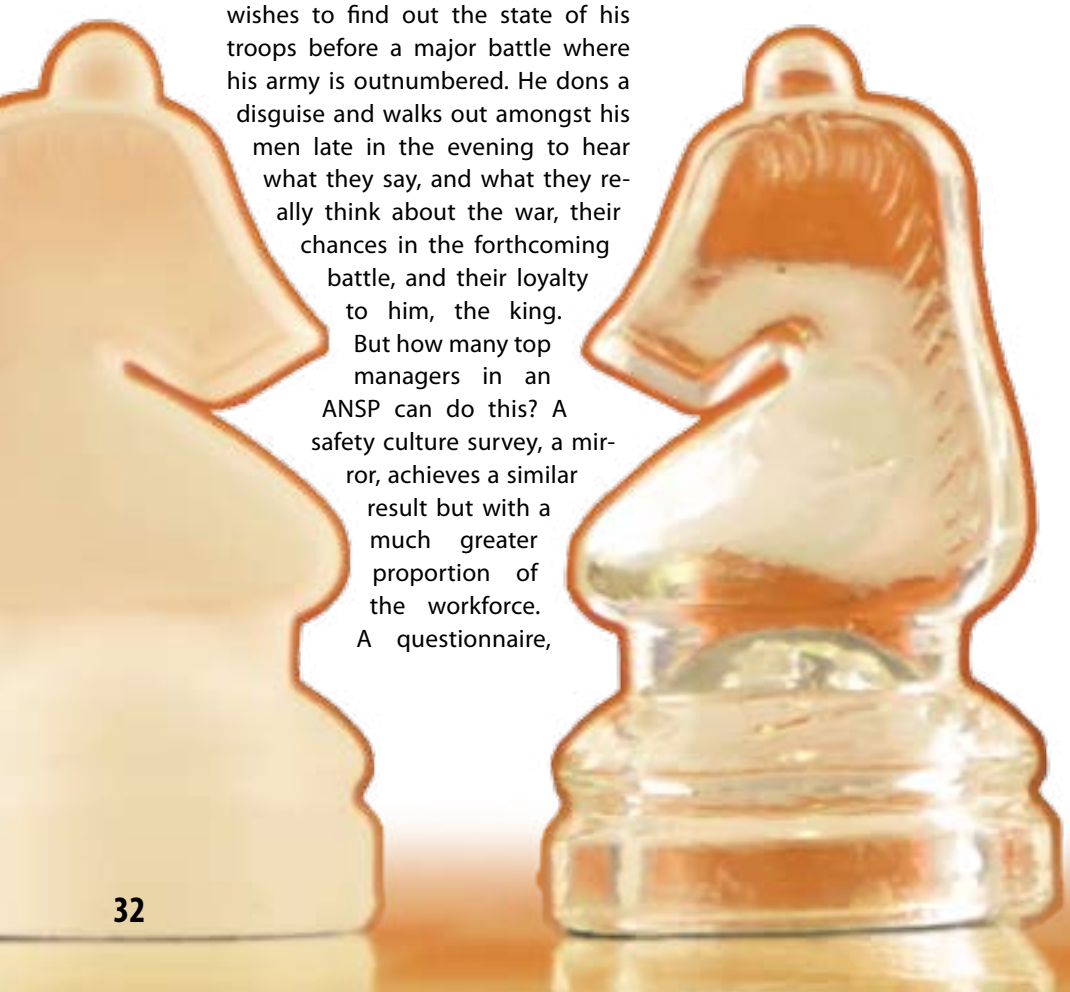
Through the looking glass: inside ATM safety culture surveys

In Europe in the past half-decade, twelve ANSPs have gone through a safety culture survey process, eight of them with EUROCONTROL. This process is about finding out where safety culture is strong, where it is weak, and how to improve safety culture in the weak areas.
By Barry Kirwan

The process is basically one of reflection, assisted by an outside agency. A safety culture survey is therefore something like a mirror – it is an opportunity to see your organisation the way an informed outsider might see it. So, how does it look so far from the other side of the mirror? `

