

# Lean Safety Gemba Walks: A Validated Strategy To Make Work Safer And Easier

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San Luis Obispo

Fitting The Pieces Together 2019



**CAL POLY**

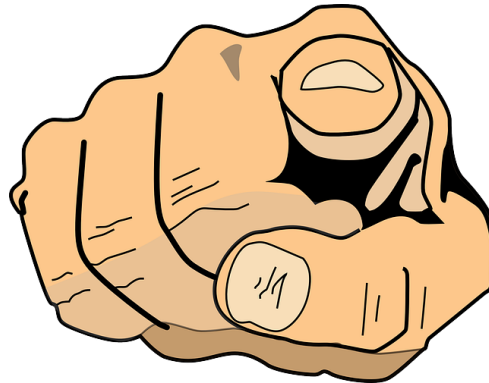
# Introduction

- The Lean Safety Gemba Walk Workshop was borne out of our interest to keep our employees safe
- Our VP of Administration and Finance charged EHS with implementing changes to reduce employee injuries
- We found an elevated number of injuries among custodial workers from two departments: Facilities and Housing
- Others were dispersed among large employee groups: faculty/instructors and administrative assistants
- 2-day Lean workshop resonated with participants; changed the way they approach work
- CSURMA Grant - Lean Safety Gemba Walk workshop offered to all CSU campuses
- Scheduled a second workshop for SLO building trades and landscape maintenance supervisors and leads
- Added the Strain-Sprain workshops to further reduce musculoskeletal injuries
- Next steps



# In the Beginning...

CABO Report noticed by our VP of A & F – We were leading the pack in number of WC claims!  
 What are YOU going to do about it?



Campus	FY 14.15		FY 15.16		FY 16.17	
	TNRs	% Timely	TNRs	% Timely	TNRs	% Timely
Cal Poly Pomona	78	96%	75	91%	78	90%
Cal Poly San Luis Obispo	129	90%	115	89%	90	98%
Cal Maritime Academy	22	100%	17	53%	21	86%
Chancellors Office	8	100%	17	100%	17	100%
CSU, Bakersfield	24	100%	26	96%	29	100%
CSU, Channel Islands	20	80%	30	97%	29	97%
CSU, Chico	44	100%	44	95%	61	80%
CSU, Dominguez Hills	43	81%	59	75%	47	100%
CSU, East Bay	46	98%	54	94%	35	100%
CSU, Fresno	64	100%	72	100%	55	98%
CSU, Fullerton	87	98%	94	93%	85	92%
CSU, Long Beach	98	97%	80	99%	101	98%
CSU, Los Angeles	68	87%	62	92%	76	92%
CSU, Monterey Bay	30	97%	22	95%	35	91%
CSU, Northridge	81	85%	86	93%	95	99%
CSU, Sacramento	75	95%	73	92%	57	96%
CSU, San Bernardino	48	96%	46	96%	50	90%
CSU, San Marcos	36	92%	26	96%	20	100%
CSU, Stanislaus	40	95%	31	97%	30	87%
Humboldt State University	46	100%	39	97%	45	96%
San Diego State University	119	98%	107	96%	98	92%
San Francisco State Univ	103	93%	90	97%	85	94%
San Jose State University	103	83%	100	91%	85	93%
Sonoma State University	101	93%	83	95%	76	95%
Systemwide Total	1,513	93%	1,448	93%	1,400	94%

