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5.2. Measurement of behaviour

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The measurement of behaviour is, in principle, directed at two groups: people in leadership positions (managers, supervisors and relevant staff) and people in operating positions.

People in leadership positions include all persons who, through their acts and doings, influence the behaviours of others. Through their example, what they do or do not do, their behaviour and decision-making, the organization makes clear what it finds important. The measurement of “managerial” behaviour is crucial here, since the behaviour of these people greatly influences other people's behaviour (and the consequences thereof).

The measurement of behaviour of people in operating positions can be divided into two categories:

- (general) behaviour observation, which is the observation of the way people behave in a more general sense while doing their work;
- task observations, which are directed at the performance of people in the execution of specific tasks that have been identified as “critical”.

5.2.1 A conceptual view of behaviour observations

Whereas all kinds of performance measurements have their value, the measurement of “behaviour” is the most important one since this reflects the attitude of both the organization and the individuals working in it. It is the individual attitude of some people, namely top management, that serves as the foundation for the organizational behaviour which in turn influences the individual behaviour of others, and so on.

Individual and organizational behaviour are interrelated and they influence each other (see Figure 5.7). Through focusing on behaviour it will be possible to influence the attitudes of people. Therefore, the behaviour of people - both individually and as a group (the “organizational behaviour”) - is the most important measurement that can be made and is at the very heart of a safety management system. Everything people do originates from their attitudes and their beliefs. It is the behaviour that can be observed and measured and which is a window on the attitudes behind it.

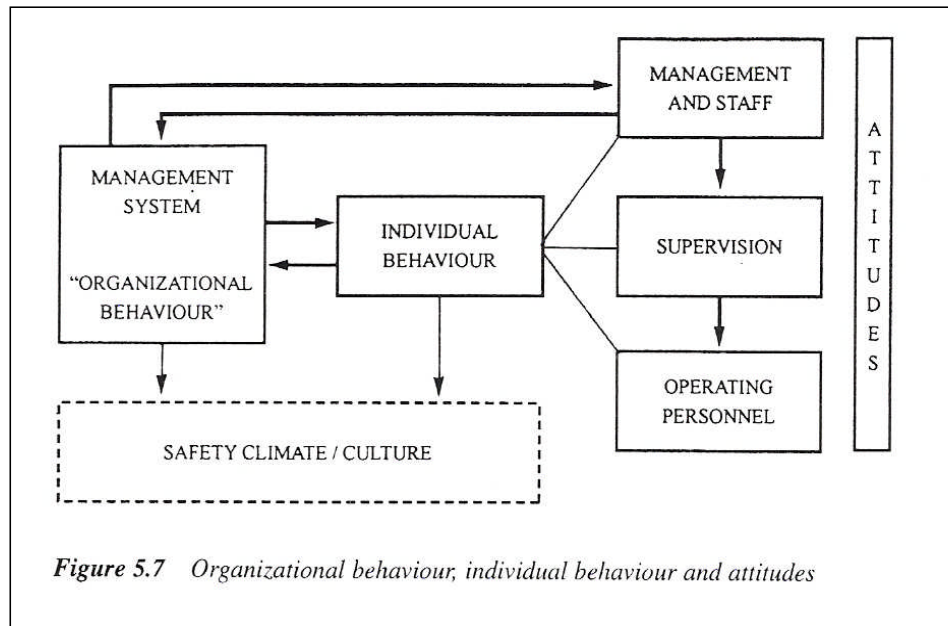
Desired behaviour is not something that happens by accident. It must be managed for best results. While doing that it must be kept in mind that “desired” behaviour always refers to a standard, either written or otherwise. Any measurement must therefore start with determining that desired behaviour.

The “management” of behaviour includes at least the following issues:

- The selection of people who already show the desired behaviour or who have the willingness and capability to show it. This selection becomes even more important nowadays as many businesses are moving towards an “empowerment” culture.
- The way in which rules, procedures and so on are being set up in the organization. Such rules and procedures indicate the desired behaviour, even though they may not be written down. DNV's “24 points for obtaining compliance with rules etc.” apply here (see Table 5.4).

Specific qualities are demanded from those who make business systems (including hardware design) to have these systems operate with as few rules and procedures as possible. Necessary rules and procedures must be as close to “normal” behaviour as possible. Both positive and negative factors influencing “activators” and “consequences” must be considered thoroughly so that undesired behaviour is discouraged and desired behaviour stimulated.

