5S / Visual Factory

IPI Vision

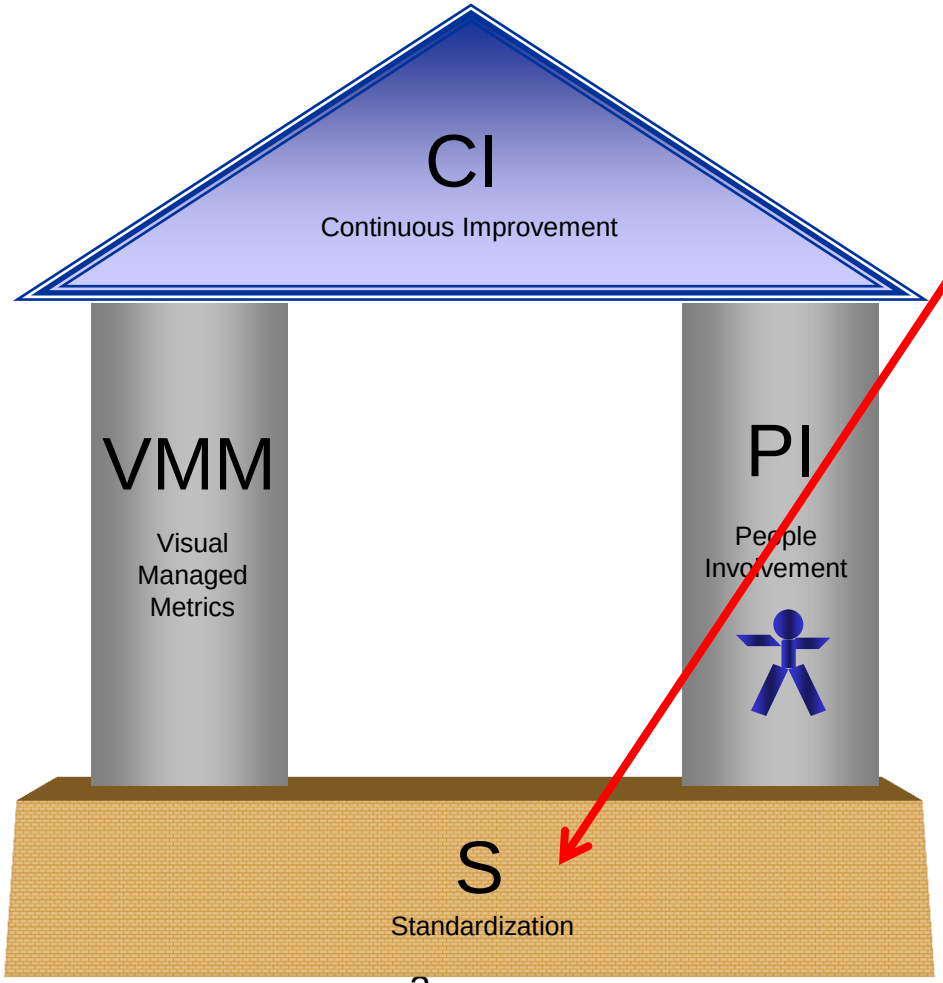
A meaningful work opportunity for every offender

IPI

Building Brighter Futures

CI

Continuous Improvement (CI)



CI - Supporting Tools

- Standardization
  - 5S
  - Standard Work
  - Total Productive Maintenance
- VMM
  - Visual management
  - CI boards
  - Layered process audits
  - Smart Goals
- Continuous Improvement
  - Process Problem Solving
  - Kaizen
  - VSM
  - Go See

Purpose of CI Tools

- Standardize the system
- Return the system to standard
- Improve the standard

Why did we do the 5S event?

