

(Safety) IMPROVEMENT

The CONCEPT and the PROCESS

In the text below covers the description of the process by which (safety) improvement will be obtained. This concerns the more generic improvement though the use of a "management system". However, the process described can also be used for improvements through projects that are directed at more specific objectives. The process for improvement is based on the concept as provided through the "platform" model.

Safety management - necessary aspects - THE CONCEPT

Four supporting aspects or "building blocks" (see figures 1A and 1B) are required to bring about desired results and the level of safety performance "rests" on these:

- adaptation of organization, meaning identification and establishment of work or activities and related criteria, necessary to produce the desired results. It means making a **PLAN** so that in the end the right things can be done in the right way. This will include the making of a company's own safety management "system".
- development of people (**TRAIN**) in relation to the work to be done to obtain those results. This includes various types of training such as general introduction training as a basis for the improvement process as well as specific training for staff and management personnel to properly carry out the specific activities as requested by the plan.
- execution of the required activities (**DO**) in accordance with criteria set, by people who know what to do, and why, until the desired results have been obtained. Obviously this is the heart of the matter: doing the right things in the right way. This is what will lead to results and success.

The foundation of this 3-dimensional ("platform") model is management **LEADERSHIP**, the true driving force of the improvement process.

ADAPTATION OF ORGANIZATION - WORK TO BE DONE - **PLAN**

To reach a destiny, a goal or objective, to obtain results, certain identified activities are necessary. The nature and quality of these activities determine to a large extent the failure or success of organizations and companies. To reach a certain level of "safety care" minimum criteria must be established for such activities as:

- leadership and administration
- leadership training
- planned inspections and maintenance
- critical task analysis and -procedures
- accident/incident analysis
- job observations
- emergency preparedness
- rules and work permits
- accident/incident analysis

- knowledge and skill training
- personal protective equipment
- health and hygiene control
- system evaluation
- engineering and change management
- individual communications
- group communications
- general promotion
- hiring and placement
- materials and services management
- off-the-job safety

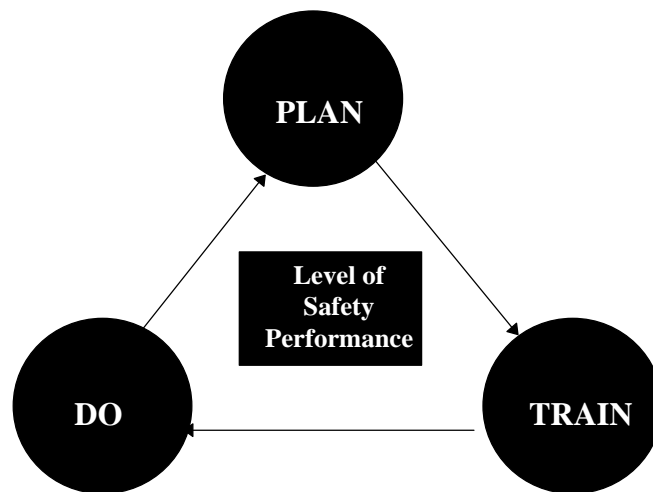


FIGURE 1A

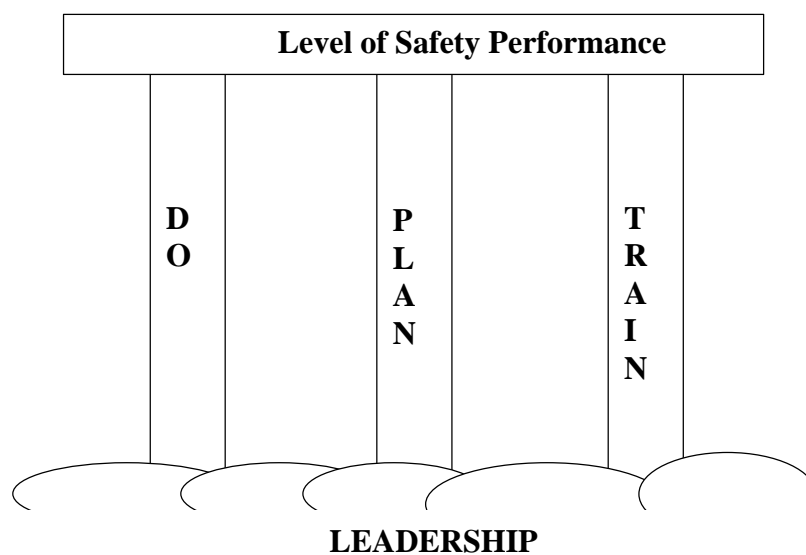


FIGURE 1B

Consecutive actionplans should be directed at setting up the management system incorporating the above aspects. Detailed criteria must be set up to clearly identify how activities should be carried out, by whom, when, etc. A Safety Management Manual (describing the activities forming the safety management system) should, over time, derive from such actionplans.

