

# APPA Effective and Innovative Practices

The University of Texas at Austin, Facilities Services

## Implementing an Interactive Campus-wide Office Cleaning Schedule

### Statement of Program

In 2010, Custodial Services sought creative ways to address their ever-shrinking budget. Various cost-cutting measures were implemented, but reducing cleaning frequency for the approximately 9,500 campus offices (roughly 1.9 million sq. ft.) proved to be the most challenging and innovative effort.

Previously, custodians checked every office, every day, to empty trash and recycling. Now, clients can be conscientious in placing items inside their waste and recycling receptacles, or place receptacles outside their office doors for service during nonservice days. On service days, custodians detail-clean offices and empty receptacles.

A key innovation allowed this effort to succeed. Custodial Services developed the cleaning schedule so it could be posted electronically for easy access by custodial crew leaders and clients. Clients can view the schedule for their office online—past, current, and future.

Now in its fifth year, the program is a proven success that combines stewardship with innovation to address a complex situation using a flexible, teachable solution that meets clients' needs. The office cleaning schedule program aligned manpower to the budget, while maintaining or improving service quality and client satisfaction. As a byproduct, the initiative also raised personal awareness of sustainability.

### Planning Stages

Custodial Services planned to communicate the transition to once a month office cleaning to campus clients well in advance of the program's launch date. Internally, they planned to reduce the office cleaning frequencies from once a week to approximately once every 20 business days using a Microsoft Excel-generated Office Cleaning Schedule. Once the program was fully implemented, the vision was for the schedule to be automated and a web application developed to make the schedule available to office occupants from Custodial Services' webpage, all without incurring cost.

### Data Gathering

Custodial Services has 24 cleaning crews on campus. Each cleaning crew is split into several teams, which at the time totaled 66 teams. An office cleaning schedule for all

66 teams needed to be created for the entire calendar year, but first space information was needed to start developing the schedules.

The office space information was extracted from WORQSpace<sup>1</sup> and exported into a Microsoft Excel spreadsheet. The spreadsheet was then sorted by building, floor, office number and square footage. With a few edits to the spreadsheet, it was ready to sort by the 66 teams. To determine how many offices each team would clean per night, an average of the total office square footage assigned to each team was used. For example, if team 'A' had 100,000 square feet of office space to clean in 20 days, then the calculation would be  $100,000\text{sqft} / 20\text{days} = 5,000\text{sqft per day}$ . In this example, team 'A' would have to clean on average 5,000 square feet of office space a day.

### Work Route Development

The project to determine work route assignment was divided up among Custodial Services' seven building services supervisors and three training specialists. Each were given printouts of the office information and asked to develop the best possible work routes for the teams they were assigned. They also walked all the buildings and sequentially numbered the offices in the order they were to be cleaned, 'number one' being the first office on the route. So the genesis of the office cleaning schedule program began with an Excel spreadsheet containing building information and some good walking shoes.

### Excel Office Cleaning Schedule

The screenshot shows an Excel spreadsheet with a 'Vertical Calendar' on the left side, displaying days of the week from January to December. A red cross icon labeled 'Work Route' is positioned over the calendar. To the right, a table titled 'DETAIL Clean Offices - frequency every 4 weeks' is visible. The table includes columns for 'Bldg-FI-Rm', 'Bldg', 'Fl', 'Rm', 'Room Type', 'Sq Ft', 'Cleaning Day', and 'Route'. The data rows list various office locations such as '2500, NON-CLASS (RESEARCH) LAB', '3105, RESEARCH STAFF OFFICE', and '3106, ADMIN/TECH STAFF OFFICE'.

Once all 66 work routes were completed, an actual office cleaning schedule template had to be developed based on the 20 office cleaning business days. Using Excel, Custodial Services developed a template with the capability of linking a vertical calendar to any of the work routes and their corresponding office information located in a different tab. Then the template was duplicated 66 times for each of the campus cleaning teams.

<sup>1</sup> WORQSpace is the official space management tool for collecting all space information at The University of Texas at Austin. The primary function of WORQSpace is to provide a simple and effective process for maintaining accurate information about space that the university owns or leases.

It would have been impractical for the 66 teams to carry printouts of their entire assigned office cleaning schedules, so office cleaning cards were created using Excel pivot tables within the same template. Then the cleaning cards for all the teams were sequentially grouped by the crews, using accordion files to store them. Using cards has saved paper, as there is no need to print assignments each day.

### Training the Trainers

The next phase of the project was to train the trainers--the training specialists and building services supervisors--on how to use the office cleaning schedule on a nightly basis. Once the training specialists and supervisors were trained, they explained the process to crew members. For example, crews were taught to distinguish office spaces from public spaces, which have a daily cleaning schedule.

### Client Communication



The Facilities Services director communicated the change in service to campus clients in an official informational group email message. Custodial Services addressed all concerns from individual clients after the email was sent.