What was the

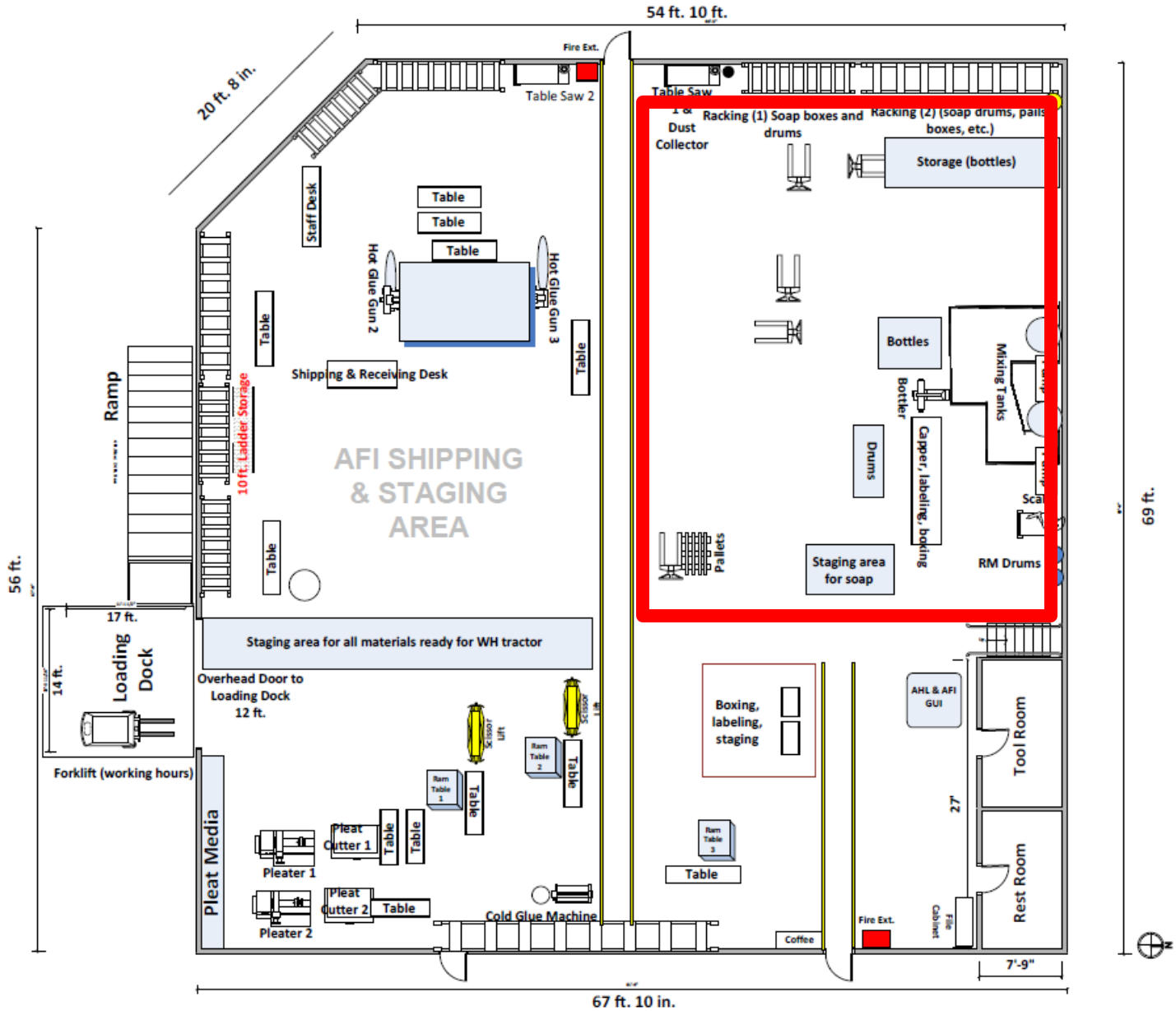
FOR

OUR

????

WE ACCOMPLISHED……

- **Discovered roughly 400 square feet of space that we can now use exclusively for chemical production!**


54 ft. 10 ft.
20 ft. 8 in.
Fire Ext.
Table Saw 2
Table Saw
1 & Dust Collector
Racking (1) Soap boxes and drums
Racking (2) (soap drums, pails boxes, etc.)
Storage (bottles)
Staff Desk
Table
Table
Table
Hot Glue Gun 2
Hot Glue Gun 3
Table
Table
Shipping & Receiving Desk
Ramp
10 ft. Ladder Storage
AFI SHIPPING & STAGING AREA
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Bottles
Mixing Tanks
Bottler
Drums
Capper, labeling, boxing
Scale
Pallets
Staging area for soap
RM Drums
56 ft.
69 ft.
17 ft.
14 ft.
Loading Dock
Staging area for all materials ready for WH tractor
Overhead Door to Loading Dock 12 ft.
Forklift (working hours)
Scissor Lift
Scissor Lift
Ram Table 2
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Ram Table 1
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Boxing, labeling, staging
AHL & AFI GUI
Tool Room
27'
Pleat Media
Pleat Cutter 1
Table
Table
Pleater 1
Ram Table 3
Table
Rest Room
Pleat Cutter 2
Table
Pleater 2
Cold Glue Machine
Coffee
Fire Ext.
File Cabinet
7'-9"
67 ft. 10 in.

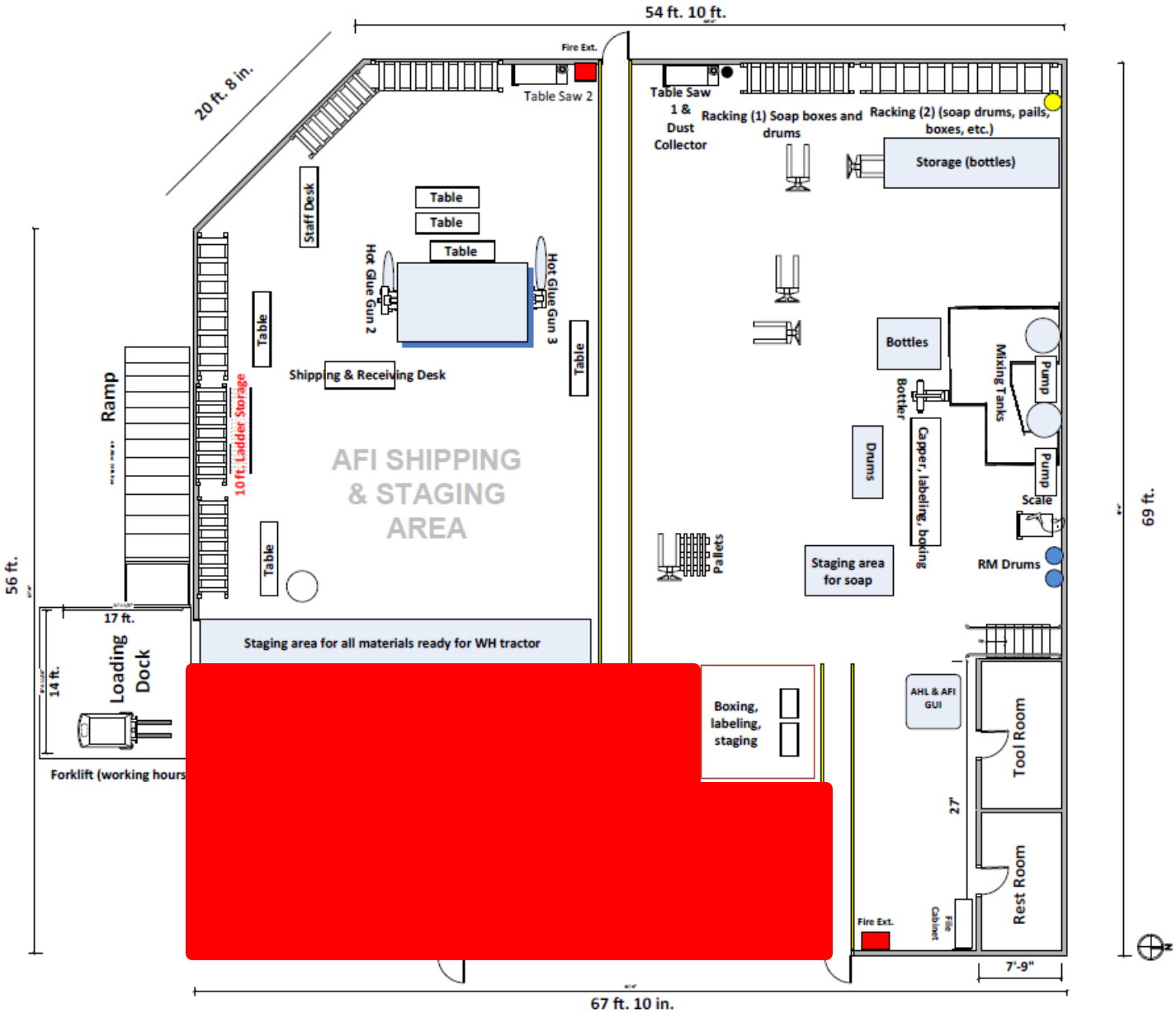
CHEMICAL AREA

BEFORE

AFTER

What did we accomplish?

