

# safety bulletin

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# OM – treating their OIRs



At the end of last year, when my colleague Thomas Schneiter left the department, I had the chance to “take over” the responsibility within SRO to treat the OIRs from the regional and military aerodromes as well as ADDC – until we have found a new member of staff. This new member was eventually found – Monika Baumgarten – and the date of commencing her new job with us was set to February 2011. During these three months, I all of a sudden had to deal with different problems, needs, requirements, and documents. Not that I was unfamiliar with this field entirely, but a lot of it was still new...!

When I receive an OIR, I read it and try to understand it. Mostly I succeed. However, there are times when I do need some more information in order for the OIR to make sense to me. Sometimes a case even “is not as it initially looks”. In my head, the case – the situation – needs to develop. Therefore, I am very grateful to receive the necessary information

after I sent out e-mails with my questions, and thanks to the wonderful staff at OM, I usually receive the missing pieces in no time at all! Thus, I would like to take the opportunity to say: **thank you** all for your cooperation!

Our new member of staff finally was welcomed in February 2011, meaning our team was complete again. For several reasons our department offered me the opportunity to “keep” the OM part, rather than doing another swap-over again.

Interaction with the ATCOs is important to me. Providing feedback is part of it. We are working on improving this feedback process as unfortunately, an instant feedback is not possible on every single case, and some of the incidents require intense investigation (operational/technical). In a monthly review of the cases, we (SR, SRO, SRT, Safety Domain Managers and ATCO Investigators) discuss the open items, and provide feedback of what has been done/solved/initiated and fixed.

What is also important to me is to put a face to a name (no, skyguide’s who-is-who does not do the trick...). I am trying to visit all the aerodromes in order to meet the ATCOs as well as technicians and superiors, talk to them and find out what they have to deal with on an everyday basis. So far, I have been able to visit a few aerodromes as well as the ADDC, and I hope to meet many more of you in the near future.

Yours truly,

*KARIN HEPWORTH  
SRO*

# What happens to your Safety reports?

## Some news about our internal Safety Improvement process

There is no Safety without improvement. Thus, it is important for a company like skyguide to develop its ability to hear and interpret the “safety signals” sent everyday by its surrounding ATM-System. But this is far from being an easy task. The purpose of this article is to explore the means available to do so, discuss the problems associated with them and inform you about the changes which are currently ongoing and planned in this domain.

### Internal reporting system

Several years ago, our company has put in place an internal Safety reporting system which allows everybody to report Safety relevant issues. This system is based on two distinct pillars: a mandatory and a voluntary reporting process. While the former is mainly used by Air Traffic Controllers to report operational situations via OIRs, the latter can be used by everybody within the company to inform – via SIRs – about broader Safety concerns. These reports are collected by the Safety Reporting and Investigation division (SR) and systematically *de-identified* before being further processed. The aim of this protective process consists in removing any informa-

tion that could make the identity of the reporter known by the addressees. Thus, the company will concentrate on understanding and improving the reported issue without falling into the trap of judging individual behavior.

### Confidentiality put in question

The protective mechanisms anchored in our reporting system raise increasing concerns within managerial instances who openly started to question its utility. In this respect – and without opening here a large debate – I would like to draw your attention on the fact that the protection of reporters is at the root of a “just” Safety Culture, is necessary to maintain a high rate of reporting and is also part of our legal obligations. So we should be very careful before alleviating these confidentiality barriers on the sole basis of the argument that our Safety culture has become mature enough. But more on this in the coming months ...

### Managing the information flow

So let’s come back to your Safety Reports (OIRs and SIRs). They contain a large amount of information which should be handled in such a manner that effective



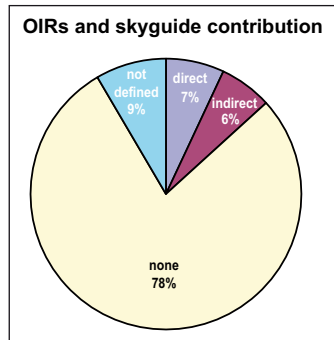
Picture 1: to be reported by SIR!



Picture 2: to be reported by OIR!

