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CERN | IdeaLAB

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ORGANIZING AND TRACKING PROCEDURES

ORGANIZATION

How to arrange and organize the little useful space we will have it's probably the most important thing we have to take care of. In order to have all the tools, materials and machines we need, we will have to set up and place them the best way possible.

For the tools, the tool carts it's the best option. We should also give them different colours so the tools of two different cars don't get mixed up. A good way to ensure good organization within a tool cart is to draw a diagonal stripe, so the tools have their colour code in a different position and it's harder to leave them in the wrong place.

For the materials, small labelled plastic boxes (as shown in Harri's pictures) are a good option. All material must be separated by their type, size and particular specifications; screws for example:

- Type of screw – different box (hex, socket, flat)
- Size of screw – different box (5mm, 15mm, 45mm)
- Metric of screw – different box (M3, M5, M8)

As for the machines, that it's more complicated. We cannot place them anywhere and if it's not properly done just move them somewhere else.

TRACKING

A good way to keep traceability of the materials and tools, so no material gets wasted and tools borrowed get forgotten, it's to have a program in which you have to register:

- Who's using each tool cart each day (assigning one tool cart per person per day?) That person should be responsible for the tools he's using and keep a record of the tools that have been borrowed and by whom.
- Which material it's using and the quantity of it (having a drop-down list with all the material and a box to write the number?) That way we will be able to know if we need to get stock, of which material and which are those we use the most.

At least if we do not have the program, we could have a list that could be checked and updated every week to know all the stock and where is everything . . .

IDEAS

- For tools:
 - ✓ Each tool cart marked with a different colour
 - ✓ All tools marked with tool cart colour
 - ✓ Tool carts locked and unlocked with CERN card
 - ✓ One tool cart assigned per person per day
 - ✓ Possibility of: having sensors for each tool in the tool cart – tool cart won't locked unless all tools are in place or, after locked warns/sends a message to the responsible person – have a “call button” that makes all missed tools flash and/or make some noise – have all tools located with a wireless tracking system. . .

- For work stations:
 - ✓ Each work station have a tool cart and a white board
 - ✓ Have samples of screws and nuts labelled attached to one side so the students can try them and know what they need before asking for material
 - ✓ Possibility of: having a screen that shows you other group's projects evolution and tools used to do so – having access to the system to see schedule and availability of bigger tools and machine tools. . .

- For bigger tools (more expensive) and machine tools:
 - ✓ Have a schedule (outlook / excel) to set approximate dates, times and duration of use
 - ✓ Can be locked and unlocked only with CERN card and signature password. . .

- For materials, possibility of:
 - ✓ Material vending machines that upload stock information and automatically prompts a message to the responsible person or sends a material request form
 - ✓ Students can take what they need and: type it in the computer / measure the quantity by weight
 - ✓ Students leave what they need in a conveyor belt, an X-ray system tells the computer which material and the quantity and they take it afterwards
 - ✓ Have a robotic automated system that brings the materials requested to the work station. . .

- For open areas of IdeaLAB, possibility of:
 - ✓ “Have a wall of fame for successful projects”!
 - ✓ “Have a wall of shame for inappropriate behaviour students”?
 - ✓ Have a screen with workstation information, tools schedule, tool carts assignment, people working at the moment, group's projects evolution. . .

5S methodology



Application to daily work activities

Seiri	Sort	S'organiser	Sorting material	Go through all tools, materials and the plant and work area. Keep only essential items and store or discard what is not required, prioritizing things per requirements and keeping them in easily accessible places.
Seiton	Straighten	Situer	Setting in order	Arrange the work, workers, equipment, parts, and instructions in such a way that the work flows free of waste through the value added tasks with a division of labour necessary.
Seiso	Sweep	Nettoyer	Systematic cleaning	Clean the workspace and all equipment, and keep it clean, tidy and organized. At the end of each shift, clean the work area and be sure everything is restored to its place.
Seiketsu	Standardise	Standardiser	Standardising	Ensure uniform procedures and setups throughout the operation to promote interchangeability.
Shitsuke	Sustain	Être rigoureux	Sustaining	Ensure disciplined adherence to rules and procedures to prevent backsliding.
Safety	Security	Satisfaction	These are three other nontraditional phases that are sometimes included. Safety for example is inherent in the 5S methodology and is not a step in itself. Therefore the additions of the phases are simply to clarify the benefits of 5S and not a different or more inclusive methodology.	