How facilities management leaders can reverse the deferred maintenance mindset and contribute to their institution's mission

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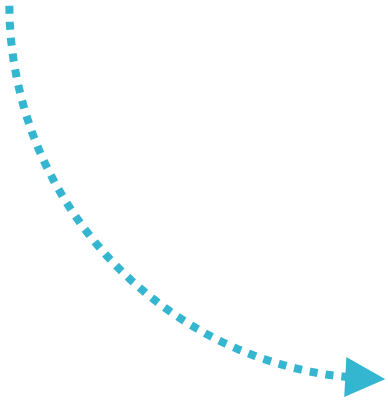
In this guide, learn how applying a customer- and people-centric approach helped a university's facilities management (FM) department find hidden resources to invest in the responsible stewardship of their buildings and contribute to their institution's mission.

Facilities management helps fulfill an institution's mission

Educational and healthcare institutions help develop citizens, build communities, and create an environment for innovation.



MISSION STATEMENT

"Dedicated to advancing health worldwide through preeminent biomedical research, graduate-level education in the life sciences and health professions, and excellence in patient care."

Facilities management helps fulfill an institution's mission

Although usually behind the scenes, FM ensures that institutions have a built environment that will foster an institution’s mission.

FM MISSION STATEMENT

“We are here to create an exceptional physical environment. We help to support its research, teaching, health care, and community service mission by providing the operational and maintenance needs of all campus facilities.”

But…

Deferred maintenance (DM) is a **major obstacle** that inhibits FM leaders' ability to help fulfill their **institution's mission.**

Costs of deferred maintenance

Maintenance money falls into two categories: **planned** and **reactive**

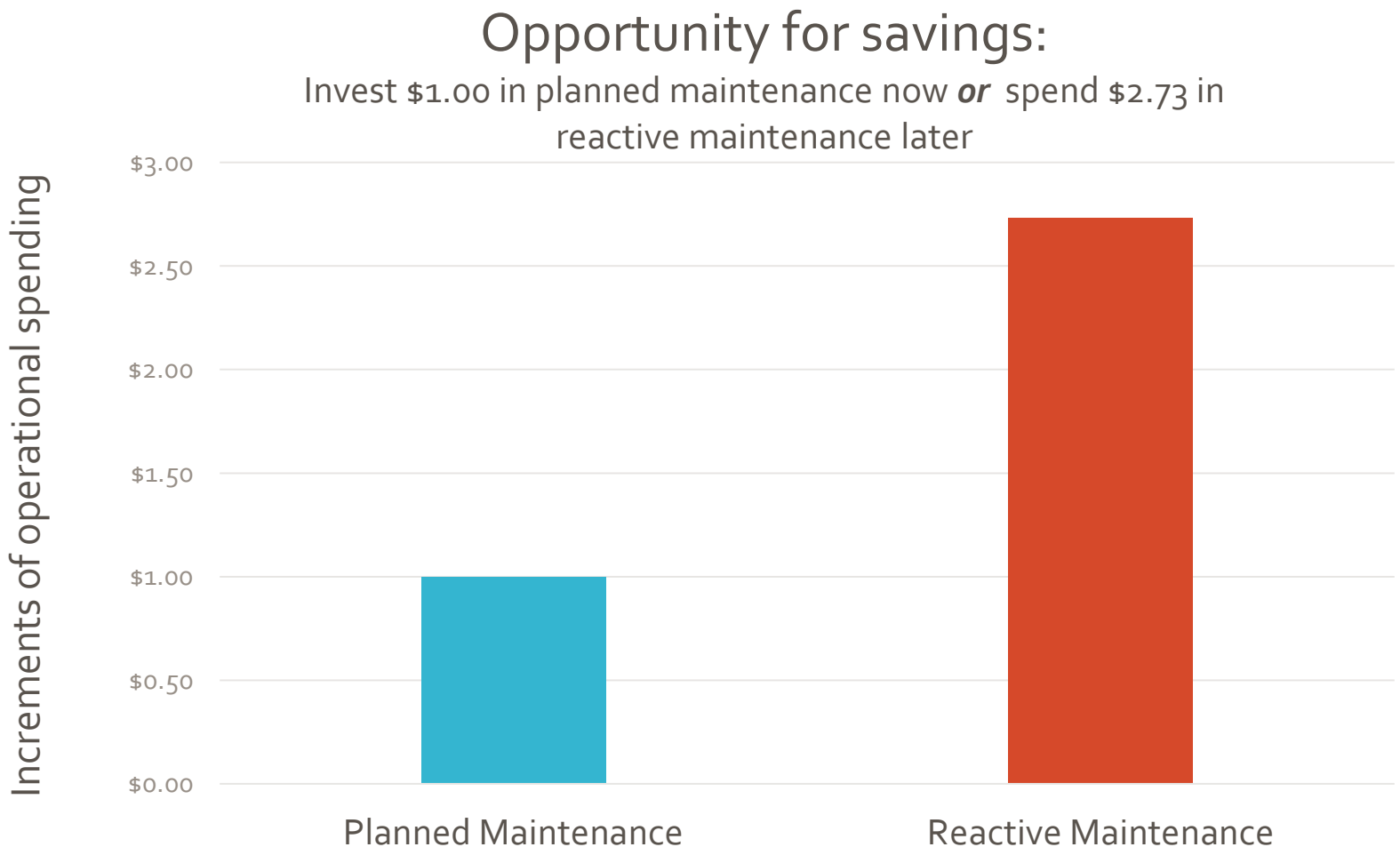
Reactive maintenance (RM) costs institutions **5-10x more** per asset than if assets were regularly maintained

