پیاده سازی نظام آراستگی 5S

آروین تقی زاده تبریزی

معرفی دوره

آموزش صحیح

- استفاده از آخرین متدهای موجود
- استفاده از تجربیات خود و دیگران
- استفاده از استانداردهای مرسوم و ابتدایی

- امکان استفاده مستقیم از آموزش صحیح دریافتی

یادگیری

What is 5S

➢ 5S is the most powerful Lean Manufacturing Tool

➢ 5S is a method for organizing the workplace

➢ Enhance productivity, visual management and to ensure

the introduction of standardized working.

By the end of the module, the participants will be able to:

- Define and understand the importance of the 5s method

- Identify and overcome the barriers to **productivity**

- Improve **QUALITY** of work

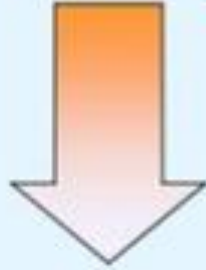- Practice **efficiency** at all times

ARVInIT

BEFORE

AFTER

ARVin

- **Reduces**
  - Waste
  - Downtime
  - Defects
  - Changeover time
  - Delays
  - Questions

- **Improves**
  - Safety
  - Customer satisfaction
  - Personal satisfaction
  - Visual Control
  - Standardization
  - Process Control

SEIRI	Sort/Tidiness
SEITON	Set/Orderliness
SEISO	Shine/Cleanliness
SEIKETSU	Standardize
SHITSUKE	Sustain/Discipline

مرتب کردن

طبقه بندی کردن

تمیز کردن

قانون مند کردن

حفظ و نگهداری

The 5S concept was popularized by:
- **Taiichi Ohno** (Toyota)
- **Shigeo Shingo**

Just In Time Manufacturing

5S approach was then developed further by **Hiroyuki Hirano** in his book "5 Pillars of the Visual Workplace"

