University of Michigan
Plant Building and Grounds Services (OS1) Initiative
Outline

- Who we are
- What we do well
- What needs fixed
- What we learned
- What is (OS1)
- Implementation
- Supporting Programs
- Summary, Q&A
Who we are...

- 200 plus facilities
  - 14 million square feet
  - $20M operating budget, 90% labor

- Generalists working in zones
  - 380 custodians/ 36,000 SF/FTE
  - 25 supervisors and managers
  - 1/17 supervisor to custodian ratio

- CRT for specialty work, emergencies
What we do well

- First University to receive CIMS certification with honors
- Leader in Big 10 and beyond for best practices
- Improvement in customer and employee satisfaction scores on B&F surveys 2007-2009
- Honorable mention for Exemplary Team award in 2008
- Rookie of the year program at (OS1) symposium 2009
- Award nomination for Norovirus Study and Pandemic Response Plan 2009
What needs fixed?

- Cleaning standards at APPA 2.7
- Inconsistent custodial management performance
- Chemical and equipment issues
  - PM, quantities
- Training - technical, equipment
- Budget reductions = service reductions
What we learned...

- Review of task/team cleaning programs
- ID (OS1) as only comprehensive product
- Contacted references
  - UMass, UNC, UT Austin
  - Boeing, UT Jazz, Sandia National Labs
- Site visit to UT Austin
- Attended Janitor U
• Accidental Industry

• No certifications, degrees, qualifications, or licenses

• $150 Billion Industry
  ◦ In every business and household
  ◦ Largely controlled by chemical and equipment manufacturers and distributors

• Labor intensive

• Industry as dysfunctional business
• Most cleaning workers don’t know how to clean, or the science behind it.

• Building Service Contractors make money on what they don’t do.

• Distributers and manufacturers make money when customers make mistakes.

• Most cleaning managers and supervisors came up through the ranks and don’t know how to manage or supervise.

• Physical Plants – least understood, largest, receives majority of complaints
• **Janitor**
  ◦ Jan = Janus – Protector of the household
  ◦ Tor = Professional title

• **Janitors as health care workers**
  ◦ 90% of our time spend indoors
  ◦ Responsible for sanitization of facilities
  ◦ First line of defense against spread of disease

**Role of the janitor**
What is (OS1)?
An Engineering Approach to Cleaning

1. Clean for health first, then appearance
2. Treat Cleaning workers as first class citizens
3. Simplify, simplify
4. Utilize the clean syndrome
5. Go beyond compliance on safety regulations
6. Minimize environmental harm
7. Exceed expectations

- Adam Smith – Economics
  - Increased productivity = lower cost = lower price = increase sales

- Fredrick Taylor – One Best Way

- Ford – Standardization
  - Specialist vs. generalists/craftsmen

- McDonalds – Process Systems
  - A focus on process for consistent product

- Harvard Study
  - Don’t try to innovate when you are trying to copy
Zone Cleaning vs. team/task

- Specific, structured approach to job assignments
  - Efficient, focused, duplicable
  - Improved quality control

- Savings estimated to be 10-20% or more over zone cleaning
  - Cost neutral 18-24 months.
Primary Custodian Functions

- **Light duty specialist**
  - Empty trash, dust, spot clean, place trash for pick up

- **Vacuum specialist**
  - Check trash, vacuum traffic areas, spot vacuum others, reposition furniture

Restroom specialist
- Refill dispensers, empty trash, clean and disinfect fixtures and partitions/doors, sweep and mop floors

Utility specialist/lead custodian
- Stairwells, glass, spot clean carpet, move trash to dumpsters, special cleaning needs

- **Day Porter**
  - Works during normal business hours. Takes care of emergencies, restroom cleaning, restocking, empty trash, other duties as needed by customers
### Job Cards & Scouting Reports

**Building BMA**

#### LIGHT DUTY SPECIALIST

**Starting Point:** 1st fl Info Desk  
**Schedule:** MONDAY  
**Projects:** TRASH and DASH

<table>
<thead>
<tr>
<th>Floor</th>
<th>E.T.</th>
<th>Schedule</th>
<th>Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st fl</td>
<td>Check-in</td>
<td>8:00 to 8:02</td>
<td>Pick up tray and keys</td>
</tr>
<tr>
<td>1st fl</td>
<td>Lunch</td>
<td>11:30 to 12:00</td>
<td>Clean up equipment, return keys and tray</td>
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#### VACUUM SPECIALIST 1

**Starting Point:** 2nd fl N Lobby  
**Schedule:** MONDAY  
**Projects:**

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<thead>
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<th>Schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>2nd fl</td>
<td>Check-in</td>
<td>8:00 to 8:02</td>
</tr>
<tr>
<td>1st fl</td>
<td>Lunch</td>
<td>11:30 to 12:00</td>
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</tbody>
</table>

