



# SAFETY BULLETIN 34/22

## Human Factor Organisation, Managing Organisational Change

### ASIA INDUSTRIAL GASES ASSOCIATION

No 2 Venture Drive, # 22-28 Vision Exchange, Singapore 608526

Tel: +65 67055642 Fax: +65 68633307

Internet: <http://www.asiaiga.org> LinkedIn profile: <https://www.linkedin.com/company/asiaigaorg>

## Organisation: Managing Organisational Change



Organisational change is defined as change that has an impact on the way that work is performed and has significant effects on staff. This could include changes:

- in the structure, interaction and culture of an organisation;
- to organisational operation, staffing levels and size of a workforce;
- to working hours or practices;
- in the way roles are carried out or responsibilities delegated; or
- to the scope of a role that results in a change to the working situation, structure, terms and conditions or environment.

Organisational change can have an impact irrespective of whether changes are viewed as large or small, often the changes that are considered to be small can result in the largest risks or most severe consequences for safety, health and the environment. Any change of an organisation will have an influence on all other aspects mentioned.

Some common examples of organisational change in business are:

- business process re-engineering;
- delayering;
- introduction of 'self-managed' teams;
- multi-skilling;
- sub-contracting / outsourcing
- mergers, de-mergers and acquisitions;
- downsizing;
- changes to key personnel;
- centralisation or dispersion of functions; or
- changes to communication systems or reporting relationships.

Changes at corporate level as well as site level can have a significant impact on safety at operational level and may include changes to objectives, resources, management systems, available expertise for design, engineering support, and procurement etc.

The processes for managing and approving organisational change outlined in this information sheet should have benefits for all aspects of health, safety and environmental management, and even commercial risks. The outcome of the organisational change has to be risk assessed on HSE aspects.

**Learning more about organisational change.**

Organisations are always changing - is it always a change for the better, or is your company having any of these problems?

**If the answer to any of the questions below is 'no', then you need to take action and look at the change management process in your company**

- |   |   |  |
|---|---|--|
| 1.  | Are there enough people to carry out everyday work, and respond to any unusual or emergency situations?   | <input type="checkbox"/>   |
| 2.  | When employees' jobs are changed, do they get proper training in the new job?   | <input type="checkbox"/>   |
| 3.  | Are there enough people available to supervise all of the contractors working on site?  | <input type="checkbox"/>   |
| 4.  | Are contractors fully integrated with your company but able to maintain contact with their own management?  | <input type="checkbox"/>   |
| 5.  | Does management explain the need for change and consult or involve employees in the change process?   | <input type="checkbox"/>   |
| 6.  | Do systems that worked before the change still work as well after the change (for example, supervision or work permit systems)?   | <input type="checkbox"/>   |
| 7.  | Is the general opinion that recent changes have improved morale (or at least, not lowered morale) and have not unsettled employees?   | <input type="checkbox"/>   |
| 8.  | Do managers ask if the changes are working or whether there are any problems?   | <input type="checkbox"/>   |
| 9.  | Has the company made changes in a way that employees can easily adapt to and cope with?<br>NOTE Although some changes are small, their effect can be cumulative and suddenly, there is a problem.   | <input type="checkbox"/>   |
| 10.   | Where changes are still in progress, are the planned changes clear to all those affected?   | <input type="checkbox"/>   |
| <b>Change management processes must be effective and understood</b> |   |  |
| 11.   | Is there a robust procedure for management of organisational change with: <ul style="list-style-type: none"> <li>• clear objectives?</li> <li>• clear leadership from senior management?</li> <li>• a structured consistent well documented process?</li> <li>• clear communication?</li> </ul>   | <input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/><br><input type="checkbox"/> |
| 12.   | Is there an assessment process that: <ul style="list-style-type: none"> <li>• identifies and maps all changes to both tasks and personnel that could have an impact on health, safety and the environment, no matter how small the change?</li> <li>• is facilitated by well-trained persons independent of the organisation being assessed?</li> </ul>   | <input type="checkbox"/><br><input type="checkbox"/>   |
| 13.   | Does a risk assessment methodology guide assessors to take full, realistic account of the issues affecting human factors? This may include: <ul style="list-style-type: none"> <li>• staffing levels and workload;</li> <li>• training and Competence;</li> <li>• work priorities;</li> <li>• team work and communication;</li> <li>• culture.</li> </ul> | <input type="checkbox"/>   |
| 14.   | Where applicable, are there realistic assessments of the organisation's ability to handle a range of crisis scenarios after the change, including disruptions, escalating incidents and emergencies?  | <input type="checkbox"/>   |
| 15.   | Are all assessments fully participative, ensuring that the knowledge and views of people involved is gathered (including informally held knowledge)?  | <input type="checkbox"/>   |
| 16.   | If contracting out of activities is considered:   |  |