Erodes the value and life of assets (Net Asset Value), which affects an institution's overall value and financial health

Impacts perception of faculty, staff, students & prospective students **and job satisfaction for facilities staff**

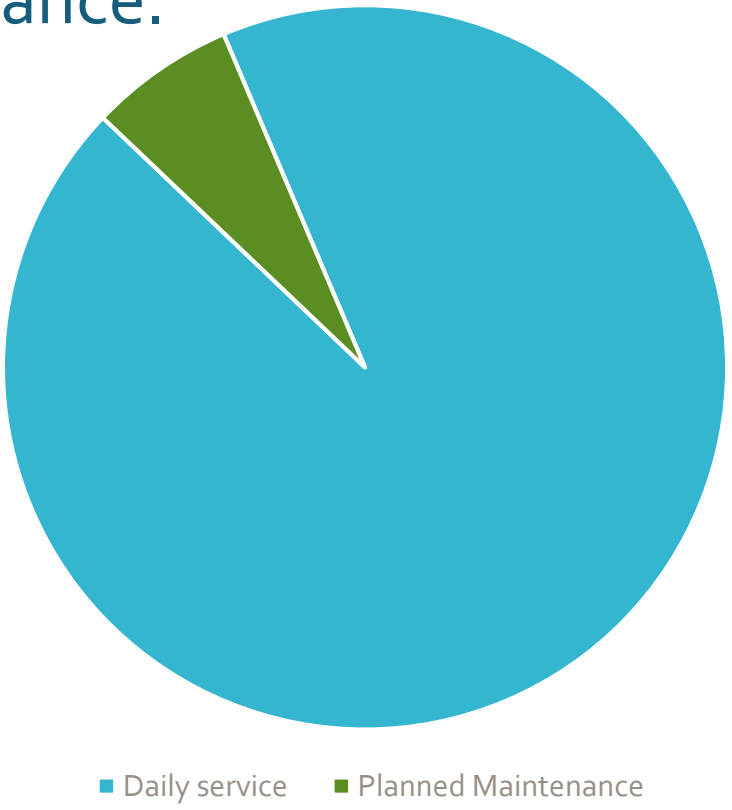
**Buildings…the Gifts that Keep on Taking"*
Center for Facilities Research, APPA

Despite the indisputable value of a planned maintenance program…



…Most of the money doesn't go to planned maintenance

According to *Sightlines*, **only 6.5%** of facilities' operations budgets in 2015 went to planned maintenance.



