III…Methodologies

III-1…5S <Five S> Principles and the activities

III-1-1…Definitions

5S is the principles of work environment improvement derived from the Japanese words seiri, seiton, seiso, seiketsu, and shitsuke. In English the five Ss are respectively described **Sort, Set Shine, Standardize,** and **Sustain**. This principles focus on effective work place organization starting from physical environment and gradually to functional aspects, which are influential to 5S simplifies your work environment, reduces waste and non-value activity while improving quality efficiency and safety. 5S is Key activities of the TQM and describe basic philosophy of KAIZEN.

5S Principles are your reliable instruments to make a break-through in improving your work environment and staff attending various types of jobs in your Project or Institution. This is not only a concept but also a set of actions which have to be conducted systematically with the full participation of staff serving in the Project or Institution. 5S activities are practiced in a real participatory movement to improve the quality of both the work environment and service contents delivered to your clients.

5S is literally 5 abbreviations of Japanese words with 5 initials of S. These are 1 - Seiri, 2 - Seiton, 3 - Seiso, 4 - Seiketsu and 5 - Shitsuke. Convenient translation to English similarly provides 5 words with initials of S.

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1 - Sort: Remove unused items from your venue of work; and reduce clutter
(Removal / organization)

2 - Set: Organize everything needed in proper order for easy operation
(Orderliness)

3 - Shine: Maintain high standard of cleanness
(Cleanness)

4 - Standardize: Set up the above three Ss as norms in every section of your place
(Standardize)

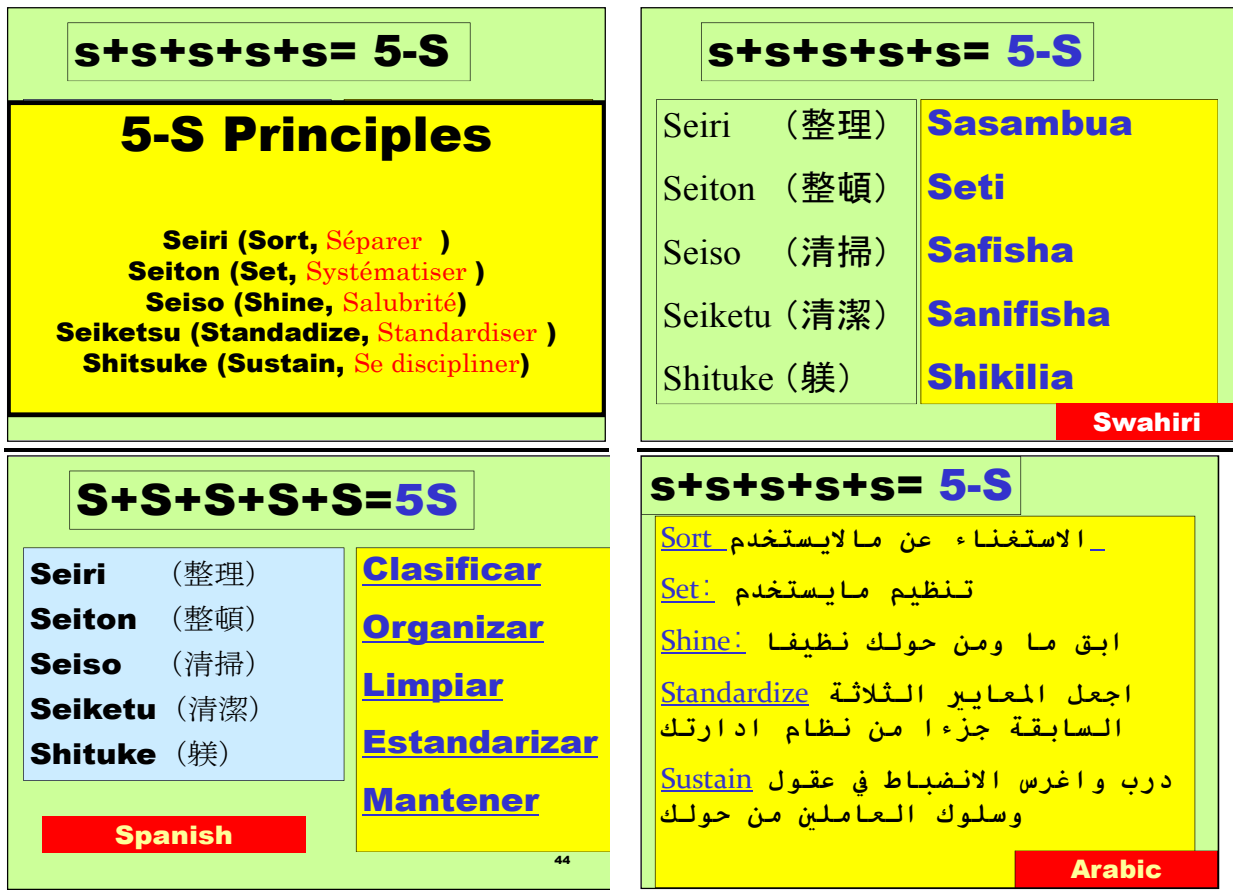5 - Sustain: Train and maintain discipline of the personnel engaged.
(Self-Discipline)

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s+s+s+s+s= 5-S

5-S Principles

Seiri (Sort, Séparer **)**
Seiton (Set, Systématiser **)**
Seiso (Shine, Salubrité**)**
Seiketsu (Standadize, Standardiser **)**
Shitsuke (Sustain, Se discipliner**)**

s+s+s+s+s= 5-S

Seiri	（整理）	**Sasambua**
Seiton	（整頓）	**Seti**
Seiso	（清掃）	**Safisha**
Seiketu	（清潔）	**Sanifisha**
Shituke	（躾）	**Shikilia**

Swahiri

S+S+S+S+S=5S

Seiri	（整理）	**Clasificar**
Seiton	（整頓）	**Organizar**
Seiso	（清掃）	**Limpiar**
Seiketu	（清潔）	**Estandarizar**
Shituke	（躾）	**Mantener**

Spanish

44

s+s+s+s+s= 5-S

الاستغناء عن مالايستخدم Sort_

Set: تنظيم مايستخدم

Shine: ابق ما ومن حولك نظيفا

Standardize اجعل المعايير الثلاثة
السابقة جزءا من نظام ادارتك

Sustain درب واغرس الانضباط في عقول
وسلوك العاملين من حولك

Arabic

Figure 3-1: 5S Principle

Five steps of Sort-Set-Shine-Standardize-Sustain are a sequence of activities to improve your work environment to as convenient and comfortable a level as possible and thereby to improve your service contents with regard to preparedness, standardization, timeliness and communication. Health personnel are technology oriented, since its delivery is based on application of specific techniques. 5S activities are the tools to prepare the best obtainable stage for them to make maximal use of their skill and knowledge.

Two different grades are identified in the standard of 5S activities in the service sector particularly in the health service. 5S has been used not only to make <White belt> physical work environment better, but also for the <Black belt> software matters such as:

      --Job sequence and contents,
      --Time management,
      --Communication system such as meetings and briefings

The entry point of the <Black belt> 5S will be the active utilization of 5S tools, such as;

a…Orderly arrangement of items based on the objective-oriented way of thinking, for instance, using alphabetical order, chronological order, and numerical order
Pharmaceuticals at emergency room are good examples. Those items should be arranged at specific places with a system, which is recognized by all staffs, who have to handle on demands.

b…X-axis and Y-axis arrangement
Posters and notices on the notice board, for instance, should be arranged based on this concept avoiding messy situation and unintended oblique angles in hanging up.

c…Check lists
Five S activities, particularly of Standardization (Seiketsu) level, should always be monitored by the 5S practitioners at each venue. For this purpose simple check lists can be developed and put them into their practice. Periodical guidance by Quality Improvement Team (QIT) can be done to the Work Improvement Team (WIT) can be supportively conducted based on the check lists.

III-1-2…5S activities and actual sequence of the works

III-1-2-1…Sort (*Seiri* in Japanese language, S1)
Sort: Remove unused items from your venue of work; and reduce clutter
            (Removal / organization)

Figure 3-2: Discarding unnecessary items in "Sort" of 5S

Important 1ˢᵗ step of 5S
Without "Sorting", you cannot have the next step of putting appropriate order in your work places. There are several steps for realizing venues without unnecessary items and clutters. For commencing this important first step of 5S, it is mandatory for the hospital to install WIT at each work unit or department. The WIT is a team organized by each work front-line unit for conducting 5S in the beginning and later KAIZEN, the front-line based participatory problem solving for betterment of work process and the service contents. Each WIT is an actual body to plan, implement, and monitor the process of 5S.

