grounds. We certainly miss you.”

“No issues. Everything worked out great. Thank you for your help!”

“John and his team were awesome! Thanks for all your hard work and dedication.”
The work order in the iService desk shows multiple unrelated costs which have been questioned and reversed through inquiries to Work Control. I was not communicated with during this process, with the exception of pre-construction work I do not recall anyone informing me the work was complete.

This project had four project coordinators before it was complete. This excessive turnover did not make for a smooth process. Working with the JOC was challenging also - and again - the turn over of project coordinators did not ease the process. Additionally, months after the work was completed Facilities O&M conducted a final inspection and found items that had to be addressed.

After the bumpy start on this project and that of the 1st Floor Service Point, we were very happy with the project coordinator and Facilities support.
Annual Project Management Survey Results

Average Project Customer Satisfaction Rating

- 2009: 3.79
- 2010: 3.88
- 2011: 3.94
- 2012: 4
- 2013: 4.13
Communicating with Campus/Clients

- Formal Process for Emergency and Non-Emergency Notifications
- Facilities Web-Site Notifications
- Regular meetings with Prime Customers
- “UTSA Today” (Campus Newsletter) Articles
- Surveys (Work Orders, Projects, Overall)
- Town Hall Meetings with Customers
- Dale Carnegie Customer Focused Training
Ideas for “World-Class” Customer Focus

- Leadership conveys an attitude of service leadership to all
- Culture of delighting the customer and helping to assure their success
- Customer service strategy that includes communications strategy
- Great value on customer service attributes in annual performance evaluations
- Formal communications policies for emergency and non-emergency work
- Regular meetings with major customers
- Customer town halls to obtain improvement advice and understand their needs
- Employee Customer Service Training (ie. Dale Carnegie, HR/In-house Facilities)
- Variety of tools to capture the voice of the customer (surveys, customer advisory groups, service reviews, employee field reporting)
- Manage the total customer experience from service/project inception to close-out
- Talk with and listen to the customers and follow-up to resolve concerns
- Communicate standards, tasks, roles, frequencies of service with customers
- Customer service guidelines
- On-line service desk for work requests
“Workforce development is a strategic approach focusing on people rather than operations. It is essentially a human resources strategy… evolved from a problem-focused approach… to a holistic approach considering participants’ many barriers and overall needs… While Facilities budgets are notoriously tight, proper investment in continuous development of FM staff is vital to achieving the mission of the organization. Effective workforce focus and development includes employee job descriptions and succession planning, training and professional development, employee recognition & rewards, and employee performance & feedback.”

- Facility Management – Diagnostics (Facility Engineering Associates)

“Having the right people on the bus with the right skills, experience, and depth is one of the critical elements.”  - James Collins, Good to Great
# Employee Engagement Surveys