- Discovered roughly 400 square feet of space!
- **Redesigned the RAM table area to eliminate wasted motion.**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Forklift (working hours
67 ft. 10 in.

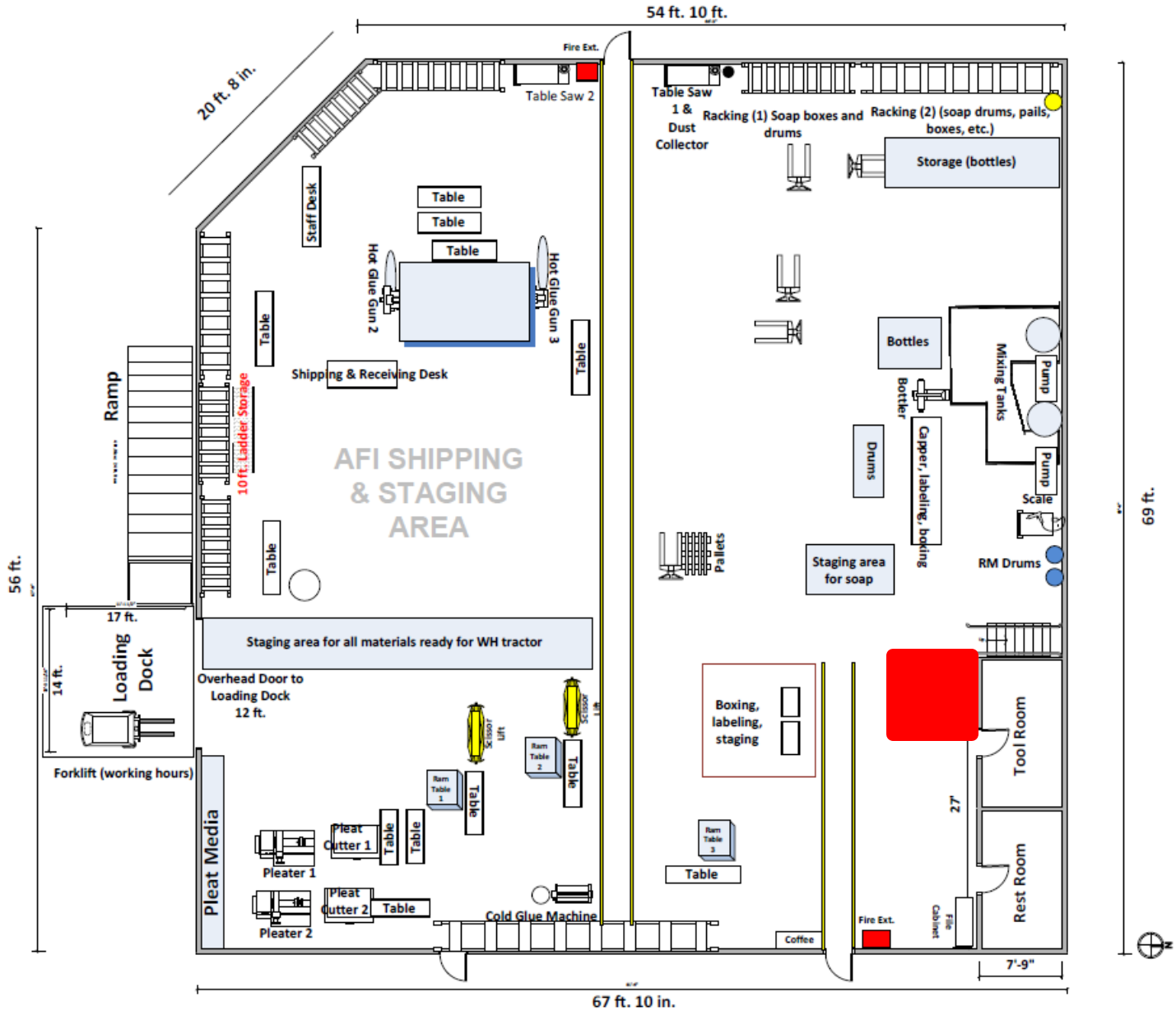
Ram table area

BEFORE

AFTER

What did we accomplish?

- Discovered roughly 400 square feet of space!
- Redesigned the RAM table area to eliminate wasted motion.
- **Combined the 2 GUI computers onto 1 desk to free up space and standardize the location.**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67 ft. 10 in.
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GUI STATION

BEFORE

AFTER

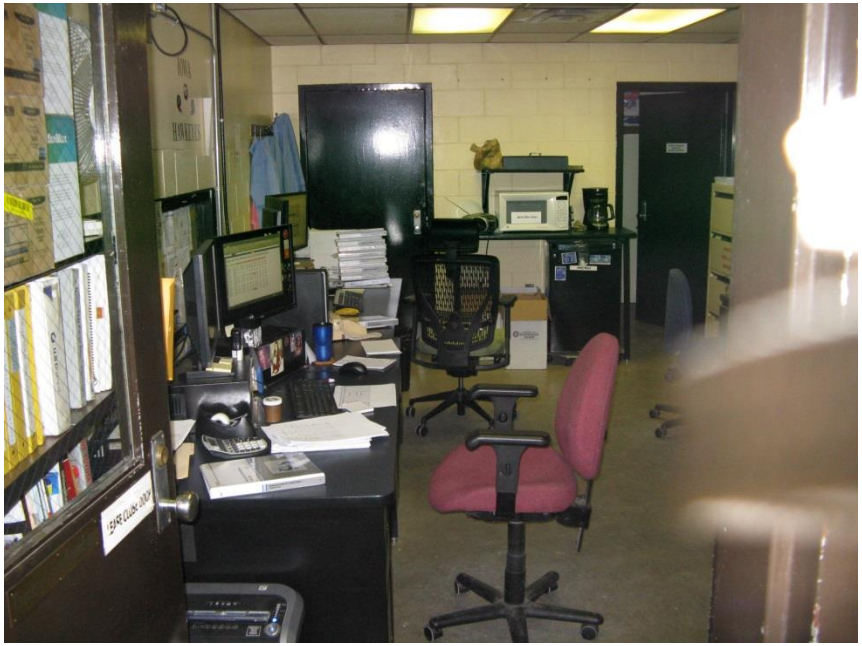
X 2!!