► **What happens to your Safety reports?**

Safety Improvement Measures can be proposed and implemented as a result. The current procedure applicable to OIRs consists in transforming each report into a “First information” which contains additional data (like for instance radar plots) and to forward it to the concerned units – with the hope that something will be done about the problem. To be noted that some of these reports are also transformed into so-called ATIRs and forwarded to FOCA and AAIB in response to the legal obligation we have to declare certain categories of events (like for instance Separation Minima Infringements or Runway Incursions). The way to handle your voluntary reports (SIRs) is slightly different. They are assigned to persons of contact (SPOCs) nominated within the operational and technical departments who analyze the reported issue and propose a solution to the problem (if any) in close cooperation with the concerned units. Moreover, in order to make sure that the agreed corrective measures make sense in a global perspective and are effectively implemented, a SIR Panel has been established and given the task to act as an overall coordination and supervisory instance. So far so good.



Picture 3: skyguide’s contribution for OIRs reported from beginning 2010 until September 2011 (1894 reports)

**So where is the problem?**

To answer this question, let’s start with some numbers: in 2010 the Safety Department received a total of 1038 OIRs and 65 SIRs which were systematically treated by its Geneva and Zürich RIT offices. At first sight, this huge amount of information can be considered very precious material for those in charge of improving Safety. But is that really so? In fact, a closer look at these reports reveals a very interesting fact (see picture 3)

First, about 80% of the OIRs are pointing towards the outside. Put differently, they emphasize situations where airspace users or local stakeholders did not behave as expected. This is good to know but very difficult to address effec-

tively since the corrective measures are usually not within skyguide’s managerial control. This is why these cases are handed-over to FOCA with hope that something will be done “up there”. But at the level of our company, we would be much more interested in knowing about problems like for instance deviations from prescribed procedures, cognitive limitations, conflicting goals or business pressures. Unfortunately, these are very rarely reported. And there are good reasons for this; the main one being that our legal system is currently not able to efficiently protect individuals who honestly disclosed what happened to them. Second, our attempt to treat each report in isolation from the others impeaches us to “read between the lines” and to discover what the system as a whole is trying to tell us. Indeed, some cases clearly need punctual treatment but in general, we should develop further our ability to draw recurrent “patterns” from a collection of reports. This would allow us to draw the attention of our top-management on broader Safety problems instead of bothering them with numerous isolated events. Third and finally, we have developed a Safety Performance measuring scheme which creates steady confrontation between

Safety experts who recommend improvement and line managers who “resist” with usually good arguments – this despite the fact that Key Performance Indicators (KPIs) have been formally linked to their incentive plan. As a result, few improvement measures are effectively put in place in response to the many reports we receive.

**What has been done so far?**

In the light of the problems mentioned above, it has become clear within the Safety Department that the current way of handling your reports was in need for improvement. Hence, since April this year, the Safety Reporting and Investigation division (SR) has put in place the following immediate measures:

1. From April this year, the quarterly SIR Panel meetings have been replaced by regional monthly reviews at the occasion of which all OIRs and SIRs reported during the preceding month are discussed in a broader perspective and corrective actions agreed in cooperation with all involved parties. To be noted that these reviews involve both Safety experts and active controllers from the various operational units.

► What happens to your Safety reports?

- 2. The role of our Domain Managers Safety has been clarified in the sense that they represent their respective line managers in the process of negotiating corrective measures and are in charge of tracking their implementation.
- 3. Feedback to the report originators is now provided in a more systematic manner since the monthly review meetings are also used to discuss the information to be given in return.
- 4. In a consistent manner with what precedes, the SIRs are now directly assigned to the concerned Domain Managers Safety, except for the technical department where this function does not exist. In that particular case, it has been agreed that the formerly designed technical SPOC (Jean-Pierre Lambert) will remain in charge and that quarterly dedicated review meeting will be conducted with him.
- 5. The backlog of operational SIRs opened before April 2011 will be cleaned-up and handed-over to the monthly review panels before the end of the year. Special meetings have been organized for that purpose.
- 6. A systematic follow-up of our internal investigations and Safety analyses is now possible thanks

to the monthly review panels. Indeed, these regular meetings provide a platform for discussing the outcome of our internal inquiries and agreeing on the corrective measures which could advantageously be proposed to the line.