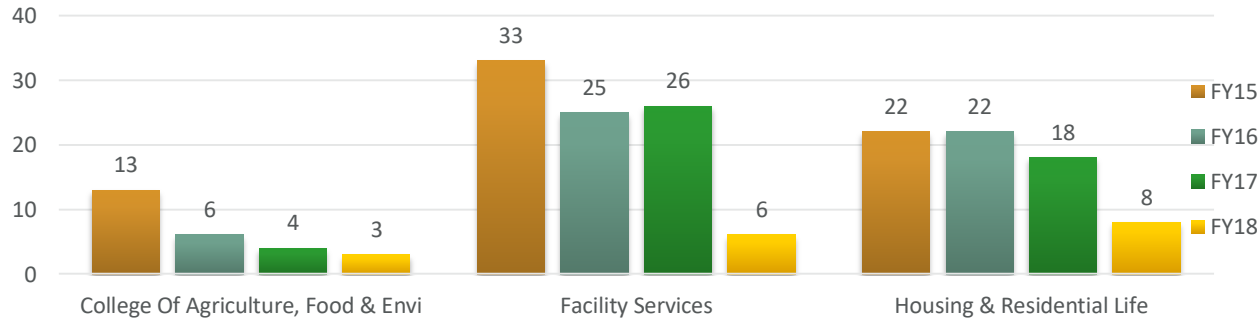
# Workers' Comp Claims

We took a closer look at the details of our WC data looking for trends...

Broke down the data by division to determine: Where, Who and How?

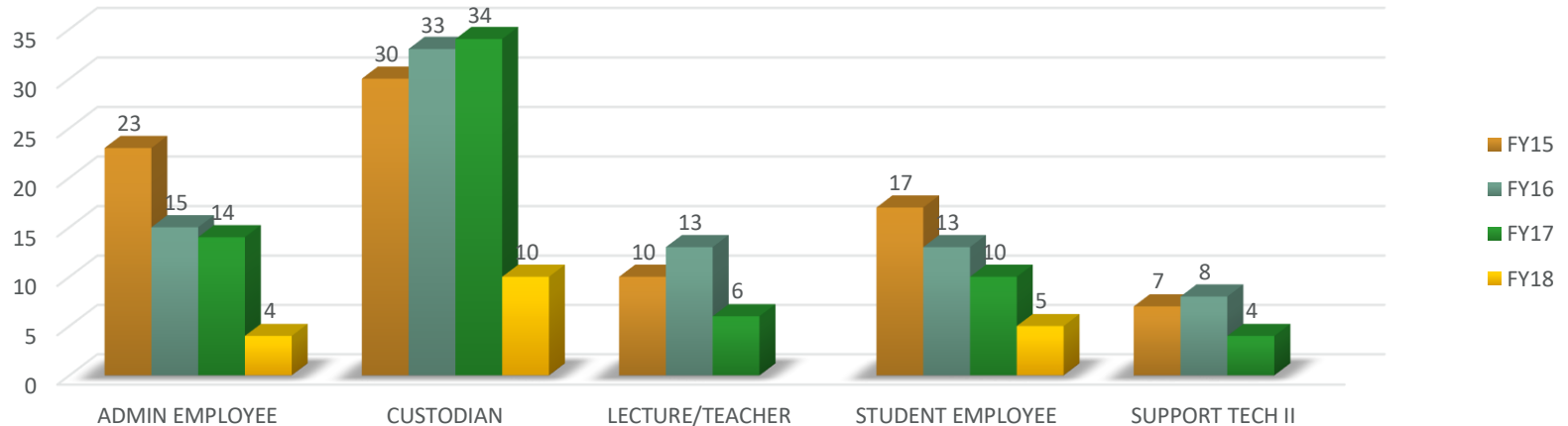
Divisional Slide -

The "where" was everywhere!

