

Change Management Audit Program, Change MAP

How to integrate organizational change into safety management: Criteria for change management and their assessment

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ABSTRACT

SwissRe believes that change management is an important element of company culture. Many companies have incorporated the organisational changes in their management of change (MOC) procedure. As all change in equipment, feedstock, instrumentation, etc are meticulously assessed in the MOC procedure, organisational changes should also receive a similar careful and formal treatment, else it could leave the organization in a disastrous state.

The research project Change MAP (**C**hange **M**anagement **A**udit **P**rogram) aims at evaluating potential linkages between major organisational change like downsizing, mergers and acquisitions, or business process reengineering and the ways risks are handled in an organization. Organisational changes that apparently are unrelated to risk and safety management may in fact be very relevant to the level of process and work safety. Reorganizations leading to massive reductions in personnel and high insecurity for the remaining employees can have strong effects on how conscientiously and safely work is carried out, based on “objective” parameters like work load as well as “subjective” parameters like motivation. Whether these changes really do affect safety negatively depends on the attempted change, e.g. on the way, the change is carried out and downsizing below a critical number of people necessary to perform a job well.

PURPOSE OF ChangeMAP

Assessments of an organization’s risk quality should take into account the change management during major organizational changes. To help such assessments e.g. in insurance audits, three change scenarios were chosen (downsizing, mergers & acquisitions, business process reengineering BPR) and parameters describing effective change management for these scenarios selected. The parameters and their rationale as well as the procedure for their use during audits are presented. It is assumed that the parameters are also suited for integration into safety management systems in order to proactively define adequate procedures for change management under a safety management umbrella.

BACKGROUND OF THE PROJECT

After having suffered losses in which contributing factors to the cause were found that relate clearly to organisational changes, a need for investigation was obvious.

Not only major organisational changes such as merger and acquisition, downsizing and BPR but organisational changes of smaller extent also can effect the safety culture adversely (see figure 1). Investigations after losses seem to accept correlation between organisational changes, safety culture and losses.

One case investigators reported after a loss that a company had not evaluated their potential impact on safety that could result from organisational changes prior to making the changes. The organizational changes that have occurred at that company during the last ten years have had a detrimental effect of safety culture. Staff reductions in the Health and Safety Department, changes in the operators' safety responsibilities, the speed at which the changes are made, and impeding layoffs – all have contributed to a serious cynicism toward new safety – related initiatives and programs. Furthermore it was found there was no formal Management of Change MOC procedure for evacuating and managing organisational changes that might affect safety such as changes in roles and responsibilities, staffing levels and organisational structure.

An other case where a loss occurred organizational changes were contributing factors to the cause of loss. A plant operated several trains to produce a petrochemical product. A new train was built and most experienced operators joined the new unit, which left the old trains with many junior operators. At the day of the loss two operators with less than two years of experience try to run the train. The chain of events leading to the loss could have been broken easily with more experienced operators or a combination of a junior and senior operator.

INTRODUCTION

When evaluating a company's risk quality, for instance as part of insurance assessments, technical factors have been dominant, with only fairly recently adding also some consideration of the company's formal safety management and to a lesser degree the company's safety culture (cf. e.g. Grote & Künzler, in press; Müller et al, 1998). At the same time as the acceptance of organizational safety measures as crucial determinants of system safety is growing, a push for an even broader view of organizational factors in risk has happened through reports of detrimental effects attributed to mergers and downsizing (e.g. Perron & Friedlander, 1996).

So far, systematic evidence on decreases in work and process safety as a consequence of radical organizational changes is scarce (e.g. Rousseau & Libuser, 1997). Most studies focus on effects on employee attitudes and behavior (e.g. Kets de Vries & Balazs, 1997), sometimes including indicators of employee health such as sick leave (Vahtera, Kivimäki & Pentti, 1997). Generally, the findings demonstrate the dramatic nature of major organizational restructuring for the individuals affected, resulting in severely lowered job motivation and organizational loyalty.