What did we accomplish?

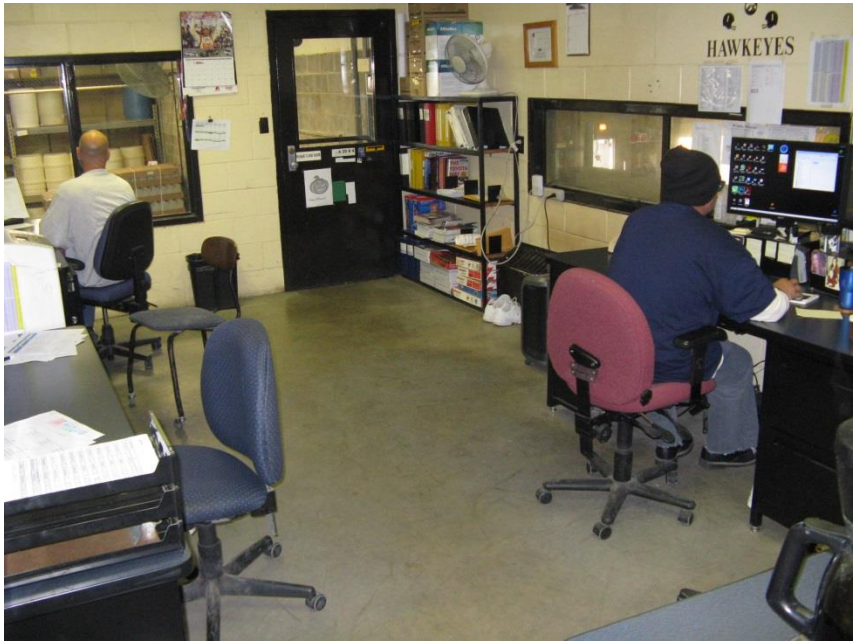
- Discovered roughly 400 square feet of space!
- Redesigned the RAM table area to eliminate wasted motion.
- Combined the 2 GUI computers onto 1 desk to free up space and standardize the location.
- **Developed a plan to relocate the apprentice clerk and training materials to a better location**

CLERK OFFICE

BEFORE

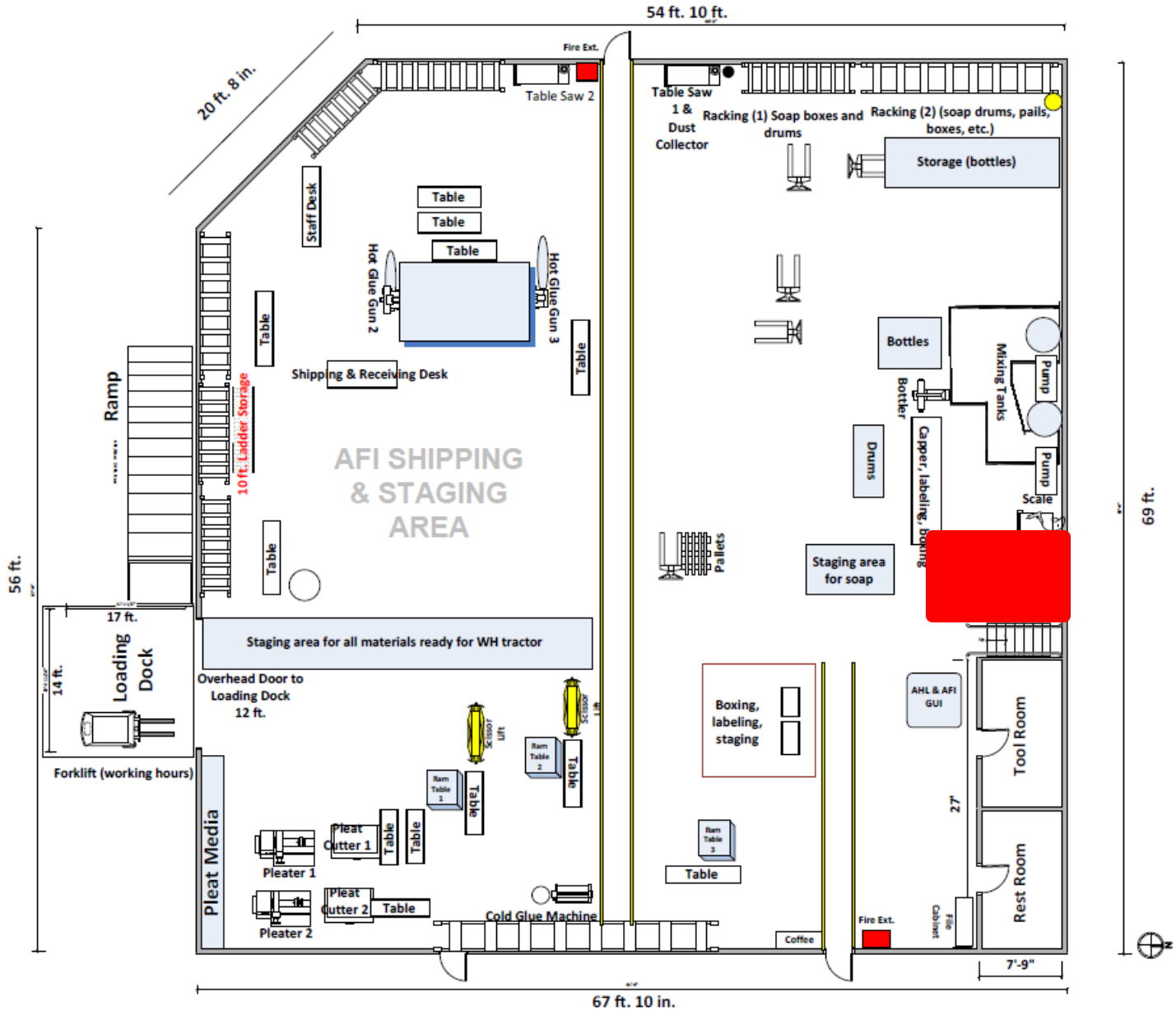


AFTER



What did we accomplish?