The mental models of deferred maintenance

The term “deferred” gives us the impression we can put it off…we kick the can down the road so often that institutions have to deal with breakdowns, and as a result spend more $ and labor on emergencies.

The mental models of deferred maintenance

And so…we rely on heroics to maintain the impression of perfection in facilities, and alignment with the institution's mission. Even though the people having to act as heroes don't really have the right resources and structure to do so.

The mental models of deferred maintenance

Facilities leaders believe they have to make a zero-sum game choice between addressing deferred maintenance on existing buildings vs. constructing new, highly visible, well-funded buildings.

The mental models of deferred maintenance

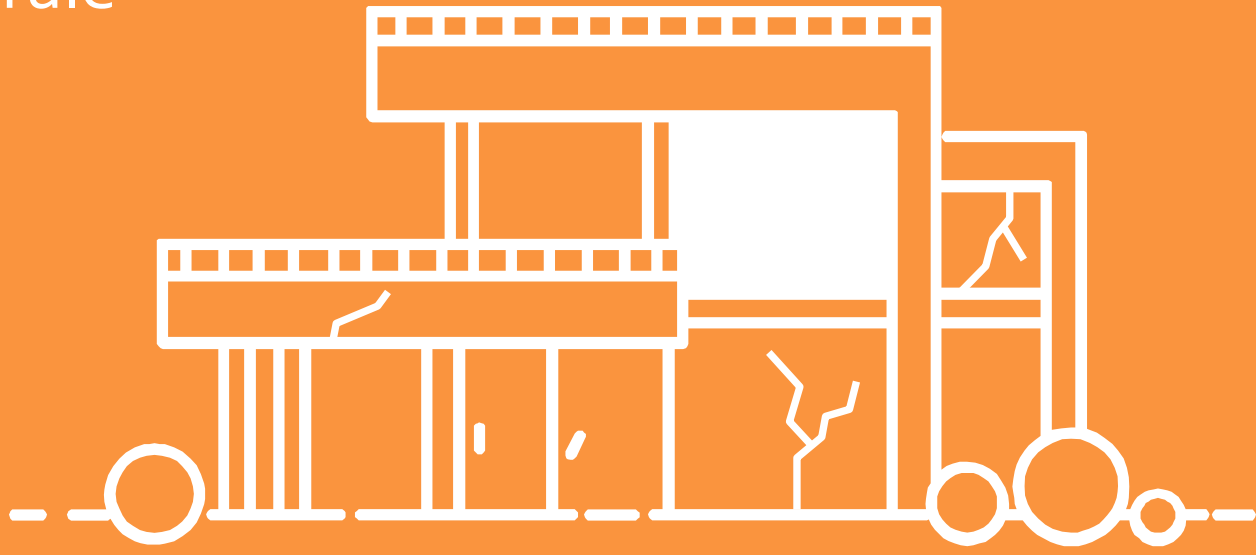
There often isn't a formal structure to facilitate "a meeting of the minds" between all relevant stakeholders – FM staff, senior management, space planners, and professors.

The mental models of deferred maintenance

This results in little to no flow of communication related to competing interests that ultimately impact all stakeholders, as well as the university's bottom line, ability to attract talent and students, and ultimately achieve the mission.

The results of our mental models

Erosion of
staff morale



Erosion of potential value our buildings could contribute to our mission.