**What is coming next?**

The measures mentioned above were put in place as an immediate reaction to the problems identified at the beginning of this year. They were necessary but are far from being sufficient. Thus, the following actions are currently ongoing and will contribute to further improve the situation:

- 1. As mentioned earlier, all interesting cases are far from being officially reported. However, many of them are automatically recorded by our ALANIS/CASTA system. An agreement has been recently signed with the Associations in order to allow the Safety Reporting and Investigation division to approach the controllers involved in such cases. This will significantly enhance our understanding of sharp-end operations and allow more effective measures to be put in place within the company.
- 2. Developing skyguide’s ability to analyze and manage its Safety data in a broader perspective is

only possible with significant cultural and organizational changes. To achieve that in a structured and organized manner, a Safety workstream has been recently launched by the BMS program. This initiative will further improve the current manner to treat OIRs and SIRs while at the same time reflecting on possible means to enhance our reporting system with other approaches.

- 3. Three serious incidents unfortunately emerged this year from the growing complexity of our ATM-System. They have revealed that the way such critical situations are managed within the company is lacking consistency and clarity – especially for what concerns the way to handle concerned individuals. Thus, the management of such incidents has been formally decoupled from the monthly review process mentioned above and will be formally redefined.

**In sum ...**

To conclude, several isolated initiatives have been conducted during the past years in order to better understand the difficult working condition prevailing at the sharp-end of our ATM-System. As a result, the Safety Department collects a huge amount of

precious information but our company is not “equipped” with the culture and the tools necessary to do something really effective with these data. Immediate corrective measures have been put in place this year but a broader perspective on the subject is needed and should be developed in close cooperation with all involved parties. This is the main challenge for the Safety Reporting and Investigation division in 2012 and I’m looking forward to have interesting opportunities for discussions with all of you. Many thanks in advance!

STÉPHANE BARRAZ  
HEAD SAFETY REPORTING  
AND INVESTIGATION, SR

# How does our memory work?

SRO has received a number of OIRs over the last few weeks describing incidents which occurred following clearances issued for a change of flight level.

These OIRs all had one of these two things in common:

- either the pilots had read the flight level back correctly, but had gone on to either climb or descend beyond the flight level newly assigned, or
- the pilots had read the new flight level back incorrectly, but the controllers in the sector concerned (and even the following sector, too) had failed to notice this.

Disregarding for a moment the possible technical reasons for errors of this kind (FMS programming etc.), these OIRs suggest that we should perhaps consider how our brains actually work. Perhaps, by doing so, we can better understand how our brains can play such tricks on us...

## One incident described

The flight that interests us today was an overflight, which made initial contact with our L5 sector at FL 370. Sector L5 requested a flight level from Sector L34, to permit the flight to descend. L34 offered FL 350, since it had traffic in the opposite direction at FL 340.

A little later, the flight was cleared to descend to FL 350 at a minimum rate of 2000 feet per minute. The pilot read the new flight level back not as 350 but as 250; but nobody at L5 noticed this.

The flight was subsequently passed on to the L34 sector frequency. With his initial contact with L34, the pilot stated that he was descending (correctly, he believed) to FL 250 at a minimum of 2 000 feet per minute. Again, the discrepancy was not noticed by the sector's controllers.

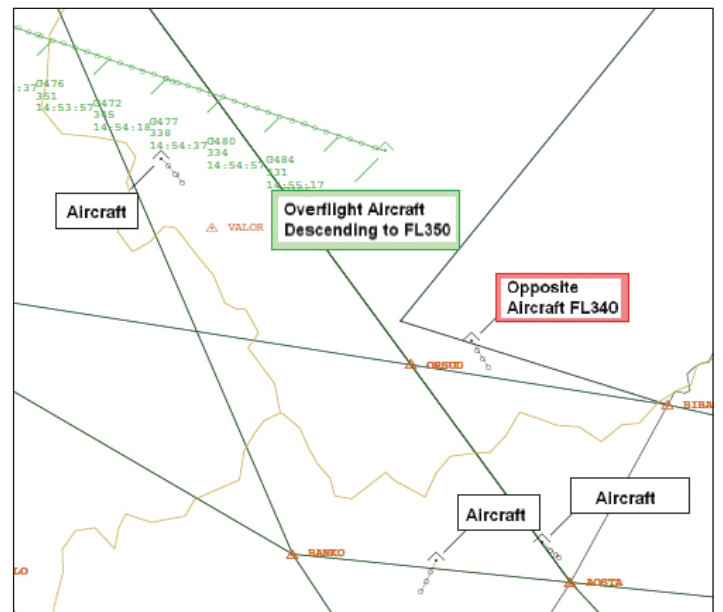
With a descent rate of 2000 feet per minute, no avoiding action was needed when the controllers finally noticed that the flight had descended beyond the cleared FL 350. The requisite separation minima were also maintained.