- The observation of the behaviour of individual managers and supervisors as well as workers to evaluate actual practice.



In particular the observation of people in operating positions could lead to undesired situations in which people feel they are being “spied upon”. So it is important to spend considerable time and effort on the introduction of such a programme. Furthermore, the behaviour of operating personnel is often the result of management behaviour.

Any worker observation programme should be well-planned and properly organized. The project organization must include higher levels of management to allow for appropriate decision-making (and actions) in response to information gained through the worker observation programme. Eventually observation activities must lead to modifications in the management system so that undesired behaviour is eliminated as far as possible from the organization.

A good way to start a worker observation programme is to run workshops with operating personnel during which the discussion includes:

- . What is desired/undesired behaviour?
- . What are the reasons for showing undesired behaviour?
- . What works in safety and what does not?

The results of such workshops often point to issues that exist at higher managerial levels and need to be resolved there.

Table 5.4 24 Points for 'How to obtain compliance with rules' or 'When to apply disciplinary action'

PREPARATION

1. Rules only when necessary
2. Involve people concerned in making of rules
3. Explain why rules are necessary
4. Make rules as simple as possible
5. Rules must be justified and correct
6. Make rules to comply with 'normal' human behaviour
7. Rules must not contradict each other
8. Make rule compliance attractive, make non-compliance unattractive

PRESENTATION

9. Give worker preview of rules prior to instruction
10. Provide proper instruction
11. Test knowledge of rules
12. Keep rules accessible to users

APPLICATION

13. Provide 'try-out' period to test rules in practice
 14. Be clear in daily application of rules
 15. Provide sufficient time for proper rule application
 16. Be positive about rule compliance
 17. Be negative about non-compliance
 18. Proper example by supervision and management
 19. Maintain rule knowledge
 20. Periodically evaluate rule compliance
 21. Periodically evaluate effect of rules
 22. Keep rules up-dated
 23. Be clear about consequences in case of non-compliance
 24. Be consequent in case of non-compliance
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Another aspect of these worker observations is that they should never replace day-to-day observations by line management. It is a first responsibility of line supervisors and managers to observe the people working in their area of responsibility in order to identify an.; correct behaviour that is not desired.

5.2.2 People in a leadership position

The evaluation of "leadership behaviour" cannot normally be done through visual observation but requires interviewing the people concerned and, as necessary, people at the "receiving end". These

evaluations are done using a set of criteria (“questions”) for leadership performance. Table 5.5 shows example questions picked at random from a more extensive questionnaire. Such references are adapted to the function and provide the opportunity for scoring. Thus, quantitative indicators can be obtained.

Individual behaviour of people in a line management position is also reflected in behaviour of the people working under their responsibility.

Table 5.5 Examples of questions for leadership performance

EVALUATION ITEM	MAXIMUM SCORE	ACTUAL SCORE
2. Appointed health, safety and environment (HSE) coordinator in his area		
9. Established HSE objectives and targets for his area		
11. Requires and supports HSE training for all managers/supervisors in his area		
16. Designated emergency coordinator in his area		
27. Makes HSE tours in his area at established frequency		
29. Takes part in annual HSE audits		
32. Sets leadership examples regarding rules compliance and adherence to safe work practices		
36. Chairs periodic HSE campaigns		
40. Discusses HSE policy issues with subordinates		
44. Includes HSE on agenda of all regular scheduled management meetings		
Total score	Maximum 100	Actual 65

Analysis

The quantified results of the “observations” - that is, the interviews - can be used in different ways:

- for comparison with the maximum obtainable score (such as 65 out of 100);
- for comparison with the results from previous interviews of the same individual (for example 65 vs 55);
- for comparison with the average number obtained from a group of people in similar positions (for example 65 vs 75).

Table 5.5 shows an example of a scoring mechanism. Whereas the outcome of individual observations is certainly relevant, trend developments are more important to reveal any changes over a period of time.

Follow-up

As follow-up after the observations, the results are discussed with the individual and an action plan agreed upon to improve the individual's behaviour. To help in motivation, the reasons for showing

desired behaviour are explained.