Mirror, mirror, on the wall…

In Shakespeare's Henry V, the king wishes to find out the state of his troops before a major battle where his army is outnumbered. He dons a disguise and walks out amongst his men late in the evening to hear what they say, and what they really think about the war, their chances in the forthcoming battle, and their loyalty to him, the king. But how many top managers in an ANSP can do this? A safety culture survey, a mirror, achieves a similar result but with a much greater proportion of the workforce. A questionnaire, anonymously filled out by at least thirty per cent of the target audience of an ANSP, followed up by a series of workshops and focus groups, equally anonymous, where people are allowed to voice their opinions, but also are asked for supporting evidence by way of examples, can lead to a rich picture of an organisation's safety culture. However, as we all know, particularly as we get older, everything we see in a mirror is not always to our liking.



Most organisations nevertheless react positively to the picture they receive. This is helped by the fact that every ANSP so far analysed has had strong safety culture 'assets', in particular a sincere commitment to safety running throughout the organisation; effectively the whole industry appears to be permeated by a professional commitment to safety, irrespective of national cultural traits. This is something ATM should be proud of, because not all industries see this in their surveys.

There are inevitably blemishes in the reflections which ANSPs see. Some common ones are not that surprising given the pressures on ATM at the moment:

- a conflict between 'productivity' (shifting aircraft; delivering an excellent service to pilots) and safety risks;
- difficulties in keeping on top of safety during periods of significant change and system upgrades;
- problems in learning from incident reports fast enough;
- concerns over the right allocation of resources for safety,
- difficulties in dealing with regulatory authorities, many of which are relatively inexperienced with ATM regulation.
- safety in teams being handled in uneven or non-optimal ways

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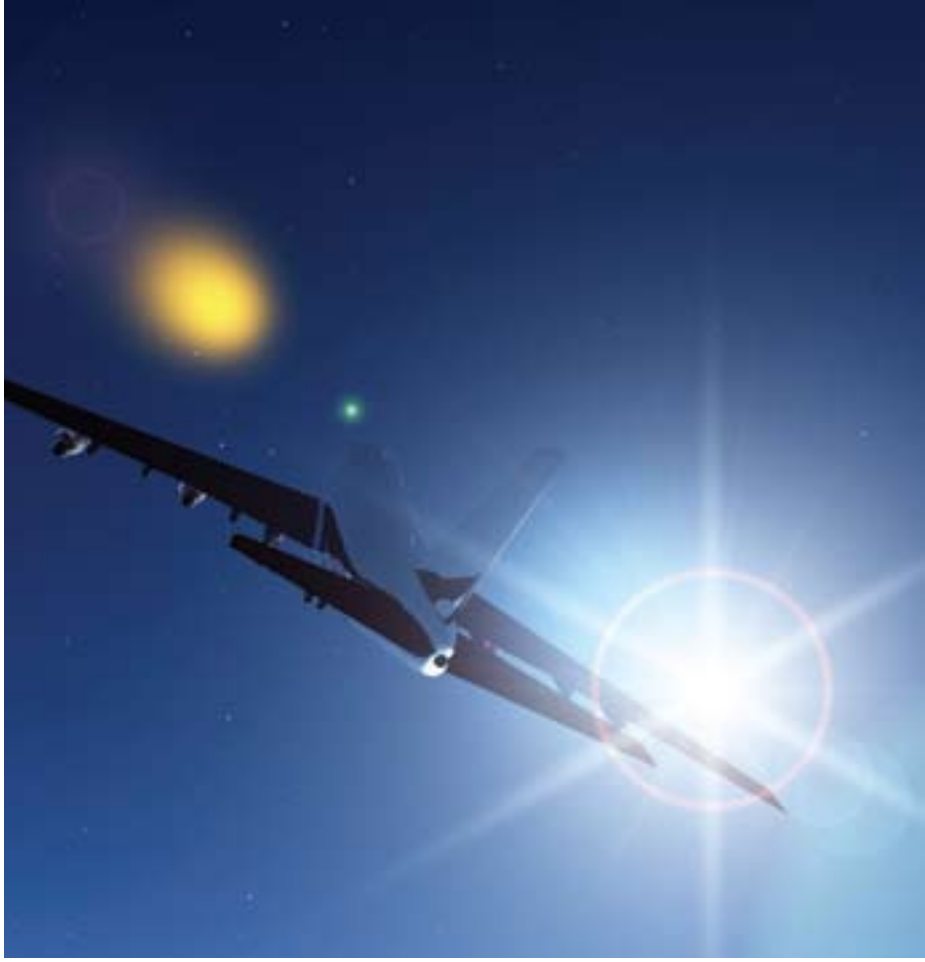
Additionally, there are typical issues that arise in most organisations, whether inside or outside ATM: issues of trust between the 'shop floor' (Operations and Engineering) and management; and also perceived communication problems. Sometimes this is actually too much information, so that key messages are lost or diluted; alternatively communication can be seen as too uni-directional (top-down) without the reciprocal bottom-up channels.