	<ul style="list-style-type: none"> <li>• are risks still managed as if they are part of the business? <input type="checkbox"/></li> <li>• are there arrangements and resources to continue effective control of contractor activities? <input type="checkbox"/></li> <li>• have appropriate performance indicators been selected for signs of degradation of performance? <input type="checkbox"/></li> </ul>
17.	<p>Where required, is there a competence management system to ensure adequate transition arrangements? <input type="checkbox"/></p> <ul style="list-style-type: none"> <li>• Does it include identification of training needs for changed or additional roles, bearing in mind that some key knowledge may not be documented? <input type="checkbox"/></li> <li>• Is there adequate planning for competent cover during the training period? <input type="checkbox"/></li> </ul>
18.	<p>Is there an overall view of site or business-wide requirements for the core technical competencies required to minimize risks, including capacity for engineering and adequate supervision of contractors? <input type="checkbox"/></p>
19.	<p>Is there a mechanism for reviewing decisions, and to ensure that all necessary measures are in place before implementation of change? <input type="checkbox"/></p>
20.	<p>Are there plans to monitor performance indicators well beyond the end of the change? <input type="checkbox"/></p>

### What can we do about it?

#### What can I do about it?

- Ask people, either face to face, or by a questionnaire or survey, to find out what experiences they have had with organisational changes made in their organisation and were the objectives properly communicated.
- Find out especially:
  - if people are feeling overloaded or lack proper training due to a recent or past change;
  - if the use of contractors is a particular issue; and
  - if people believe they were not properly consulted about change.
- Draw the information to the attention of senior management.

#### Management responsibility

When a company has decided it needs to change its organisation, for whatever reason, it must plan the process very carefully and especially, predict and prepare for any possible negative effects on safety, health and environmental management in addition to general business or operational risks.

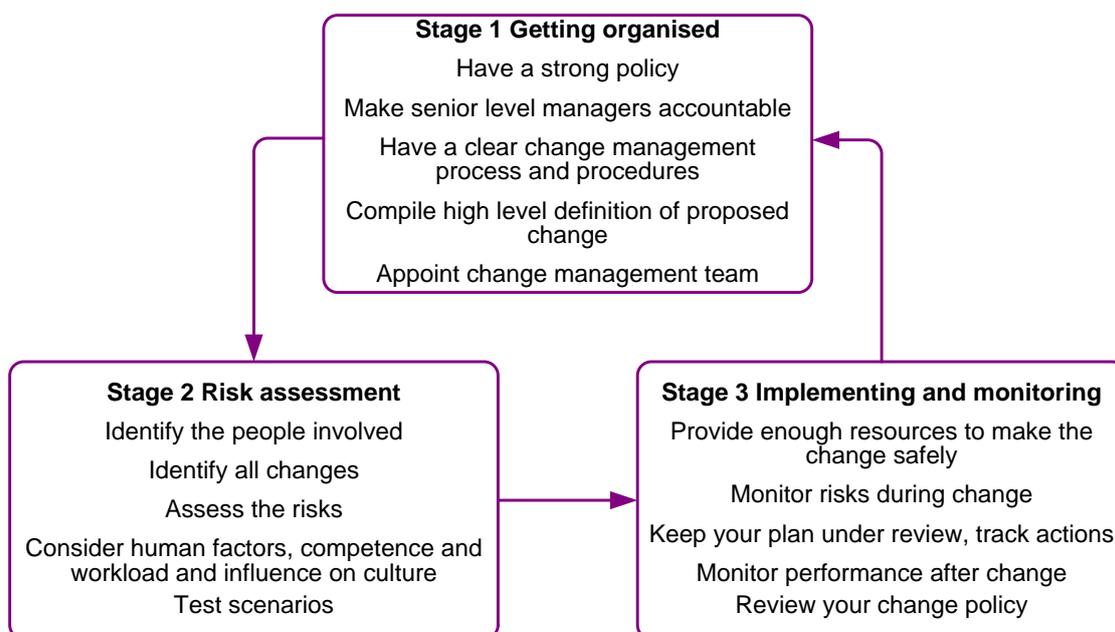
A company that sees a need to make organisational changes should ensure:

- changing the organisation is the right thing to do;
- all potential negative effects on safety (for example, losing skills from the company, lowering morale, overloading employees, losing control of contractors) have been considered;
- the changes will not negatively affect how safety critical and other key tasks are carried out, such as start-up, shutdown, major transitions, emergencies, and maintenance work;
- there are measures in place to counteract any negative consequences;
- It can manage the transition from the existing to the new arrangements (for example by establishing 'hold points' [stopping to review progress and, if necessary, revising the plan]);
- training, procedures or other support systems are provided for the new arrangements;

- changes can be reversed or modified if necessary;
- temporary changes do not exceed their planned time span;
- everyone affected by the change is consulted and their opinions, concerns and suggestions are considered;
- once the change has taken place, information is gathered on the success or otherwise of the new arrangements (for example by interview / discussion, encouraging operators to keep written records, by visiting and observing work in progress, by carefully examining safety related incidents);
- the change management / project team stays together long enough to properly complete the change and to measure and evaluate the effects;
- written records of the change process are kept and lessons learned applied to future organisational change; and
- legal requirements are met both during and on completion of the changes.

### Stages in organisational change management: what to do?

Organisational changes should be managed as projects and in accordance with good project management principles. Effective management of organisational change can be considered in a three-stage process.



In the following sections each stage is summarised and various important topics are covered, which you should address at each stage of the process, together with some simple checklists.

#### Stage 1: Getting organised for change

##### Policy

The organisation should have a clear policy for management of organisational change. This should set out principles, commitments and accountabilities in relation to impact on safety, health and the environment. Ideally all organisational changes, large and small, should be considered to determine whether or not they have direct or indirect impact on safety; even those not obviously or directly connected to safety.

##### Commitment and resources

Although the motivation for the change may be commercial or operational, and not directly concerned with safety, health, and the environment, incident prevention must be regarded as core business, not a side issue. From the outset, senior management should

demonstrate by their actions a clear commitment to safety.

There should be a distinct safety, health, and the environment focus within overall change processes, with positive objectives. Make a senior, highly influential manager the sponsor or champion for this, with responsibility for approval.

They should ensure the safety, health, and the environment aspects of the change receive an appropriate level of resource and attention.

The effort and resource put in must be proportionate to the complexity of the change; the scale of the hazards concerned; and the degree to which the change may impact on the management of major hazards. This can be achieved by categorising changes, with greater importance and a higher level of management approval assigned for categories with a higher impact on safety.

### **Clear systems and responsibilities**

Organisational change should be planned in a thorough, systematic, and realistic way. You should follow a documented and structured procedure for each element of organisational change management. The roles and responsibilities of the change management team must be clear and the stakeholders in the change identified. This is similar to the processes for managing technical or engineering change.

The following should be clear:

- The processes or activities that are to be carried out (to ensure that risks arising from the change are identified, assessed and reduced to as low as is reasonably practicable).
- The processes or procedures to be followed.
- Who is accountable and who is responsible for these activities?
- Who else is to be involved, and how?
- What potential risk factors are to be considered?
- Who is to review and who is to approve the change process, when and how?

All stages of the process should be adequately documented, including all relevant factors, questions, assessments, responses, decisions and reasons for decisions.

This has a number of benefits:

- transparency;
- easier to audit and assess under quality assurance; and
- accountability of decisions and their authorization can be traced.

A clear implementation plan, such as a project plan must be produced and approved at a senior level of management. This should be reviewed on a regular basis. Avoid trying to do too much too quickly and failing to invest adequately in the change process.

### **High Level Definition of Proposed Change**

Having identified that a change is necessary, the first important step for the initiator of the change is to define the primary objectives of the change. This can be accomplished by considering the questions:

- 'Why is this change required?'
- 'What will be achieved by making this change?'

The overall timescale for implementation of the change should also be decided and scheduled at this stage.

- A realistic fixed endpoint reduces uncertainty among those affected by the change and provides reassurance that the transition period is in proportion to the magnitude of the change.