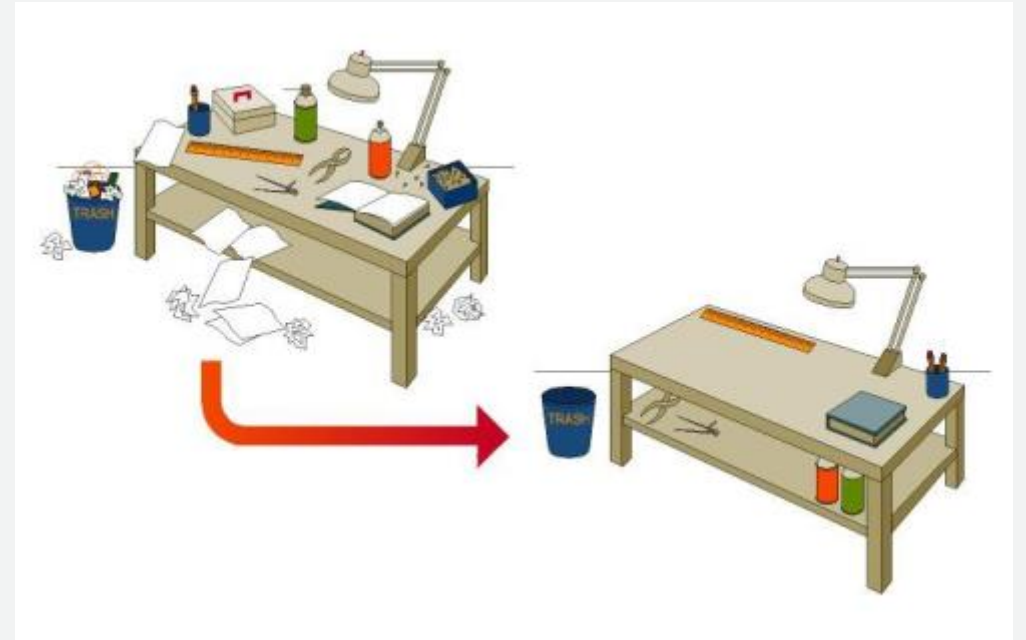# High Impact, Low Cost

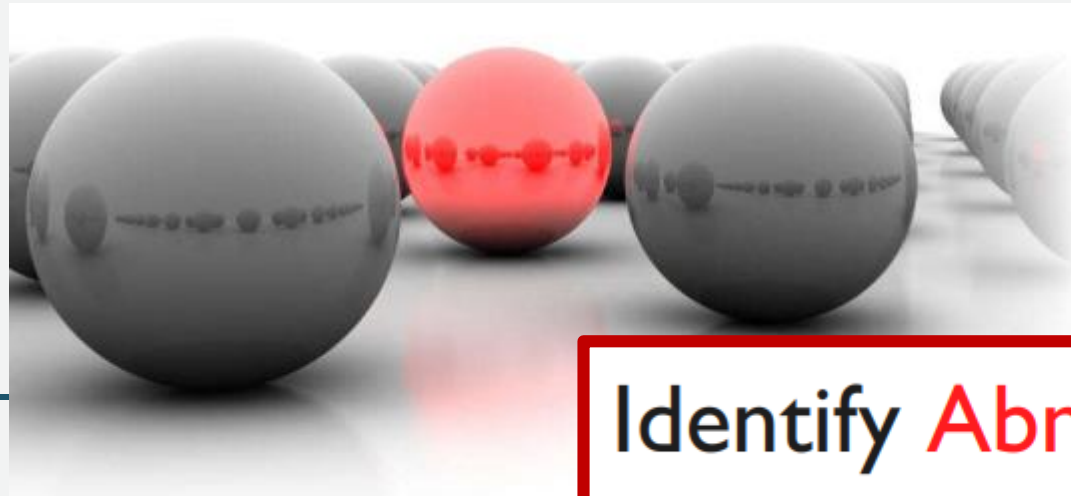## Gets everyone involved

SEIRI → ← SORT

PURPOSE: TIDINESS

: To ensure that everything left in the workplace is related to work.

How to sort things:

✓ Decide what you need.

✓ Remove unnecessary clutter. Throw away all rubbish and unrelated materials in the workplace.

✓ All tools and materials must be classified and stored.

✓ Remove items which are broken, unusable or occasionally used.

Identify Abnormalities

Level	Degree of Need (Frequency of Use)	Storage Method (Stratification)
Low	• Things you have not used in the past year or won't be needing • Things you have only used once in the past 6-12 months	• Throw them out • Store at a distance
Average	• Things you have only used once in the last 2-6 months • Things used more than once a month	• Store in a central place in the workplace
High	• Things used once a week • Things used every day • Things used hourly	• Store near the work site or carry on the person

Red Tag
NOT needed
Dispose now.

Yellow Tag
We MAY need this.
Keep it until
_____Date

Green Tag
We DO Need it.
Keep it

SEITON → ← **SET in Order**

PURPOSE: ORDERLINESS

: To eliminate time wasted in obtaining the necessary items when in the middle of a task.

How to set things in order

- ✓ Once you have eliminated all the unneeded items, turn to the left over items.
- ✓ Set everything in proper place for quick retrieval and storage.
- ✓ Arrange tools, parts, and instructions in such a way that the most frequently used items are the easiest and quickest to locate.

- Label & Sign Strategy
- Paint & Tape Strategy
- Tool Outline Strategy
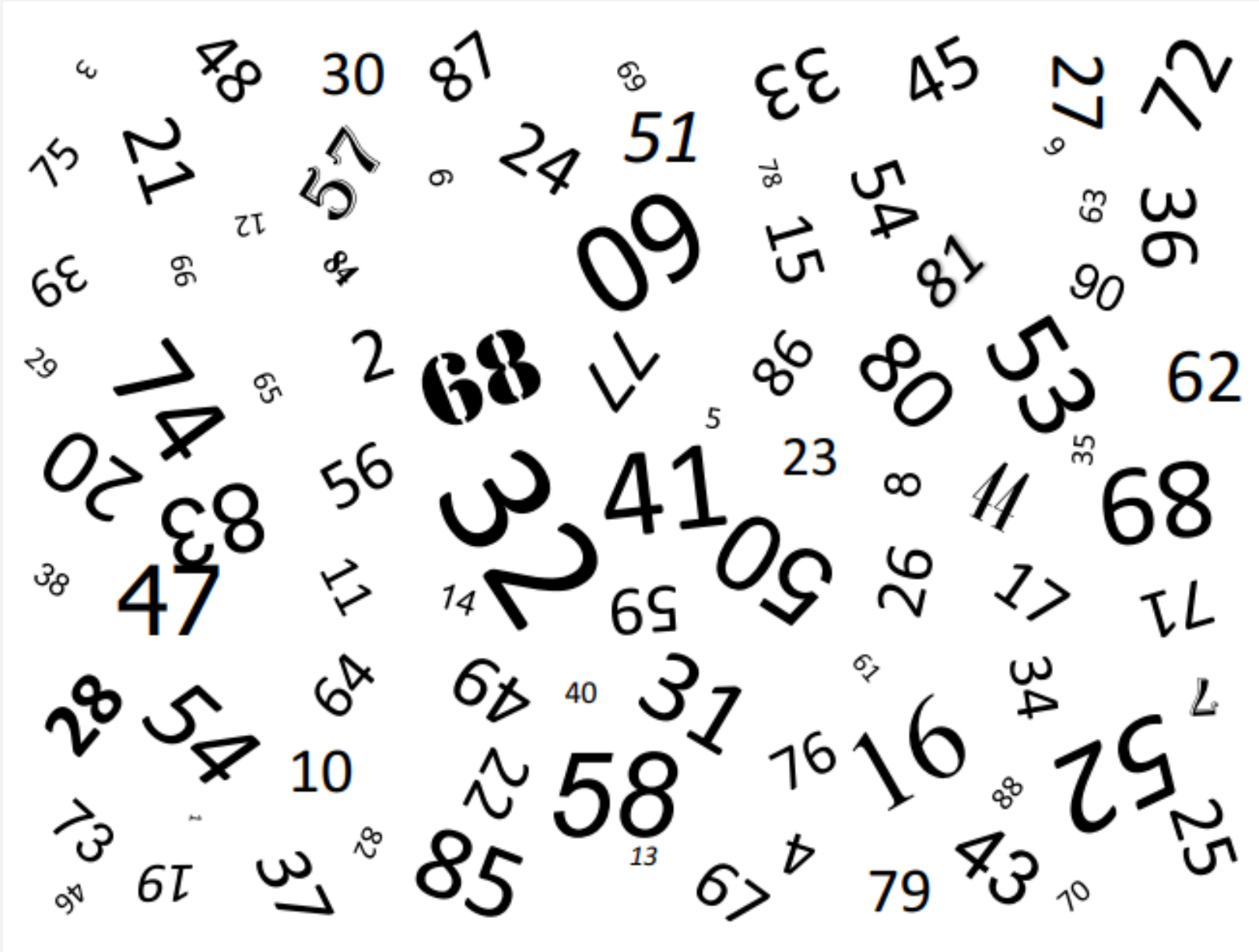
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Paint & Tape Strategy