Unwanted Items' Store
Quality Improvement Team (QIT), the superior organization established under the hospital director for leading 5S activities, is to announce the commencement of "Sort" step with an extremely important activity. This is opening up "Unwanted Items Store" or "Condemning Store". This store is used to collect unwanted items from all work units or departments after commencing "Sort" step of 5S. Each unit actively removes unwanted, unnecessary, unworkable items from their venues and brings them to the store. Since those items are all government property, the hospital cannot discard them immediately. Due to this nature, the items have to be kept for a while until the permission is granted by the authority. At the store, the items should be further classified into several subgroups. Functioning, broken but reparable, irreparable, and clatter are the sub-categories.

Red Tag and the tagging
Unwanted items should be identified during the routine work. If those are found, red color tags or labels should be given to the items with proper explanation on the problems. This procedure will be the first step of the colour coding system of the hospital. The system in this stage is standardized yet, maybe. It is a good opportunity for QIT to look into the future colour coding system applicable variety of purposes in this stage.

From indoor to outdoor
The "Sort" step of 5S maybe started from the various rooms and spaces under the roof within the hospital. The activity is then extended to outer space of the building structure. The indoor spaces both of health service front-lines and the backyards are the primary targets of this activity. Among indoor spaces in the hospital, there are no place, where is excluded from the activity. The priority can be set due to the seriousness of disorganization, visibility as a pilot successful place and urgent demands in functional betterment. In the meantime, works are advanced to reach a point to modify physical structure of the room, wall, door etc. It incurs some costs, which maybe elaborated by the top management of the hospital to find out the fund for the remodeling. In case, gardening and re-arrangement of the trees and fences appears as the targets of "Sort". Step-by-step approach should be taken to do the job with consideration of the expense.

Decision-making and leadership
Decision-making is important as well as the leadership. The division head and /or WIT leader should make vigorously make a decision in removing big items and large amount of clutters with obtaining consent from the staffs. Each staff is, then, encouraged to check designated spaces such as desk and cupboard for removing unwanted items gradually without enforcement.

First step to improve waste management system of the hospital
Solid waste management system for the entire hospital premises should be, in this stage, discussed among QIT members and the hospital top management group. It is not, however, necessary to make a large scale activity with radical change of the existing practice. Promotion of segregation of the solid waste at each work unit can be proposed and put into practice without using large scale fund but with utilizing the existing resources.

Initiation of "Reduce, Reuse, Recycle Concept" with "Sort" step of 5S
Waste management can educate staffs for mind-set change. Reducing clutter and piled up unnecessary documents and paper make the staffs happy with additional spaces and cleaner environment. The moment, when WIT leader and/or division head detect a small change in physical environment of the workplace, is the time for introducing the new waste management trial.

a…Simple separation of solid wastes into
(1) Medical wastes including infected items / materials and
(2) Normal wastes without possibility of infection

b…Further separation of the category (2) into
(2-1) Items, which can be provided to the safe recycling process, for instance, inner wrapping paper of disposable surgical gloves, glass bottles of i.v. antibiotics and so force,
(2-2) Items, which can be collected for selling to outside recycling companies, for instance, PET bottles and other plastic materials.

Figure 3-3: 5S activities

The above-mentioned challenge is an example of the activities, which connect the "Sort" process to the later "Standardize" process.   In addition to that, "Sort" will be a useful initiation opportunity in refinement of the existing waste disposal management system.

"Big cleaning day" should be timely set for "Sort"
A specific half day in a month may be used for hospital-wise day for "Sort" activity. QIT have to announce the time/date of this special day, in advance, to all WITs and departments. If the Saturday is an official working day, one half day session of "Sort" can be used for removing unnecessary things from all corners of the hospital. "Unwanted Items Store" will be the busiest area in the hospital to accept items transported from various divisions. Discarding performance, for instance, burning unnecessary document at final garbage collection site in the hospital premises can be demonstrated to all hospital staffs. At the same time, it will be a good chance to make the collection site can be cleaned up and re-organized for avoiding risks related to infected disposals and also birds, animals and insects.

III-1-2-2 …Set (*Seiton* in Japanese language, S2)
Set: Organize everything needed in proper order for easy operation
          (Orderliness)

"Set" based on perfection of "Sort"
"Set" is the second step of 5S and is namely a process to put orderliness in every workplace for better work efficiency and visualization for all workforces, which have to collaborate as a team for achieving a specific target. The process has to be commenced under the perfection in removing clutter and other unnecessary items for the work from their workplace.
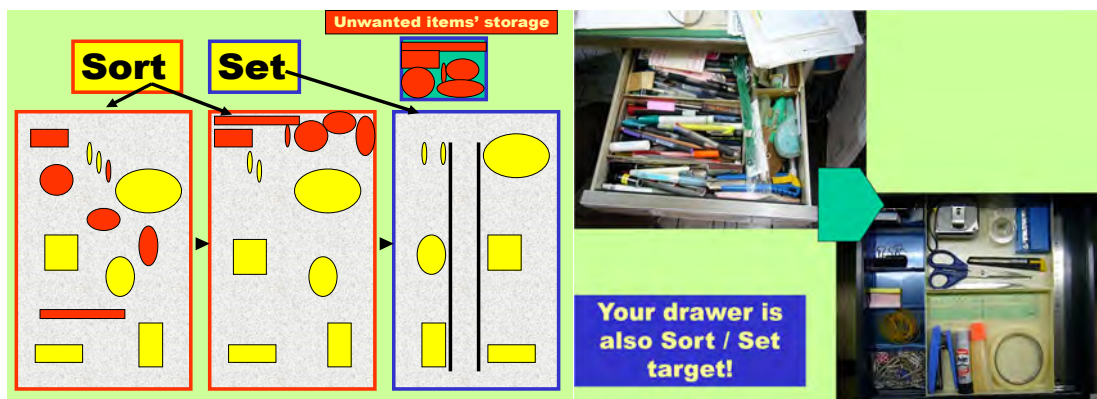

Figure 3-4: "Sort"

Set the target place of "Set"

It is recommendable to select the prioritized portions and/or functions related to the important services that should be delivered by the team for the internal and external customers. Taking an example of clinical venues in the hospital, "Emergency Cupboards" containing drug and medical devices will be the impactful targets of "Set". If those places are "set" with perfection in orderliness and the orderliness is perfectly recognized by the team members, the work process itself can be improved instantly just with betterment of time factor. In case that emergent situation is happened, whatever the reason, the time factor for retrieving necessary items and drugs is a key issue, in case, for life-saving.

Figure 3-5: "Set" (1)

Step by step in "Set"

Recognizing the improvement and workload reduction by "Set" at important portions within respective workplace, WIT and the members are highly recommended to guide themselves to expand the target of "Set" to all areas of the work venue. It should be done with checking the existing work processes, reviewing the experienced constraints. Five S tools, which were already mentioned in the former column, should be actively utilized for achieving better work environment. It is vital for the staffs to begin "Set" activities making maximal use of the existing system and resources without altering the existing set up. It is not necessary to achieve the drastic change. Neatness and convenience are the most expecting situation. Recycled boxes and hand-made containers are the symbol of these "Set" activities. If the basic "Set" condition is achieved, small ideas to maintain the "Set" condition and prevent so-called "Set-Back" should be considered among WIT members. QIT has an active role to guide WITs to encourage the front-line staffs to maintain "Set" works within routine works. The routine works and the demands from customers are the mother of improvement.