DEVELOPMENT OF PEOPLE - **TRAIN**

After establishment of what has to be done, people should receive adequate training for motivation, knowledge and skills to carry out the required work.

Adequate training (and re-training) is necessary for success and should be provided top-down in the organization. It basically consists of two "levels":

- general introduction training necessary to put "all noses in the same direction". "This is where we want to go together and that is the way we will do it".
- specific training following the establishment of detailed criteria for those activities that form part of the actionplan.

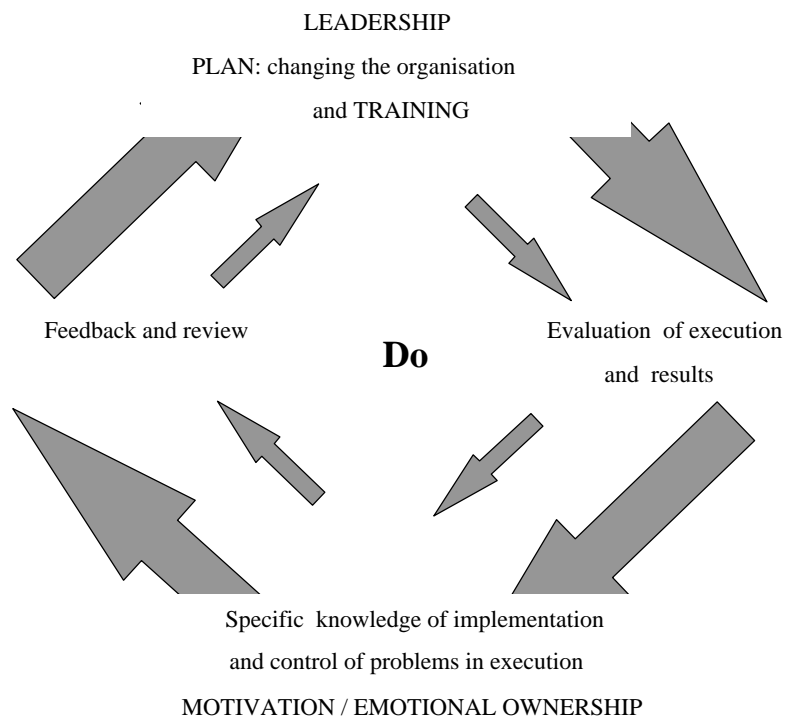
EXECUTION OF ACTIVITIES - **DO**

Ultimately success (in this case related to the control of accidents/incidents) can only be secured if the necessary activities are done in the right way. This requires the necessary discipline to do the required work and to keep on doing it. In particular this requires discipline from top-management to provide enthusiastic leadership and support to important activities. It is of great importance that these activities are being carried out as a mutual effort of management, staff and employees to obtain the desired results.

Best, and lasting, results can only be obtained through a combination of top-down and bottom-up involvement, during preparatory stages but certainly also where it concerns the way activities are being carried out.

Best results can be obtained through an approach that combines top-down activity with bottom-up involvement (figure 2). Not top-down alone, as has been so often the case in the past, or a one-sided bottom-up movement as we have also seen since the sixties, but a wanted combination of the two can provide the proper basis for a lasting success.

Top-Down



Bottom-Up

FIGURE 2

The top-down approach following top-management's accepted leadership role and providing direction to the program by indicating which activities are expected to be carried out in the organization and which training will be provided.

Top-down also the support for the execution of the work to be done. By making important items, truly important. By implanting in the organization a system for (self-)measurement of what is being done and (self-)evaluation in comparison with criteria set. By providing feedback and commending people and workgroups whenever possible. By making sure that undesired situations are being corrected in order of priority. By asking about performance and progress at relevant meetings. By being proactive rather than re-active. And above all: by example whenever possible and appropriate. By action, not just by words!

Bottom-up approach by involving people at the lower end of the organization in problem-solving within their area of operation. Using the expertise that is available in relation with the work to be done.