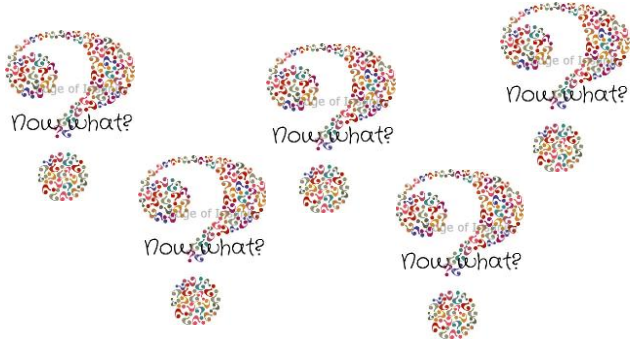


# Who is getting injured ?

Comparison, Most Frequent Occupations Injured



# Now What?

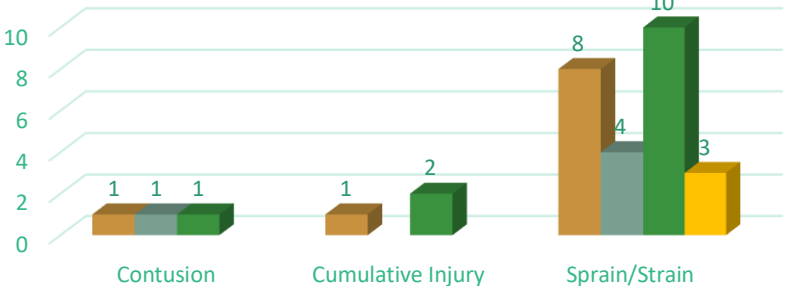


EHS defines the APP (Accident Prevention Plan) established a task force with Facilities and University Housing Managers.

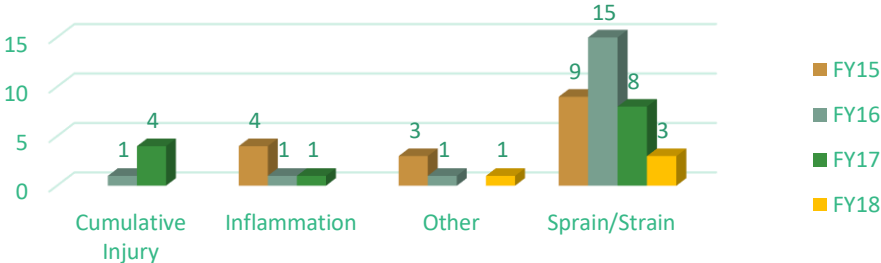
Decided to initially focus on custodians because they had the most injuries

**Custodial injury types/causes:**

Facilities Custodial Injuries



Housing Custodial Injuries



# Safety Climate Survey

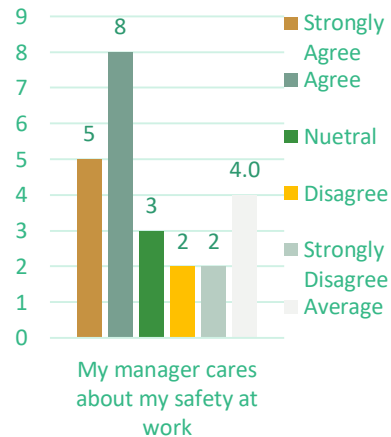


The Task Force decided to conduct a survey to better understand what employees thought

Survey asked employees about workplace safety: access to PPE, management's safety leadership, safety training,

Survey also included verbatim questions: "How can we do better in preventing worker injuries?"

## Survey Report Slide-



- Checking on people to see if they need help-
- Less work
- Don't know
- Be aware of what you're doing
- Would like the facilities/staff to get on board.
- Stop overloading trash cans & recycling so it is past the 50lb requirement.
- Hire more people to lighten the work load
- More reminders and continued training, better equipment
- Smaller injuries so less rushing and risk of injury
- Some people doing more work than others
- No rushing
- More Safety training/doing the job right
- More time to do the job- no rushing
- Leaders giving more help to custodians, check uniforms-
- Don't overload the work