Figure 3-6: "Set" (2)

Work efficiency is positively affected by "Set"

Priority areas for commencing "Set" are the places with functional importance, which can demonstrate changes within a short period. Emergency cupboards accommodating drugs, medical materials and devices will be a good example of the prioritized and useful location, which has impact both to work efficiency and work process as the foundation of work environment. Recognition on the "change" and removing unnecessary workload due to disorganization should be the encouraging factor to gear up the team for continuing the step of "Set" throughout the work venue. Locations on furniture, machines, instruments, devices, documents, should be arranged likewise seeking perfection in the orderliness. Those are all influential hardware to the work process and the time factor.
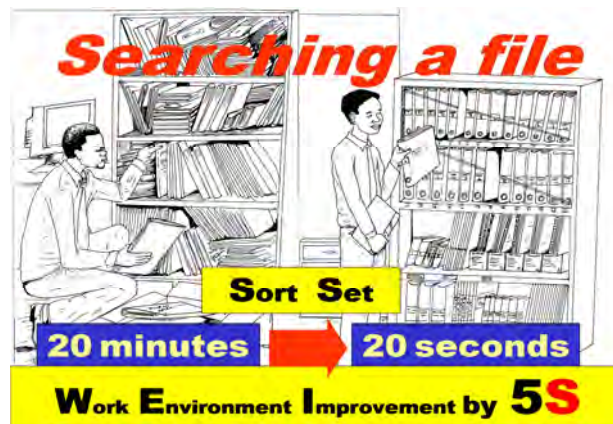

Figure 3-7: Sort and Set

"Set" is an onset for the centralization of supply system in the hospital

Central Sterilization and Supply Department (CSSD) and Linen Department incl. laundry service are the two vital areas as the target of "Set". If the hospital already installed those centralized system as a mode of material supply to various work units of the hospital, the "Set" processes can make further development in those functions. In the other hand, still, there is a tendency that those services are rather neglected as a fringe backyard jobs allocated both to nursing staffs and non-professional staffs. In addition, the jobs are often conducted as a scattered manner at each place requiring those services. This situation negatively affects the work efficiency. If it is so, the hospital managers and QIT will be able to encourage WITs to assess the existing problems in the supply and advice them to apply "Set" activities for the betterment of the existing work environment without major change of the work system. After achieving "Sort" and "Set", you will have a high time to discuss the centralization of those practices step by step.

Figure 3-8: "Set", with systematic labeling

Tagging and labeling starts from setting up board for each room

Name tag, board and symbols development and installation are namely symbolic activities of "Set" process. Each work venue has specific objective for the use. Identify names of the room and install a simple board for the benefits of staffs and visitors. In the beginning of this activity, it is recommendable to avoid making permanent boards before having certain test period by means of the boards with printed paper. In this test run time, the hospital managers can re-consider the room usage and the names for efficient and effective use of the spaces. As touched upon in the description on "Sort", unwanted items store is a key area for 5S activity. In this stage of "Set", there is a possibility to "set" the space utilization and manage to have an additional room, which you can provide for the unwanted items store, in case.

"Set" kick off improvement of inventory system

Inventory system of various equipment, instruments and devices can be reviewed during the "Set" period. Tagging and labeling should be nicely done with consideration on standardization. In conjunction with this activity, you can review and improve the existing inventory system. Specific locations for the items, arranging workable instrument sets, storage of those sets, and colour coding system for easy handling are all useful topics, which can be handled during "Set" activity.

Figure 3-9: Examples of Sort and Set

Colour code system

Simple and demonstrable colour coding should be made and applied to various items, which are essential for respective job and service in order to achieve work efficiency and mistake proofing. The attempts in "Set" activity on this will be a foundation of future standardization and system development for the entire hospital.

Tools useful to enhance "Set" activity

XY axes, alphabetical and/or numerical order and slot allocation based on use frequency can be aggressively applied to various places, which are visible and functionally important. By using those ideas, neat and function-oriented arrangement of necessary items for every sort of hospital jobs can be achieved with future standardization in mind. Neat and well-arranged notice boards in the hospital, for instance, are good indicators of the process advancement of "Set" process.

"Set" activity as the precondition on patient triage at OPD

Guidance maps and direction boards can be installed relevantly throughout the hospital premises for the convenience both of visitors and staffs. After testing temporary maps and direction boards in "Set" stage, the hospital authority can develop a standardized style of those items. In addition to them, it is also possible to regard the patients and visitors coming to hospitals as the target of "Set". Various zoning and classification methods can be used to avoid confusion, congestion and conflict. Waiting lounge at outpatient department (OPD) provides a good example on this topic. If the proper triage is made in the lounge by capable nursing officers, it is possible to classify the patients into two to three groups, such as patients with urgent attendance, on the first visit, and the patients seeking

re-examination. The waiting list at OPD can be adjusted based on the mentioned patient administration practice. This comes to be realistic only after practicing "Set" activities of the waiting lounge and the related amenities.

Effective utilization of existing materials and goods
Case of CHR Banfora, Burkina Faso

CHR Banfora has tackled 5S practices with utilizing existence materials and goods effectively same as Sri Lanka does. For instance, they purchased plastic baskets which are used for storing patient's belongings at bedsides. The baskets are much cheaper than any other medical bedside furniture, and then, it's easy to get at local market in Bandore. Also, patients in hospital keep dishes and kitchen pan in the basket.

Likewise, used carton boxes are redesigned for storing documents and patient's files. The carton boxes are reinforced with transparent tape and describe the purpose. Instead of spending extra money, using carton boxes helps to save budget and to set the documents appropriately.

III-1-2-3…Shine (*Seisou* in Japanese language, S3)

Shine: Maintain high standard of cleanness

        (Cleanness)

Participatory activity

"Shine" is the participatory activities for maintaining cleanliness at every work venue regardless the category and location in the hospital. All personnel in the hospital are allocated specific territory as

his/her work venue. Regardless the category, rank and gender of the human resources, everyone is expected to join in the "Shine" activity and control the work environment on cleanliness in conjunction with the ongoing "Sort" and "Set". Territories requiring professional attendance, in particular, cannot be cleaned up only by the efforts of cleaners. Also desk-top of executives' office cannot be touched casually by other people. The executive should take care of his or her territory by his / her own efforts. Only small efforts are needed. The efforts should, however, be sustained in a continuous manner. Functionally improving and beautifying your own work venue will be a reflection of your mind-set. The mind-set as a professional person in the society should be further strengthened based on your spiritual aspect of your capability.

Periodical implementation of "Shine"
Periodical implementation of "Shine" is important. Daily, weekly, monthly and quarterly "Shine" time can be set by QIT for promoting cleaner hospital based upon the ongoing "Sort" and "Set". If the periodical activity is stabilized, definitely "Sort" and "Set" are also further activated. Perfection of "Sort", "Set" and "Shine" will be gradually achieved and the teams, so to say, WITs conducting those activities come to be more energetic and capable. Daily 10 minutes morning "Shine" before starting routine work will help a lot to motivate the staffs to be sensitive on 5S activities.
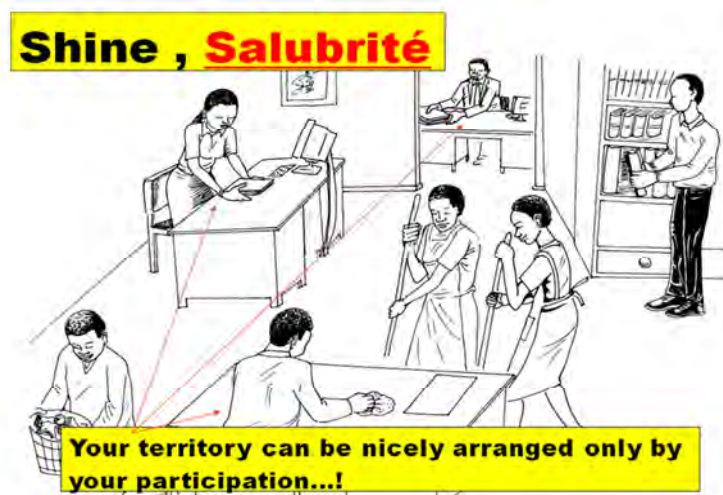

Figure 3-10: "Shine"

Cleaning staff and their work environment
Cleaning tools are important particularly for the group of cleaners. This category of the staffs is, sometimes, treated in wrong way by other groups of hospital staffs due to the nature of the job, which is often misunderstood to be unimportant and disrespectful job. Investment is not relevantly made by the hospital to this area of work. Even in case of outsourcing, the work environment and amenity for the cleaning staffs are not properly arranged. This situation should be overcome by adopting 5S principles. Or conducting "Shine" activity, the cleaning staffs are the core human resources. They should be given more attention by other staffs of the hospital. Interventions, such as cleaning tool renewal, tool storage space arrangement and provision of small office and better uniform for cleaning staffs will be encouraging factors for perfection seeking in cleanliness.

"Shine" and equipment maintenance
Medical equipment should be well protected from dust and dirt. During the "Shine" activity, WITs and QIT will discuss how they can protect the equipment from dysfunction caused by unfavorable work environment and system failure of preventive and users' maintenance. Firstly the equipment should physically be protected from dust and dirt for instance by periodical and timely cleaning and appropriate cover and/or wrapping during resting time of the machines. If the "Shine" is well and systematically done by the full participation of the staffs, WIT members will be able to create feasible ideas for sustaining sound operation of the equipment. Obviously, cleanliness of the work venue is the

most influential enabling factor to longevity of life of medical equipment.

