APPA
Institute for Facilities Management
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Continuous Improvement and Change Management
in Higher Ed

Instructor: Jam Rivetna
Program Manager
University of Wisconsin Madison

APPA
LEADERSHIP IN EDUCATIONAL FACILITIES

Continuous Improvement means…

1. Operations Improvement
   Eliminating administrative mistakes
   Cut unnecessary or redundant steps from processes
   Simplify processes and tasks

   2. Asset Management (Reliability)
      Increase equipment uptime
      Reduce unexpected failures and equipment breakdowns
      Extend useful life of equipment

Agenda

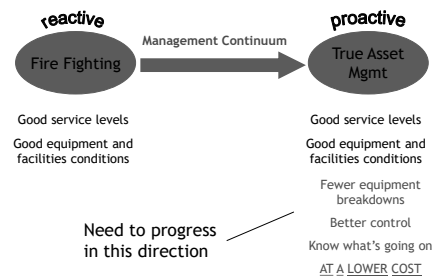• Continuous Improvement

• Change Management

• Measuring Results

Continuous Improvement means becoming more proactive.

reactive

Management Continuum

proactive

Fire Fighting → True Asset Mgmt

Good service levels

Good equipment and
facilities conditions

Good service levels

Good equipment and
facilities conditions

Fewer equipment
breakdowns

Better control

Know what's going on

AT A LOWER COST

Need to progress
in this direction

Continuous Improvement is about incremental change

Continuous improvement should focus on making small incremental improvements, not always massive sweeping changes.

The continuous improvement premise is that people should be looking for small improvements in the things they do themselves…

…thereby streamlining the process as a whole.

Continuous Improvement means employees at all levels of the organization feel a sense of ownership and pride.

Employee morale is important.
• When morale is low, it shows.
• When morale is high, it shows.

When morale is high, employees contribute more.
They take more ownership for mishaps.
They seek out and pursue improvements.

Continuous Improvement is about employees leading the improvement efforts.

Not a "Suggestion Program".

Employees generate ideas and implement the improvements.

Current State of Things

Existing processes and systems are highly complex and piecemealed together.

In most organizations, especially in higher ed,…

…processes and the systems to support them have been twisted and contorted to meet specific needs over the years.

Motivating People to Continuously Improve

In higher ed, people don't change jobs too often.

At middle management and staff level, there is very little employee turnover.

In most organizations, facilities processes and maintenance procedures have evolved over time with little planning or deliberate structuring.

Status quo is working fine.

This sense of comfort quietly permeates the FM department.
Nobody recognizes the inefficiencies and improvement opportunities.

Grand proclamations don't motivate.

When looking for improvements from staff, we need to provide focus.

Don't just say we want you to start making improvements and make sure we're doing things efficiently.

Need to give people a particular aspect of the organization that needs improving and then set them on a path to seek out and make improvements.

Objectives have to be clearly stated…and specific.

Through some assessment process (utilizing input from leadership, management, staff), identify specific objectives or guiding principles.

The message coming from leadership should be…

If we are doing something counter to these objectives/guiding principles, bring it up. Let's fix it.

Example of Objectives/Guiding Principles.

Guiding Principles for Operations

Work is managed efficiently from reception to completion
We will perform our work in a cost-effective manner
Supervisors are ultimately accountable for prioritizing and managing work within their shops
We remove barriers allowing our tradespeople to maximize time spent applying their craft
We will do the right preventive and predictive maintenance on the right assets
We will encourage our staff to become highly educated in their crafts
We will encourage our tradespeople to communicate with occupants and building managers
We will foster a culture of teamwork and collaboration with team members across Physical Plant
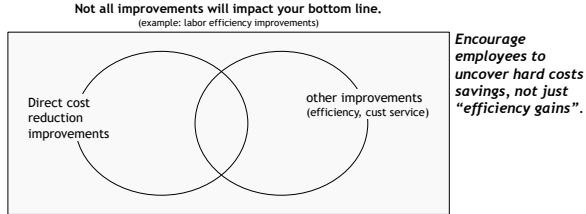
Put this in writing. Communicate it.

Continuous Improvement is about employees leading the improvement efforts.

Not a "Suggestion Program".

Employees generate ideas and implement the improvements.

Cost cutting is a valid reason.

Everyone in the organization should have an improvement mindset looking for cost savings.

Not all improvements will impact your bottom line.
(example: labor efficiency improvements)

Direct cost reduction improvements

other improvements (efficiency, cust service)

Encourage employees to uncover hard costs savings, not just "efficiency gains".

People can only improve the things they control.

Desired changes must be within span of control of the people expected to make the changes.

High-level department-wide objectives and performance measures are difficult to link to an employee's behavior.

