# Safety Information — Human Factors

Prepared by the Safety Advisory Group WG-16 Worker Safety | Safety Info HF 07/18

## Organisation

## Communications on Safety

Communications are basically 'messages' which can be written, verbal or non-verbal. All messages need to be created, sent and then received. Human or technical problems at any of these stages may mean that the intended receiver of the message fails to take the right action. The quality of communications influences and reflects the company's safety culture.

Companies use many different types of communications for a variety of purposes, some examples are listed below. Important messages are often communicated in several ways to re-enforce and remind of the content.

**General safety communications, e.g.:** Notices, warning signs, posters, memos, gestures, hand signals, manager or supervisor leading structured safety talks in the workplace, observed compliance with safety rules (visible leadership);

**Specific safety communications:** to pass on and to receive information such as lessons learned; communication of actions taken after accidents, audits and risk assessments; responsibilities in job descriptions; safety signage and signals. Includes important safety instructions/training and emergency plans where confirmation of understanding is mandatory.

**Safety meetings**, the records of those meetings and how they are distributed.

**Job-specific communications:** examples include job briefings, 'toolbox talks' and written instructions or procedures with information focussed on job hazards and safety precautions needed. Discussions within teams and between teams (e.g. between team members working on the same job; between operations and maintenance teams, when handing over work from one shift to another). Job briefings before non-routine work is carried out, as part of the issue of safe work permits or confined space entry permits.

**Informal communications:** examples include general discussions and interactions between employees, supervisors and managers, where these include safety issues, discussions about life saving rules and behaviours, leadership behaviours, perceived attitudes of supervisors and leaders.

**Emergency information:** examples include gas or fire alarms, Public Address (PA) messages, team briefings, media statements.

**Safety-critical Instructions:** urgent instructions where it is essential that sender needs confirmation that action has been completed or is made aware of any issue. Examples includes communication with emergency services, communication between crane driver and banksman (see picture).

**The success or effectiveness of any communication depends on whether the intended recipient undertakes the desired action.**

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| **Learning more about communications on safety.**<br>**If the answer to any of the questions below is 'no', then you need to take action** | | |
|---|---|---|
| 1. | Is the workforce actively involved in communications such as by dialogue and consultation rather than being just passive receivers of information? | ☐ |
| 2. | Are the communication channels by which people should raise safety concerns with management clearly understood, used, and is appropriate feedback received? | ☐ |
| 3. | Is there a defined structure for shift handover arrangements? | ☐ |
| 4. | Do employees and contractors know when and how they should report safety concerns? | ☐ |
| 5. | Do employees understand where they can obtain key safety information? | ☐ |
| 6. | Is the successful communication of key aspects of critical procedures assured? | ☐ |
| 7. | Is there a management system to communicate changes in practice and lessons following an incident? | ☐ |
| 8. | Is there evidence that changes to practices, as a result of an incident, are understood by affected employees and contractors? | ☐ |
| 9. | Has the company implemented ways to communicate relevant major hazard information to permanent and temporary employees, contractors, visitors and neighbours and to monitor the effectiveness of those communications? | ☐ |
| 10. | Have communication methods been considered in defining the leadership structure during emergencies and normal business? | ☐ |
| 11. | Is there a process to ensure that modifications, changes to processes, procedures, systems and organisation are communicated to all relevant employees and contractors? | ☐ |
| 12. | Can employees describe the safety implications relevant to their role, of any recent changes to the plant? | ☐ |
| 13. | Is there a process to review the communications routes following plant /organisational change? | ☐ |

## What can go wrong?

Ineffective or unreliable communications can result from a variety of problems including:

- missing information;
- unnecessary information;
- inaccurate information;
- poor or variable quality of information;
- misunderstandings;
- translation errors, and
- failing to carry forward information over successive shifts.

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## What can we do about it?

### Understanding communication

Much of human factors is about communication. It is clear that accurate and timely communications are important for safety and efficiency in work. In order to perform a task properly anyone needs to have acquired the correct knowledge, training and understanding.

Part of the process of selecting personnel is an interview in which existing skills and experience will be discussed. This is a communication process exploring the skills and knowledge that potential employees and contractors already have.

Training is a form of communication. First, it involves finding out what training is required, then passing new information to personnel to improve their skills and knowledge.

When work starts, specific issues about each job should be described in tool-box talks and in the procedures used. Both should emphasise health and safety issues.

Pre-job discussions identifying overlapping activities and the possible safety effect on others nearby are especially important on construction sites.In the workplace, displays, signs and labels communicate factual and safety information.