So what? These are just perceptions, right?

It is important, when considering such results and insights to answer the 'Well, so what?' question; after all, these are just perceptions, right? Let's tackle the second one first. Everything we do is based on perceptions, and our interpretation of them. . If you are in a meeting and being told something by someone, but the way they say it – their body language the language they use, things you've heard from others, and your entire experience up to this point in time – makes you think they are lying, do you take what they say at face value? Which do you trust more – your own perception and judgement, or what someone says? Let's take a non-ATM example: during a difficult and potentially dangerous technical problem a nuclear power plant control room operator shuts down the reactor to be on the safe side. After the event, it becomes clear that there was not really a serious risk. What happens to the operator? Does he get fired for costing the company in excess of a million euros during the week-long shutdown? This scenario played out some years ago in the UK. Everyone held their breath in the day after the expensive, unplanned shutdown, waiting to see what would happen to the understandably nervous operator. Eventually the CEO sent a message to the operator. Did he fire him? No. Did he admonish him? No. He actually thanked him for taking the safe course of action. Cynics (aka realists) will point out that this was a smart CEO. But does it matter? If he had fired the operator, a negative safety culture message would have shot through the company, and next time there was a similar situation with real risk, the operator could well have made the wrong decision.

'Everyone knows about some accident just waiting to happen'.

Now back to the first question – *so what?* This can be elaborated as follows: do these identified issues, assuming we believe them, lead to actual safety risks, e.g. the increased likelihood of a mid-air collision or runway collision? This is something that the EUROCONTROL people doing surveys focus on a lot, particularly in the workshops, and also in the final write-up of the report to the ANSPs when specifying recommendations for improvement. One of our questions, actually borrowed from the FAA's safety culture approach, is as follows: 'Everyone knows about some accident just waiting to happen'. First thing we do is check with the focus groups, if this one had more than 25% of people agreeing with it, what did they actually mean, because sometimes they mean simply that they are aware of the risks – it's part of their job. However, sometimes they mean, yes, we think an accident is imminent.



Through the looking glass: inside ATM safety culture surveys cont'd)

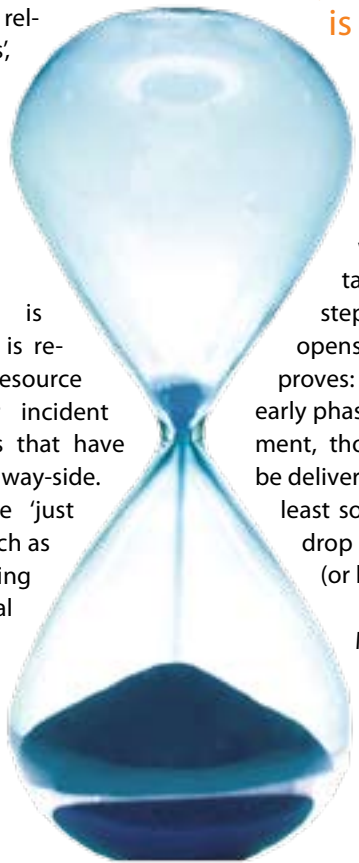
There's a hotspot they're very nervous about. So we ask the obvious questions: *what type of accident? Where would it occur? How would it occur? What is being done about it?* The 'evidence' we get back is anecdotal, but the ANSP can at least judge whether it sounds reasonable, and then check it out.