Involvement of employees and lower management levels in activities such as:

- design of installations and workplace
- identification of workplace hazards
- identification of "critical" tasks, analysis of those and the establishment of task procedures or work practices
- periodic review and up-dating and/or improvement of existing procedures
- conducting planned inspections in their own department
- analysis of accidents and incidents
- establishment of rules and regulations
- selection of protective equipment

Considering this bottom-up involvement one has to realize that this does not come by itself. Bottom-up involvement should be brought into the organization by top-down activity, establishing effective two-way communication channels. In fact, top-management must want bottom-up involvement to make it truly effective for lasting success. In this, adequate (prompt, correct, positive) management response is necessary to problems and/or solutions and suggestions originating from lower levels of the organizational hierarchy.

It is of great importance that the three supporting activities (plan, train, do) are developed in balance with each other. There must be a balance between the activities that are wanted by the organization, the training, which is provided, and the execution of the activities in practice.

Safety management - a road to success - THE PROCESS

A practical approach to safety management will at least include the following steps, after a decision has been taken by top-management "to do something about it" (see also figure 3).

1. Top Manager Leadership

Improvement - positive change - can only result from top-management leadership. In fact the greatest guarantee for success lies with the Director himself, through his personal leadership, commitment and actions.

Step 1 will clarify for the Director that personal leadership at the top, transformed into commitment and actions, is a must to obtain the desired success.

Purpose of this step is to make sure that the individual leadership, commitment and support is given by the senior executive of the unit being considered. (The "unit" here would most likely be a site or location.)

2. Top Management Team leadership

The improvement process must be carried by the entire management team, from senior management to supervisory level. All levels are important but the involvement of the group that directly reports to the Director is critical. This is the first level where strategy and policy are being transferred into the Management System for further detailing and implementation at lower levels in the organization.

Purpose of this step is to make sure that the individual leadership, commitment and support is given by all members of the Management team. (The "Management team", as meant here, consist of the Managers directly reporting to the senior executive.)

3. Management Improvement Team (MIT)

Coordination at the top of the organization provides for the high-level power source that is required to get the improvement process started and on its way to success. This is the management team that will set the strategy and steer the process. This team will lead and support, decide on main actions to be taken, evaluate progress and stimulate the entire organization to the desired level of excellence. Here the management team can be pro-active to identify, evaluate and control to-morrows problems. An important function of the MIT is also to periodically review Management System implementation in relation to expected result and to stimulate the process of continuous improvement.

Purpose of this step is to make sure that leadership and coordination for the overall improvement process is structured at senior Management level.

4. Internal Expertise

In-house coordination and expertise must be available to assist management in the improvement process. This house expertise should preferably consist of several persons to allow for the necessary continuity. This in-house expertise is necessary in all stages of the process.

Purpose of this step is to make sure that in-house expertise is provided to coordinate the development and implementation of the Management system(s) to be set up as part of the improvement process.

5. Written Plan communicated

Leadership needs to be transmitted into demonstrated commitment if it is to "pull and push" the organization in the desired direction. There is no better way than letting everybody in the organization know what the plans are, what activities can be expected to be introduced and when: Leadership becomes tangible when put on paper and shared with everyone involved, from top to bottom. Leadership transferred into commitment is necessary in order to obtain the desired goal(s).

Purpose of this step is to assure demonstrated senior Management leadership and commitment by communicating to everyone in the organization through which process (including the process steps) the improvement will be obtained.

6. Opinion Survey

To further demonstrate the commitment and the desire to make things work, an opinion survey is a tremendous tool to find out how other people in the organization - at all levels - feel about the related aspects in the plant. Normally such a survey will be carried out at senior (top and middle) management, supervisory and operator level. It is a strong indication that management wants to hear how other think and feel. If well done, it helps to "loosen up" the organization, to lessen the resistance to change at a later stage of the process and provides further information about areas that may need special attention.

Purpose of this step is to collect subjective/objective information about the actual situation/culture as related to the improvement process. To also "loosen" up the organization for the improvement process to come.

7. Base-line Assessment

No improvement process can really start before an organization determines where it is. This means an evaluation of the present level of management activity; an "audit". Such an evaluation will provide a picture of the management activities taking place. This will provide the management team with a clear view of the strength and development needs and is a valuable tool to select specific activities for the first action plan.

Purpose of this step is to obtain a good picture of the present situation as related to the Management system(s) involved.