- **Gained approval to utilize the space in front of the overhead door for soap production!**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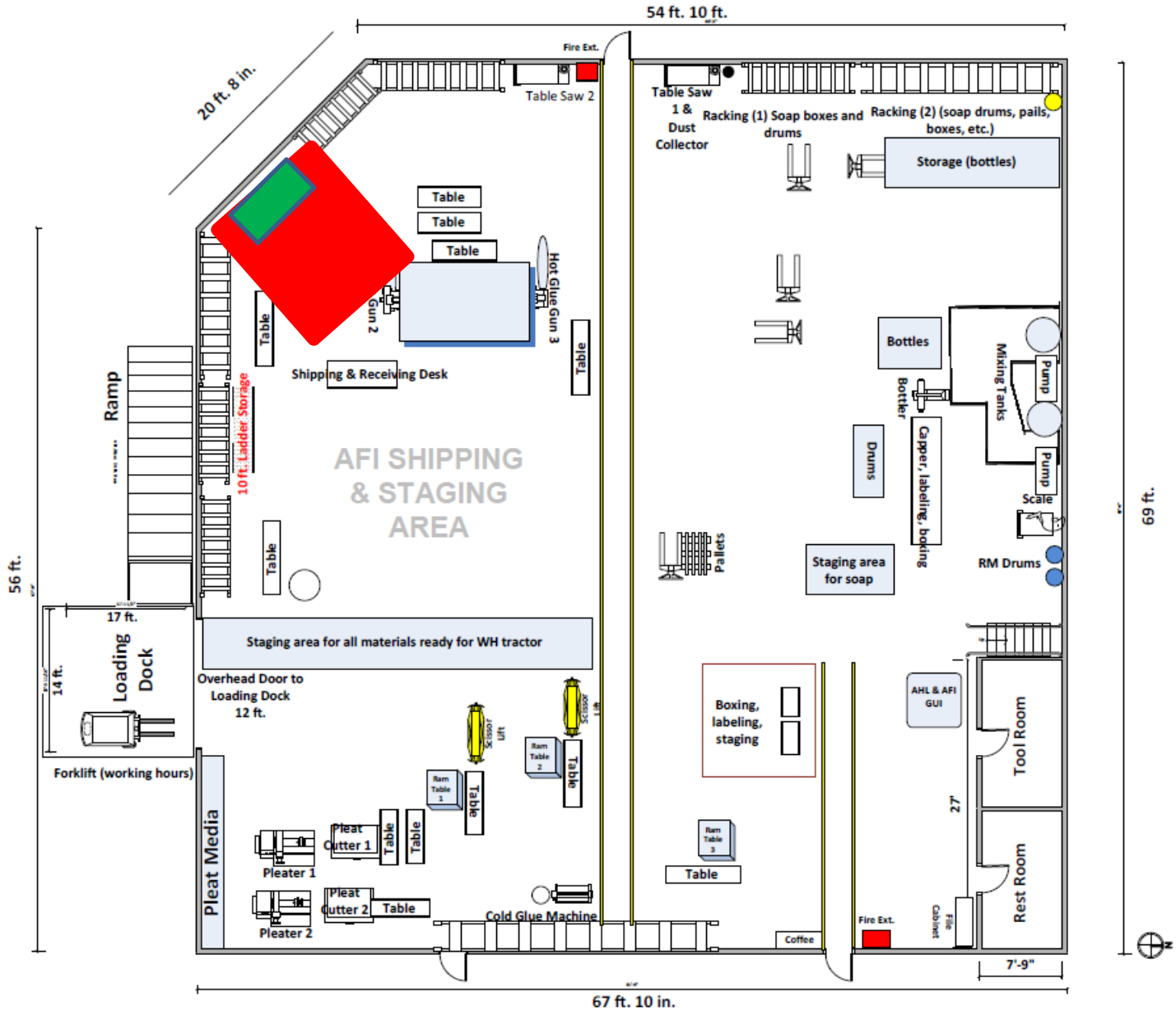
OVERHEAD DOOR AREA

BEFORE

AFTER

What did we accomplish?

- Gained approval to utilize the space in front of the overhead door for soap production!
- **Reduced the space for the staff desk on the floor by roughly 50 square feet!**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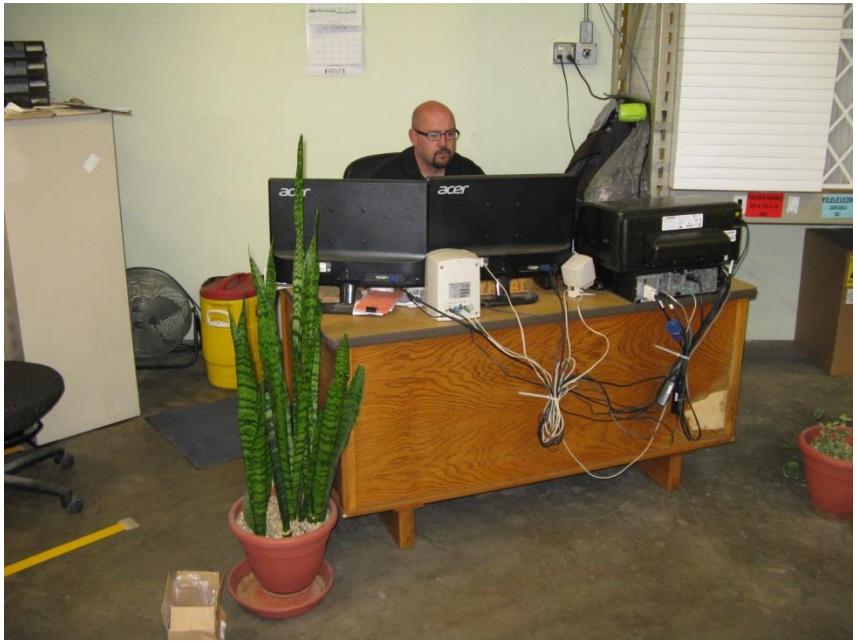
STAFF SHOP DESK

BEFORE

AFTER



What did we accomplish?