These studies also indicate, however, that the effects can be strongly influenced by the strategies and procedures chosen for carrying out the changes (cf. e.g. Boonstra & Bennebroek Gravenhorst, 1998). This poses a challenge for theory and practice in the field of organizational development, where up to now the focus has been on evolutionary

changes. Recommendations such as strong and early employee involvement in the change process, a long-range time perspective, and complete transparency of the change process (e.g. French & Bell, 1984) have to be examined in the light of requirements stemming from radical organizational change such as fast decision making to help organizational as well as individual reorientation.

The project reported here has two aims: (1) to develop indicators for effective change management during radical organization restructuring, and (2) to study the assumed link between change management and system safety. In order to reach these goals, firstly parameters for effective change management were to be derived from the literature on evolutionary and radical organizational change. Secondly, these parameters were to be translated into interview checklists to be used during insurance audits, see fig 2 and 3. Thirdly, a questionnaire has been developed (extended ChangeMAP) see fig 4. The aim of the questionnaire is to get information on safety related assessments of organisational changes, perceptions and attitudes of different people in different departments on different hierarchical levels. The results of the questionnaire are compared with the interview results and being used as a basis to discuss and to interpret the change management.

Fourthly through audits focusing on both the quality of change management as well as the quality of directly safety-related organizational factors, systematic evidence on the relationship between radical organizational change and system safety should be gathered. In this paper we can report on the results mainly of the first, second and third project phase.

Progress has been made in the fourth project phase, but it could not be completed so far, as obtaining access to appropriate companies turned out to be somewhat difficult. This in itself is an important finding of course, as it shows strong uncertainties in the organizations concerned about the quality of their change management. However, companies proactive in safety matters seem open and recognize the benefit. To perform a change well leads to a competitive advantage.

PARAMETERS FOR EFFECTIVE CHANGE MANAGEMENT

Before presenting the parameters chosen for the intended audit instrument, the core assumptions that went into the development are briefly summarized:

1. Fundamental changes are often necessary in order to cope with changing external demands and conditions.
2. Major organizational change can be linked to the process safety and risk quality of the organization(s) involved.
3. Fundamental changes leading to massive reduction in personnel and high insecurity to the remaining employees can have strong effects on how conscientiously and safely work is carried out.
4. The way the change is carried out is of importance for assessing the effects of change: if such a change is implemented with little care for the affected employees the safe operations of the production process may be jeopardized.
5. The audit instrument should help to assess how well change is handled in an organization, thereby helping the participating company to review their own change program and to discuss best practice regarding change management.

Based on an extensive review of the literature (references can be obtained from the authors upon request), a list of potential parameters for effective change management was developed. In drawing up this list, three change scenarios were distinguished, mergers & acquisitions, downsizing, and business process reengineering. For each of these scenarios, key factors were determined, which during a change process can lead to positive or negative effects on the employees and therefore on the whole output of the company, e.g. risk quality. This process led to a general list of parameters as well as scenario-specific lists. E.g., cultural aspects are considered more relevant to mergers & acquisitions than to downsizing. The general list is presented in Table 1.

Table 1. General change management parameters

Content area	Parameters
A. Reflected radicality of change	<ol style="list-style-type: none"> 1. Unquestionable need for change 2. Proactiveness 3. Integral success criteria 4. Value consciousness 5. External support 6. Personal commitment 7. Appropriate means of influence 8. Dealing with conflicts
B. Support for constructive developments	<ol style="list-style-type: none"> 1. Closing gaps 2. Measures for growing together 3. Balance of change and stability
C. Expressing esteem for employees	<ol style="list-style-type: none"> 1. Investing in employees 2. Care for survivors/victims 3. Acceptance of emotions
D. Employee involvement	<ol style="list-style-type: none"> 1. Process transparence 2. Predictability of change measures 3. Participation in decision making

ASSESSMENT OF CHANGE MANAGEMENT IN INSURANCE AUDITS

A procedure was developed for the assessment of change management in an insurance audit which consists of four steps (see figure 5). The first step is a very broad external view on the selected company, which aims at getting a first input about the potential relevance of a planned or ongoing change process in that company. In this step only publicly available data are used. The second step is a more detailed view. It provides the basis for deciding whether to go on with the third step. The size of the change as well as first evaluations regarding the parameters presented in Table 1, raising concerns about potential influences of the change on the company's risk quality, are relevant to that decision.