<table>
<thead>
<tr>
<th>Survey of Organizational Excellence and Survey of Employee Engagement</th>
<th>2005 FS Composite Score</th>
<th>2007 Composite Score</th>
<th>Total Change in Score</th>
<th>2009 Composite Score</th>
<th>Total Change in Score</th>
<th>2011 Composite Score</th>
<th>Total Change in Score</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Work Group</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Supervisor Effectiveness</td>
<td>299</td>
<td>321</td>
<td>22</td>
<td>335</td>
<td>14</td>
<td>382</td>
<td>47</td>
</tr>
<tr>
<td>2. Fairness</td>
<td>309</td>
<td>314</td>
<td>5</td>
<td>325</td>
<td>11</td>
<td>358</td>
<td>31</td>
</tr>
<tr>
<td>3. Team Effectiveness</td>
<td>301</td>
<td>316</td>
<td>15</td>
<td>327</td>
<td>11</td>
<td>358</td>
<td>31</td>
</tr>
<tr>
<td>4. Diversity</td>
<td>321</td>
<td>337</td>
<td>16</td>
<td>339</td>
<td>2</td>
<td>349</td>
<td>10</td>
</tr>
<tr>
<td><strong>II. Accomodations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Fair Pay</td>
<td>255</td>
<td>232</td>
<td>-23</td>
<td>256</td>
<td>24</td>
<td>244</td>
<td>-12</td>
</tr>
<tr>
<td>6. Physical Environment</td>
<td>344</td>
<td>361</td>
<td>17</td>
<td>359</td>
<td>-2</td>
<td>379</td>
<td>20</td>
</tr>
<tr>
<td>7. Benefits</td>
<td>376</td>
<td>367</td>
<td>-9</td>
<td>382</td>
<td>15</td>
<td>382</td>
<td>0</td>
</tr>
<tr>
<td>8. Employment development</td>
<td>325</td>
<td>359</td>
<td>34</td>
<td>351</td>
<td>-8</td>
<td>371</td>
<td>20</td>
</tr>
<tr>
<td><strong>III. Organizational Features</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Change Oriented</td>
<td>303</td>
<td>331</td>
<td>28</td>
<td>341</td>
<td>10</td>
<td>376</td>
<td>16</td>
</tr>
<tr>
<td>10. Goal Oriented</td>
<td>338</td>
<td>336</td>
<td>-2</td>
<td>352</td>
<td>16</td>
<td>366</td>
<td>0</td>
</tr>
<tr>
<td>11. Holographic</td>
<td>318</td>
<td>341</td>
<td>23</td>
<td>354</td>
<td>13</td>
<td>379</td>
<td>20</td>
</tr>
<tr>
<td>12. Strategic</td>
<td>375</td>
<td>371</td>
<td>-4</td>
<td>379</td>
<td>8</td>
<td>395</td>
<td>16</td>
</tr>
<tr>
<td>13. Quality</td>
<td>373</td>
<td>355</td>
<td>-18</td>
<td>369</td>
<td>14</td>
<td>376</td>
<td>7</td>
</tr>
<tr>
<td><strong>IV. Information</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15. Availability</td>
<td>338</td>
<td>351</td>
<td>13</td>
<td>359</td>
<td>8</td>
<td>369</td>
<td>10</td>
</tr>
<tr>
<td>16. External</td>
<td>344</td>
<td>359</td>
<td>15</td>
<td>360</td>
<td>1</td>
<td>363</td>
<td>3</td>
</tr>
<tr>
<td><strong>V. Personal</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17. Job Satisfaction</td>
<td>327</td>
<td>346</td>
<td>19</td>
<td>359</td>
<td>13</td>
<td>364</td>
<td>5</td>
</tr>
<tr>
<td>18. Time and Stress</td>
<td>320</td>
<td>344</td>
<td>24</td>
<td>350</td>
<td>6</td>
<td>364</td>
<td>10</td>
</tr>
<tr>
<td>20. Empowerment</td>
<td>330</td>
<td>346</td>
<td>16</td>
<td>357</td>
<td>11</td>
<td>363</td>
<td>16</td>
</tr>
<tr>
<td><strong>Employee Engagement Information Systems</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average Score</td>
<td>326</td>
<td>338</td>
<td>12</td>
<td>347</td>
<td>9</td>
<td>359</td>
<td>12</td>
</tr>
</tbody>
</table>
Ideas for “World-Class” Workforce Development

- Comprehensive and objective Hiring Process – hire the right people first time
- Career paths/job families, job descriptions, needs assessments
- Survey of employee engagement
- Effective Staff recognition and awards program
- Supervisory Curriculum/Mandatory training
- Employee language training (Rosetta Stone, “Erlinda’s Wish” Computer training)
- Employee technical, compliance, ethics training
- New employee orientation for Facilities employees
- Benchmarking staffing levels
- Effective occupational health and life safety training program
- Opportunities for employees to share experiences at trade conferences
- Employee Progression guidelines
- Succession Plans for key positions in the organization
“Effective process management addresses how the facilities organization manages key product and service design, delivery processes, and continuous improvement. Process management includes various systems or “core competencies” such as work management, performance standards, estimating systems, planning, design, and construction of new or renovated facilities, space management, event management, and other key processes that affect facilities functions.”
- APPA FMEP