## Cognitive factors

### A) How our memory works

As the writer Pascal once said: "The memory is vital to every operation of the mind."

Memory is the mental function that enables us to **capture, encode, retain** and **reconstruct** the stimulations we perceive and the information we acquire. And we use our memory to set both **physical** and **mental** actions in motion.



Our memory is essentially divided into three functions: sensory, short-term and long-term.

- **The sensory memory** (i.e. the memory relating to our five senses) is not something we need to pay much attention to. It stores its data away automatically as they are perceived. It is an essential part of our memory, though: this is the part, for instance, that tells us what overall object we are looking at as our eyes dart from detail to detail.
- **The short-term memory** is the part of our memory which we will use if someone draws our attention to an item, like a

phone number or a red octagon. The short-term memory can only record a limited number of information items (traditionally seven plus or minus two) for less than a minute, and recover them within a minute, too.

Conrad and Hull (1964) have demonstrated that the process of encoding information to the short-term memory is a phonological one. Their experiments here consisted in asking their subjects to memorise and then recall sequences of letters corresponding to telephone numbers. The most frequent errors made were of a phonological nature –

► **How does our memory work?**

confusing similarly-pronounced letters, for example, such as B and V. Of particular note here is the fact that such errors continued to occur even if the stimuli were presented in visual form: this suggests that even when reading (rather than hearing) the letters, the subjects were consigning the information to their short-term memory in acoustic form.

In two articles published in 1966, Baddeley compared the performance of subjects in consigning four different types of word list to their short-term and long-term memory. List 1 consisted of words which were similar in sound (*mad, man, cap, can, map*) but had no semantic links. List 2 consisted of words that were dissimilar in sound and also had no semantic links (*pen, day, rig, bar, sup*). List 3 consisted of semantically related words (*big, huge, great, long, tall*). And List 4 consisted of words with no particular semantic similarities (*old, late, thin, wet, hot*).

The results showed sizeable differences in the numbers of words that participants were able to recall from each list. These differences also varied depending on whether participants were using their short-term or their long-term memory.

For the short-term memory task (in which the participant was asked to recall each five- word list immediately), List 1 posed the greatest challenge, with only 10% of participants reading it back correctly. There was no major difference in participants' performance in recalling the other three lists.

For the long-term memory task, in which participants were asked to recall a ten-word list of each of the four types after a certain time, there was no major difference in performance for the first two list types; but a tangible difference was seen in participants' ability to recall List 3 (of words of similar meaning) and List 4 (of words with no semantic similarities).

The results suggest that our short-term memory tends to store information according to sounds rather than meaning, while our long-term memory tends to store information according to semantics (meaning) rather than simply sound – two distinctly different encoding processes, which suggests we are dealing with two entirely different systems.

A third type of experiment has revealed that we all have a finite “mnemonic span” – the number of elements (digits are generally

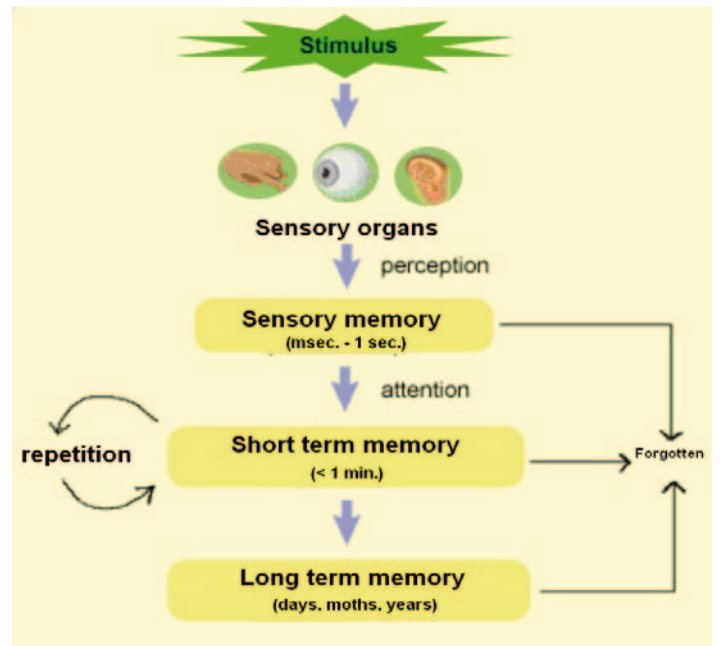
used) that we can recall immediately after hearing them.

