

Culture in context

■ IN November's HSW we looked at different methods of measuring safety culture, concentrating on questionnaire-based software tools (www.healthandsafetyatwork.com/hsw/cultural-barometers).

But gathering data about your organisation's safety culture isn't an end in itself. Let's assume you have collected the data on your workforce's attitude to safety and what employees think of your own safety provision; what are you going to do with them?

If you are using a benchmarked safety culture measurement the results may give you a score which tells you if you're doing better or worse than other organisations in each area of safety culture. That gives you a sense of where you rank in your area or sector, but on its own it still won't help you to develop your safety culture.

An evaluation of the original HSE safety climate tool (SCT) by The Keil Centre in 2002 (www.hse.gov.uk/research/rrpdf/rr042.pdf) identified that one of the prob-

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It is probably fair to say that this comment applies to the results of any large survey, whether they are presented as numbers in a spreadsheet, as graphs or as text.

One of the eternal problems with questionnaires is that they are often used to provide an answer without any idea of the question being asked (see www.lexisurl.com/hsw_question). If an organisation starts without knowing the question, it will be hard to know what to do with the

The GSK experience

The environment, health and safety (EHS) team at the GlaxoSmithKline (GSK) site in Irvine, Scotland, had their problem defined for them by a process safety accident in March 2006, when a 4500-litre reactor vessel exploded, badly injuring two operators.

A few months earlier the team had used the SCT with a good response rate of around 60%, but they were still in the process of sifting the results when the accident happened.

"Before the accident, we didn't really know what the [safety climate tool] results were telling us," admits Phil Wilson, EHS and risk manager for GSK.

Wilson brought in consultants from The Keil Centre who used several other inputs to support the HSE SCT results. The researchers used:

- the investigation report following the 2006 accident, which considered both the technical aspects of the chain of events from root cause to explosion, and the positive and negative safety behaviours with particular relevance to the explosion
- critical-incident interviews, where interviewees identified incidents they have witnessed or experienced which led to a good or poor safety performance. Incidents could include accidents or near-misses, but interviewees were also encouraged to describe behaviours or conversations which supported or undermined safety behaviour
- the repertory grid technique, where workers were asked to think about effective and ineffective managers and supervisors, and describe each person's attributes
- research on safety behaviour, including use of the Safety Culture Maturity model (www.hse.gov.uk/research/otodf/2000/oto0049.pdf).

Bridget Leathley draws on examples from GlaxoSmithKline, Pilkington and Rolls-Royce to show where safety culture surveys can fit into change programmes



This extra work, on top of the results of its own safety culture survey, gave the GSK EHS team a better perspective on the plant's problem and an idea of what to do next.

The result was new health and safety behavioural standards for all staff. The EHS staff explained the required behaviours to each group and emphasised to managers and supervisors the importance of their modelling the behaviour to the workforce. They used workshops, discussions and presentations, including personal messages from the two people injured in the explosion. They helped individuals and teams to develop team action plans and individual commitments which were followed up over the next weeks and months. Managers and supervisors received 360° feedback so that they could understand how their subordinates perceived their health and safety behaviour.

After two years of running its behavioural change programme, GSK Irvine

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re-ran the questions from the HSE safety climate tool in 2008 and recorded improved scores for all areas of safety culture measured by the tool. But it was also apparent that the drive to improve safety was slowing down so, in 2009, a full-time culture change champion was appointed from the workforce to maintain the momentum.

In 2010, measures against the Safety Culture Maturity® model showed progress. These measures correlate well with traditional performance indicators. Since the safety culture improvement initiative, the GSK Irvine site has reported its longest period without a lost time incident and has raised the rating in its environmental spill index.

Insights from Rolls-Royce

Andy Rogers, group head of health and safety management at Rolls-Royce, knew there was a culture problem at one of his overseas assembly sites. He had seen the audit reports and knew from the detail of the accidents and incidents that compliance with procedures was a key issue, with employees cutting corners. He spent two days making observations of the workforce to see what was really happening.

"I didn't need the safety climate tool to tell me what the problems were," Rogers explains. "But I did need to steer the site management towards discovering the problem for themselves."

He gained the support of the site's safety representatives, and they volunteered to take paper copies of translations of the questions in the climate tool [taken over by the HSL from the HSE] around the site, achieving an almost 100% response rate. Rogers says the summary results for each factor confirmed his belief that the biggest problem by far was employees not following procedures. He was able to direct the site management towards these results, rather than baffling them with dozens of other less useful findings.