Conflicts between productivity and safety are common, but again we ask for examples, e.g. short-cuts in procedures or minor rule violations, or controllers working without any effective 'plan B', so that if anything deviates they are on a fast-track to a separation loss. Equivalent issues can arise with engineers, who are often under significant schedule pressures, and so they sometimes cut safety corners accordingly. Similarly, problems in learning fast enough from incidents mean that incident patterns will recur, and more generally incident investigators and safety sections will be kept on the 'back foot', always reacting to incidents and trying to play 'catch-up', rather than being able to stay ahead of the game, anticipating events and putting in measures before nasty trends are allowed to manifest as accidents. Again, problems of (mis)trust between different layers or departments, or between different regions in a country, lead to ineffective transfer of (safety) information and learning in the organisation. Imagine if different parts of your own body decided not to get along – just how difficult would that be?

Okay, but you can't change safety culture, can you?

The second implication of the 'so what?' question is definitely harder to answer, and can be paraphrased as follows: so what, you can't change an organisation's safety culture! Well, I'd have to admit that compelling evidence for successful changes in safety culture is thin on the ground, and what evidence exists suggests this is no overnight process, taking long time-scales, possibly years to have a major change. But are we looking for a major change? Usually not. Some of our recommendations following surveys – and they differ for each ANSP, though there are commonalities – can offer relatively 'quick wins', items which can be addressed or corrected in a timescale of months rather than years.

Communications is one of these, as is reinstating Team Resource Management or incident learning sessions that have fallen by the way-side. Where there are 'just culture' issues, such as supervisors varying in how they deal with controllers have had an incident, re-training and peer focus groups can lead to rapid results. Similarly, confusion over the role, scope and working arrangements of safety groups (a common issue, incidentally) can be addressed fairly quickly. Safety reporting can usually be improved within a year if there is management will to do so.



Okay, so how long is this going to take?

The more thorny issues, such as perceived imminent accident threats, productivity-safety conflicts, and lack of trust within the organisation may take longer, but once the first steps are taken – once dialogue opens – the picture already improves: intent is all-important in the early phase of safety culture improvement, though tangible results must be delivered within about a year on at least some issues, or else trust will drop back to its previous levels (or lower).

Most ANSPs develop a strategic safety action plan

Our formal agenda is to help another sixteen ANSPs go through the process in the next four years

to address the safety culture issues raised, whether they adopt the recommendations arising from the survey, or decide to implement alternative solutions. Then comes the 'long haul' of maintaining the momentum and commitment at all levels in the organisation (particularly the top level, as the management board hold the 'purse strings'). The next brave step, after having implemented improvement measures for a few years, is to carry out a second survey to see if safety culture has improved. Of the EUROCONTROL-analysed ANSPs, the first one has now reached this point, and has improved, and a second ANSP will go through its second round at the end of the year.

The good news is that we've just (June 09) got the results of an ANSP who has now done the survey twice, and put a lot of effort into safety in–between the two surveys. There have been large improvements in key areas. We're still working on the data, but it looks really promising.

On the bright side…

All the organisations we've worked with so far have been professional and accommodating in making these surveys work. People have also been honest, surprisingly so in some cases. We never know what we will find when we start these surveys, but usually by the time we reach the workshops we are sure that we are getting to the hot-spots in safety culture, sometimes resulting in 'hot discussions' where people argue passionately about safety. We see people already committed to safety wanting to do a better job of safety. This passion for safety is always rewarding in itself, and we try to help the organisation see how best to channel it to get the best results.

Our formal agenda is to help another sixteen ANSPs go through the process in the next four years, and ideally, we'd like to see (as would CANSO, by the way) every European State undertake a Survey, with or without EUROCONTROL.

One more thing…

If anyone says *'maybe with this current economic crisis, now is not the right time to look at our safety culture'* – please correct them, because economic pressure challenges even good safety cultures, so it is exactly the time to address an organisation's safety culture.

Someone else's mirror…

I recently visited a nuclear power company (safety culture 'started' in nuclear power, following the Chernobyl accident in 1986), and I spotted a safety culture poster on the wall. Below is what I had time to write down. Food for thought… ■