Check list and supervision
Cleaning check list should be systematically used in every work venue. This is not a bid burden to respective work team member to give mark just after conducting routine cleaning work before and after the work. Once the check list is applied, relevant supervision should be conducted maybe by QIT. For sustaining the check list utilization, the format should not be too complicated. Also, the guidance should be done by the middle class managers under no blame policy but under encouraging atmosphere.

Hospital waste management and "Shine" activity
Cleanliness issue can be well discussed during the activities together with "Sort" process. Hospital disposal handling both of infectious and non-infectious wastes is an important topic for the environmental and functional betterment of the entire hospital. Prevention of Nosocominal infection is firstly achieved on the basis of reliable and safe waste management practice. "Shine" should be applied perfectly to the waste separation, collection, storage, transport and final treatment system. The emphasis particularly goes to the damping site of the waste within the hospital premises. With or without modern incinerator, many hospitals in developing country setting have to make final treatment of the infectious solid wastes and biological wastes within the hospital premises. It is not easy to achieve perfection in waste management system due to uncontrollable external conditions and limitations of the civil service. "Shine" activity is, however, extremely vital for the betterment of the waste management for every hospital. Cleaner damping site create better hospital safety.

III-1-2-4…Standardize (*Seiketsu* in Japanese language, S4)

Standardize: Set up the above three Ss as norms in every section of your place

        (Standardize)

Making 3S a part of routine work
"Standardize" is an activity to develop standards for the three S activities. In addition to that, the ultimate goal of this step of 5S activities is to make "Sort", "Set", and "Shine" important parts of all personnel's routine work at all work units in the hospital. For that purpose, challenges should be done by the hospital authority and QIT to standardize the key procedures of each step of S1-S3 based on the experiences and the assessment of pilot work units particularly of successful WITs. Dissemination of the standardized procedures, thereon, should be done by visualization and sensitization activities throughout the hospital.

Figure 3-11: Visualization of the principles

Visualization of slogans

Information, Education, Communication (IEC) tools for dissemination purpose should be formulated after compiling simple and workable guidance documents. Eye-catching ear-stimulating slogans and other key messages on 5S should be included in posters, stickers, and other public relation materials. The situation, where the terms and phrases related to 5S and quality of service are visible in every corner of the hospital, will be created and come to be influential to hospital personnel and visitors as well. The people in the hospital community including patients and visitors are gradually guided to respect the work environment, which was positively changed by the step by step practice of "Sort", "Set" and "Shine". The hospital, particularly visible common spaces are occupied by the atmosphere, where no one can disturb the improved environment.

"Creative way of Trash box"
Colour coding: Case of HOMEL in Benin.

It is a general 5S practice to identify color coding trash boxes based on the control level. According to the national health rules at Benin, HOMEL sets up color coded trash boxes at each section, for instance, black is general garbage, yellow is medical wastage, and red is organs and blood contaminated items. Moreover, at HOMEL, black trash boxes are indicated 5S principles not only Japanese version but also in French. Through this attractive trash box, 5S practice has been spread to hospital staff, patients, patient families and hospital visitors effectively. And this 5S activity tries to be delivered to out of hospital as well.

A symbolic "Standardization" is colour coding system

Colour code system is a good example of standardization. Various attempts of color code application, which was done during "Set" activities at different work units, are compared and discussed by QIT and representative of WIT leaders for making a standard. Once the standard is formulated, it should be disseminated by IEC materials and through various meetings. Short but effective training opportunities should also be created by QIT particularly for WIT leaders for applying the newly established standard throughout the hospital. The color selection will be an interesting thing maybe for QIT members and WIT leaders, since each color has specific image. In CSSD, mentioned in the former column, blue color is normally used on sterile items and materials after sterilization, whereas red is allocated to unsterile items. Yellow will be suitable as a symbol of "infection". Infection Control Unit may wish to use this colour predominantly for demonstrating important procedures and drawing attention from the staffs and patients.

Figure 3-12: Colour coding

"Standardize" contribute to MIS through M/E

Monitoring and evaluation (M/E) is another issue that should be highlighted in this "Standardize" activity of 5S. Also regular supervisory visit is essential activity to ensure the development of 5S toward perfection in conjunction with the mentioned M/E. for conducting routine M/E, the major role should be taken by QIT both on formal data collection and on informal site visit for encouragement. QIT should closely work together with WIT leaders for simplify and standardize various check lists, such as the lists for stock management, environment management and patient administration. Existing management information system (MIS) should then be well looked into for correlating the change or evolution through 5S to quality uplifting process of MIS information particularly to resource and financial management. Improvement of check lists here in "Standardize" process of 5S should contribute not only to the work processes but to the data collection system managed by administration office of the hospital.

Encouragement should be prioritized in supervision activity

Informal site visit for supervising ongoing S1, S2 and S3 processes is an essential mode of standardization. The supervision should not a process only to reveal shortcomings, mistakes, incorrect performance of WIT. Supervision should be an encouraging process of work environment improvement by 5S. In that meaning, supervisors, mostly QIT members plus top management, should be "good point finders". Based on the informal friendly communication, the supervisors firstly have to try to find the positive indications and praise the person in charge in front of WIT and other spectators. The shortcomings can be indicated in a constructive manner after discussing the positive indications with WIT members on site.

III-1-2-5 …Sustain (*Shitsuke* in Japanese language, S5)

Sustain: Train and maintain discipline of the personnel engaged.
> *(Self-Discipline)*

Self-discipline improvement with positive attitude

Everything should be sustained in development. Hospital management is not an exception. "Sustain" here imply the activities for make further improvement of self-discipline of the personnel together with re-confirmation of mind-set change from cynical attitude to positive attitude, by which the hospital continue challenge to realize quality of services under the policy of maximal use of existing resources. Definitely conducting 5S is not a final goal of hospital services. Principles of 5S is an starting point of the long process for achieving goal of hospital services, represented by high employees' satisfaction, high customers' satisfaction, success rate of diagnostic / treatment services in diversified medical services. To be on the right truck, 5S activities should never have a set-back and withdrawal. Deterioration of cleanliness should never happen at the hospitals, where good leaders introduced this unique management tool originated in Japan.

Introductory training should be started with nursing officers and midwives

Introductory training is crucially important both for commencing and disseminating 5S Principles. It should be a sort of leadership training and a good exposure to a new concept of work. Maybe 1 hour lecture session can be organized for respective category of hospital staffs. Since hospitals are the place, where are served by various groups of staffs. Interests and knowledge level on management are quite different grout to group. It is useful to start the session with highly populated and influential human resource. This particular group is nursing officers and midwives. They are well organized under the matron and also educated both in technical and managerial subjects in their undergraduate training. They are the people, who are close to patients and visitors both in terms of communication and technical terms of reference. Also the duration of work in a day for them is rather long. Based on those reasons, they are already in good preparatory status to receive an idea to function as a breakthrough of managerial constraints at hospitals. The lecturer, maybe highly motivated hospital director or QIT chairperson should use the most suitable language, phrases and workings to touch their spirits to serve the people.
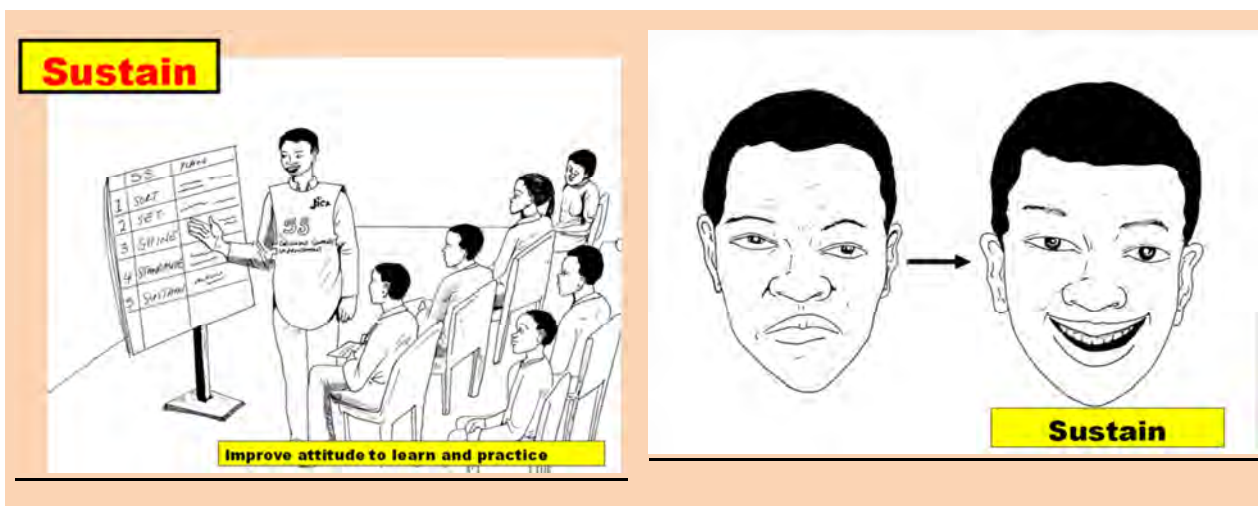