A written record of this high-level definition must be kept by the initiator of the change. This must be passed on to the change manager as soon as that person is appointed.

The initiator should make contact with the communication group at this stage and brief them on details of the proposed change. This will make sure that they sufficiently well-informed to respond to both internal and external queries on the proposals.

## Stage 2: Assessing risks

The key aim of risk assessment is to ensure that following and during the change, the organisation will have the resources (human, time, information etc), competence and motivation to ensure safety without making unrealistic expectations of people.

Two aspects of the change need risk assessment, they are related but different and should not be confused:

- risks and opportunities resulting from the change (where you want to get to); and
- risks arising from the process of change (how you get there);

The first aspect is dealt with in this section; the second is dealt with in Stage 3.

The risk assessment needs to consider potential impacts upon safe operation in the full range of foreseeable conditions and scenarios, as well as:

- all activities required to maintain plant in a safe condition;
- all activities required for a fully functioning health safety and environmental management system;
- all aspects required for major accident prevention or 'process safety' (such as safe design and plant inspections); and
- effective emergency response.

### Assessment procedures

There are two complementary approaches to ensure that the main risks are identified:

- **mapping of tasks, teams and individuals** from the old to the new organisation;
- **scenario assessments** when the reorganization impacts staff who may have a role in handling or responding to crises such as upsets and emergencies.

In both cases it is important that organisations use all of the knowledge and expertise available to them and involve the workforce in the risk assessment process.

### Factors to Consider.

During the assessment consider the following factors:

- **Past experience**, for example previous accidents and incidents, maintenance records, or hours worked to see whether there had been any issues in the existing organisation that can be addressed during the change.
- **Assessing workload**, especially individual workloads in the new organisation. Take into account all required tasks, peaks and troughs.

Overloading can lead to:

- omission or poor execution of safety-related tasks such as plant checks or shift hand-overs; and
- fatigue from working excess hours, leading to reduced reliability, errors, or short cuts.
- **Assessing influence** on culture and interactions
- **Risks from using contractors**, your policy for using contractors needs to be clear

If you plan to contract out work:

- retain adequate resources to closely supervise and monitor the expertise of people employed and the quality and safety of their work;

- remain an 'intelligent customer', in other words retain adequate technical competence to judge whether, and ensure that, work done is of the required quality and safety; and
- have contingency plans to maintain low risks (and not increase risks) should the contractor lose the capacity or willingness to deliver to requirements.

#### **Contractor checklist**

- Avoid erosion of competence in your organisation leading to dependency on contractors and reduced control of risks.
- Contracts and specifications should mention all necessary safety, health and environmental key aspects.
- Ensure your contractors, or their sub-contractors, have the competence or financial resource to undertake work to required levels of safety or quality.
- Monitor your contractors' work; if your resources for monitoring work are low contractors may void compliance with agreed procedures or rules. Conduct regular audits with your contractors.
- Capture and retain essential information and knowledge held, often informally, by the staff that will be lost to the organisation through the use of contractors

#### **Human factors and competence**

Risk assessments should always consider the full range of potential human failure that may follow a change. These include:

- excessive workload;
- lack of competence;
- poor communications;
- deficiencies in team-working;
- conflicting priorities; and
- low morale.

#### **Competence checklist**

- Identify any gaps in skills and knowledge.
- Identify how these gaps will be addressed, for example by reallocation of roles or training.
- Select suitable methods for training and assessment.
- Plan the availability of competent trainers and assessors.
- Plan cover for those involved in training.
- Verify that the training meets requirements.
- Ensure that adequate time and resources are allowed for necessary training prior to implementation of the new organisation.
- Set clear criteria with regard to competence levels to judge when it is safe to implement change.

### **Stage 3: Implementing and**

Having completed the risk assessment, you will have identified whether there will be increased risks following the planned change and what the risks will require actions. It is now important to ensure that the actions identified are planned and carried out successfully during the transition and there must be a clear project plan to achieve this.

The risk assessments should result in action plans and milestones and identify key

## monitoring the change

performance indicators that can be used to monitor the impact of the change process on the management of health, safety and the environment.

This is particularly important where consequences could be subtle or long term, such as reducing maintenance staff.