The third step consists of an audit at the company involving plant visits and interviews with key persons. Along with already existing instruments for the assessment of safety

management (cf. Grote & Künzler, 2000), checklists are to be used which contain for each parameter a number of indicators, each being translated into several questions, see fig 2. The checklist serves the auditor to carry out interviews with different persons responsible for the change process (e.g. plant managers, risk manager, human resource manager, members of the change team). For the parameter "Measures for growing together", e.g. one indicator is the communication and cooperation between different newly created units. One of the questions related to this indicator is e.g. "How are leadership positions in these units filled?" A positive answer to this question could be that leadership positions are filled with members from all the former company units which have been transformed into the new ones. The indicators and questions are tailored to the specific change scenario relevant to the company audited, i.e. mergers & acquisitions, downsizing, and business process reengineering. For the parameter "Integral success criteria", for instance, the size in personnel and money of the safety department(s) before and after a merger is asked about, or specific measures taken to avoid loss of knowledge in the company after downsizing.

The fourth step consists of a questionnaire, see fig 4, which is to be distributed to a representative sample of employees in the audited company in order to complement the expert interviews with perceptions of the change process by the people affected. This fourth step should usually accompany step three.

While step three could also be carried out alone, however, step four should never be taken without step three in order to avoid broad quantitative data being collected without grounding through the in-depth qualitative information obtained in the expert interviews. The parameters and indicators described earlier also served as the basis for the questionnaire, thereby allowing direct comparisons between answers obtained in the interviews and in the employee survey.

The interview checklists could be tested in audits. It was found that the questionnaire was generally accepted by the respondents and overall produced reasonable responses with respect to basic characteristics like spread of responses and amount of missing values.

PRELIMINARY CONCLUSIONS

We are quite confident that the parameters defined are able to capture relevant aspects of change management and help to weaknesses in their change management. Generally it may contribute to raise awareness of companies to the importance of the human element in organizational changes.

Many company proactive in safety matters have already incorporated the organizational change process in their common Management of Change (MOC) procedure. Companies started evaluating formally the potential impact on safety that could result from organizational changes prior to making the changes. Not only major organizational changes such as merger and acquisition, downsizing and BPR but organizational changes of smaller extend such as changes in roles and responsibilities, staffing levels and organizational structure are covered.

In order to study the presumed relationship between change management and safety, however, a number of audits will have to be carried out allowing to measure both the

company's change management and its safety standards, such as compliance with safety management requirements and actual safety indicators like incidents, near misses, and recordable injury rates.

Currently, a project in cooperation with a nuclear inspectorate is underway to use the change management parameters as part of organizational regulations, helping to define standards for appropriate change management within safety management standards.

ACKNOWLEDGEMENTS

We thank our project partners at Swiss Re Risk Engineering Services for financial support as well as for the stimulating and fruitful cooperation.

We thank our project partners at ETH Zürich for the cooperation and endeavor.

REFERENCES

- Boonstra, J.J. & Bennebroek Gravenhorst, K.M. (1998). Power dynamics and organizational change: A comparison of perspectives. *European Journal of Work and Organizational Psychology*, 7, 97-120.
- French, W.L. & Bell, C.H. (1984). *Organization development. Behavioral science interventions for organization improvement* (3rd ed.). Englewood Cliffs, NJ: Prentice-Hall.
- Grote, G. & Künzler, C. (2000). Diagnosis of safety culture in safety management audits. *Safety Science*, 34, 131-150.
- Kets de Vries, M. & Balazs, K. (1997). The downside of downsizing. *Human Relations*, 50, 11-50.
- Müller, S., Brauner, C., Grote, G. & Künzler, C. (1998). *Safety culture - a reflection of risk awareness*. Zürich: Swiss Re Publications.
- Perron, M.J. & Friedlander, R.H. (1996). The effects of downsizing in safety in the CPI/HPI. *Process Safety Progress*, 15, 18-25.
- Rousseau, D.M. & Libuser, C. (1997). Contingent workers in high risk environments. *California Management Review*, 39, 103-123.
- Vahtery, J., Kivimäki, M & Pentti, J. (1997). Effect of organisational downsizing on health of employees. *Lancet*, 350, 1124-1128.