# The Survey- Summary

Tell us what you think



## Safety Survey Cal Poly Custodial Results - April 2017

	Fac+UH (128)	Fac Day (10)	Swing (28)	Grave (31)	UH (24)	UH PCV (35)
1. I feel my work environment is safe and free from hazards	3.38	4.00	3.39	3.58	3.60	2.50
2. I am provided with all Personal Protective Equipment (PPE) needed to do my job safely.	3.88	4.90	3.73	4.13	4.17	3.17
3. I look to my lead(s) for guidance on safe practices and safety procedures.	3.52	4.70	3.12	3.67	3.86	3.25
4. I consistently use the Personal Protective Equipment provided to me.	3.97	4.40	4.19	4.13	4.00	3.61
5. I have received adequate safety training to perform my job?	3.82	4.40	4.15	3.90	3.91	3.13
6. I feel comfortable letting a coworker know if they are performing a task in a way that may risk injury.	3.76	4.00	3.89	3.55	3.76	3.92
7. My lead provides help and/or solutions for my safety concerns.	3.45	4.56	3.38	3.87	3.82	3.18
8. My manager cares about my safety at work.	3.60	4.50	3.63	3.81	3.94	3.18
<b>Above 4.0 Strongly Agree   4.0 – 3.0 Agree   3.0 – 2.0 Neutral   2.0 – 1.0 Disagree</b>						



Custodians from Facilities



Custodians from University Housing



What do You feel are the most common work related injuries that may affect you and your co-workers?



How can we get better at preventing those work related injuries?

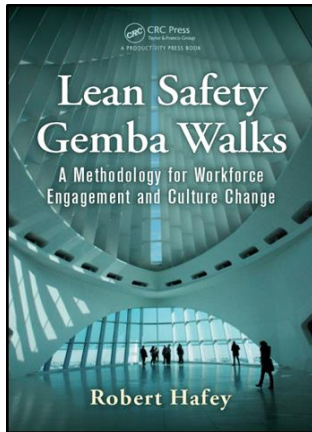


# Action Planning

Based on custodial injury data and safety survey results:

We investigated hiring a human factor / ergonomic consultant: too expensive

Discovered Bob and his Lean Safety Gemba Walk Workshop: Let's give it a try



**Lean Safety provides a proven path to culture change because it engages employees in an honest trust building approach to continuous improvement. Lean Safety is a culture change enabler.**



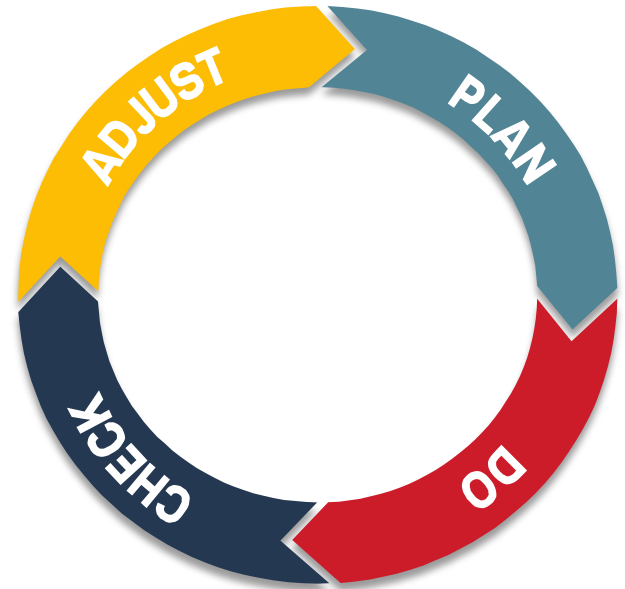
# What is Lean?

Lean is a system of thinking and acting that:

*Increases* **Value**

*Reduces* **Waste**

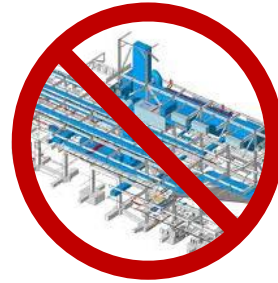
*Respects* **People**



# What is Lean?

1. Lean is a philosophy that can be applied to tackle many risk issues- EHS, EM, BC, and WC issues
2. It is an approach based on understanding customer value, reducing problems (or waste), and respecting people throughout a system
3. It has the potential to create sustaining, transformative results for organizations and their people

# Myths of Lean?



# How can Lean help us?



# Lean + Safety, Then Gemba

How to start & what are we facing?



# Getting through the maze



# Let's get started with Custodians.

We brought Managers and Leads together for the first time in the spring of 2017.

The Objective: Learn to engage employees in a process of continuous improvement to make the job safer and easier.