“If you can’t describe what you are doing as a process, you don’t know what you’re doing.”
- W. Edwards Deming

“Excellent firms don’t believe in excellence, only in constant improvement and constant change.”
- Tom Peters
Ideas for “World-Class” Process Management

- Lean systems analysis to improve existing processes
- Develop new processes as necessary to assure effective service delivery
- Annual shop rate analysis and updating
- Project management fees analysis and updating
- Master Plan Management Process
- Formal Preventive Maintenance program with mechanism to update as necessary
- Service Level Agreements (SLAs) with fee funded customers
- Job Order Contracts and Job Order Design Contracts
- Formal Hiring Process
- Project management charters with Construction agents/EHS&RM
- Capital Renewal Planning process
- Construction Management training and “lessons learned” reviews
- Automation improvements (mini-iPads, wireless assignment of work)
- Funding mechanisms (“Swept” deferred maintenance funds, utility reinvestment)
- Annual Work Plan
- Condition Assessment Process
- Computer Replacement Guidelines
- Archiving and Storage Retrieval Process
Assessment and information analysis describes how your organization uses information and analyses to evaluate and drive performance improvements. Of interest are types of tools used, and how the tools are used to measure and enhance organizational performance.

- APPA FMEP

“When you can measure what you are speaking about and express it in numbers, you know something about it; but when you cannot express it in numbers, your knowledge is of a meager an unsatisfactory kind…”

- Lord Kelvin
“The performance of a facilities organization can be assessed in a number of ways: campus appearance, customer satisfaction, employee satisfaction, effectiveness of systems operations, financial results, and supplier/business partner results. Having measurement tools in place to assess such performance is critical in an environment of continuous improvement.”

- APPA FMEP

“If you are not getting better, you are getting worse.” – Tiger Woods

“It is not necessary to change. Survival is not mandatory.” – W. Edwards Deming
Ideas for “World-Class”
Measurement & Analysis/Performance Results

- Key Performance Indicators and benchmarking with other institutions
- Benchmarking with professional trade organizations (APPA, IFMA)
- Focus on key business metrics (those critical to your success)
- Upgraded web-based Computerized Maintenance Management System (CMMS)
- Operations Review Meetings to discuss performance results
- Analysis of work order information to address emergent issues (elevators, fire and life safety concerns)
- Productivity Analysis
- Third Party Analysis of Key Metrics
- Engagement of key stakeholders in what metrics they feel are important
- Emergency Response and Business Continuity metrics
- Quality Assurance Program and regular assessment process
- Standards for design, construction, maintenance, operations, other critical areas
STRATEGIC KPI EXAMPLES

(IFMA and APPA Suggested Metrics)
Total Operating Cost Per GSF (excluding Purchased Utilities)

- Building Age Range: less than 20
- Carnegie Class: Research High
- Funding: Public
- APPA Region: CAPP
- Enrollment Range: 20,000+

UTSA = $21,657,141 Total Operating Cost / 5,252,876 GSF

APPA Average: $5.23
UTSA: $4.12
Maintenance Cost per Gross Square Foot

- Building Age Range: less than 20
- Carnegie Class: Research High
- Funding: Public
- APPA Region: CAPPA
- Enrollment Range: 20,000+

UTSA = \frac{\$5,349,630 \text{ Maintenance Operating Cost}}{5,252,876 \text{ GSF}}

APPA Average $1.63

UTSA $1.02
UTSA = \frac{\$21,657,141 \text{ Facilities Operating Cost}}{\$475,029,268 \text{ Institutional Operating Cost}}

UTSA = 4.56%  
APPA Average = 5.7%
Total Operating Cost per Student Full Time Equivalent

UTSA = $21,657,141 Facilities Operating Cost / 30,474 Student FTE

UTSA = $710.68

APPA Average = $1,450.00
Office of Facilities

Average Gross Square Feet per Student FTE

UTSA = \frac{5,252,876 \text{ GSF}}{30,474 \text{ Student FTE}}

APPA Average = 299.9 SF

UTSA = 172.4 SF
Note: This is total BTU/GSF and not the same as the Energy Utilization Index (EUI). UTSA FY13 EUI is 170.9 considering chiller plant inefficiency factored in.
Operations Review Meeting