The classic experiment here consists in reading out a list of digits at a specific speed (one per second, for instance) and then asking the subject to repeat them in the same order. When the list consists of fewer than five elements, most subjects have no problem doing so. With more than seven elements, however, the task becomes a good deal more difficult.

**“The Magical Number Seven, Plus or Minus Two: Some Limits on our**

**Capacity for Processing Information”** is one of the most-cited articles in the whole of psychology<sup>1,2,3</sup>. It was published in 1956 by cognitive psychologist George A. Miller of Princeton University’s Department of Psychology in the journal *Psychological Review*.

In brief, Miller argues that the number of objects that an average human can hold in their working memory is seven, plus or minus two. Recent research has demonstrated, however, that “Miller’s Law” (as it has become known) is based on a misinterpretation of



► *How does our memory work?*

Miller’s paper, and that the correct number of new elements that an average human can hold in their working memory is probably around **three or four**.

- **The long-term memory** If we make an active effort to remember an item of information – to keep it in our short-term memory for a certain time, in other words – we have a good chance of transferring it to our long-term memory, where it is likely to be retained for longer.

**B) Focused and divided attention, and the cocktail party effect**

Generally speaking, our attention is applied in two forms: “focused attention” and “divided attention”. These two attention attitudes, and the difference between them, have been highlighted in what is known as the “cocktail party effect”.

**1. Focused and divided attention**

Focused attention is our ability to focus our cognitive resources on a specific set or source of important information. Focused attention is commonly confused with concentration, because it enables us to simultaneously select both the type of stimulus we intend to respond to and the type of information we intend to acquire from our surroundings.

We can see both the benefits and the drawbacks of focused attention in a task that was devised by US psychologist Ulric Neisser, in which two different videos of a basketball team throwing the ball around are superimposed on each other. Since the two films are superimposed on one another, the viewer needs to focus hard to determine how many passes the team in white make, for example, without allowing the information on the team in black (to which they are also exposed) interfere with their acquisition process.

The task can be performed by paying careful attention and selecting from all the information presented. This enables the viewer to only pay regard to the video of the team in white, and to essentially “erase” all the information relating to the team in black, and indeed, on a broader scale, any information not relating to the team in white.

Divided attention, by contrast, enables us to perceive a complete scene or the totality of the information provided by various sources or events. Here, our attention isn’t really focused: instead, it works to enable our brain to assimilate a scene as a whole – not down to the details, but with all

the essentials included. Divided attention allows us to gain an overall view of a scene that provides multiple items of information or events that may or may not be connected, and to gain an overall appreciation of its importance or a broad awareness of its development. It will, however, be difficult to recall one particular feature of this scene later with any great precision, since many of the feature’s details will have simply been ignored.

It’s thanks to our divided attention, too, that we can detect the flaws in our focused attention. Going back to the Neisser basketball video, it is possible to view the entire scene without selecting only the information relating to one team or the other. And when we do so, we will notice a strange detail: a third event that completely escaped us in our “focused attention” mode, of a young girl strolling through the scene with a parasol in her hand. Amazingly, when using our focused attention, we remained oblivious of her presence: it is only when using our divided attention, and viewing the scene as a whole, that we become aware of this absurd new element in the video.

This is a very important point: by using our focused attention, we

may well miss certain information that could actually be very useful. One dangerous example of this is often seen on our roads. If we pay too much attention to the colour of the next traffic light and to the cars around us, it’s all too easy to overlook other road users such as cyclists and pedestrians. How many times have we all had that kind of shock behind the wheel when we suddenly become aware of a road user we have overlooked and had to admit: “I never saw him!” It’s a telling reminder of the limits of our attention capacities.

**2. The cocktail party effect**

Fortunately for us, the brain has its own tricks that will often help it cope in situations where our focused attention might otherwise lead us to miss key information items. One of these resources is the so-called “cocktail party effect”, which was first defined and named by Colin Cherry in 1953.

Cherry’s first inroads into the effect were inspired by the social situations in which we frequently find ourselves, with many people in the same room, all talking at once, creating a constant level of background noise that is often further increased by music. Against all this noise, Cherry wondered, how can we possibly make out the



► *How does our memory work?*

words of the individuals with whom we are currently conversing? We can, though, thanks to our focused attention capability, which enables us to focus on the specific words that we want to hear. In doing so, we automatically block out the other conversations going on around us. And yet...