The Goal: For trainees to use these skills as a foundation on which to build and expand the process to include area of their work.

The Task: As indicated in the safety survey and injury data, routine tasks involving lifting, slips trip and falls, and repetitive motions are good candidates for the workshop experience.



# Learning how

- To engage with the employees.
- To **LISTEN** and **HEAR** what they are saying.
- To identify opportunities where you can make work easier and safer.
- Look for low hanging fruit and make a change
- Practice, practice, practice



# How did the teams do?

## 06 – PAC

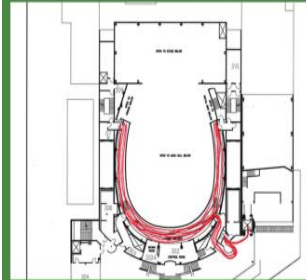


**BUILDING LOCATION:**  
PAC- 3<sup>rd</sup> and 4<sup>th</sup> FLOOR  
BALCONY

**CUSTODIAL ACTIVITY:**

- TRASH REMOVAL
- DUSTING / CLEANING RAILS
- MOPPING
- VACUUMING
- CLEAN GLASS PARTITIONS

## Spaghetti Map



**THINK**  
CONTINUOUS  
IMPROVEMENT  
**SAFETY**  
FIRST

## Areas for Opportunity



### Areas of Opportunity:

- Cart that would fit all work tools: vacuum, mop, trash bucket and additional cleaners
- Create an area on 3<sup>rd</sup> floor to have cart in storage
- Door stop installed in custodial closet so as not to hold door open with body or foot, straining to fill mop bucket
- Authorization for keys to open auditorium to do assigned work and eliminate wasted time



## Summary for continuous safety improvements

### To improve efficiency:

- Work bench in custodial closet for attaching I-Mop attachments
- Future building modifications that would allow central locations for all supplies on each floor
- Each station to have same equipment for each floor for work
- More like equipment – add cordless backpack vacuums, additional I-Mop
- Kickstand doorstop added to each custodial door as a standard
- Provide additional mop sizes to limit straining and excessive weight

**THINK**  
CONTINUOUS  
IMPROVEMENT  
**SAFETY**  
FIRST

Thanks to CSURMA Grant Funding we were able to take the Gemba program across the state...

**\* Host Campus**

<u>TEAM 1</u>	<u># Slots</u>
CSU San Marcos	2 (are there any front line custodians that could attend?)
CSU San Diego *	20
CSU open slots	3

**TEAM 2**

<u># Slots</u>	
CSU Long Beach	8
CalPoly Pomona *	4
CSU Fullerton	8
CSU San Bernardino	5

**TEAM 3**

<u># Slots</u>	
Channel Islands	8
CSUN *	8
Los Angeles	5
Dominguez Hills	3
Chancellor's Ofc	1

**TEAM 4**

<u># Slots</u>	
CSU Chico (14)	8
CSU Sacramento(11)*9	
CSU Stanislaus(7)	5
Humboldt(6)	6