The actual measures chosen should be specific to the change and the potential risks identified by the assessments, and wherever possible should be 'lead' indicators measuring the control of risks rather than 'lag' indicators of the realisation of risk. Examples include levels of overtime, maintenance backlogs, quality of maintenance, or accidents and incidents frequency.

It is important that plans are carefully reviewed to ensure that exposure to risks is not significantly increased during this time. Even where a planned change involves reducing the workforce, you will usually need to plan for an increase in workload during the transition.

You should:

- Phase changes wherever possible, to prevent loss of control through over-complexity and avoid peaks in workload.
- Ensure that there is adequate cover to allow necessary extra work such as training and writing new procedures.
- Arrange for ample support and/or supervision by competent people for all people who have been assigned to work with an increased safety, health or environmental risk.
- You shall ensure that the change is not hurried through before all necessary new measures are in place and functioning. This means setting clear criteria to determine if risks will be as low as is reasonably practicable at the completion of each phase of the change before proceeding to the next phase.

### Monitoring the change

Measurement should begin before implementation, so that there is meaningful data comparison

Risk assessments and plans for both the transition and progress should be regularly reviewed. You will have set objectives and devised key performance indicators. Periodic, planned reviews should assess whether these have been achieved. Ultimately, be prepared to change the plans or there may be significant risk, however uncomfortable this might be.

### Getting organised checklist

Don't make too many simultaneous changes, resulting in inadequate attention to some or all of the changes.

Don't delay or defer safety issues compared to other aspects considered more pressing, because:

- it is seen as a side issue;
- it is delegated to people with inadequate influence;
- it is not considered early enough in the change process;
- inadequate time or resource is allocated to the assessment;

### Assessment checklist

- Do use the experience of others, don't make mistakes because you haven't consulted.
- Do listen adequately to employees, don't miss or dismiss serious issues hidden among all the natural concerns and complaints.
- Don't rely on arrangements that make unrealistic, over-optimistic assumptions about human performance and reliability.
- Don't staff for normal operation only, be able to respond adequately to foreseeable crises and emergencies.

- teams making decisions are too inward looking;
- there is lack of objectivity;
- objectives are passive, maintaining rather than improving standards;
- appropriate management controls are missing.

- Don't fail to consider realistically the whole workload for people following the change, including extra delegated tasks.
- Do ensure that all key tasks and responsibilities are identified and successfully transferred to the new organisation.
- Don't fail to consider the infrastructure for delivering safe operation

### Useful Reference Information

Unless otherwise specified the latest edition shall apply.

- [1] *Organisational Change*, Human Factors Briefing Note No 3, Energy Institute, [www.publishing.energyinst.org](http://www.publishing.energyinst.org)
- [2] *Organisational Change*, HSE Human Factors Briefing Note No. 11, [www.hse.gov.uk](http://www.hse.gov.uk)
- [3] *Human factors: Inspectors human factors toolkit*, Health and Safety Executive, [www.hse.gov.uk](http://www.hse.gov.uk)
- [4] *Organisational change and major accident hazards*, HSE Chemical Information Sheet No CHIS7, [www.hse.gov.uk](http://www.hse.gov.uk)
- [5] *AIGA SB 32/22, Human Factor – An Overview*, [www.asiaiga.org](http://www.asiaiga.org)
- [6] *AIGA SB 33/22, Human Factor, Organisation Safety Culture*, [www.asiaiga.org](http://www.asiaiga.org)

### Disclaimer

All technical publications of AIGA or under AIGA's name, including Codes of practice, Safety procedures and any other technical information contained in such publications were obtained from sources believed to be reliable and are based on technical information and experience currently available from of AIGA and others at the date of their issuance.

Where AIGA recommends reference to or use of its publications by its members, such reference to or sue of AIGA's publications by its members or third parties are purely voluntary and not binding.

Therefore, AIGA or its members make no guarantee of the results and assume no liability or responsibility in connection with the reference to or use of information or suggestions contained in AIGA's publications.

AIGA has no control whatsoever as regards, performance or non-performance, misinterpretation, proper or improper use of any information or suggestions contain in AIGA's publications by any person or entity (including AIGA members) and AIGA expressly disclaims any liability in connection thereto.

AIGA's publications are subject to periodic review and users are cautioned to obtain the latest edition.

© Reproduced with permission from European Industrial Gases Association. All Rights Reserved.