Nowadays most people will need to use several technology platforms, i.e. (smart-) phones, internet voice/video communications, net-meetings, e-mail, radios or intercoms, to contact others. Each have specific advantages and issues.

Safety concerns arising in the workplace will need to be communicated via a reporting system.

**All of these are communication issues: they are also human factors issues.**

### What can Managers do about it?

Management should provide adequate resources to that all kinds of safety communications can be delivered effectively.

Where there is evidence that key messages are not being received, understood or acted upon, then the company should investigate and address any identified barriers to effective communication. Remember that messages need to be created well, sent – to the target audience, via appropriate method, transmitted accurately - and then received correctly at the right time.

To do this management must regularly review communication strategies and implement methods to evaluate effectiveness of key safety communications

Managers should ensure that:

- Managers and supervisors regularly discuss safety with employees face to face
- Formal safety information: posters, talks and presentations, newsletters, memos, e-mails, etc are:
    - clear and easy to understand
    - short and to-the-point
    - regularly updated.

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- Tasks are scheduled so that there is adequate time for job-specific communications.
- Communications specialists are engaged for widespread or important safety communications.
- Communications equipment – such as radios, intercoms, PA, (smart-)phones, email & net-meeting platforms – are fit for purpose.
- Systems of effective communication are available for use in unusual situations such as bad weather conditions or during emergencies.
- Excessive background noise in the workplace does not interfere with critical voice communications or audible alarms.
- Systems are in place to check that safety-critical information has been received and understood. (e.g. using repeat-back, confirmation or note in shift logbook)
- There is a specific focus on effective communication of safety aspects at shift handover.
- Systems of effective communication are available for use in unusual situations or emergencies.
- Different groups – such as operations and maintenance, employees and contractors, – communicate well with each other. A manager should talk to these different groups on a regular basis to check their understanding.
- Employees understand the communication needs of all tasks they are required to perform - whether normal operations, non-routine tasks, maintenance, fault diagnosis or emergency tasks.
- Employees are regularly trained and assessed in key aspects of safety communications (e.g. terminology used; hand signals, how to use communication equipment and computer based information)
- Employees are able to contact supervisors or managers at any time ('open door' policy) and have the means to report problems and receive feedback in good time
- Employees see managers and supervisors on site demonstrating their commitment to work quality and safety.

**Shift handovers**

Management should ensure that:

- Where possible, tasks are scheduled to be completed within a shift so that there is no need for handover
- Clear procedures or written guidance are in place describing the key information to be exchanged and how this should be done (e.g. word of mouth, in writing, use of computer systems etc.)
- Handovers are face-to-face wherever possible allowing crews to question each other

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- Time is scheduled for handovers, so that shift leaders are not distracted by time pressure
- Handover procedures take into account higher risk periods, e.g. when there are many work permits issued, during lengthy maintenance campaigns, after long periods of personnel absence.
- Handover procedures take into account periods when safety systems may be overridden, e.g. start-up of continuously operating plant, during unscheduled maintenance
- Employees are competent and confident in the handover process
- Regular and thorough monitoring and auditing of the effectiveness of shift handovers is conducted
- Employees who conduct handovers are engaged in the critical review and improvement of these shift handover practices
- Information from incidents and accidents due to shift handover problems are brought to the attention of employees on shift.

## Improving Communication

A number of simple steps can improve communications in the workplace:

- Carefully specify what key information needs to be communicated;
- Eliminate the transmission of unnecessary information;
- Use aids (such as logs, screenshots, photographs, computer displays) based on the key information needs to help accurate communication;
- Aim to repeat the key information using different communication channels, e.g. use written, verbal and non-verbal communication;
- Allow sufficient time for communication, particularly at shift handover;
- Encourage two-way communication so that both the sender and recipient of information taking responsibility for accurate communication;
- Encourage requests for confirmation, clarification and repetition;
- Encourage face-to-face communication wherever feasible; recognize that video can help if in person face to face is not possible; voice communication by phone, radio or internet is often more effective than written messaging.
- Develop the communication skills of all employees in all relevant media; and
- share best practices for effective and safe communication.

**Useful Reference Information**

1. Institute of Petroleum, Communications, Human Factors Briefing Notes No 10, 2003.
2. Health and Safety Executive, Safety-Critical Communications, HSE Human Factors Briefing Note No 8.
3. Health and Safety Executive, HSE Human Factors Toolkit, June 2004.
4. Health and Safety Executive, Reducing Error and Influencing Behaviour, HSG48, 2007, HSE Books ISBN 978-0-7176-2452-2
5. EIGA, Design and Effectiveness of Procedures, Human Factors Safety Information Sheet 04/17

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