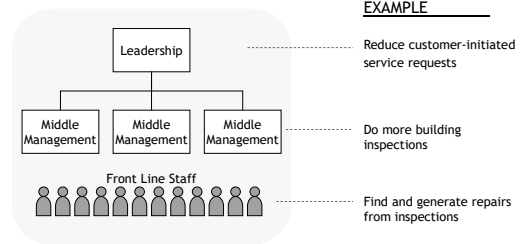Employees need lower-level cascading objectives that support the grander objectives.

Efficiency improvement is a valid reason.

Unnecessarily complicated processes and procedures.
Wasted materials.
Unproductive administrative time.
Ineffective repairs.
Poor communication.

Efficiency is...	Simplification
	Streamlining
	Eliminating waste (effort, time, resources)

Set objectives appropriate for each level in the organization.

EXAMPLE

Leadership — Reduce customer-initiated service requests

Middle Management Middle Management Middle Management — Do more building inspections

Front Line Staff — Find and generate repairs from inspections

Continuous Improvement mini-projects have to be well-defined.

When an improvement idea is generated, help frame it and define it.

If it's too vague, it's hard for employees to take it on.

Continuous Improvement is about employees leading the improvement efforts.

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Employees generate ideas and implement the improvements.

Examples of improvement ideas,… which ones are stated with enough specificity?

PRIORITY 1
  Implement lubrication management program.
  Develop preventive maintenance program for department-owned assets.
  Improve the way multi-shop work orders are coordinated and managed.
  Improve FM involvement in capital project inspections and closeout.
  Remove inefficiencies in the work order process.
  Improve warehouse request and picking process.

PRIORITY 2
  Enhance capital project engineering standards for equipment maintainability
  Incorporate predictive technologies in preventive maintenance program
  Develop a skills-based training program in each trade shop.

Open Lines of Communication

Trades Supervisors and Leadership are sometimes the brick wall, stopping ideas from going anywhere.

Ideas are often perceived as complaints or griping…

but that's only because of the mindset of those involved,…on both sides.

Front line employees need some channel for identifying and communicating ideas up the organization at least one level past their supervisor.

Need to create a process for input and feedback, circumventing the brick wall if needed.

Motivating Employees is not just a singular meeting to introduce the idea and ask for improvement ideas.

It takes time for employees to catch on and begin contributing…

- Frequent departmentwide workshop sessions on the topics
- Frequent departmental meeting and discussions
- Focus groups

Collecting feedback and improvement ideas.

Quarterly meetings with shop staff and support staff (ask for feedback or improvement ideas)

- Needs to be facilitated well, focused on operations.
- Needs to be a listening session, no responses needed.
- Maybe without management and leadership in the room.

Emails to a single point of contact for improvement ideas.

Electronic survey with comments options.

Nothing innovative here. Feedback mechanism should be simple and easy to execute.

Who's your target for generating improvement ideas?

We're not just directing the message at shops and trades staff.

Continuous Improvement should come from throughout FM…
- Finance
- Warehouse
- Safety
- Shop supervisors
- IT administrators
- Purchasing

Need a Driving Force

Continuous Improvement is about employees leading the improvement efforts.

Not a "Suggestion Program".

Employees generate ideas and implement the improvements.

Someone needs to be driving and facilitating the improvements.

An idea is born or there is a notion that something isn't quite right.
And it is corroborated,...

Need someone to help employees dig deeper and develop the solution.

Someone needs to facilitate the discovery and
improvement definition and execution.

A Facilitator moves things forward.

Employees don't always have the time to dedicate to
improvement definition, research, and execution.

The Facilitator needs to help...

　　　　... translate issues into improvements.
　　　　... refine the ideas and corroborate them with data.
　　　　... develop solutions and fix problems.
　　　　... implement decided solutions more broadly throughout the department.

What's missing in FM?

In industry, there is always a Quality Assurance (QA) department.

It's usually these QA departments driving the improvement programs and helping to execute them.
- ✓ Provide training on evaluation and improvement techniques
- ✓ Facilitate, track, and drive the improvements
- ✓ Help monitor and measure the results

Facilities management organizations seldom have a Quality Assurance function.

Implementing a Continuous Improvement "Program"

Who should be the Facilitator/Driver?

An outsider who will ask probing questions.
("outside" the direct leadership team)

Someone who brings a fresh perspective.

Someone with some autonomy and wide-reaching authority.

Where to look...
a dedicated Quality Assurance (Business Analyst) position within FM
an outside consultant
a new Director/Manager

Hard definitive steps to instituting a formal Continuous Improvement program...

Appoint a facilitator/manager over the continuous improvement program *(maybe a team)*.
- Provide this individual with training on continuous improvement philosophies/strategies.

Announce the program. Let people know it's real and you're looking for improvements.

Create a framework for logging the projects and monitoring them.