After the program was implemented, custom table tents were produced and placed on every office desk. These cards provided contact numbers and links, plus how-to information. They also described the transition to once a month office cleaning.

### **Program Launch**

On November 4, 2010, Custodial Services piloted the program in one of the 24 crews. After the successful pilot launch, the rest of the crews implemented their schedules. The last schedule was implemented on December 10, 2010—just over one month.

### **Post-Implementation**

After a successful implementation, Custodial Services reached out to the university's Technology Resources department (TRecs) to take the next phase of the program from concept to reality. To get buy-in from TRecs, Custodial Services had already created a viable Office Cleaning Schedule. They also explained that the project would affect the entire campus community. Ultimately, TRecs made the project one of their priorities.

## Web Application Development

*Office Cleaning Schedules*

Offices and cubicles are cleaned approximately every 20 days. Public areas such as bathrooms, hallways, classrooms, and break rooms are cleaned daily. If your space needs immediate attention, please call the Facilities Service Center at 512-471-2020, or submit a service request via WORQS (UT EID required).

To find out the cleaning schedule for your office, please select your building below:

\*Don't see your building, floor, or room listed? Contact the Facilities Service Center.

Building: AHG - Anna Hiss Gymnasium

Floor: 001

*Anna Hiss Gymnasium (AHG), Floor 001*

Room	Last Cleaning	Next Cleaning	Future Cleaning
13	10/20/15	11/17/15	12/17/15
14	10/20/15	11/17/15	12/17/15

First, on the backend, TRecs replicated the office cleaning schedule by creating multiple Oracle tables and views containing the building information found in WORQSpace and the relevant pieces of the Excel-driven office cleaning schedule. To replicate the Excel-driven office cleaning cards, TRecs wrote a Cognos report that uses an Oracle view, allowing viewing and printing of the schedule for any given day.

Then, TRecs used Django, a web application framework written in Python<sup>3</sup> to create the web application used to publish cleaning schedules on the [Custodial Services web site](#).

## Interface Tool

Custodial Services needed the ability to update the office cleaning schedule without going through TRecs. They also needed to be able to blackout dates from the office cleaning schedule calendar during unplanned weather events and for planned university holidays. TRecs implemented a Django administrator interface that allowed Custodial Services to make adjustments to the schedule via the Python application, which directly updates the Oracle database.

## **Institutional Benefit**

At the National OS1 Users Symposium, Custodial Services has won the Best Work Loading and Best Cleaning awards for the past two years (2014 and 2015). Although maintaining the office cleaning schedule isn't a part of the OS1 cleaning program, it does demonstrate that a program like this doesn't interfere with cleanliness.

The office cleaning schedule directly benefits office occupants. The schedule allows them to know exactly which day their office was last cleaned and when it will be cleaned again. Knowing the cleaning date gives occupants the opportunity to plan ahead for the cleaning; they may want to move items off the floor, for example.

The schedule also benefits the Custodial Services workforce. If a supervisor or crew leader must cover for an absent coworker, he or she can easily access the needed

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<sup>3</sup> Python is widely used programming language. Its design philosophy emphasizes code readability, and its syntax allows programmers to express concepts in fewer lines of code than would be possible in languages such as C++ or Java.

cleaning schedule information. Also, the cleaning schedule information assists crew leaders with inspections and quality control.

Ultimately, the entire campus benefits from the emphasis on mindful disposal of office trash and recycling. The office cleaning schedule supports the university's [Natural Resource Conservation Plan](#) goal to *"divert 90% of the total waste stream from the landfill using a variety of methods including reuse and recycling"* by August 31, 2020.

### **Innovation, Creativity, and Originality**

The idea of an office cleaning schedule was inspired by hotel cleaning. Hotel housekeepers must know exactly which rooms need service, so they use some type of cleaning schedule. The university's cleaning schedule is both innovative and original because it's the only known program of its kind on a large university campus. It's creative because it came into being to address budgetary constraints without sacrificing service. Cleaning services outside the offices weren't reduced, while dust and debris inside offices did not typically increase. In fact, custodial management believes that they now provide a better service to their clients. Office occupants know exactly when custodians enter their office space, and custodians know exactly which offices to clean each night.

### **Portability and Sustainability**

Custodial Services' trainers audit each crew to ensure program compliance, not only with the OS1<sup>4</sup> cleaning program, but also with the office cleaning schedule program. It's interwoven with their overall cleaning program.

In a simple analysis of the Facilities Services web site, Custodial Services' cleaning services page was in the top ten most viewed web pages from November 3, 2014 through February 9, 2015. This demonstrates that clients value the office cleaning schedule. November 2015 marks the five-year anniversary of the program's existence, so it has proven to be sustainable.

This type of program can be replicated and adapted to address cleaning frequencies within any university custodial operation, regardless of budget. Any custodial operation can implement this program as a value-added service.

