

What is 5s?

5S is a lean technique born in Japan that proposes that efficiency starts with organization. It forms a solid foundation upon which many companies base their drive for continuous improvement.

5S stands for sort, straighten, shine, standardize and sustain (in Japanese, Seiri, Seiton, Seiso, Seiketsu, Shisuke). These are the 5 steps:

Sort: Sort out & separate that which is needed & not needed in the area.

STRAIGHTEN: Arrange items that are needed so they are ready & easy to use. Clearly identify locations for all items so that anyone can find them & return them once the task is completed.

SHINE: Clean the workplace & equipment on a regular basis in order to maintain standards & identify defects.

STANDARDISE: Revisit the first three of the 5S on a frequent basis and confirm the condition of the Gemba using standard procedures.

SUSTAIN: Keep to the rules to maintain the standard & continue to improve every day.

A typical 5S implementation results in significant reductions in the space needed for existing operations. It also contributes to reducing waste, optimizing productivity and improving safety. Visual cues are often used, organizing tools and materials into labeled and color-coded storage locations, as well creating "kits" that contain just what is needed to perform a task. This helps to achieve more consistent operational results. It typically is the first lean method that organizations implement. It is equally applicable & successful in all sectors helping to achieve high impact results.



5s demonstrator gameplay

The 5S demonstrator is a serious game displaying the advantages of using the 5S methodology in a work environment. The gameplay is based on applying the 5S principles to a proposed scenario. Here we will see each one of them as in the game:

Sort: At this stage, the player has to eliminate obstacles on the scenario, remove everything considered as waste and place unnecessary items that cannot immediately be disposed of or could be worth keeping for the future.

STRAIGHTEN: Here the player has to organize necessary items to make them easy to find and grab. Every component should be placed according to its use, with frequently used components being closer to the workplace.

SHINE: At this stage, the game highlights the importance of cleanliness, or how dirtiness can complicate things. For example, a dirty container will demand more time for the player to recognize its content.

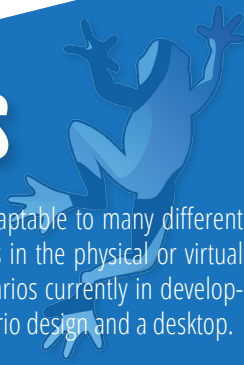
STANDARDIZE: Everything has to be easy to recognize from a distance and set in its right place.

SUSTAIN: Apply the same methods in different circumstances (in the game, scenarios).

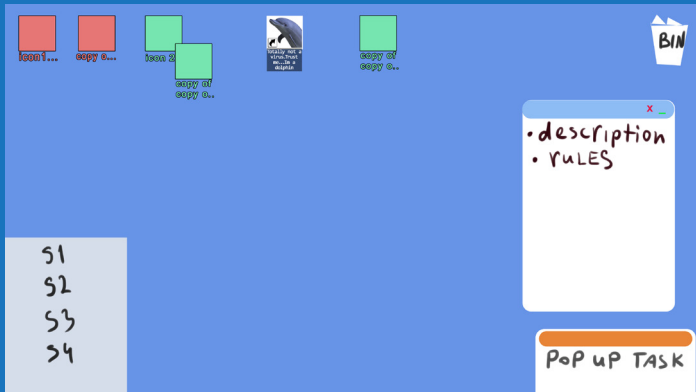
In the game, the player needs to evolve inside a certain space to find some specific items and act on them in order to fulfill a certain task. In order to improve the work environment and hence the efficiency, the player will have the options to invest some time into upgrading it according to one of 5S technique, by clicking on a button. The last S, sustain, was not included in the game as a possible improvement as it is a technique that is applied by using the other 5S techniques throughout all the different scenarios. The game is divided in turns, which correspond to working days, in which the player has to accomplish a certain amount of tasks. The first day, no 5S improvement is available and the player has to evolve in a very cluttered working environment. Afterward, 5S improvements are made available to the player one by one.

Two concepts are important for the player to master in order to perform properly in the game: finding the correct object and dealing with it quickly. In the default work environment, those tasks are made difficult by the sub-optimal way all the objects are set and how difficult it is to find them. Using 5S techniques allows the player to perform much better and accomplish the tasks more efficiently.

Game Scenarios



The game engine and core mechanisms are adaptable to many different scenarios in which 5S can be used, whether it's in the physical or virtual world. For this game there are 4 different scenarios currently in development: a pharmacy, a scrapyard, a learning scenario design and a desktop.



Desktop arranging

The scenario depicts an OS desktop for a company administrative staff, which at the beginning of the game is cluttered with icons over a distracting background. The user has to find a certain icon corresponding to an application or file. Using the 5S to improve the desktop order will help the player to find items faster.



Learning scenario design

This scenario is about optimizing the creation of a learning scenario from a teacher point of view, in which the player has to organize several types of pedagogical activities according to their purpose. Applying the 5S methodology helps the player to sort and sequence the objects to improve the learning design scenario.



Pharmacy

In this scenario, the player is a new employee working for a pharmacy warehouse. The player must supply each customer with the correct items before they leave. The player has to manage the warehouse and deliver the objects to the clients in the counter. The objects to be retrieved are drug boxes, which have a name, a concentration and an expiration date. The player has to use the 5S improvements to find and retrieve items faster.



Scrapyard

In this scenario, old or broken cars are taken to the scrapping where the different pieces have to be separated and stored. The scrapping also receives requests of pieces from clients. The player is the scrapping operator, who manages the objects in the scrapping area: cars, motors, lights, seats, etc. The player has to apply the 5S to remove unnecessary objects, like batteries, to store different parts in separated areas, sorting them by manufacturer and year, clean the warehouse, etc.

Project dissemination

The work done in this project has been presented in the media through a press release and also in several conferences and presentations across Europe (L.CAT, UVigo, EduLearn, IATED). The word is also spread through an information leaflet and this biannual newsletter. You can also find us in social media at the SCIENTIX portal, the LEAP Facebook page and the UTH Organizational portal. For more information, please visit the LEAP website at <http://leaproject.eu>.



Partners