- Gained approval to utilize the space in front of the overhead door for soap production!
- Reduced the space for the staff desk on the floor by roughly 50 square feet!
- **Relocated a saw to improve safety and reduce motion!**

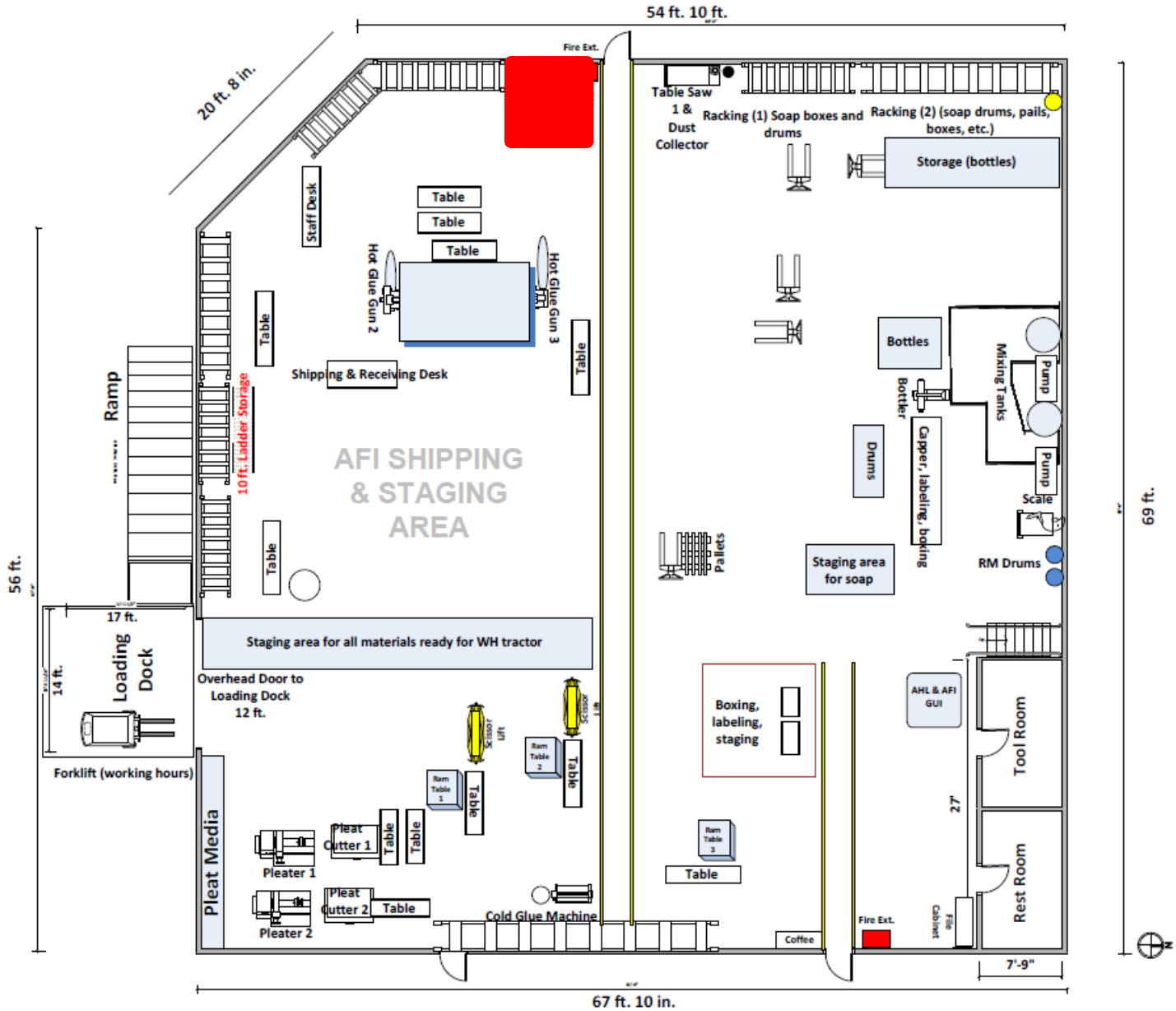

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TABLE SAW AREA

BEFORE

AFTER

What did we accomplish?

- Gained approval to utilize the space in front of the overhead door for soap production!
- Reduced the space for the staff desk on the floor by roughly 50 square feet!
- Relocated a saw to improve safety and reduce motion!
- **Removed 6 trailer loads of non-value added items from the shop and old soap!**

LA50900

What did we accomplish?

- **Developed a standard for Floor markings for all IPI shops!**

IPI Floor marking standard

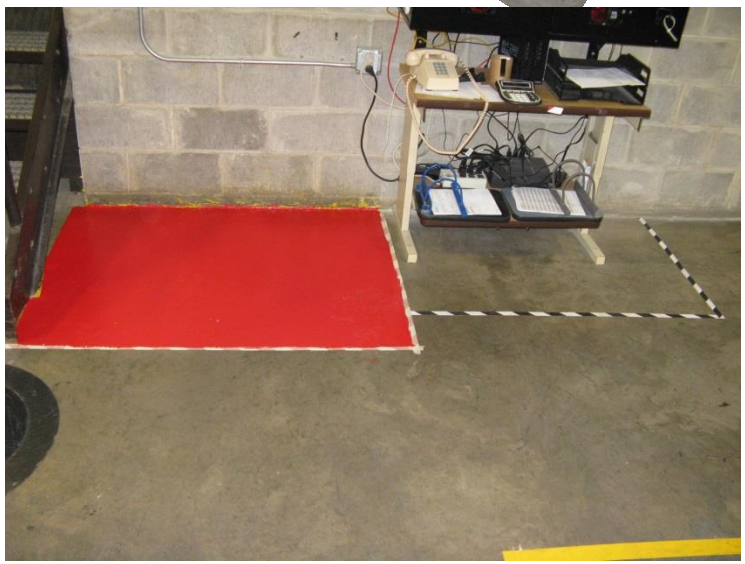
YELLOW	Aisleways & Traffic Lanes; 'Paths of Egress'; Work Cells
WHITE	Production -OR- Racks, Machines, Carts, Benches, and other equipment that does not fall under any other color guidelines
RED	Defect/Scrap Area; Red Tag Area
ORANGE	Material or Product Inspection -OR- Energized Equipment
GREEN	Materials & Manufacturing: Finished Goods
BLUE	Materials & Manufacturing: Raw Materials
BLACK	Materials & Manufacturing: Works In Progress
BLACK/YELLOW	Areas which present physical or health risks to employees. Indicates that extra caution is to be exercised.
RED/WHITE	Areas to be kept clear for safety reasons (around emergency access points, electrical panels, firefighting equipment, etc.)
BLACK/WHITE	Areas to be kept clear for operational purposes (non-safety related)

What did we accomplish?