Conduct introduction sessions and workshops with employees throughout FM.

Provide training to interested employees (project management, problem solving, change management, etc.)

Make it a real thing. Not just another fleeting management initiative.

Help people frame the projects and develop solutions.

Recognize the projects to create awareness and provide some authority to the project leaders.

Encourage work time spent on these improvement projects.

Recognize successes.

Tips for Successful Continuous Improvement

Continuous Improvement is about employees leading the improvement efforts.

Not a "Suggestion Program".

Employees generate ideas and implement the improvements.

Corrective Action Program is a tool for Continuous Improvement.

When some triggering defect is found, initiate a corrective action to fix the underlying cause…

What's the precise problem?
Where in the process did it occur?
What's the root cause? (Root Cause Analysis)
Eliminate the root cause to prevent it from happening.

Develop a corrective action template and provide training.

Failure Analysis is a tool for Continuous Improvement.

Failure analysis is a proactive tool to identify potential failures and take precautionary steps to avert them.

Failures of equipment
Failures of processes
Failures in service delivery
Failures in administrative tasks

Provide training on failure analysis techniques.

Simplification is a real goal.

Noticing that things are too complicated and untwisting everything.

Processes and systems should be more:
✓ *streamlined*
✓ *simplified*
✓ *intuitive*

How to streamline…
1. Identify the critical needs (and there aren't too many of those).
2. All other "needs" should be questioned.
3. Streamline the processes keeping just the critical needs intact.

Getting organized is a tool for Continuous Improvement.

✓ organized with our record keeping
✓ organized with our systems and processes
✓ organized physically in the office, warehouse, shops

A well-run organization makes a difference.

Customers will notice it.

Employees will notice it.

Don't confuse *technology utilization* with Continuous Improvement.

In the name of progress, we often force people to use imperfect and inefficient software.

Unwittingly, we are creating a process worse than before.

This software-centric approach to process development sometimes will stifle improvement ideas and their execution.

Standardization can be counterproductive.

Don't force a "standard" way of doing things at a task level.

As a management team, control things at a higher level,…but leave the details for employees to figure out.

Standardization at task level is the exact opposite of continuous improvement.

Standardization of tasks and methods is micromanaging.

How to utilize labor efficiency improvements.

Improvements often lead to efficiencies which result in additional _theoretical_ work hours.

Need to convert these theoretical newfound labor hours into _actual_ hours used for the greater good.

Start doing higher-level activities. Just put them on the schedule and begin doing them.

- Proactive*ness* activities
  - Preventive maintenance and walk-through inspections
  - Equipment and maintenance analysis
- Job enrichment activities
  - Training and education
  - Improvement projects
  - Customer meetings

Spreadsheets are not forbidden.

People like to analyze things and create sophisticated functions in Excel.

Let them do it as long as your needed system inputs and checkpoints are met.

Sophisticated spreadsheets with macros, formulas, color coding, etc.
Don't crush this enthusiasm by forcing people into a software with subpar functionality for analysis.

The Higher Ed challenge…not everyone is motivated to get involved.

Even the best contributors may not be driven to make improvements.

Higher ed culture is unique… employees sometimes come to higher ed from industry for a non-pressure environment. (and our institutions are welcoming of it.)

Not all employees will embrace the improvement-oriented mindset. It's not a bad thing… just something to take note of.

We shouldn't alienate them. They are equally important and valuable.

Varying degrees of involvement from FM employees.

Don't expect, nor require, that everyone embrace the continuous improvement mindset.

Just ensure no one stands in the way... most people will play along nicely if you are truly carrying through with promises...

10%	70%	20%
takers	on the fence, going along	cynics
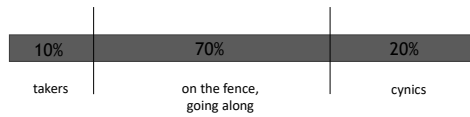
Change Management in a nutshell...

Change Management is all about increasing the likelihood of acceptance and long-term adoption of a change.

It's the "people" side of implementing changes.

Changes requiring "change management" are...

Process changes
Organizational changes
Technology changes
Work practice changes

Agenda

• Continuous Improvement

• Change Management

• Measuring Results

Change Management is deliberate.

Change management tasks need to be specifically defined and woven into the project plan for the particular change.

Change Management is never it's own project. Rather it's the set of activities in any project that increase likelihood of acceptance.

Developing a change management plan for your initiatives.

1. Identify what specifically is changing and who will be affected.
2. Brainstorm the risks/obstacles that could come up when implementing the change.
3. **Brainstorm ways to mitigate or eliminate the risks/obstacles.**
   - Communication/awareness
   - Education on need for the change
   - Stakeholder meetings and involvement in development, implementation
   - Proper training on the change
   - Documentation and clarity of the change
   - Methods and speed of rollout
   - Etc.
4. Incorporate the mitigation steps into initiative workplan

Example change management plan...