Figure 3-13: Sustain

Doctors as well but not in the beginning

Doctors, both medical and dental, except for the persons related to hospital management will be the last group to have this sort of session. After all other categories of staffs are exposed and started to work on 5S, maybe they will recognize a slight change of their work environment. The point of time is the high time to ask for them to join in the movement to improve the work environment. Doctors

are normally just wish to concentrate their technical areas particularly of diagnosis and treatment. They seldom pay attention how their professional work is supported systematically by the hospital system including backyard services and logistics. When they noticed the positive change in their well supported work environment, doctors should be invited to join in 5S activities as leaders. They definitely comes to be good leaders and provide various ideas guiding the respective work venue to betterment of safety and quality of services

Proper training done in regular WIT meeting
Proper training programme should be in place for creating universal positive attitude toward work environment improvement. The main focus of this training during 5S activities should be the front-line personnel particularly of WIT members, regardless the category and rank of the staffs. Periodical short time meeting for example bi-weekly briefing of each WIT on progress of 5S activities should be a venue of training. The meeting should be done within working hour for avoiding feeling of enforcement and additional task. The duration of the meeting should not be long. After quick review of the ongoing 5S activities, constraints of the work process, timeliness and workplace safety should be informally talked for exchanging experiences and ideas. Democratic atmosphere should be created to provoke the people to make comments and suggestion freely. This sort of 30-45 minutes regular meeting is a venue, where WIT leaders and QIT members can grasp the responsiveness of the staffs to the ongoing 5S activities. Also QIT can expect to receive good suggestions from the work front-lines.

Short but practical learning process in WIT meeting
"One-topic training" can be added in the above-mentioned regular meeting. Out of various topics related to quality issues, one message short presentation can be done by an invited QIT member to WIT meeting. The topic should be practical not too much theory and conceptual explanation. It will be a good idea to share the information on, for instance, a newly introduced parking system of stretchers and wheel chairs, which is intended to improve the work efficiency of intra-hospital transport of patients. There are various topics that can be informed and taught through this small classroom at every WIT meeting.

Stimulation to WITs
Monthly or bi-monthly short lecture can be planned as the part of "Sustain" activity for category-based large group of personnel. Top management and/or QIT chairperson can organize such a lecture session maybe having outside lecturer for exposing the hospital personnel to the different angle of work environment improvement and the problem-solving process, which will be systematically handled in KAIZEN process in the later stage. People involved in a movement of such king tend to feel boring, when they are familiar to the processes after getting them into the routine work. Stimulation is often necessary to wake them up for tackling higher targets.

Positive competition is a stimulant too
Positive competition is useful mode of stimulation to all WITs, both for active and inactive work groups. I t is not rare to have situation, where some are extremely active, exceeding the expectation of QIT but majority of WITs remains still in low gear. Competition of 5S outcomes at 6 months after the commencement, may work as a stimulant to vitalize the entire activities. It is obvious that a few selected model work units are in progress. Other units, however, take a chance to catch up to those model units and, in case, some units shows creativity and efforts to overtake the model units. The competition can be organized by QIT together with appropriate assessment score format of 5S. QIT appoint neutral judges from inside and outside of the hospital. It is then important to have a ceremony in front of all hospital personnel and praise the successful groups granting prizes and small tokens. The prizes are, of course, not going to individuals but groups. Monetary incentives are not basically recommended to use in this context, since this competition is a mode of encouragement to all involved people. In any cases, receiving a prize in front of colleagues is a stimulating and pleasant occasion for the work group, such as WIT, if the team has been united for common objective.

III-1-2-6…Safety issues and 5S activities

Without implementation of 5S activities, you cannot guarantee hospital safety. The safety is an extremely wide area to cover from inside issue of each medical service package to physical facility-related safety. In this column, discussion is limited only to work environment related dimension. Patients, visitors and staffs are all should be safe, when they are in the hospital premises. Any kinds of accidents, medical and non-medical ones, should be avoided. For that purpose, structural and systematic enforcement, based on the improved work environment, should be a pre-condition for any safety promotions within the hospital.

Various pro-safety ideas should be incorporated to the procedures of 5S. During Sort and Set, in particular, physical structures, which might cause inconveniences of mobility of staffs and various lines of work flow, should be meticulously checked in participatory manner. Safety promotion is then automatically realized if the staffs come to be sensitive to the work environment and its influence both to clients / patients and the workforces. Slippery corridor, car park without control, slope without safety sign or tiger mark are good examples of unsafe common spaces in the hospital. In addition to the outer environment of clinical venues, there are various observation and improvement points related to physical facilities, hospital equipment for safety promotion. Electric wiring should be regularly monitored and in case any risks are detected, the hospital should prioritize the repair or re-wring works. Likewise, fire extinguishers are essential items, which are periodically and strictly checked up on the expiring date and devices' function.

Clinical safety is a big issue for any type of health facilities. The details will be taken up in other chapters. Here, the readers are requested to pay your attention to the fact that the foundations of clinical safety are "Work Environment" and "Communication". Obviously, WEI by 5S is essential for safety. Also "Safety" is an important idea behind continuing encouragement to the front-line health staffs for strengthening capacity in conducting 5S activities. Definitely, we cannot separate safety issues from WEI and KAIZEN.

Through 5S processes, particularly of "Standardize" step, QIT, in collaboration with WITs, can challenge to formulate a simple by effective reporting system related to accidents and/or incidences of the occasions, where the staffs felt risky or terrified at situations which might cause accident and / or dangerous events to patients and/or to staffs. If the mentioned system is in place and functioning, each work unit led by and middle manager automatically monitor the safety through the reporting. Also the collected reports are provided to the discussion table of the superior management group including QIT and the steering committee to plan the countermeasures for further promoting safety. This is a typical progressive managerial activity, which often encourages the "Sustain" process and at the same time to prepare the incoming KAIZEN phase, where there are various problem solving process on the ground of diversified hospital services.

III-2…Navigation process of 5S from kick off to stabilization

In every work venue, a work unit in charge of a specific task needs to look into their work and work environment from the point of view of 5S application, although the team is a group of personnel, who are well trained and familiar with the task. There are some important questions that are often asked in the process of 5S implementation.

Q1--Are there any unnecessary items or clatters? (*Sort*)
Q2--Are the essential items for the work properly given a workable arrangement both in placing and the line work flow? (*Set*)
Q3--Are the venue, equipment and consumables arranged in the obtainable cleanest condition? (*Shine*)
Q4--Are the processes of *Sort, Set* and *Shine* are the part of routine work in all areas of the work

venue? (*Standardize*)
Q5--Are the personnel managing and working on the specific task well disciplined, based on periodical learning opportunities, to serve the clients? (*Sustain*)

The situation, where the above questions are positively used by all personnel for their routine works of the hospital, will be called as the stabilized implementation condition of 5S. The following description is typical sequences, which top and middle managers will follow at the introduction phase of 5S Principles to a hospital.

III-2-1…Implication of 5S Principles to objective of respective work unit

Service systems of health facilities, particularly of hospitals are rather complicated and difficult to maintain in the obtainable best condition. There are various divisions, as the work units, which have specific objective. The following chart is describing typical features of front-line or district level hospital.

………………………………………………………………………………………………………

Divisions	Expected outcomes of routine work
--Security guard office	-- The facilities are protected from outside environment.
--Kitchen	-- Foods supplied to in-patients are safe, nutritious and tasty.
--Maintenance technician's office,	-- Equipment is all in good function.
--Pharmacy	-- Drugs are well managed and delivered to the clients precisely.
--Laboratory	-- Standardized and quick laboratory tests are available.
--OPD	-- Outpatients are nicely treated with minimum waiting time.
--Patient Wards	-- Inpatients receive treatment under comfortable environment.
--Delivery room	-- Normal deliveries are conducted in a safe, clean and efficient system.
--Operation Theatre	-- Surgical care is given under a safe, clean and efficient system.
--CSSD	-- Supply and sterilization system supports the safety and cleanliness.
--Room for doctor	-- The utility provides staff relaxation and readiness to work.
--Administrative office	-- Office is functioning as the management centre.
--Matron's office	-- Office works as the management center for nursing/ auxiliary staff.
--Hospital Doctor's Office	-- Office works as the centre for decision-making and management.