**TEAM 5**

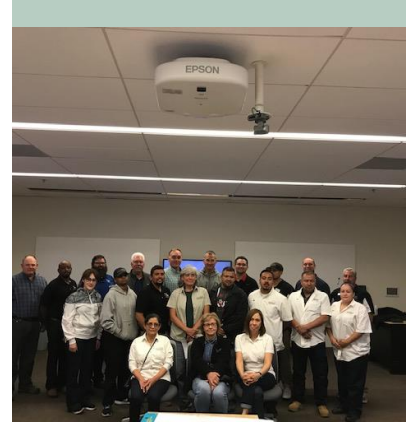
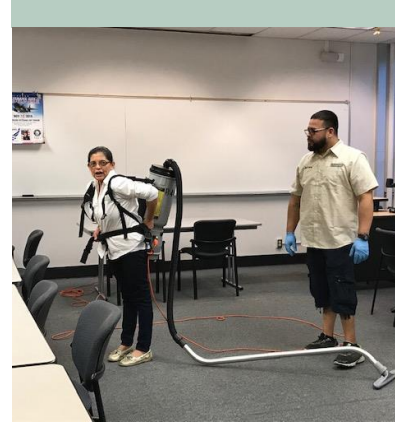
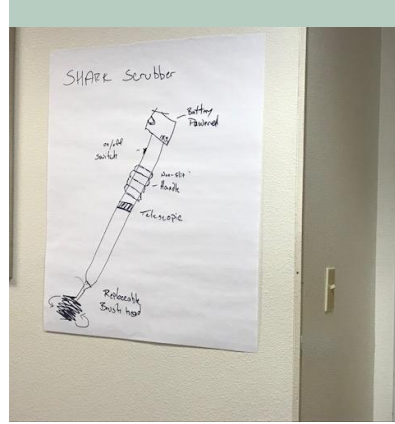
<u>#Slots</u>	
San Francisco(14)	11
Maritime (1)	1
East Bay (6)	4
Sonoma * (6)	6
San Jose (9)	6

**TEAM 6**

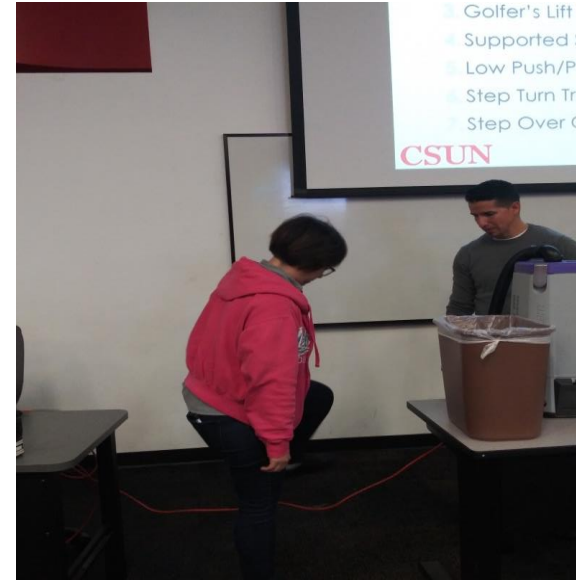
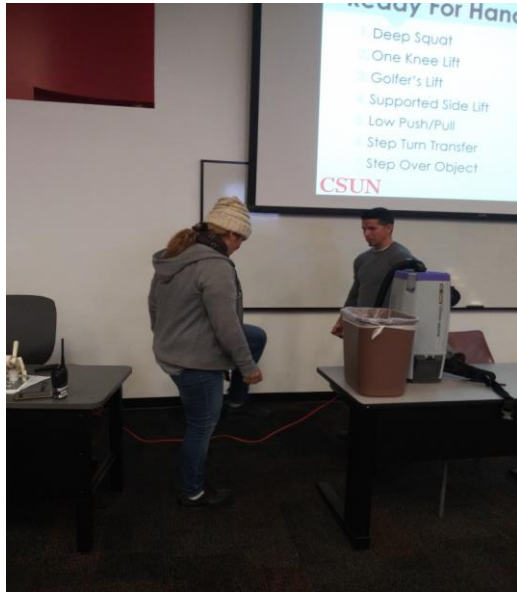
<u>#Slots</u>	
Fresno (11)*	4
Bakersfield(4)	6
Cal Poly SLO (6)	7
CSU open slots	



# Fresno Hosts Lean Safety



After Gemba training CSUN developed a regular training time to look for "opportunities for improvement"



# Getting with the Gemba

The carpenters received a work order for a project where 70 display cubes were needed.

Cubes were 3x3x3.

This would require repetitive bending, grasping and lifting.

They realized this would be the perfect “opportunity” to put their heads together, use what they learned in Lean Safety to make the job safer and easier.



# Who, What and How?

Who is involved



What is the nature



How it happened



The finished product, without any reported injuries





# How to move forward?

Pick a process.  
Choose one that  
is done every  
day, or on a  
regular basis. A  
process that  
presents a  
hazard.