8. Selection of Activities

The base-line audit will provide management with a good picture of where they are; the next step is to select specific activities for inclusion into the Management System. This is "what" needs to be done. These activities will most likely be part of the first action plan.

Such activities may include: emergency preparedness, planned inspections, accident investigation, group and personal communications and task analysis, but also engineering controls, purchasing of goods and services and selection and placement of personnel.

Purpose of this step is the selection of activities (or system "elements") to be part of the first action plan (the beginning of the development of the Management system), based on perceived effectiveness and on "visibility" of these elements.

9. Management Introduction Training

At this step the philosophy, concepts, models etc. are conveyed to all management, including supervision. These management "introductions" are not intended to generate any specific action. Proper information of all people in leadership positions is of vital importance for the success of the following steps in the program. These sessions are intended also to bring the necessary leadership further down the organization. Such leadership is very much needed at the level "point of control manager" (normally the "supervisor"). These sessions are also an excellent vehicle to demonstrate the leadership and commitment through senior management participation and to eliminate any major concerns at management and supervisor levels.

Purpose of this step is to make sure that all Management, supervision and relevant staff are aware of the improvement process, knows the terminology, models, concepts, etc. To "put the noses in the same direction". (This introduction is not intended to generate any specific activity. See 13 for that.)

10. Element Coordination

Once the specific activities are selected (step 8), these need to be further detailed to become meaningful for implementation. This would normally take place in an "Element Coordination Team (ECT)" consisting of middle managers taking personal responsibility for development of one or two elements. As many levels in the organization as practical should be included to assist the element leader. This will "guarantee" ownership and involvement throughout the organization and facilitate implementation at a later stage. In fact the detailing of those activities can be accomplished through a "cascading team" set-up, including worker participation where relevant, under the coordination of a "MIT" and directed by the MIT (Management Improvement Team)

Purpose of this step is to establish coordination for development of Manager system elements as well as for the implementation thereof. Preferably this would include teams rather than individuals.