August 2014

Data

Facilities………Your Partner for Successful Solutions
Office of Facilities

Main Campus O&M Net Balance
18-2200

<table>
<thead>
<tr>
<th></th>
<th>Aug</th>
<th>Jul</th>
<th>Jun</th>
<th>May</th>
<th>Apr</th>
<th>Mar</th>
<th>Feb</th>
<th>Jan</th>
<th>Dec</th>
<th>Nov</th>
<th>Oct</th>
<th>Sep</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY13 Net</td>
<td>($120,752)</td>
<td>($120,752)</td>
<td>($120,752)</td>
<td>($120,752)</td>
<td>($120,752)</td>
<td>($120,752)</td>
<td>($120,752)</td>
<td>($120,752)</td>
<td>($120,752)</td>
<td>($120,752)</td>
<td>($120,752)</td>
<td>($120,752)</td>
</tr>
<tr>
<td>FY12 Net</td>
<td>$120,752</td>
<td>$120,752</td>
<td>$120,752</td>
<td>$120,752</td>
<td>$120,752</td>
<td>$120,752</td>
<td>$120,752</td>
<td>$120,752</td>
<td>$120,752</td>
<td>$120,752</td>
<td>$120,752</td>
<td>$120,752</td>
</tr>
<tr>
<td>-10% FY14 Exp.</td>
<td>($120,752)</td>
<td>($120,752)</td>
<td>($120,752)</td>
<td>($120,752)</td>
<td>($120,752)</td>
<td>($120,752)</td>
<td>($120,752)</td>
<td>($120,752)</td>
<td>($120,752)</td>
<td>($120,752)</td>
<td>($120,752)</td>
<td>($120,752)</td>
</tr>
<tr>
<td>+10% FY14 Exp.</td>
<td>$120,752</td>
<td>$120,752</td>
<td>$120,752</td>
<td>$120,752</td>
<td>$120,752</td>
<td>$120,752</td>
<td>$120,752</td>
<td>$120,752</td>
<td>$120,752</td>
<td>$120,752</td>
<td>$120,752</td>
<td>$120,752</td>
</tr>
<tr>
<td>FY14 Revenue</td>
<td>$246,983</td>
<td>$152,876</td>
<td>$98,751</td>
<td>$69,553</td>
<td>$0</td>
<td>$0</td>
<td>$152,876</td>
<td>$246,983</td>
<td>$98,751</td>
<td>$69,553</td>
<td>$0</td>
<td>$0</td>
</tr>
<tr>
<td>FY14 Expense</td>
<td>($250,000)</td>
<td>($200,000)</td>
<td>($150,000)</td>
<td>($100,000)</td>
<td>($50,000)</td>
<td>($0)</td>
<td>($50,000)</td>
<td>($100,000)</td>
<td>($150,000)</td>
<td>($200,000)</td>
<td>($250,000)</td>
<td>($300,000)</td>
</tr>
</tbody>
</table>
Preventive Maintenance Schedule Compliance - Tri Campus
(Excludes Vehicle Maintenance)