### **Management Involvement and Employee Commitment**

The level of involvement was phenomenal. From the vice president of University Operations to Custodial Services' frontline supervisors, management was involved. Custodial Services Associate Director Sally Moore developed the vertical calendar and initial calculations and Operations Manager Andrew Yanez executed the project.

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<sup>4</sup> [\(OS1\)](#) is a comprehensive, high performance management system for cleaning organizations. (OS1) is based on Team Cleaning. It employs in-depth training, from the upper-management down to the cleaning worker level. (OS1) prescribes standardized cleaning tools and procedures.

Frontline supervisors and training specialists walked all the campus buildings to verify office space.

The custodians embraced the office cleaning schedule idea, as it meant less wasted time locking and unlocking offices to check waste and recycling receptacles. Now, the process is so interwoven into Custodial Services' cleaning program that most of the custodians believe it is a part of OS1.

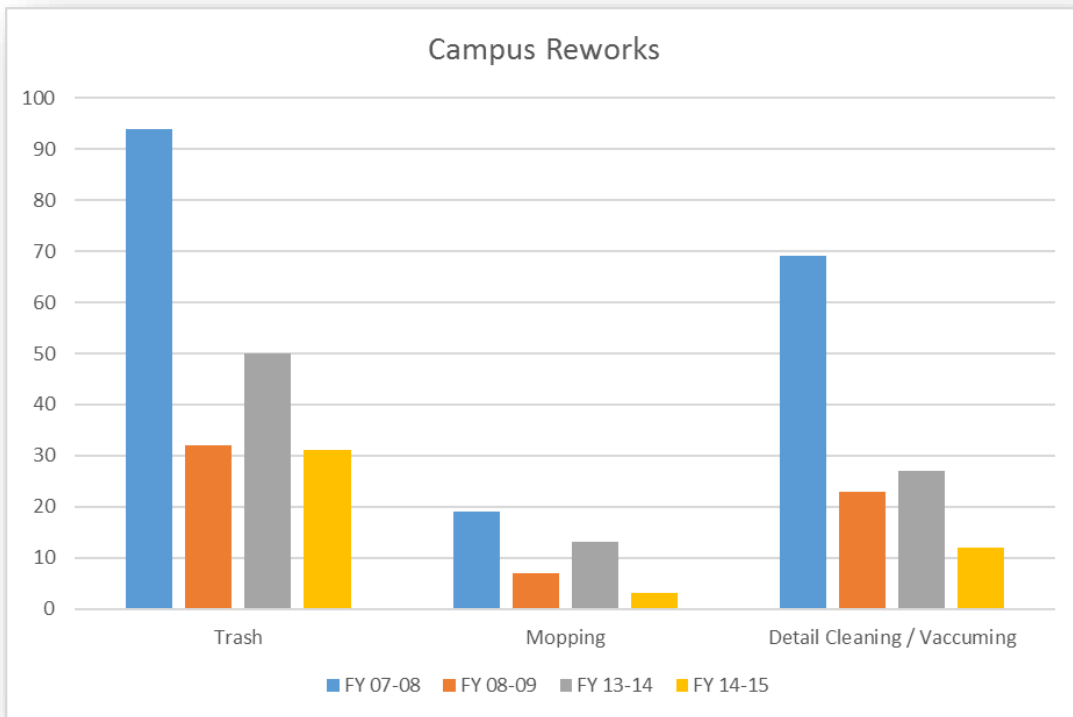
### **Documentation, Analysis, Customer Input, and Benchmarking**

Custodial Services has solid documentation practices when it comes to scheduling work. They have a fulltime workload coordinator whose primary mission is to analyze, document and update both the office cleaning schedule program and the OS1 cleaning program across 24 crews on campus.

Prior to implementation, campus clients were made aware of the upcoming changes to office cleaning. Initially, concerns about cleanliness and office trash overflow were voiced, but subsequent communication provided program details that made clients more comfortable with the idea. New clients don't see the cleaning schedule as a reduction, as it is all they know. There is flexibility, however: building managers and administrative clients can notify Custodial Services of any changes or additional services needed within office spaces.

Custodial Services anticipates future benchmarking from other OS1 users that adopt the program. Internally, Custodial Services looked at the two fiscal years prior to the implementation (FY07-08 and FY08-9) and the two most recent fiscal years (FY13-14 and FY14-15) to see if the program negatively affected their overall OS1 cleaning program.

The chart below includes all reworks (inside and outside of office spaces) requested by clients, excluding restrooms. Results show no evidence that the program negatively affected the campus. This is an amazing outcome, given that approximately 9,500 active offices are on the schedule at any given time.



In summary, the office cleaning schedule program has proven to be a win for Custodial Services and clients across the campus. Clients have an interface specifically for them, the quality of cleaning remains high, and the program contributes to the university's sustainability goals—all while improving Custodial Services' bottom line.