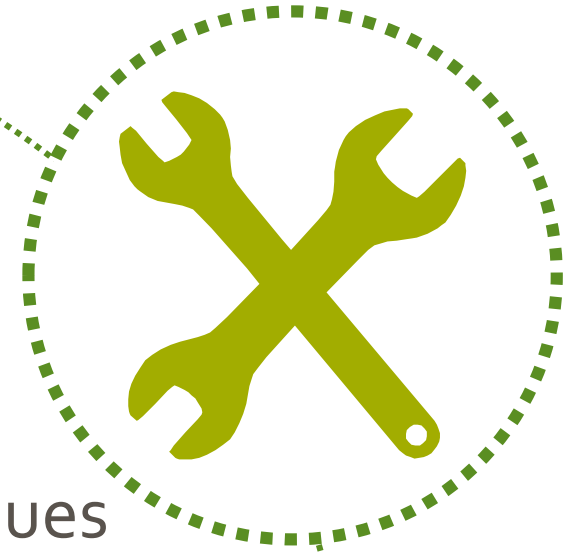
We have let our mental models stymie our actions and prevent us from improving the current state.

We can’t keep kicking the can down the road.

But imagine if…

…FM leaders were equipped with a different approach to stop the deferred maintenance mindset?

What if…



…FM used new tools and techniques to ***partner*** with customers and FM employees to develop shared values and a shared prioritization of maintaining buildings and assets?

In order to reverse
the DM mindset, we must

act our way into a new way of thinking

by using a **different approach!**

Let’s look at a case study to see a different approach and how this works in practice.

Case study:
Reversing deferred maintenance mental models

Haley & Aldrich and StudioJAED helped one university decrease their long-term capital renewal needs and daily operating costs by empowering its people to identify problems, remove obstacles, and implement change.

Challenge

75% of the university's maintenance work was unplanned, reactive, and costly. Because they were "fighting fires" daily, only 60% of their planned work orders were completed on time.

Challenge

They had a reactive and expensive approach of "run it till it breaks," followed by expensive (and often unnecessary) repairs or replacement.

Challenge

They had no system for prioritizing work orders.

Challenge

There simply weren't enough resources to address all problems.

- Total DM needs ~ **$462M**
- **75%** of all work orders = unplanned maintenance
- **25%** of all work orders = planned preventive maintenance (PM)
- Of the PM, only **60%** completed on time, as scheduled
- **0** dedicated PM staff

Challenge

The institution needed to increase funding for recurring capital and focus on preventive maintenance within its operating budget.

Challenge

Ultimately, the lack of a preventive maintenance strategy led to an erosion of value to the institution
and its mission.

Given these challenges,
what did we do?

Customers

We started with the customer, which is where every strategy should begin.

This helped the team understand what is important to the customer – what they value.

This shared understanding allows the team to ensure that each decision made will deliver critical value.

Customers

In this example, the customers are:

- Building customers: students, faculty, administrators

Key stakeholders:

- Trades
- Staff
- Managers
- Facilities leadership

Approach: buildings & assets prioritization

Now let's take a
closer look at how we used
those customer expectations
to drive building & asset
prioritization for a more targeted
maintenance strategy.

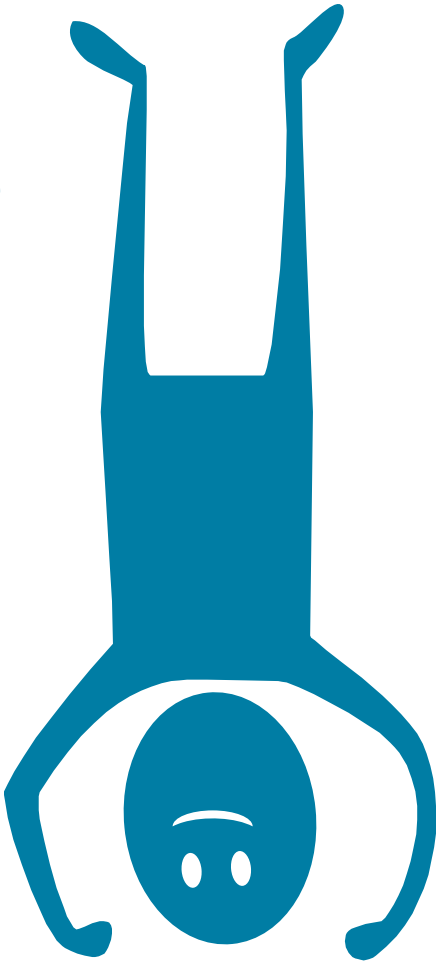
Approach: building & assets prioritization

This isn't BENCHMARKING

What you get from benchmarking, or someone else's model, is not what should drive **your approach** to maintenance.