#### UTILITY SPECIALIST 1

**Starting Point:** 2nd fl N Stairwell  
**Schedule:** MONDAY  
**Projects:**

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#### RESTROOM SPECIALIST

**Starting Point:** 1st fl Conf. Room  
**Schedule:** MONDAY - PROJECTS  
**Projects:**

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</tr>
</tbody>
</table>

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1. **Check-in:** 8:00 to 8:02  
2. **Lunch:** 11:30 to 12:00  
3. **Break:** 10:00 to 10:15  
4. **Switch:** 10:15 to 10:19  
5. **Restock:** 9:30 to 10:00  
6. **Vacuum:** 11:30 to 12:00  
7. **Scrub:** 11:30 to 12:00  
8. **Switch:** 12:30 to 12:34  
9. **Clean up:** 12:30 to 12:45  
10. **Restock:** 12:30 to 12:45

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**Key Functions:**

- 1. **Check-in:** 8:00 to 8:02  
- 2. **Lunch:** 11:30 to 12:00  
- 3. **Break:** 10:00 to 10:15  
- 4. **Switch:** 10:15 to 10:19  
- 5. **Restock:** 9:30 to 10:00  
- 6. **Vacuum:** 11:30 to 12:00  
- 7. **Scrub:** 11:30 to 12:00  
- 8. **Switch:** 12:30 to 12:34  
- 9. **Clean up:** 12:30 to 12:45  
- 10. **Restock:** 12:30 to 12:45
Cleaning Schedules

Routine Cleaning (daily)
All areas except core
- Restroom Cleaning

Detail Cleaning (weekly)
- Monday Core
- Tuesday Core
- Wednesday Core
- Thursday Core

Projects: Fridays
Project days adjusted as required

Cleaning Schedules
Specialized Equipment & Supplies

- Back pack vacuums
- Mini Mops & Flat Mops
- Wooly Dusters with Sleeves
- Portion controlled cleaning products
Bulk Storage
3-6 Months Supply

Control Cabinet
1-3 Months Supply

Check In Areas

Pantry's Restroom Supplies

Supply Distribution and Control
- Beyond Compliance Safety Program
  - Employees trained on program
  - Color Coding
  - MSDS
  - Product inventory
New cleaning paradigm

- Focus on weekly detail cleaning
- Facilities clean to point where we only remove dirt that entered the day before
- Minimize accumulation and prevent bonding
- Reduction in project work
• Current budget model
  ◦ Budget reductions = frequency reductions

• New Model
  ◦ Clean for health then appearance
  ◦ Focus on detail cleaning and daily tasks
  ◦ Reduce project work
  ◦ Increase productive work time, lean systems
    • 5 minutes = $259,178/yr
Implementation
1. Survey the facility and develop the building profile
2. Prepare the site, job cards and task schedules
3. Determine staffing needs and assignments
4. Assess building condition
5. Hold boot camp
6. Complete 90 day basic training
7. Assess building condition
8. Hold “going forward” meeting

Preparation for OS1 Transition
Each facility work loaded

- Measure Cleanable Square Feet
  - Space type (office, classroom, etc.)

- Determine Floor Coverings
  - Carpeted floor surfaces
  - Hard floor surfaces
  - Special floor surfaces

- Count Restroom Fixtures

- Determine Specific Requirements
  - Security or access issues
  - Unusual client expectations
  - Best shift hours for cleaning
Improved Quality Control

Dana Hall
Pre-OS1

Chemistry Equipment
Removed

Chemistry OS1 Equipment

Dana Hall
Post OS1

Improved Quality Control
Supporting programs
• Boot Camp
• Basic Training
• Janitor University
• Expert Trainer
• (OS1) Coach
• Floor Care
• Functional Supervision
• (OS1) Users group
• Symposium
• Simon Institute

Training and Recognition
• Planning Management
  ◦ Sequence of Work Manager
  ◦ Instruction Cards Manager
  ◦ Time & Expense Manager
  ◦ Disciplinarian

• Performance Management
  ◦ Trainer & Job Coach
  ◦ Speed of Work Manager
  ◦ Preventative Maintenance Manager
  ◦ Compliance Manager
Door Security

- **RED DOT**: REMAIN LOCKED
- **GREEN DOT**: CLOSED, NOT LOCKED
- **WHITE DOT**: LEAVE AS FOUND
- **BLUE DOT**: OUTLET AVAILABLE FOR CUSTODIAN
Other Building Services related programs

- Day Porter position
- Carpet and Floor care
- Time clock/kiosk pilot
- Back to work program
- Building metrics pre and post OS1 pilot
  - Air quality testing
  - Microbe testing
Summary
What to expect during transition

- Drop in service as custodians relocated and/or shifts changed in zone areas
- Open house prior to roll out in new (OS1) facilities
- Drop in service then gradual improvement over 90 days of “basic training”
- Full 20% increase from zone service levels within first 6 months
- Staffing based on building needs
- Consistent quality cleaning standards
- Improved coverage
- Reduced injuries, absenteeism, and equipment abuse
- Lean supply and distribution systems
- Reduced chemical and equipment inventory
- Increased efficiencies = more for less $$

Expected end results
• John Lawter – Assoc Director, Plant Building and Grounds Services
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  ◦ 734-764-5458

• Maggie Garcia – (OS1) Project Manager, Plant Building Services
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  ◦ 734-615-0044
For Info on (OS1) Team Cleaning

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http://www.os1userssymposium.org
Plant Building and Grounds Services

Questions?

Building Services (OS1) program