<table>
<thead>
<tr>
<th>Month</th>
<th>% Month</th>
<th>% Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug-13</td>
<td>97.5%</td>
<td>95.3%</td>
</tr>
<tr>
<td>Sep-13</td>
<td>94.8%</td>
<td>95.6%</td>
</tr>
<tr>
<td>Oct-13</td>
<td>93.4%</td>
<td>95.5%</td>
</tr>
<tr>
<td>Nov-13</td>
<td>85.1%</td>
<td>94.6%</td>
</tr>
<tr>
<td>Dec-13</td>
<td>80.1%</td>
<td>93.2%</td>
</tr>
<tr>
<td>Jan-14</td>
<td>94.8%</td>
<td>92.9%</td>
</tr>
<tr>
<td>Feb-14</td>
<td>96.8%</td>
<td>92.9%</td>
</tr>
<tr>
<td>Mar-14</td>
<td>93.4%</td>
<td>92.5%</td>
</tr>
<tr>
<td>Apr-14</td>
<td>90.1%</td>
<td>91.9%</td>
</tr>
<tr>
<td>May-14</td>
<td>93.2%</td>
<td>92.1%</td>
</tr>
<tr>
<td>Jun-14</td>
<td>83.9%</td>
<td>91.6%</td>
</tr>
<tr>
<td>Jul-14</td>
<td>96.6%</td>
<td>91.8%</td>
</tr>
<tr>
<td>Aug-14</td>
<td>90.4%</td>
<td>91.5%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Scheduled</td>
<td>1,556</td>
<td>1,484</td>
<td>1,646</td>
<td>1,673</td>
<td>1,600</td>
<td>1,718</td>
<td>1,883</td>
<td>1,726</td>
<td>1,921</td>
<td>1,959</td>
<td>1,759</td>
<td>1,663</td>
<td>1,724</td>
</tr>
<tr>
<td>On-Time</td>
<td>1,517</td>
<td>1,407</td>
<td>1,537</td>
<td>1,423</td>
<td>1,282</td>
<td>1,629</td>
<td>1,823</td>
<td>1,612</td>
<td>1,731</td>
<td>1,826</td>
<td>1,476</td>
<td>1,606</td>
<td>1,559</td>
</tr>
<tr>
<td>Missed</td>
<td>39</td>
<td>77</td>
<td>109</td>
<td>250</td>
<td>318</td>
<td>89</td>
<td>60</td>
<td>114</td>
<td>190</td>
<td>133</td>
<td>283</td>
<td>57</td>
<td>165</td>
</tr>
</tbody>
</table>
Preventive Maintenance Backlog – Tri-Campus
(Excludes Vehicle Maintenance)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Backlog</td>
<td>417</td>
<td>463</td>
<td>340</td>
<td>346</td>
<td>323</td>
<td>105</td>
<td>92</td>
<td>107</td>
<td>232</td>
<td>167</td>
<td>333</td>
<td>199</td>
<td>287</td>
</tr>
<tr>
<td>Ave Backlog</td>
<td>199</td>
<td>227</td>
<td>245</td>
<td>266</td>
<td>287</td>
<td>291</td>
<td>290</td>
<td>290</td>
<td>301</td>
<td>294</td>
<td>291</td>
<td>272</td>
<td>263</td>
</tr>
</tbody>
</table>
Corrective Maintenance Schedule Compliance - Tri Campus
(Excludes Vehicle Maintenance)

<table>
<thead>
<tr>
<th>Month</th>
<th>Aug-13</th>
<th>Sep-13</th>
<th>Oct-13</th>
<th>Nov-13</th>
<th>Dec-13</th>
<th>Jan-14</th>
<th>Feb-14</th>
<th>Mar-14</th>
<th>Apr-14</th>
<th>May-14</th>
<th>Jun-14</th>
<th>Jul-14</th>
<th>Aug-14</th>
</tr>
</thead>
<tbody>
<tr>
<td>% Month</td>
<td>85.5%</td>
<td>84.2%</td>
<td>81.7%</td>
<td>82.2%</td>
<td>82.7%</td>
<td>82.5%</td>
<td>85.4%</td>
<td>81.4%</td>
<td>85.4%</td>
<td>86.5%</td>
<td>83.2%</td>
<td>83.4%</td>
<td>74.9%</td>
</tr>
<tr>
<td>% Average</td>
<td>89.0%</td>
<td>88.5%</td>
<td>87.7%</td>
<td>87.1%</td>
<td>86.8%</td>
<td>86.1%</td>
<td>86.2%</td>
<td>85.6%</td>
<td>85.2%</td>
<td>84.8%</td>
<td>84.4%</td>
<td>83.8%</td>
<td>83.0%</td>
</tr>
<tr>
<td>Completed</td>
<td>1,244</td>
<td>1,245</td>
<td>1,407</td>
<td>1,345</td>
<td>992</td>
<td>1,209</td>
<td>1,165</td>
<td>1,037</td>
<td>1,128</td>
<td>917</td>
<td>1,067</td>
<td>969</td>
<td>993</td>
</tr>
<tr>
<td>On-Time</td>
<td>1,064</td>
<td>1,048</td>
<td>1,150</td>
<td>1,106</td>
<td>820</td>
<td>997</td>
<td>995</td>
<td>844</td>
<td>963</td>
<td>793</td>
<td>888</td>
<td>808</td>
<td>744</td>
</tr>
<tr>
<td>Missed</td>
<td>180</td>
<td>197</td>
<td>257</td>
<td>239</td>
<td>172</td>
<td>212</td>
<td>170</td>
<td>193</td>
<td>165</td>
<td>124</td>
<td>179</td>
<td>161</td>
<td>249</td>
</tr>
</tbody>
</table>
Work Order Aging - Tri-Campus
Corrective Maintenance & Departmental Requests