... if someone who is not part of our current conversation circle says our name, we will hear this immediately and turn to locate the source. And we'll do so, what is more, even if we have been paying zero attention to this new speaker before!

This, then, is the cocktail party effect. Despite the mass of information that is being received by our ears (and, more generally, by all our senses), our central nervous system will still be able to

alert us as soon as it receives a particularly familiar input (or indeed an alarm of some kind). Some words, it would seem, have this "alerting" quality, and our own name is generally among them. If any individual – even one to whom we have paid no attention at all so far – says our name at a party, we are bound to turn around and look in their direction. Other words and expressions seem to have this alerting quality, too: swear words, for example.

**3. Implications of the cocktail party effect**

The cocktail party effect reveals a peculiar faculty of our central nervous system: the ability to focus on a specific part of all the information stimuli it is receiving without filtering the rest of the information out entirely. All the other stimuli are still being assim-

ilated at some subconscious level; and all it takes is for one of them to have a sufficiently high "alerting" quality for it to capture our conscious attention immediately and relegate all the information we were previously focusing on to merely secondary status. In the concrete example of the noisy party, our attention will be transferred immediately to the person who has said our name, and the conversation we were previously engaged in will no longer be our prime centre of interest.

The trigger for such an immediate shift in our focused attention can also be provided by any other acoustic input that we perceive to be strong or important in communicative or emotional terms – such as someone swearing behind us, or someone shouting "Fire!". In the case of the obscenity (or a red light, to take an example from a different language system), the alert has a relative value: the stimulus is not strong in itself, but it does have a lot of importance, because of our cultural and educational conditioning.

Someone shouting out "Fire!", meanwhile, will be giving a strong stimulus on two fronts. First, the stimulus is likely to be physically loud. Secondly, the stimulus is a

strong one in emotional terms: we know from similar situations that we need to respond quickly to it, such as by leaving the building, and we know at the very least that we need to check out the credibility of the information's source.

**Studies in focusing attention**

The very fact that we are able to focus our attention tells us that we don't always use all the attention resources at our disposal. The degree to which we do so seems to depend on a number of factors such as our motivation, and on our surroundings, too.

This means that in certain situations, we will tend to focus our attention, while in others we will prefer to adopt a "divided attention" approach. There are some situations, however, in which it seems unclear which attention attitude – focused or divided – is the better one to adopt. And it's situations of this type that have been the subject of numerous studies into the phenomenon.

This focusing of attention, combined with modifications to the way we perform our daily duties according to our surroundings, is one of a number of factors that have been studied by Skyguide,



## ► How does our memory work?

Avinor and the DFS in workshops conducted by Professor Erik Hollnagel on the issue of “resilience”.

### How can we make our memory work?

#### Can we stimulate the memory ourselves?

First things first: according to the pharmacologists, there is no evidence to date that any medication claimed to help improve the memory has had any convincing benefits on those taking it in terms of their normal or enhanced mnemonic capacity. In fact, the products concerned have never been subjected to the kind of scientific analysis required.

All the signs seem to suggest, though, that no chemical substance can be considered specifically beneficial to memory. At the very most, such medication may enhance the taker’s attentiveness and concentration or ease their anxiety for a limited period – and these changes in turn may have a (similarly temporary) knock-on effect on the subject’s memory performance.

Caution is advised too, though. And these words of warning are best demonstrated by the students who take stimulants during exam periods. While these do achieve a certain effect, they can also disrupt sleep patterns – and sleep, too, is an immensely influential factor in memory performance.

A lot of work is currently being conducted in the field of molecular research, with a view to easing memory problems and disorders, especially among the aged. But for those of any age who are free of pathological memory disorders, it is far more advisable not to stimulate the memory but to simply cultivate it instead.

#### What do we recommend?

The best way to cultivate the memory and keep it in good shape is to adopt a two-pronged approach: have a healthy lifestyle, and give the memory some exercise.

#### A healthy lifestyle

Sleep has a particularly beneficial effect on our performance in retaining information that we have acquired the day before.

Contrary to what has been claimed even recently, we do not learn while asleep; but we do retain more if we have sufficient regular quality sleep (i.e. at least eight hours for adolescents and young adults).

Sleeping tablets are not the way to a good memory. This is because medication of this kind alters one of sleep’s most important phases: the paradox phase, during which the memorisation process is particularly active. Other medication can also affect the brain’s mnemonic performance.