1

Gather the players, get your supervisor involved.

2

Observe the work being done.

3

Engage the employees in discussion about how to make their job task safer and easier.

4

Record the opportunities on how to improve.  
Make a change.

# Injury Prevention – Sprain Strain Workshops



Anya Taylor, MS, CPE, CEAS Professional Ergonomist. Professional, energetic and customized safety programs for your business.

Injury Prevention programs include Sprain Strain Tool Box with the following descriptions:

**Sprain Strain Tool Box for Work and Home workshops.**

**Classroom to REAL LIFE: Developing an Ergonomic Eye.**

**Self-Care Core basics and Back Health Stretch Program**

**Stretch and Safety Employee Training Ergonomic Comfort for Computer Users (Work and Home)**

**Individual Office Workstation Coaching**

<http://www.workplaceergonomics.org/our-crew>

**STRETCH FOR SAFETY**

**Prepare & Recover from Work:**  
Stretch only to comfort – STOP if it hurts. Breathe deeply the entire time.

**Full Body Stretches**  
• Hold each exercise 20 seconds  
• Always stretch both sides of body  
• Keep back straight and knees bent  
**Band Exercises**  
• Do four repetitions of each exercise  
• Keep shoulders down and relaxed

<p><b>Back</b> Reach overhead to ☺ for 15 seconds, then L. Keep knees bent. Feel stretch in back and sides of torso.</p>	<p><b>Chest</b> Interlace fingers behind back and lift arms away to stretch chest.</p>	<p><b>Upper Back</b> Extend arms straight, cross wrists, then interlace fingers. Increase stretch by pushing arms further out. Feel shoulder blades move away from spine. Breathe deeply.</p>	<p><b>Upper Back - Chest</b></p>
<p><b>Shoulder Balls</b> Move shoulder in circular motion, forward, up, back and down. Go Slowly! Do 4 times one way, then 4 times in reverse direction.</p>	<p><b>Overhead Pull Down</b> Hold band wide. Reach arms overhead, then bend elbows to bring hand down, either behind head or to chest.</p>	<p><b>Shoulder Blade Squeezes</b> Hold band wide with front of body, chest level. Pull band to torso by bending elbows or by keeping arms straight.</p>	<p><b>Behind Back Lift</b> Hold band wide with both hands behind you, palms facing away. Lift arms straight back.</p>
<p><b>Shoulder Pull Apart</b> Hold band wide with both hands behind you, palms up. Keep elbows anchored at side, and stretch band by moving hands away from center of body. Go slow.</p>	<p><b>Shoulder</b> Place R hand on L upper arm and quickly arm across chest. Feel stretch in back of L arm.</p>	<p><b>Neck</b> Place L forearm at back of neck. Tip head toward R to feel neck stretch. Keep shoulders down.</p>	<p><b>Shake Break</b> Let hands go limp and shake vigorously in front of waist to increase blood flow and relax shoulders. Count to 10.</p>
<p><b>Double Calf</b> Stand in split stance with front knee bent, back leg almost straight. Feet, lower leg stretch. Press back heel firmly into floor. Repeat with back knee bent.</p>	<p><b>Back Thigh</b> Extend one leg straight while keeping supporting leg slightly bent and spine neutral. Stretch back of raised leg.</p>	<p><b>Front Hip</b> Bend front knee and place foot on raised surface. Keep back leg straight and pull body forward for thigh stretch. Keep front knee over front heel. Keep back upright.</p>	<p><b>Palm Pull Back</b> Use R hand to press L fingers against wall in lower position. Extend L arm out to stretch hand, wrist, forearm, triceps.</p>
<p><b>Legs</b></p>	<p><b>Front Thigh</b> Curl up ankle and bring heel toward buttock. Keep support knee bent. Support knee bent, back neutral.</p>		

# Give them what they ask for:

- Sprain Strain Workshops
- Why are they participating? This is the Them, the employees.
- Be sensitive to the different shifts and allow for everyone to participate.
- The information needs to make sense to the employees so that it matters.
- Learning doesn't stop at the end of the session, remember to reinforce. Take it from knowing to doing.