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 30</td>
<td>94</td>
<td>111</td>
<td>227</td>
<td>239</td>
<td>186</td>
<td>116</td>
<td>140</td>
<td>161</td>
<td>138</td>
<td>227</td>
<td>168</td>
<td>237</td>
<td>140</td>
</tr>
<tr>
<td>&gt; 60</td>
<td>90</td>
<td>50</td>
<td>37</td>
<td>107</td>
<td>103</td>
<td>89</td>
<td>66</td>
<td>86</td>
<td>62</td>
<td>93</td>
<td>133</td>
<td>100</td>
<td>132</td>
</tr>
<tr>
<td>&gt; 90</td>
<td>24</td>
<td>24</td>
<td>23</td>
<td>20</td>
<td>58</td>
<td>57</td>
<td>83</td>
<td>74</td>
<td>51</td>
<td>92</td>
<td>133</td>
<td>186</td>
<td>177</td>
</tr>
<tr>
<td>Total</td>
<td>208</td>
<td>185</td>
<td>287</td>
<td>366</td>
<td>347</td>
<td>262</td>
<td>289</td>
<td>321</td>
<td>251</td>
<td>412</td>
<td>434</td>
<td>523</td>
<td>449</td>
</tr>
</tbody>
</table>
### MMBTUs per GSF

<table>
<thead>
<tr>
<th>Month</th>
<th>2014</th>
<th>2013</th>
<th>2012</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sept</td>
<td>0.0092</td>
<td>0.0095</td>
<td>0.0123</td>
</tr>
<tr>
<td>Oct</td>
<td>0.0097</td>
<td>0.0096</td>
<td>0.0104</td>
</tr>
<tr>
<td>Nov</td>
<td>0.0103</td>
<td>0.0120</td>
<td>0.0126</td>
</tr>
<tr>
<td>Dec</td>
<td>0.0130</td>
<td>0.0115</td>
<td>0.0137</td>
</tr>
<tr>
<td>Jan</td>
<td>0.0145</td>
<td>0.0134</td>
<td>0.0135</td>
</tr>
<tr>
<td>Feb</td>
<td>0.0119</td>
<td>0.0102</td>
<td>0.0124</td>
</tr>
<tr>
<td>Mar</td>
<td>0.0110</td>
<td>0.0109</td>
<td>0.0110</td>
</tr>
<tr>
<td>Apr</td>
<td>0.0109</td>
<td>0.0108</td>
<td>0.0110</td>
</tr>
<tr>
<td>May</td>
<td>0.0091</td>
<td>0.0098</td>
<td>0.0106</td>
</tr>
<tr>
<td>Jun</td>
<td>0.0090</td>
<td>0.0093</td>
<td>0.0110</td>
</tr>
<tr>
<td>Jul</td>
<td>0.0102</td>
<td>0.0100</td>
<td>0.0101</td>
</tr>
<tr>
<td>Aug</td>
<td>0.0097</td>
<td>0.0092</td>
<td>0.0105</td>
</tr>
</tbody>
</table>
GALs per GSF