Instead, identify **your actual model** based on what buildings/assets you actually have + shared prioritization criteria that involves the people doing the work and your customers.

Your buildings are not all **THE SAME**.



Approach: asset prioritization

A cross-functional team was formed to inventory and prioritize asset types within buildings.

Assets were assigned priority ratings from 1 (highest) to 5 (lowest)

Of 400 asset types reviewed, 178 were rated as priority 1 (critical) & priority 2 (essential)

Approach: buildings prioritization

For the buildings portfolio, below are examples of the characteristics and definitions that were established *by* FM people, using a facilitated approach – including factors that made a building unique or important.

Priority (1 = High)	Characteristic	Definition
1	Mission critical	Any factor (building, equipment, process, procedure, etc.) essential to the university's core function
2	High energy consumed	Buildings/systems that consume or require a significant amount of energy to support/perform mission
3	Offices	Facility that predominantly houses staff, administration, and/or departmental offices

Then bring together customer value and physical condition criteria to prioritize

Category 1 Assets percent by division	
Controls	15%
HVAC	34%
Central Heat Plant	15%
Electrical	16%
Plumbing	11%
Structural	8%

Combined with critical building score creates

PM Maintenance Levels of Service	
Level 1	Showpiece Facility
Level 2	Comprehensive Stewardship
Level 3	Managed Care
Level 4	Reactive Maintenance

The result:
A shared understanding of the right amount of maintenance, at the right time, on the right assets.

But…

Even though we now know WHAT to maintain at the right levels… it **doesn't mean we have the money**

So, what can we do about it?

Get more money

OR

Optimize our use of the money we already have

Can we find ways to do better, targeted maintenance with the same budget?

YES. By understanding behaviors and obstacles that waste resources.

Going to where the work happens

reveals what obstacles get in the way of maintenance staff doing their highest-value work.

Work as a team to identify current state problems and opportunities

Learn to see problems and know what obstacles to remove to get more done!

How do we remove obstacles?

Identification of obstacles and ideas to remove them came from *everyone* in the FM organization, mostly from the tradespeople doing the maintenance work.

FM staff generated **195 ideas,** which freed up 57,000 hours to improve PM!

Value created

400 things deprioritized,
100 things prioritized

Value created

Who made these improvements and found these hidden resources?