………………………………………………………………………………………………………

To have a tangible outcome, each division is required to fulfill the task in the obtainable best working condition avoiding excessive workload to the staffs in charge. The workload should be moderate under the stimulating working condition to allow the staff to be innovative in developing various ideas or proposals for the betterment of the jobs and the outcomes. It is, however, not easy to realize the above situation, in reality. Too much clients, too much paper works and too much complexity in the reporting system are often seen in workplaces.

Above-mentioned outcomes are all, at the same time, targets of 5S activities. By the sequential activities of 5S, the staffs can reduce their workload and make maximal use of given working hours for the clients and, in addition to that, they will be able to have an extra cup of tea in the tea time, because the work system becomes lean and maximally efficient by 5S. The staffs sorted necessary and unnecessary things at their workplace and discarded unnecessary items. Then they set nicely the essential items in the best order for the convenience of the operation. They always make the venue shining by daily cleaning and also standardize the process of *Sort-Set-Shine* successfully. In the process of the standardization, you acquired good attitude to be in driver's seat of incoming KAIZEN process and continuation of 5S activities to be ready to tackle the "Quality of Service".

III-2-2…Navigation process for introduction and stabilization of 5S activities

A distinctive approach to mainstream 5S activities in routine managerial process is necessary at hospitals. The following sequence will be the most common and useful for your hospital, in which you introduce this intra-organizational social movement. Health Centre or Front-line Hospital as well as large scale general hospital will be able to apply this sequence for establishment of the implementation structure of 5S. Large scale organizations, such as ministry offices are not exceptions. Regardless the size of the project or institution, you can make use of the following strategies and the sequence of work. Top management and middle managers are both highly expected to obtain the following tips to success.

III-2-2-1…Decision-making of the top management

Top management has to firstly learn 5S Principles by him or herself. The starting point of 5S activity introduction is to have strong will and determination to improve your organization. Improving your work environment by yourself is the first action that you have to take, if you want to be a more powerful leader with high potentiality of further development. Just decide to practice 5S and move forward.

III-2-2-2…Exposure and training for the staff

Exposure and empowerment seminars for your executive staff (limited attendance of under 10 in number) is the second step after you achieve a little by your own efforts in improvement of your territory (for e.g. your own desktop or office). You are the only able person to guide your core staff members toward 5S. Hopefully you arrange a small 2-3 hour seminar on 5S, inviting a lecturer and/or moderator form outside.

III-2-2-3…Trial and making showcase or pilot area for advertisement of 5S

You may choose a limited number of offices or divisions for making showcases for the rest of staffs to make them interested on the process and outcome of 5S. The executives or core staffs, who attended the 5S seminar, have to work together with you for this step. Maybe your office will also be a good place for the demonstration purpose. In addition to the above arrangement, you can choose the most neglected categories, both with the attention of people and funding as a part of pilot areas of 5S. In most cases, the suitable target will be the Classified Day Employees (CD) and their territories. Cleaning work will be one of the most useful target jobs for 5S. You can make small financial input and improve the 5S practices of them, for example, by replacing old and broken cleaning tools with the new items (Sort) and the installation of toolboxes or rockers (Set). This, definitely, is an opportunity to improve the working environment for CD. If the top management directly shows his or her interest on CDs' job by encouragement or instruction, the quality of their work will definitely improve with the implementation of 5S activities. This is the second of the points / areas to expand your movement to other parts of the organization.

III-2-2-4…Appointment of 5S Manager as future Quality Improvement Team (QIT) Leader

Appoint one person out of your core staff members as the responsible post for the entire process of 5S activities. If you are a hospital director or an equivalent, do not be the Manager by you. You have to create the organization, where 5S manager is totally authorized by you to control everything on 5S. You need to set a situation, where he can assess your territory, such as office or file system; and in later stages to check whether or not the continuing efforts on 5S were properly made. This is a

strategy to construct the sham-flat-organization under the given cadre system or ladder of human resource. Flat-organization is the utopia, where you can work on 5S and KAIZEN most efficiently. It is, however, very difficult to eliminate the borders between ranks and sections. Sham-flat-organization is the compensation for this but is very useful.

III-2-2-5…Exposure to middle-level management personnel 5S Pilot areas: A precondition of Work Improvement Team (WIT) formulation

A gathering of middle-level managers of technical and administrative sections is necessary to endorse the information and support the guidance on 5S directly from 5S Manager and the top management. Request them to do something on Sort and Set just after this meeting. One hour meeting is quite enough just to explain the objective and methods of 5S activities and expecting outcomes in a statement, such as "you can enjoy one more cup of tea in the afternoon after organizing your work venue. Your headache of the workload too will be gradually well controlled by 5S." Important thing is to have such meetings several times using working hours. Do not organize big meetings in the post- or pre-working hours. This sort of extra duty makes them lose their interests. The small successes of the 5S pilot areas should be demonstrated to the middle level managers. These people will be leader of WITs after getting new experiences and knowledge.

III-2-2-6…Declaration of 5S activities to all staff in the first 5S Day or Festival

5S activities should not be a stress to your staff. You can make it enjoyable. People have to enjoy the process aimed to achieve the best work environment. You could identify one convenient date and arrange an enjoyable festivity in lunchtime for example. The purpose is to make official announcement from top management that this organization will adapt 5S activities as the official movement for Quality Improvement of Work. If you have a small fund, you can treat your staff with refreshment or lunch and accommodate entertainment such as singing or dancing, in which you may incorporate the message on 5S. 5S Manager will be officially introduced by you but in an enjoyable manner. You can prepare a special costume or cap to symbolize his or her role. This festivity will be definitely memorized among your personnel as a milestone in the long process of improvement. After several years, if you are in the same position, you will find the visible outcomes of 5S and recall this date of orientation and initiation.

III-2-2-7… Daily 10 minutes 5S activities and in-service training for middle-level management personnel

The top management and the 5S manager announce that a specific time in the working hours, in most cases, the first 10 minutes of morning, working hours is called as "Daily 10 min. 5S time". This special time frame has to be used only for 5S activities. If you have an in-house broadcasting system, you may release announcement every morning. At the same time, 5S Manager should be given a small freehand on scheduling of his or her routine work and go around all the units managed by middle-level managers, on and off. 5S manager has to nicely push the middle-level managers and staff to mobilize the Sort-Set-Shine-Standardize system. In addition to that, the 5S manager looks for the good candidates for 5S committees representing respective cadre or job categories.

III-2-2-8…Quality Improvement Team (QIT) and Work Improvement Teams (WITs) are established.

QIT should be formulated. This committee consists of representatives from each cadre or job group and is chaired by the 5S manager. He or she is now officially called as "QIT leader". Important thing is to grant authority to make assessment of the achievement in 5S activities done by each

implementation unit. This committee should hold meetings every month to discuss and make decisions immediately on the unsolved issues related to 5S. For example, you can imagine that there is rubbish in the common space of the hospital. This rubbish cannot be removed due to the uncleanness of the responsible division. The Team comes to see the site and immediately makes suggestions to do this job. This QIT is not a body just to discuss the matters but the authority to make decision on the implementation actions of 5S. The informal groups, which have been working on 5S at each work unit, are now officially called as WITs with appointment of WIT leaders. In each work unit or division of the hospital, WIT was equipped finally. The entire hospital is ready to scale up the 5S activities to the organization-wide activities.

III-2-2-9…Continuing education on 5S for all the personnel to *"Sustain"* improvement

You may promote a scheme to educate all categories of staff on 5S, every two weeks or every month. This scheme can be organized by the QIT with the initiative of QIT leader in consultation with the Top management. One hour in-depth leaning on the actual methods on 5S from other successful WITs should be organized by QIT. Later, QIT should praise those successful WITs in front of all other WITs. Their efforts and outcomes should be presented maybe on the notice board for promoting more interests of the people. The meetings should not be long. Punctuality too should be learnt by all staff.

In addition to the above educational opportunities, each WIT is encouraged to hold periodical short meeting on 5S and the outcomes together with the persistent problems still existing even under 5S Principles. The staff meeting of each division, led by WIT members, is expected to share the information on ongoing 5S processes and the needs for further improvement of work flow, on which the smoothness was disturbed due to disorganized physical environment. Regardless the rank and category of the personnel, every meeting participant is invited to speak for the sake of better environment. The WIT leader is requested to handle the discussion topics with care to promote comments and ideas from the staffs, which actually know the reality both of the workload and work system.