- Developed a standard for Floor markings for all IPI shops!
- **Started applying floor marking tape**

Floors

Standard Floor Markings



What did we accomplish?

- Developed a standard for Floor markings for all IPI shops!
- Started applying floor marking tape
- **Developed a standard for shop signage!**

STANDARD SIGNS

IPI DARK BLUE WITH WHITE BOARDERS.

Standard Signs

What did we accomplish?

- Developed a standard for Floor markings for all IPI shops!
- Started applying floor marking tape
- Developed a standard for shop signage!
- **Established Visual metrics for the team!**

METRICS

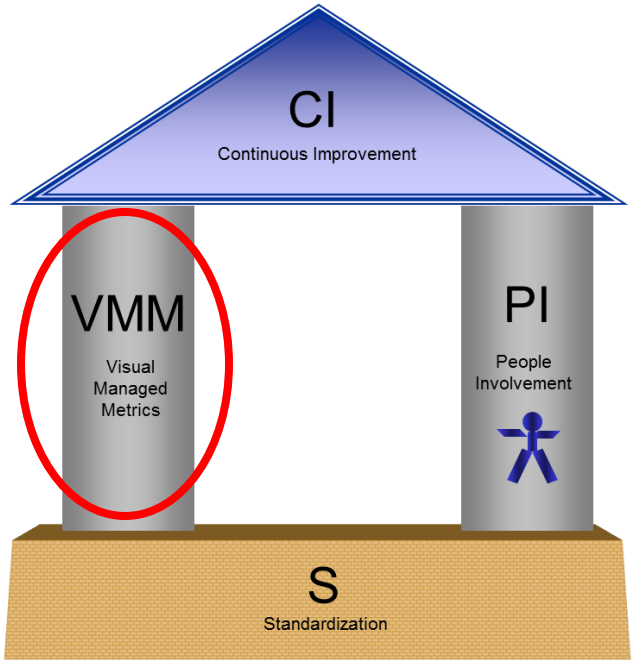
Zero RECORDABLES

Zero DEFECTS PASSED ON

5 DAYS ORDER TO DOCK

NO EXTRA HELP NEEDED

STANDARD WORK WRITTEN



LEAN THINKING is….

- Understand the differences between value add and waste.
  - What is the customer willing to pay for?
  - Understanding what adds value to the product.

IF IT DOESN'T ADD VALUE ITS WASTE!

It might be necessary but it's still waste.

WASTE

What does this monster we call waste look like?

TIMWOOD = WASTE

Types of Waste

T	Transportation
I	Inventory
M	Motion
W	Wait
O	Over Production
O	Over Processing
D	Defect

Anything that does not add value to the product for the customer is waste!

Transportation WASTE

Types of Waste

T
I
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W
O
O
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Transportation

Inventory WASTE

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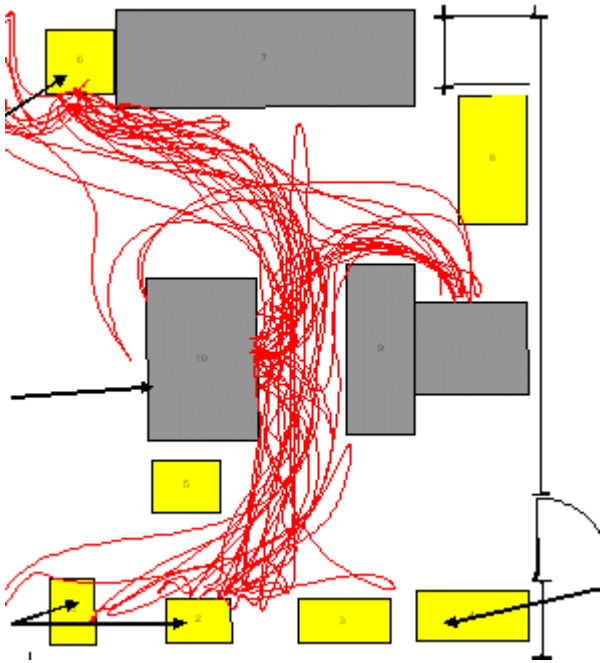
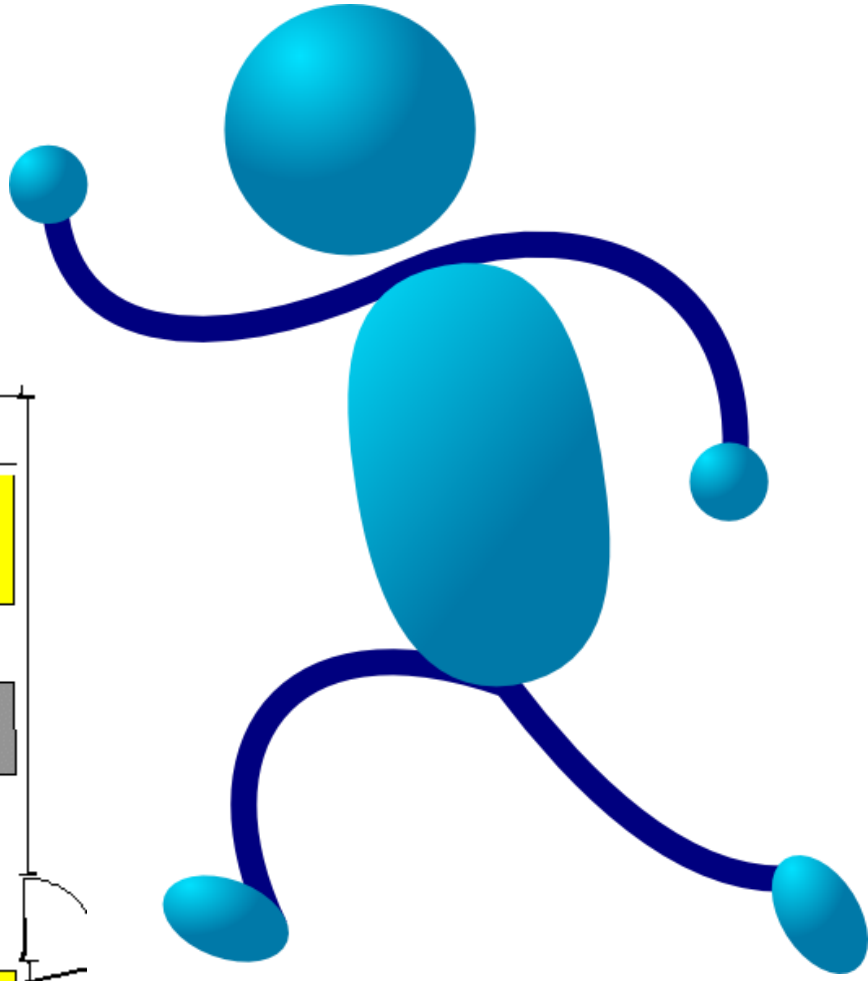
Motion