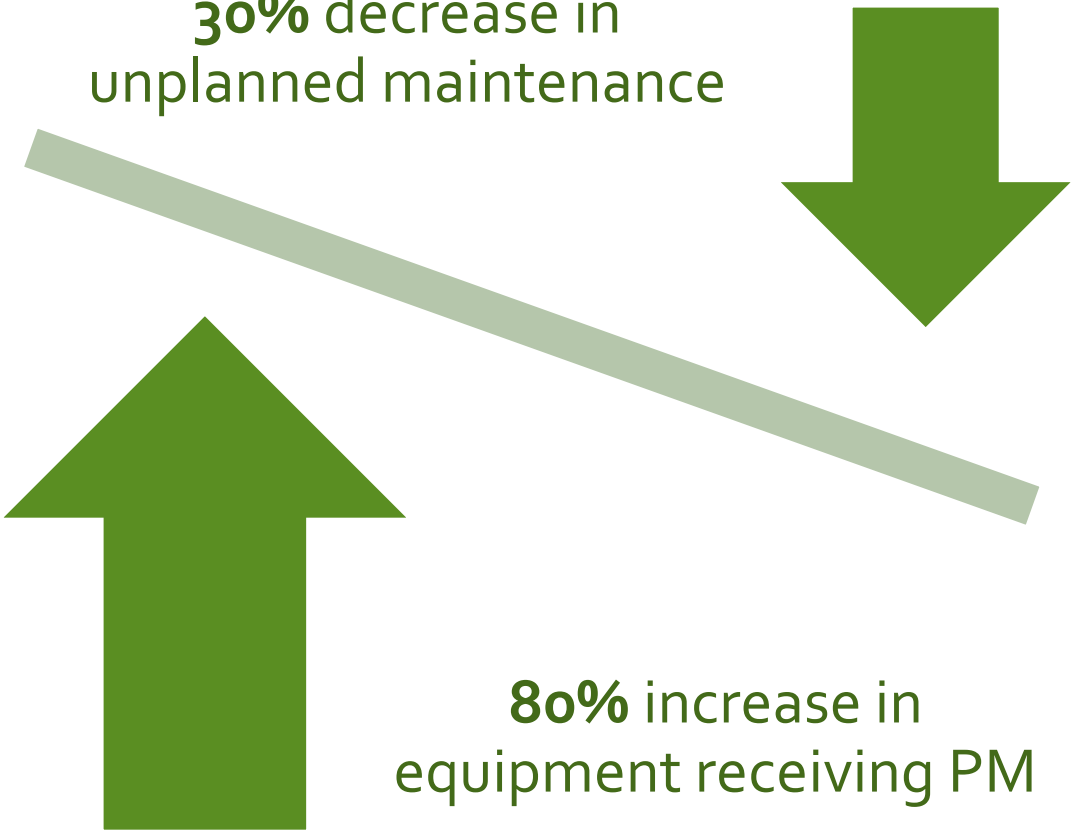
The people who work in maintenance at the university. *Not* the Chancellor, *not* the CBO, but the **actual "boots on the ground" workers**.

The approach worked

When the process was finished, the university response was telling:

Long term, sustainable results

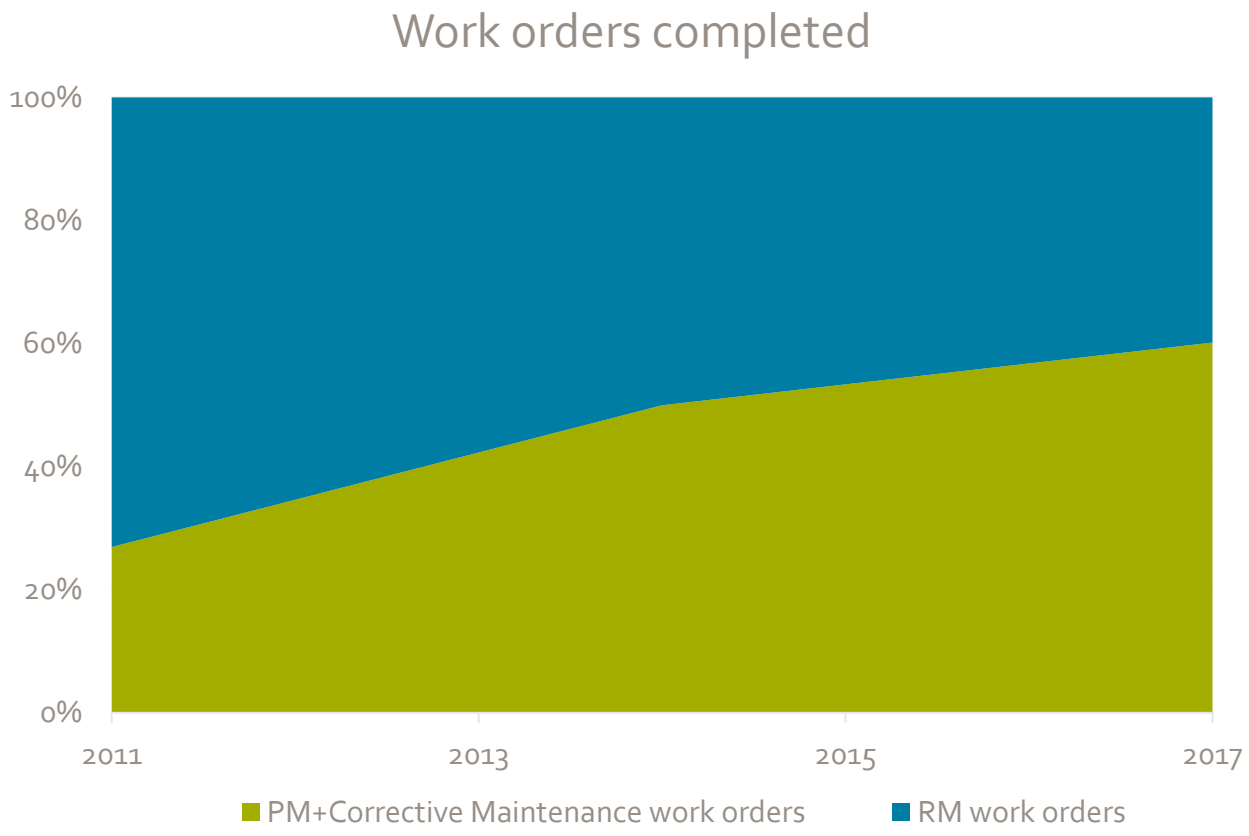
30% decrease in unplanned maintenance



80% increase in equipment receiving PM

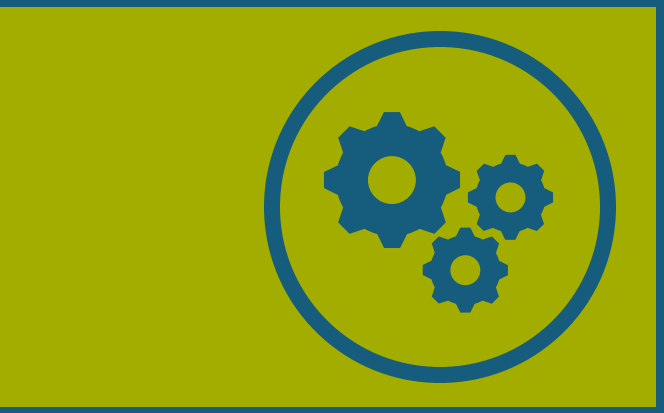
$1/sf reduction in operating expenses

Long term, sustainable results



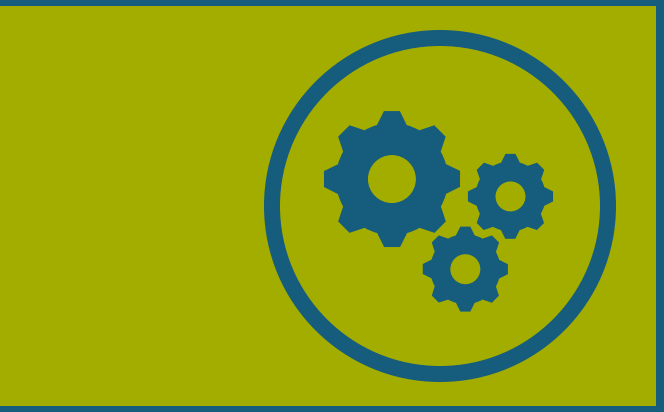
Doubled the investment in PM and added 30 dedicated PM staff

Reversing the deferred maintenance mindset



- To tackle any complex challenge, we need to engage the right people to develop the right solutions.
- Making progress requires fundamental changes to approach and mindset of VPs, managers and mechanics alike.

Support your institution's mission



With a shift in mindset, FM professionals can provide a built environment to support the institutional mission by:

- Giving voice to your people
- Prioritizing what your staff and customers value
- Optimizing the work to get the most from what you have
- Prioritizing the use of funds

To learn more:

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