III-2-2-10...Monitoring activities and "Suggestion Scheme"

Simple reporting system can be developed in line with the existing management information system (MIS). It is not necessary to build up a new and separate reporting system specifically for 5S. It is useless and just increases the paper work of your staff. Conduct 5S on the existing MIS of the hospital. If the existing MIS is an inconvenient system and a sort of burden to your workforce, you can try to reform it to a lean and efficient system, taking the introduction of 5S as a chance to do so.

The effects of 5S can be assessed by a simple check list of 5S steps. Work outputs, for instance, the number of patients, who was undertaken blood sampling within a set timeframe at the hospital laboratory, will be a visible change after practicing 5S even without drastic change of the work process and without introducing modern equipment. Those demonstrable changes can be detected, if the top and middle managers come to be more sensitive to work environment and the strengthened teamwork in conducting 5S activities. You may carefully observe those changes on MIS. This practice leads you to the Black-belt 5S activities, which are 5S for standardization using several managerial tools and regulatory mechanism, such as alphabetical order alignment, emergency cart arrangement, mistake proofing.

Suggestion scheme, herewith, is defined as the mechanism to raise suggestions from the work front-line, regardless the categories, to the middle and top management positions on the needs in improving work environment and some work processes. Official request from the top management to the work front-lines should be made for collecting suggestions from each work unit. The collected suggestions are scrutinized at QIT meeting periodically for setting priorities. The prioritized issues related to the work environment and its countermeasures will receive a small scale funding by the top

management for completion of 5S and also to proceeding to positive change of the work process and the service contents, if necessary. The mentioned change can be regarded as an attempt of KAIZEN, which is related to work environment. Even within the stage of 5S, which is originally focused only to work environment, eruption of problem-solving of the work process can be seen, if the "suggestion Scheme" is functioning and well utilized both by top management and the front-line work units.

III-2-2-11…Bi-annual award of 5S for the best performance WIT

People have to be praised if the performance is excellent. QIT will make objective assessment on the progress of 5S using direct observation and check lists and identify the best division or work unit (job group) for the 6 months duration. It is quite useful to motivate people to actively join the positive competition on 5S practice. Small awards can be granted with a small token to the job group. If small amount of cash was given, the money can be managed by the QIT and that can allow them to purchase items, with which they can improve their working environment. It is also possible to make use of funds for their amenity such as a table for tea or utensils. It is a monetary incentive for a non-monetary purpose, granted to a team and not to an individual. The usage of money is for common interests. This is genuine. In 5S activities, incentives can be used only for the improvement of 5S activities.

III-2-2-12…5S-festival for showing up the achievement

Evaluation from outside of the organization could be the best incentive for the staff. The 5S Festival should be arranged as a day for publicity on 5S, for the people outside the institution. If the photo materials are collected during the past 12 months, you may demonstrate the "change" by visual material to the guests. It is useful to demonstrate the situations both before and after the application of 5S. Same as the first festivity for initiation of 5S, you may organize the event to make it enjoyable for all people. Then your management cycle will return to the beginning. As you know, top management is always like this. You are on the upward spiral of development line. Even if you are a bit tired, you have to continue this movement. This guarantees lots in terms of your development of managerial skill at the same time.

III-3...KAIZEN

III-3-1…Definition

Origin of the term, KAIZEN is a Japanese word implying "Change for the better" or "Improvement". In management, it, generally, means "continuous cost reduction" and "improving quality and safety" by reducing delivery time. As mentioned above, KAIZEN is a team-based improvement activity, in which every process can and should be continually monitored and improved. Nobody knows everything but everybody knows something. So working together minimizes the weakness of individual and enhances the strength of each individual as well as the team. If KAIZEN is applied to a workplace, the activity on site comes to be a process for continuous improvement involving everyone regardless the difference in position or rank, manager or worker. KAIZEN is originated in manufacturing sector but now not limited to manufacturing systems only. It can be applied to service industry including health care.

There are three (3) characters that describe KAIZEN approach.
Permanent method changes:
Change the method. Once the change is made, you cannot go back to the old way of doing things.
Continuous flow of small ideas:
The smaller ideas are the better. Innovation takes time and is costly to implement, but kaizen is just day-to-day small improvements that when added together represent both enormous savings for the

facility and enormous self-esteem for the worker.

Immediate local implementation:

Be realistic. KAIZEN is done within realist or practical constraints

It is often seen that when health workers made mistake or error, the person who made the mistake are blamed and some time, they are punished too. This "Individual blaming policy" exists in many developing countries.

When any mistake occurs in a working process, probably supervisor will ask the person who made the mistake and say; "Why did you make the mistake". Then, the worker might answer; "Oh, I was busy", or "Oh, we do not have enough staff"、or "I was in a harry". If there is no KAIZEN mind in your supervisor, and organization, counter measures of the mistake will be an opposite of the cause, and he or she might say, " Do not make a mistake" or " Do not be in a harry".

Opposite of the cause will not solve the problem or reduce same kinds of mistakes. "Individual blaming policy" will make "problem" to remain dormant, as workers are scared of reporting their mistakes or errors, and stand in awe of losing job. It means that no report on medical error, accident, or mistakes will appear to surface, and it is impossible to tackle with problems for improvement of the situation. In such a situation, **"No individual blaming policy"** needs to be applied and blame the system or way of doing things. If the organization has KAIZEN mind as their culture, supervisor think as "Is there any problems on the way of doing things in our system?" and need to focus on "Why this is happening", then you will find a clue for KAIZEN. It is important to try finding the root cause of the problem or mistake and then tackle the root cause(s).
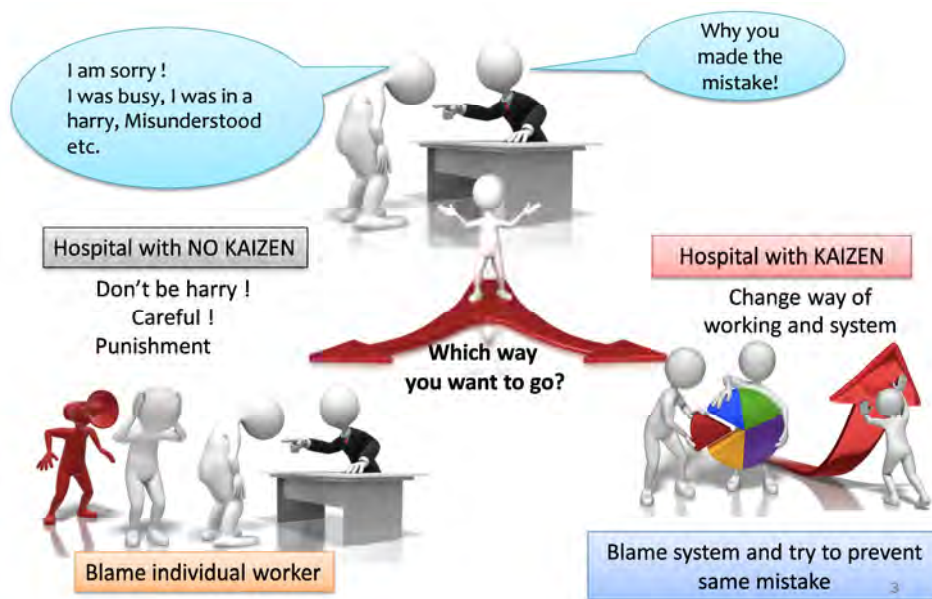

Figure 3-14: Which is a desirable workplace?

III-3-2…Objective, implications and the effects

Objective of KAIZEN is "Work Improvement", whereas the core objective of 5S is "Work Environment Improvement". The difference between 5S and KAIZEN is the difference of target and process. The most important achievement of 5S is "employees' satisfaction (ES)" as the result of improvement of work environment.   In other words, "Easy to Work" is the visible outcome of 5S.

The main achievement of KAIZEN is, however, not only ES but also "organization's satisfaction" through improvement of work processes leading to high quality and safety. The target area and procedures of 5S are mostly standardized. WIT is the engine for promoting 5S activities as bottom-up approach under the commitment of top management. In KAIZEN, on the other hand, the aim is problem-solving, which may not be defined clearly in the beginning. To define the problems, some Scientific Quality Control (SQC) tools were developed in Japanese industry. The tools are now applicable also in service sectors including hospitals.