Tool Outline Strategy

Before

After

Identify Abnormalities

48 30 3
21
12
39

33
24
6
15

45 27 9
36

29 2
20
38 47 11

5
32 41 23
14

35
8 44
26 17

28
10
1
19 46 37

49 40 31
22
13 4

34 7
16
43
25

Numbers from 1 to 49

1	2	3	4	5	6	7	8	9	10
11	12	13	14	15	16	17		19	20
21	22	23	24	25	26	27	28	29	30
31	32	33	34	35	36	37	38	39	40
41		43	44	45	46	47	48	49	

SEISO → ← **SHINE**

PURPOSE: CLEANLINESS

: To know what goes where and ensure that everything is where it belongs.

How to shine your things:

✓ Clean the workspace and all equipment, and keep it clean tidy and organized.

✓ Identify and eliminate causes of dirt and grime – remove the need to clean

✓ At the end of each shift, clean the work area and be sure everything is restored to its place.

BEFORE

AFTER

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SEIKETSU → ← **STANDARDIZE**

PURPOSE: To define the standards by which personnel must measure and maintain cleanliness.

- Determine standard procedures and make them **visible**.
- Designate standard **colors, shapes, and symbols** to be associated with standard procedures.

How to standardize:

- ✓ Simplify the way of maintaining cleanliness.
- ✓ Develop procedures, schedules, practices.
- ✓ Continue to assess the use and disposal of items.
- ✓ All employees doing the same job should be able to work in any station with the same tools that are in the same location in every station.

Implement the rules by which the **first 3S's** are performed and maintained.

Sort
- Standardize Red tag procedures and Red tag holding area rules

Set in Order
- Standardize location, number and position of all items (standardize colors, shapes, symbols, etc.)
  - Make temporary lines, signs, and labels permanent

Shine
- Standardize cleaning schedules and procedures
- Standardize work procedures and make visible

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Yellow
Most pathways, including: Aisleways, Traffic Lanes, Work Cells

White
Production, Racks, Machines, Carts, Benches, and other uncategorized equipment

Red
Defects / Scraps / Red Tag

Orange
Material or Product Inspection
OR
Energized Equipment Warning

Blue
Materials & Manufacturing: Raw Materials

Black
Materials & Manufacturing: Works In Progress

Green
Materials & Manufacturing: Finished Goods

Gray/Purple/Brown
Markings that do not fall under other color standards

Black & Yellow
Areas presenting Physical or Health Risks- Extra caution should be exercised

Red & White
Areas to be kept clear for safety (ex: Emergency Access Points, Electrical Panels, etc.)

Black & White
Areas to be kept clear for operational purposes (non-safety related)

Green & White
Health Emergency areas such as Eye Wash Stations and First Aid Stations

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SHITSUKE → ← **SUSTAIN**

PURPOSE: To maintain what has been accomplished.