Tobacco and (especially) alcohol are detrimental to the memory. Alcohol, which is often the cause of temporary memory lapses, has a negative impact on the brain’s neurotransmitters. In cases of chronic alcoholism, it can even cause permanent damage to the brain.

#### Making the memory work

One of the best ways to keep the memory fit and retain one’s mnemonic capacities is by reading. Reading constantly engages our attention, our visual perception,

our recognition skills, our ability to construct mental images, our ability to organise information and more – all operations that shape and fashion our memory.

Other exercises can also be recommended: exercises designed to mobilise our attention, to generate our interest, to encourage us to arrange the material to be memorised in an organised way, or to encourage us to recover and recall. Should you have any longer-term concerns about your own mnemonic performance and capacities, it is advisable to contact your General Practitioner. They should be able to determine whether this is down to worry, fatigue, stress or other factors, or whether it is a genuine memory problem which should be checked out at a hospital or at one of the numerous centres which specialise in memory performance assessments.

### Conclusion

Did you notice the alien in the cocktail party photo? No? Ah: the perils of focused attention!

DAVID FRATERNALI  
SRO

Sources (of the original French article):

- [www.prevention.ch/lamemoire.htm](http://www.prevention.ch/lamemoire.htm)
- [www.csrs.qc.ca](http://www.csrs.qc.ca)
- <http://www.psychoweb.fr/articles/psychologie-cognitive/173-attention-partagee-et-attention-selective-effet-cocktail-party-et-focalis-4.html>
- <http://psychclassics.yorku.ca/Miller/>
- [www.youtube.com:count the passes](http://www.youtube.com:count%20the%20passes)

# Safety Culture & Safety Management – A necessary double-act

It can be seen that both safety culture and safety management go hand in hand to achieving safe practices in an organisation. One is less tangible than the other, but both are required. If there is only an SMS but no real commitment to safety, then the SMS will not be effective, as decisions will not really prioritise safety, and the SMS will be merely a ‘paper exercise’. Similarly, if there is a good safety culture but no SMS, then in a complex organisation the way safety is applied runs the risk of being inconsistent, under- or mis-resourced, and not seen as business driven (because it will not be part of the business plan).

Source: 23rd International NeT-Work-Workshop “Safety Culture and Behavioral Change at the Workplace” Blankensee/FRG, September 9-11, 2004. Rachael Gordon, Barry Kirwan and Eric Perrin

## Safety Culture Survey 2009: next steps

The first Safety Culture Survey took part in 2006. About 300 answers were collected. The second Safety Culture Survey was launched in 2009 and more than 600 answers were received. This is certainly a success and this denotes the high implication and interest of all persons within skyguide for safety! A group was constituted, 16 persons in total coming from all departments, to work on the results of the survey. High level proposals for action

were identified by the working group. These proposals are formulated around 5 main themes;

1. process re-engineering: (simplify without weakening the process related to the management of safety),
2. education/training in safety for all company levels (acquire the necessary knowledge allowing to maintain a high safety standard in all functions delivered by skyguide),
3. management empowerment (assure that the management get involved in safety),
4. just culture inside and outside skyguide (safety is the driver to the continuous improvement)
5. communication (assure that safety is in the center of all debates)

The proposals for action were then analyzed by the Departments concerned and compared with actions which have in the meantime already been taken, or are currently running or planned. The remaining recommendations were thereafter submitted to the SSG-SG which approved them. In autumn this year, the SSG participants endorsed the recommendations and agreed that the results of the survey will have to be published. The recommendations will now be fed into the safety streams of the BMS program.

The follow-up actions will be carried out in 2 phases:

- Phase 1: an updated information to all skyguide of what was done (this article).
- Phase 2: the concrete safety improvement actions have to be identified by the BMS safety stream and will be launched

through the safety improvement management. An update of the implementation status has to be given to the SSG. This update shall also be published to all skyguide.

## Short reminder: The safety improvement management



The safety improvement management is owned by S. Presently, the process is being reworked within the BMS safety stream and should be up and running towards the beginning of 2012. The subject is also addressed in a previous article in more depth.

The safety improvement management has as objectives:

- To collect all safety relevant information allowing to improve safety (OIR, SIR, audits, surveys etc...)
- To find the appropriate way to improve safety within skyguide (actions, change requests, communication, lessons learnt, seminars, etc...)

## Today's situation (proposals and status)

The table (see next page) synthesizes the actual situation.