<table>
<thead>
<tr>
<th></th>
<th>Sept</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014 Gal per GSF</td>
<td>4.20</td>
<td>3.18</td>
<td>3.16</td>
<td>2.04</td>
<td>2.06</td>
<td>2.96</td>
<td>2.91</td>
<td>3.57</td>
<td>2.74</td>
<td>3.32</td>
<td>3.92</td>
<td>4.30</td>
</tr>
<tr>
<td>2013 Gal per GSF</td>
<td>3.98</td>
<td>3.44</td>
<td>3.27</td>
<td>2.66</td>
<td>2.37</td>
<td>2.68</td>
<td>2.64</td>
<td>3.31</td>
<td>2.82</td>
<td>3.51</td>
<td>3.60</td>
<td>3.72</td>
</tr>
<tr>
<td>2012 Gal per GSF</td>
<td>4.80</td>
<td>3.83</td>
<td>3.50</td>
<td>2.26</td>
<td>2.29</td>
<td>2.53</td>
<td>2.93</td>
<td>3.46</td>
<td>3.30</td>
<td>3.58</td>
<td>3.61</td>
<td>3.68</td>
</tr>
</tbody>
</table>
Security & Life Safety
August 2014

<table>
<thead>
<tr>
<th>Work Orders</th>
<th>Created</th>
<th>Closed</th>
<th>Open</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-Phones</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Gates</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Alarms</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Evacuations</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

August 2014 Data
Security & Life Safety-Impairments
August 2014

<table>
<thead>
<tr>
<th>Work Orders</th>
<th>Fire Alarms</th>
<th>Fire Sprinklers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Created</td>
<td>19</td>
<td>5</td>
</tr>
<tr>
<td>Closed</td>
<td>18</td>
<td>2</td>
</tr>
<tr>
<td>Open</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>
Yellow Tag Deficiencies

<table>
<thead>
<tr>
<th>Sep-13</th>
<th>Oct-13</th>
<th>Nov-13</th>
<th>Dec-13</th>
<th>Jan-14</th>
<th>Feb-14</th>
<th>Mar-14</th>
<th>Apr-14</th>
<th>May-14</th>
<th>Jun-14</th>
<th>Jul-14</th>
<th>Aug-14</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Tasks</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Transferred Tasks</td>
<td>465</td>
<td>350</td>
<td>350</td>
<td>321</td>
<td>270</td>
<td>257</td>
<td>165</td>
<td>88</td>
<td>48</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>Yellow Tags</td>
<td>31</td>
<td>29</td>
<td>29</td>
<td>22</td>
<td>20</td>
<td>18</td>
<td>11</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>
State Fire Marshall Findings
Operations & Maintenance

<table>
<thead>
<tr>
<th>Month</th>
<th>Jan-14</th>
<th>Feb-14</th>
<th>Mar-14</th>
<th>Apr-14</th>
<th>May-14</th>
<th>Jun-14</th>
<th>Jul-14</th>
<th>Aug-14</th>
<th>Sep-14</th>
</tr>
</thead>
<tbody>
<tr>
<td>O &amp; M Unresolved Findings</td>
<td>140</td>
<td>140</td>
<td>139</td>
<td>133</td>
<td>71</td>
<td>41</td>
<td>16</td>
<td>13</td>
<td>5</td>
</tr>
</tbody>
</table>
# Lab Inspections/Deficiencies

as of August 31, 2014

<table>
<thead>
<tr>
<th>Location</th>
<th>Opened</th>
<th>Closed</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>DBB 2.306</td>
<td>08/01/14</td>
<td>Still Open</td>
<td>Inspect for leaks, repair, and replace the spotted ceiling tiles.</td>
</tr>
<tr>
<td>FLN 2.01.42</td>
<td>08/01/14</td>
<td>Still Open</td>
<td>Vents are throwing out black debris all over the lab and contaminating the experiments.</td>
</tr>
<tr>
<td>DBB 2.306</td>
<td>08/05/14</td>
<td>Still Open</td>
<td>There are brown stained ceiling tiles. Please investigate for leaks.</td>
</tr>
</tbody>
</table>
Questions?