Project	Specific Changes	Who is involved?	Mitigation Steps
Warehouse processes	Controlled access to stock shopping (stop people at the door before going in). Implement controlled checkout by warehouse staff after self-serve shopping.	Warehouse staff Shop supervisors and trades	• Test and streamline checkout process by warehouse staff. • Have multiple checkout stations available in warehouse to minimize wait time for tradespeople checking out. • Training on mobile software for warehouse staff to support tradespeople users materials requests. • Training meeting with all supervisors on *Warehouse Processes 101*. • Communicate with shops in advance, give warning about the upcoming changes.

Example change management plan...

Project	Specific Changes	Who is involved?	Mitigation Steps

Lubrication management	Change in lubrication techniques
	
	Change in oil and grease storage and handling
	
	Change to oil and grease products used
		Machine shop employees
		Mechanical shop employees
		Generator team
		Fleet garage employees
			• Meeting with relevant supervisors in advance to explain the initiative and general timeline.
			
			• Tradespeople awareness meeting prior to lubrication training.
			
			• Pilot program for grease with Machine shop and Mechanics, then other shops.
			
			• Lubrication training
			  • Include relevant supervisors
			  • Trainers should help inform skeptics
			  • Training should stress importance of grease routes

"Keeping people involved" is not simply about keeping them informed.

"Involved" is different than "informed".

Don't simply inform people of progress and solicit feedback.

Getting people involved means actually letting them develop solutions and make preliminary decisions.

People don't like to be lectured, then allowed to provide feedback. That's not being involved.

With any change, delivery matters...personalities matter.

Check your ego at the door.

The people delivering the change, the tone used by those individuals matters...
It matters a lot.

There is a way to be firm yet empathetic when rolling out changes to people.

Militaristic approach doesn't work.

The words used, the tone, the connection with the people being affected all matter a lot.

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KPI

stands for

Key Performance Indicator

Agenda

• Continuous Improvement

• Change Management

• Measuring Results

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Typical FM Performance Indicators:

✓ Cost/sf
✓ Cost/student
✓ Preventive Maintenance Hours
✓ FTE/sf
✓ Utilities/sf
✓ Customer Survey Rating

High-Level metrics usually reported by FM leadership to University administration.

KPIs metrics at this level are usually developed for benchmarking and leadership direction-setting.
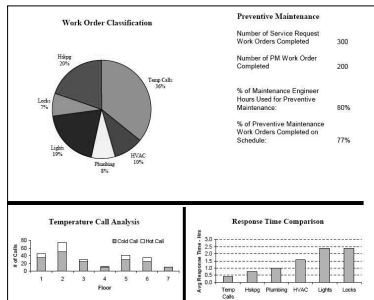
This is good and very valuable, but there's no real operational benefit to the organization.

Develop KPIs to measure the success of continuous improvement initiatives.

KPIs and metrics support continuous improvement.

Don't begin "implementing" KPIs by presenting and emphasizing a "scorecard". Do this last, if at all.

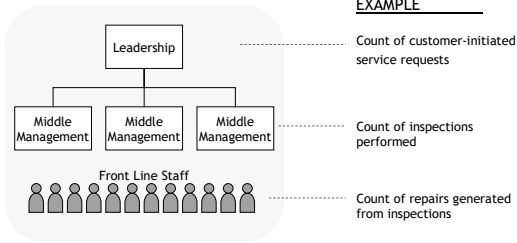Determine KPIs applicable to specific improvement areas.

Improvement Area	Key Performance Indicators
Implement formal Lubrication Management	Count of repair work on pumps. Count of catastrophic bearing failure (matl cost > 1000). Bearing parts usage
Implement planning and scheduling process	% labor scheduled % material costs planned vs actual
Finish asset portfolio	Monthly count of asset records created % of assets with attributes entered Monthly count of assets changed from ACTIVE status. Count and % of work orders with an Asset ID entered

Set KPIs appropriate for different levels in the organization.

EXAMPLE

Leadership .... Count of customer-initiated service requests

Middle Management | Middle Management | Middle Management .... Count of inspections performed

Front Line Staff .... Count of repairs generated from inspections

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Key Take-Aways

Continuous Improvement
Build a framework and support infrastructure for employees to identify and implement their own improvements.

Change Management
People impacted should be truly *involved* with the process, not just *informed* of it.

Key Performance Measurements (KPIs)
Use appropriate lower-level KPIs to measure results of continuous improvements.

A KPI *program* should never be a stand-alone management initiative.

The initiative is to instill the organization with a continuous improvement mindset.

KPIs are used to gage the various improvement efforts.

Contact me at:

Jam Rivetna
(214) 316-9677
rivetna@wisc.edu