Through team building, and team work, together we can make a difference.



# CSURMA Grant.

- We propose requesting another CSURMA grant to bring the Lean Safety Gemba Walk workshop back to all CSU.
- Use feedback from previous participants to include managers and supervisors to facilitate higher level changes: Working with clients, purchasing new equipment, changing standard work

# Feedback and Reflections

“To get out to the place where the work happens helped a lot. Talking/engaging a custodian about their difficulties was eye opening.”

# Feedback and Reflections

“Yes. I feel all custodians and managers should attend. It would be that culture shift moment into a Lean way of thinking.”

# Feedback and Reflections

“Being able to do a engage with my staff by doing a gemba walk so that I can understand their needs, concerns, suggestions, etc.”



# Feedback and Reflections

“Not blaming the employee for problems.  
Think Lean.”

# Feedback and Reflections

“We need to update the custodian's equipment to make job Lean.”

# Feedback and Reflections

“Gemba walk was an eye opening experience. You don't really know a situation until you physically out there and can see the issues.”

# Feedback and Reflections

“I would definitely recommend this course to everyone but especially management. Management makes decisions on buying equipment and certain procedures.”

# Feedback and Reflections

“I will get the co-workers involved in work discussions and ask for their opinions regarding work related issues..”

# Feedback and Reflections

“Work can be easier and you can be more productive if we focus on safety opportunities.”

# Feedback and Reflections

“I plan to talk with my crew and look them in the eyes.”

# Feedback and Reflections

“After training primarily custodians I now feel obligated to speak for them. They are all looking for management support to move Lean Safety forward. CSU needs leaders to lead change – not just do their job.”



# Feedback and Reflections

“I observed some dramatic personal change in many of the workshop attendees. Many of them took the training to heart and left committed to changing their own personal behaviors. Focusing on process rather than people became the mantra during the report out sessions.”

# Feedback and Reflections

“Whoever owns janitorial services should be in the training with some custodians, custodian leads, and custodial managers, along with representation from EHS, HR, and worker’s comp. This message came from the leads in the training. Over and over they asked why their managers weren’t in the training with them.”

# Feedback and Reflections

“Since the training covers Lean basics as well as continuous improvement safety, a mix of attendees will help to ensure follow-up and progress after the training event. They leave the training with a common language and objectives to pursue.”

# Feedback and Reflections

- New chairs, hundreds must be lifted, placed on table and new chairs created increased lifting and ergonomic hazards.
- Making higher-level changes by including managers
- Establish standards and train and enforce – lean principles
- Each building on campus should be assessed to define the processes required to maintain it. This list of “processes” would be the targets for process evaluation and improvement.

# Feedback and Reflections

- Custodial processes, like all business processes, should be understood (process mapped) and improved. Improvements may occur randomly, but they are not part of a formal improvement effort.
- Buildings and washrooms have been designed without thinking about those who have to maintain them. Soap dispenser reservoirs are under sinks, hose connections are under the sinks, trash receptacles are so low you have to bend to remove and replace, heavy furniture (without wheels) is on carpeted dorm floors that custodial staff have to wrestle around in order to deep clean. During building design the custodial staff should be consulted.

# Feedback and Reflections

- Sponsor a best practices custodial annual event and have custodians, not managers, present their stories.
- Make some custodial benchmarking visits to non-campus sites.
- Have campus representatives that were in the training together make benchmarking visits to each other's campuses.

# Feedback and Reflections

Focusing on and implementing the changes mentioned above will reduce injury risks and operational costs – that is Lean Safety.

Consider this list a starting point for some future discussions. My intent was not to criticize anyone or their performance. I am an observer of processes and that is what we should discuss moving forward. I would be happy to talk with anyone about my observations.

Sincerely,

Robert Hafey – President  
RBH Consulting LLC

# QUESTIONS and COMMENTS