Failure in continuing KAIZEN is a life-threatening issue in manufacturing sector.　You can imagine a factory making vehicles. There over 10,000 parts are prepared, standardized and supplied timely for the assembly process of one vehicle. Also there should be a workable communication system among different sections and offices to control the production process. The production line should be perfectly in order since they have to assemble the 10,000 parts precisely on time having their outcome target of finalizing, for example, 5,000 vehicles per day. Each assembly process and maneuver of workers should be in the achievable best level. The issue is to reduce the number of products, which are rejected as end products at final evaluation. If there are many rejected items, the company loses money. It also negatively affects the quality of vehicles and finally loses in the competition in the market.

Health service is also an outcome of a complex process same as the above car industry, which have to always seek "Quality of Product". It is often said that hospital is the most complicated service creation and delivery system. One unique feature of "hospital" is the segregated groups of specialized human resources sustaining the function of health services. Doctors, nurses, various technologists are the technical workforces, which are supposed to be well supported both by administrators and other non-professional staffs. Autonomy is granted to the professional decision-making of doctors in terms of health care needs and intervention. Doctors often prioritize medical issues putting managerial issues aside. IN addition to that, most of large scale hospitals are managed with multiple human resource management channels. For instance, management lines of doctors and nurses are normally separated. Doctors are managed by department head and the nurses are controlled by matron's office. Decision-making process in hospitals therefore tends to be complicated and slow. Multi-disciplinary team approach in hospital is easy to talk but extremely difficult to practice partly due to those reasons.

Managers in health service are the persons, who have to strengthen internal mechanism of your organization to involve all staffs under different categories to the movement promoting participatory problem-solving process being conducted at every work unit in a participatory way. This process is KAIZEN. If the real, workable team is in place in every work unit, we can overcome the above-mentioned complexity of management in hospitals. If the multi-disciplinary teams are functioning in solving technical and managerial problems in respective work venue, we are entitled to be on the upward spiral of development.

In the former chapter, it was clearly mentioned that 5S activities for WEI also work as a mode of team building. During the sensitization of the staffs to work environment, WIT and its leader reinforce the capacity and sensitivity of WIT members and other work unit members to look into the work environment as an important determinant factor affecting work processes, the efficiency and also the quality of services. KAIZEN process, a participatory problem-solving process followed by job groups, comes into reality during or after Black-belt 5S period, when WIT vigorously work on perfection of 5S.

Complaints in workplaces raised by the workforces, such as "hard to do", "incomprehensible", "complicated", "annoying", "bothering", "out of my job" and so on, are all the seeds of KAIZEN. There are at least three different solutions when you detect a specific complaint in a workplace under your management. The first solution is just to stop working on the job related to the complaint. There is no point to continue the work, since the work does not create any values.　The second is to change

the process or system related to the job. The third and the worst solution are to add the work for solving the problem. If you do that, you will have just an additional tasks and additional problems on them.

As mentioned in the above second solution, the core concepts of KAIZEN are to visualized problems, to define the required quality, to simplify the working process and system and to continue the improvement.

III-3-3…Phasing and the logic

III-3-3-1…What should be done before KAIZEN?

"Betterment of your work environment" is the first challenge in Continuous Quality Improvement (CQI (KAIZEN)). Without a well-organized venue for work, you cannot provide well-prepared, standardized, and timely services with proper communication with your client, which means that you cannot reach the standards of quality of service you want.

How can we create well-organized working place? Work environment is not an entity only with physical environment, such as building, equipment, and instruments. It includes functional aspects of your working venues, such as personnel team, meetings, recording/reporting system, time arrangement for work and communication system among staff and external counterparts. Environment often defines the behavior of the people. Your workforce is not an exception. If the physical structure and other in-house facilities are comfortable to you, your muscular and mental stresses are much reduced. You fulfill your work easily and efficiently. On the contrary, under unfavorable and inconvenient work environment, where you have to use extra energy to overcome the inconvenience, people's willingness to do the work properly and naturally deteriorates.
Do you think that your work venues are good enough to promote motivation to work? Are you satisfied with the present condition? Are you sensitive enough to detect inconvenience to yourself and your staff? There are so many questions, which have to be answered by you. The responsibility of a manager includes the arrangement of the obtainable best work environment for the teammates and staff. Now we have to discuss a feasible approach for us to uplift the work environment. One approach that we can employ is called KAIZEN in Japanese language or Continuous Quality Improvement (CQI). The instrument for the initiation of this approach is **5S principles**.

There is a need to lay a foundation for starting KAIZEN activities. Foundation of KAIZEN is 5S principles; especially S4 (Standardize) and S5 (Sustain) activities need to be practiced well at department level. Another way of saying that well implementation of 5S activities make us easy to find problems existing in our workplace. Facility that practicing 5S well developed a culture of eliminating different kinds of wastes, and when problems occurs, it is easy to identify them in the health facility. Thus, health managers and workers will be able to understand better what is really happening and need to be tackled within their workplace.
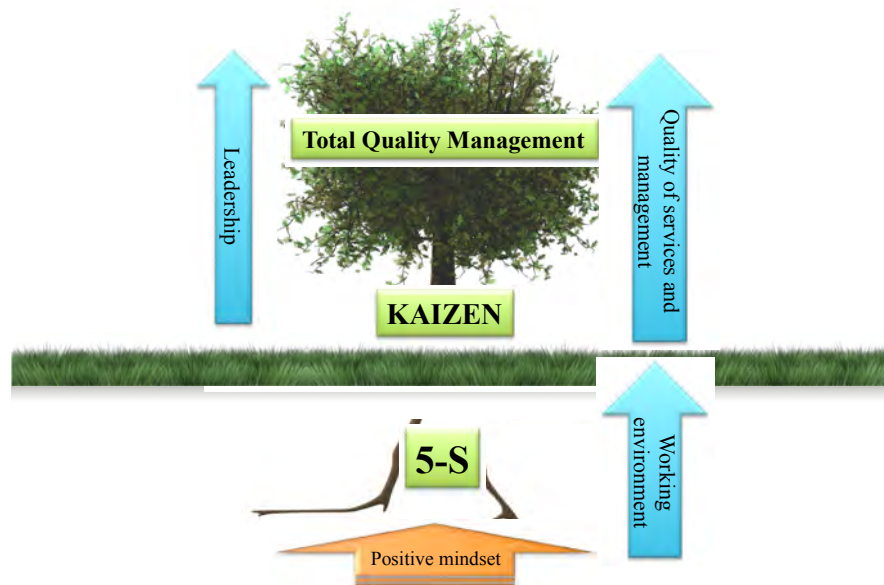
Figure 3-15: Basic concept of5S-CQI (KAIZEN)-TQM approach

Before starting KAIZEN activities, it is better understand some conditions that lead KAIZEN practice successfully at health facility. These conditions are as follows:

Receptiveness: Creating receptive environment for ideas is one of the important keys for successful KAIZEN. Every health workers in a facility are encouraged to come up with idea for making things better, accepting changes, suggestions and so on.

Implementation/practice: Taking immediate actions for improvement are one of the important keys for successful KAIZEN. The health workforces are encouraged to implement their ideas as small changes can be done by the worker him or herself with very little investment of time.

Recognition: Quick and easy Kaizen helps to eliminate or reduces waste, promotes personal growth of employees and the organization, provides guidance for employees, and serves as a barometer of leadership.

Cumulative Impact: Each Kaizen may be small, but the cumulative effect is tremendous. Therefore, continuation of Kaizen activities is one of the important keys for successful KAIZEN

If you consider that capacity of WIT is not enough to stat KAIZEN, extra training is meaningful to strengthen their capacity

KYT

KYT stands for "Kiken Yochi Training", is originally developed Japanese Industry Health to prevent injury in work. It means the training for enhancing to predict the risk factor in working area. Trainee group will find the risk factors in the illustration and discuss how to mitigate the risk factors. It is a very useful training that the staff can identify the risk factor in their working place easily.

Process Documentation

It is necessary to conduct workshop for the process documentation if the working procedures has not been documented clearly. Although QIT developed several SOPs or operation manuals as standardizing activities, some link-activities, such as procedure between doctors' diagnosis and laboratory test, preparation for an operation theatre and carrying patient into operation theatre, etc. might not been cleared. Based on the task flow or patient flow, the processes should be standardized. In the workshop, each WIT develops their current task flow or patient flow and discusses how to improve current task flow.

Team training

The training mentioned above shall be conducted as group work for each WIT. Through the exercise, the member of WIT will understand the team work properly.