5.2.3 People in operating positions - general behaviour observation

Measuring behaviour of people in operating positions is normally done through visual observation.

General behaviour is concerned with the way people behave in a more general way while carrying out their job. The timing of general behaviour observations is normally not known in advance and is therefore “unexpected” for the target group. Normally, these observations are concerned with groups of people working together in departments, rather than with individual employees.

General behaviour observations are made using a set of criteria for desired behaviour, to allow accentuation of the positive (see Table 5.6, - sample only). The set of “behavioural aspects” can be obtained from the workshops that are organized for the introduction of the programme. The result of the observations is a percentage indicating observations with desired performance against total number of observations.

A risk factor can be obtained by applying a consequence factor that indicates the potential consequences of the observed undesired behaviour (see Table 5.6, last two columns). The risk factor is calculated by multiplying the number of undesired observations with the associated consequence factor. The latter is an estimation of the likely results should the situation remain unchanged. The consequence factor is very simplified here, ranging from 0.3 to 3. Any other method will do. The purpose of the exercise is to come up with a number which indicates the total “risk level” resulting from the observation.

The various risk factors can then be totalled. The result may be an indication that follow-up action is needed. Since the number of undesired observations also depends on the time spent on the observation (the more time is spent, up to a certain point, the more undesired issues may be uncovered), it may be necessary to take into account the duration of the observation.

Acceptable and unacceptable levels need to be set per area and on the basis of experience. This should be done involving the work force. Those levels may change over time.

The risk level, and therefore also whether the level is acceptable or not, depends on the quality of the observation team. Inexperienced people will not recognize hazards even though they may be observing for a long time. Thus, using inexperienced teams will result in lower risk levels.

Risk levels are relative. As an example, a particular company indicated that a level of 10 based on a one-hour observation (and concerning a certain area) was unacceptable and would require immediate management action. Between 5 and 10 was still unacceptable and in need for action. A score below 5 was considered acceptable (on average, while individual issues might still need attention).

Table 5.6 Form for evaluating general behaviour of people in operating positions

BEHAVIOURAL ASPECT	TOTAL OBSERVATIONS	OF WHICH DESIRED	RATIO DESIRED TO TOTAL	CONSEQUENCE RISK FACTOR
Use of personal protective equipment	3	1	1/3	
Lifting	3	1	1/3	
Following procedures	3	1	1/3	
Working at proper speed	3	1	1/3	
Handling of chemicals	3	1	1/3	
Use of ladders	3	1	1/3	
Total			80/100	

Analysis

The quantified results of the observations can be used for comparison with:

- the maximum obtainable score (such as 80 out of 100);
- the results from previous observations within the same "group or department (for example 80 vs 72);
- for comparison with the (average) results obtained from observing similar groups or departments (for example, 80 vs an average of 75).

Table 5.5 (page 86) shows an example of a scoring mechanism. Here also, while the outcome of individual observations is relevant, trend developments are more important to indicate any changes over a period of time.

Follow-up

As follow-up after the observations, the results are fed back to the group or department involved, and reasons for showing undesired behaviour are discussed. An action plan is set up with the group in order to improve its behaviour. Since the group's behaviour may be influenced by management, the action plan may also include discussions with people at higher levels in the organization.

5.2.4 People in operating positions - task observation

Task observations are directed at the performance of individual people in the execution of specific tasks that have been identified as “critical”. The observations are done using a “task procedure” indicating the critical steps of the task to be done and any steps to control undesired events.

The purpose of this type of observation is to evaluate the effectiveness of training programmes, to establish that procedures can still be executed as intended and possibly to improve the work procedures involved.

Carrying out task observations results in a report which indicates both positive and negative issues, and also actions to correct any deficiencies noted. Whereas these task observations would normally not result in a performance “measurement”, it would be possible to allow such a quantified evaluation.

Analysis

The outcome of a task observation is analyzed in relation to the effectiveness of training provided to the individual, the need for further training, the appropriateness of the work environment and the tools, materials and any changes that may have occurred since previous observations and which may necessitate a change of the task procedure.

Follow-up

The results of a task observation would normally be directed at the individual observed, in particular where it concerns individual aspects that need attention such as additional training. Depending on the outcome, however, the actions may also be directed at the group of people carrying out the task observed, especially when a common issue is discovered, including the need for updating the task procedure involved.