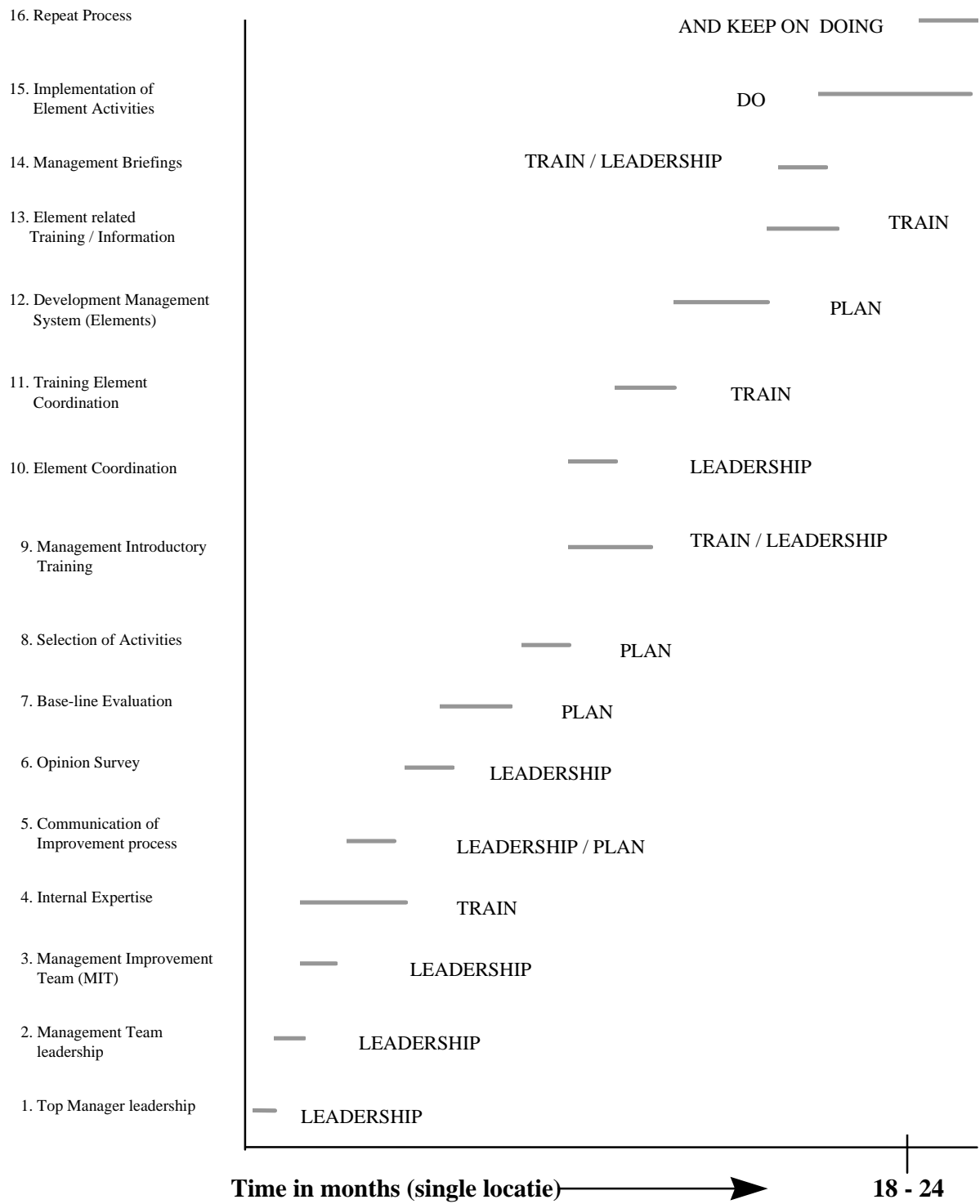


FIGURE 3

11. Training Element Coordination

This is vital training for a vital team. This Coordination Team will be the authority when it comes to setting up the Management System and this in turn will be the reference for the improvement process. If things go wrong here, they go wrong all the way.

Good knowledge of what is expected of this team is essential and a lot of unnecessary work can be avoided if these people are properly trained. The team members will learn what is expected of them, what they help to set up and coordinate. They will act as focal points in the detailing of the selected activities for which they have been given special responsibility.

Purpose of this step is to assure training of the individuals or team(s) involved in element coordination (development and successful implementation).

12. System Elements Development

Here is where the basis is laid for doing the selected right things in the right way. Clear performance standards - supported by appropriate guidelines - must be set up for the selected specific activities. For example: how inspections should be done, how to go about task analysis, how to investigate accidents, etc. After answering the "what and why" done during step 6, this details the "how, whom and when".

While all steps are important in the overall process, this step is vital as it forms the basis for success that can only come from doing the right things in the right way. This is where the Management System gets meaning and will act as a reference for implementation, after the approval of the Management Improvement Team (MIT)

Purpose of this step is the development of Management system elements (ref. 8) by the element coordination teams until approval by the Management Improvement Team (MIT) has been obtained.

13. Practical Element Training

After detailed guidelines have been set up for implementation of specific activities (as established during step 8), relevant persons must be provided with the necessary skill training. This would mainly include supervision, middle management and specialist staff.

This training is essential and should only be given after step 12 has been concluded. This will then create the best position for proper implementation: motivated and knowledgeable people ready to carry out the work that is requested of them through the Management System.

Purpose of this step is to assure proper training for execution of the element activities (ref. 8 and 12).

14. Management Briefings

To properly carry out their leadership and support function, senior management must know what the critical points are to evaluate the progress made. Asking the right questions about planned progress stimulates activity as it shows where management puts the priority. It focuses attention on result related factors.

Purpose of this step is the briefing of (higher) Management levels on the critical aspects of the management/coaching, etc. of the execution of the Management System elements concerned. (ref. 8 and 12).

15. Carrying out Element Activities

This is where people go to work in accordance with Management System standards and guidelines set. This is where it all comes together. Here and only here is where practice is turned into success; all the other steps are there to provide the best opportunity for this step to become successful.

Here is where policy turns into commitment ultimately affecting behavior and attitude, creating a new company culture. If it fails here, everything else has been futile but if done properly, success is imminent. Here is where leadership by example gets meaning.

Evaluation of activities and their results are vital in this part of the process as well as the continuous improvement that comes from that.

Purpose of this step is to carry out the activities as intended by the element description (ref. 8 and 12).

16. Repeat Process

No Management System can be built and made operationally effective through issuing one action plan. And no performance can be kept at a high level without periodic evaluation.

This is why step 16 includes repeating a number - not all - of the previous steps to bring the performance of the Management System up to the desired level. Once it is there, periodic evaluations need to take place to secure continuous improvement of already implemented activities.

Purpose of this step is the extension of Management system to include further elements through relevant steps indicated above.