Waiting WASTE

Types of Waste

T
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Waiting

Over Production WASTE

Types of Waste

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Over production

Over Processing WASTE

Types of Waste

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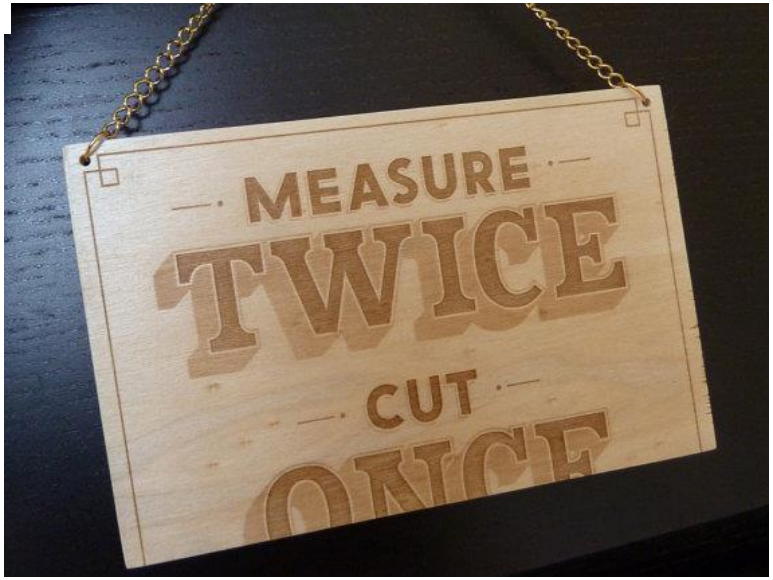
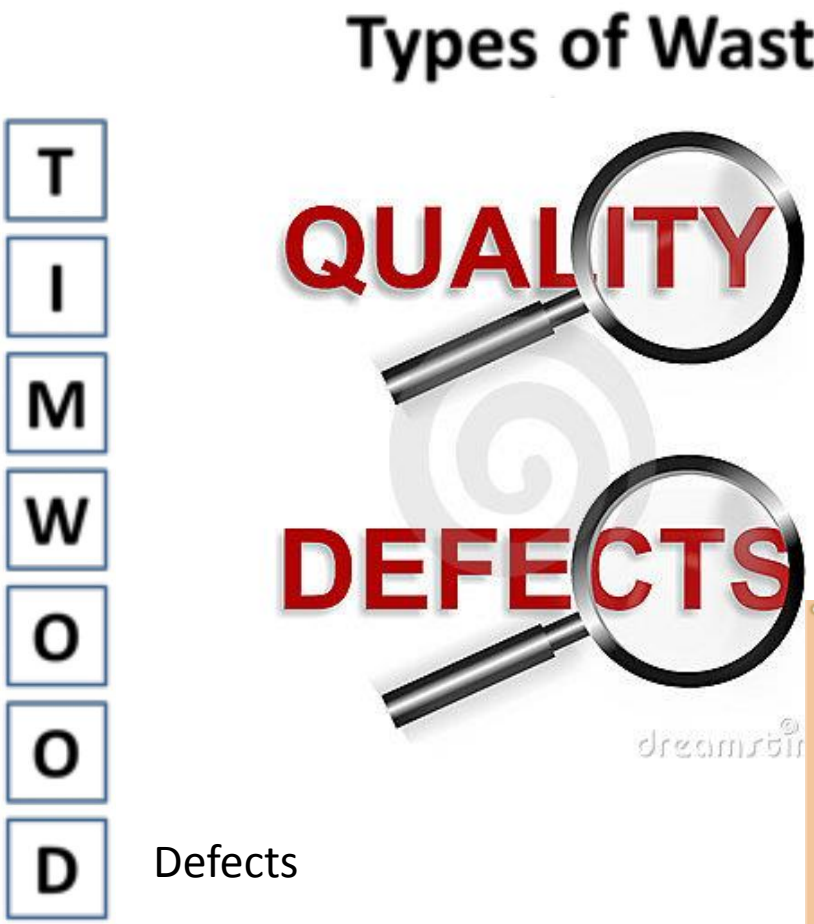
Over processing



Defect WASTE



Defects

What's next?

- 5S audit schedule
- 5S task cards **SUSTAINMENT MUST DO's!**
- Zone maps
- Install visual metrics board
- COUNTER MEASURE SHEET reviews

What’s next?

- Floor repairs
- Walls painted
- Finish taping the floors
- Staff desk in office
- Platform for staff desk on floor
- Overhead door removal
- Enclosed dock proposal

FEEDBACK

- **Was it worth the time?**
- **What went well from your perspective?**
- **What would you do differently (if anything) knowing what you know now?**

Thank you!

- **Great participation**
- **Support**
- **Resources**