5S SUSTAIN CAMPAIGN

AREA _____ WEEK OF _____

5S	TASK	TEAM	
SORT	DISPOSITION THE 5S RED TAG HOLDING AREA	Marcia	Jose
SET-IN-ORDER	MAKE SURE ITEMS ARE IN THEIR CORRECT LOCATION	Ralph	Owen
SHINE	CHECK SHINE SUPPLIES INVENTORY LEVEL		
STANDARDIZE	PERFORM 5S AUDIT AND POST SCORE		
SUSTAIN	WRITE ARTICLE FOR NEWSLETTER		

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How to sustain the 4s:

✓ Maintain and review standards. Once the previous 4 S's have been established, they become the new way to operate.

✓ Maintain focus on this new way and do not allow a gradual decline back to the old ways.

✓ While thinking about the new way, also think of better ways.

✓ When an issue arises such as a suggested improvement, a new way of working, a new tool or a new output requirement, review the first 4 S's and make changes as appropriate.

ARVint

Before

After

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The Five Primary Phrases translated into English
all start with the letter "S":

Sort (seiri)
Straighten (seiton)
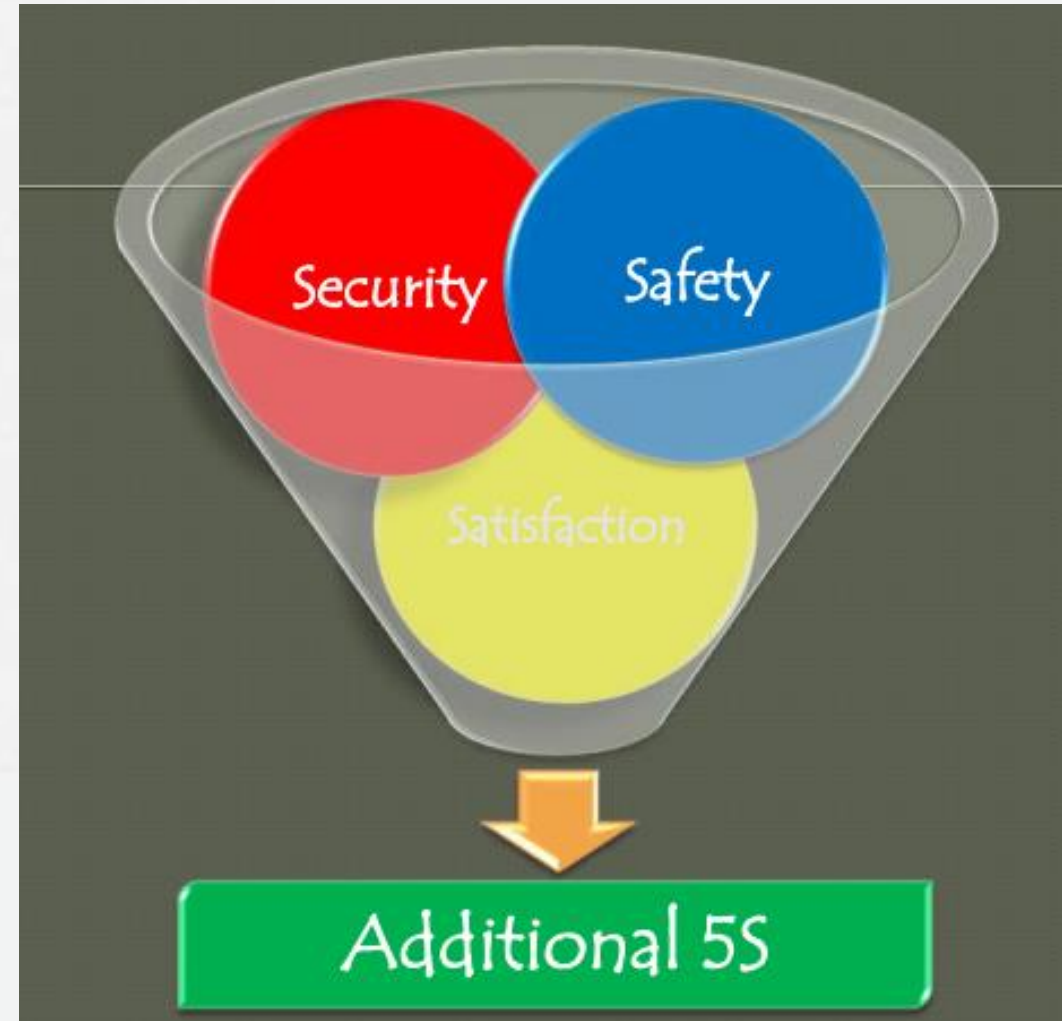**Shine** (seiso)
Standardize (seiketsu)
Sustain (shitsuke)

The additional "S"
Safety
is added to give us our

6S

Security

Safety

Satisfaction

Additional 5S

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با سپاس از همراهی شما