"The graphs enabled me to say to the site management 'look, you have a problem, and this is where it is'," he says. "They

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needed to sit down with their employees to work through the procedures and find out why people were cutting corners."

One finding was that some of the health and safety rules were not practical. If everyone agrees it's all right to ignore one rule, very quickly the value of all of them is undermined. Safe procedures have to reflect what it is practical to do if they are to be followed.

The local management were keen to re-measure their safety culture almost as soon as the new procedures had been put in place, but Rogers recommended they wait to allow the changes to take effect. "If things don't *feel* better but you measure anyway, and the survey says culture has improved, what's the point of that?" he asks.

Glass manufacturer Pilkington has a well-established behavioural safety scheme which uses a safety culture tool as an integral part of the programme.

"When a behavioural safety intervention is planned at any of our sites around the world, it is usually because the EHS team has already identified a problem that needs to be tackled," says Dave Donkin, health and safety manager in Pilkington's head office Global EHS group.

Heart of glass

The culture survey results help to focus on the problem, and provide an internal benchmark for improvement. Donkin has found that for most Pilkington sites the answers to just 10 of the HSL's 43 questions will give him the information he needs. He finds it straightforward to concentrate on the summary results for each of these 10. The employees still complete all 43 questions but "we tend to ignore the other 33 unless something unexpected turns up," he says.

Pilkington staff are given time away from the workplace to complete the survey, resulting in response rates of up to 90%. Management and employees attend culture change workshops, which help to understand the SCT results, work out what needs to be done to improve safety culture, and importantly, to help increase engagement with the behavioural safety process.

One finding from the SCT had been that the workforce did not feel that management were committed to safety. This was borne out in the workshop discussions; supervisors and managers rarely spoke to their teams about health and safety, and appeared to turn a blind eye to unsafe behaviour, because they were often afraid of the response they might get if they appeared to criticise someone's unsafe practice.

Role playing, skills practice and discussions were used to train managers, supervisors and other workforce volunteers to make "non-confrontational behavioural observations". Safe and unsafe acts (SUSA) were identified, and targets were set for the number of SUSA observations per month. SUSA observers were encouraged to recognise safe behaviours and point them out, as well as unsafe behaviours.

Donkin says the results of the behavioural safety interventions at Pilkington have been positive, with improvements in the scores given by the climate tool correlating strongly with reductions in accident and lost-time injuries and also with increased scores in health and safety audits. Note the use here again of more than one measure; Donkin does not rely solely on the SCT results. The SCT tells him the safety culture is moving in the right direction, but he also needs to know that this is having an impact on health and safety performance.

These are good examples of how safety culture measures can fit into a wider drive

to improve standards. They also show the importance of knowing which data to concentrate on. This isn't always self-evident.

Say you were starting with the question "Why is our RIDDOR accident total going up?" Before looking at the statistical results of your safety culture measurement tool in detail, you'd need to look at the factors it measures, and these differ from tool to tool. For example, using the RSSB Safety Culture Toolkit you might decide that risk-taking behaviours, workmates' influence and training are the most likely factors to affect accident rates.

If you were using the HSL safety climate tool you might pick out health and safety oriented behaviours, peer group attitudes and engagement in health and safety for further analysis.

Analysis and discussion of these results will help you to identify underlying problems, and focus on what needs to change. This usually provides the foundations of an intervention to be piloted on one site for around a year. If after the pilot, things seem to have improved — accident numbers are on a downward trend — you can run the culture tool again. This time you can look at whether the results are better than the same site before the intervention and how they compare with other sites.

What you are trying to achieve when using a safety climate/culture tool — the question you are trying to answer — should influence your choice of tool.

If you think that communication is a problem make sure the tool looks at communication at each level in the organisation; if you believe people are cutting corners with procedures ensure the tool looks at how they perceive the procedures.

We covered the characteristics of the various tools available in the UK in the earlier HSW article.

Like the organisations in our case studies, you will need to collect additional information, from accident and incident investigations, audit reports and observations, workshops, and from the outcomes of previous inspections and site walk-throughs.

Once you have collected your data, you can spend more time on the results you are interested in, and use these as the basis for further information collection in order to decide how to improve safety culture. Then run your improvement programme. Hopefully, within a couple of years things will "feel" better. Use the same tool to measure against your baseline.

There may be no end to this process. Measurement of safety culture has to be part of a commitment to sustained improvement, not a box-ticking exercise. Measuring it, and even discovering that you're as good as anyone else in your industry, is not enough. ■