- Items marked in green have already been done.
- Items marked in yellow will be treated by the safety improvement management

- Items marked in grey will be evaluated again in 3 years

The table will be regularly updated and implemented actions communicated to skyguide.

PASCAL PETROVIC  
SDE

► Update on the Safety Culture Survey

Theme	Actions proposed	Additional explanations	Actions taken, ongoing or planned	Evaluation of actions taken/running/planned	Recommendations to be dealt with in safety improvement process
1. Process re-engineering	enhance significantly the safety assessment procedure	<ul style="list-style-type: none"> <li>a new process must be defined with the participation of all stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>an E1.1 process improvement workshop is planned for 8.4.2011</li> </ul>	<ul style="list-style-type: none"> <li>need for improvement is accepted, action taken appropriate, no further action necessary</li> </ul>	no further decision necessary
	review the SIR process	<ul style="list-style-type: none"> <li>find solutions to make the procedure more efficient</li> </ul>	<ul style="list-style-type: none"> <li>safety improvement process implemented</li> <li>SIR process adapted accordingly</li> </ul>	<ul style="list-style-type: none"> <li>appropriate actions taken, SSG-SG will be informed in March 2011 meeting, no further action necessary</li> </ul>	no further decision necessary
	take safety on board for BMS (business model skyguide)	<ul style="list-style-type: none"> <li>safety must be part the future elaboration of BMS, safer can also mean simpler</li> </ul>	<ul style="list-style-type: none"> <li>S is represented in BMS extended core team by SD</li> </ul>	<ul style="list-style-type: none"> <li>appropriate actions taken, no further action necessary</li> </ul>	no further decision necessary
	relax the pressure on the system	<ul style="list-style-type: none"> <li>review the list of priorities in projects</li> <li>introduce stabilization phases</li> </ul>	<ul style="list-style-type: none"> <li>no immediate action identified</li> </ul>	<ul style="list-style-type: none"> <li>proposed action does not seem to be addressed appropriately</li> </ul>	<ul style="list-style-type: none"> <li>➤ planning reserves for safety, quality and security items should be built in for projects</li> </ul>
	improve the overall quality of SOs (OPS service orders)	<ul style="list-style-type: none"> <li>enhance the production and dissemination procedure of the services orders</li> </ul>	<ul style="list-style-type: none"> <li>no immediate action identified</li> </ul>	<ul style="list-style-type: none"> <li>proposed action does not seem to be addressed appropriately</li> </ul>	<ul style="list-style-type: none"> <li>➤ improve the overall quality of SOs (OPS service orders)</li> </ul>
	assess the functioning of S	<ul style="list-style-type: none"> <li>in particular the conflict of interests in BoM has to be understood</li> </ul>	<ul style="list-style-type: none"> <li>permanent safety part in BoM meetings</li> <li>new SSG-SG</li> <li>management of safety monitored in Cockpit</li> </ul>	<ul style="list-style-type: none"> <li>Actions have been taken, impact can not be assessed yet</li> </ul>	<ul style="list-style-type: none"> <li>➤ re-evaluate in 3 years</li> </ul>
2. Education / Training	enhance safety training / awareness	<ul style="list-style-type: none"> <li>safety training/awareness has to be given to all levels in the company</li> <li>use ATCO refreshers to present incidents</li> </ul>	<ul style="list-style-type: none"> <li>new safety training modules developed for ATCO and ATSEP basic training</li> <li>safety tours given in units and refresher courses</li> <li>regular training given to new CO and CM</li> </ul>	<ul style="list-style-type: none"> <li>a lot of safety training has been re-designed recently, and a lot of safety training activities take place or are planned in the near future</li> <li>however, this does not seem to be sufficient in the technical units and domains</li> </ul>	<ul style="list-style-type: none"> <li>➤ enhance the safety training in the technical units and domains</li> </ul>
	safety as part of training for managers	<ul style="list-style-type: none"> <li>during the education as managers, people shall be educated in safety matters</li> </ul>	<ul style="list-style-type: none"> <li>safety training given regularly in SSG and SSG-SG</li> <li>safety course for new managers is under development</li> </ul>	<ul style="list-style-type: none"> <li>appropriate actions taken, no further action necessary</li> </ul>	no further decision necessary

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3. Empowerment	give authority to managers who are responsible / accountable	<ul style="list-style-type: none"> <li>those having the responsibility and /or accountability shall receive the authority to act (e.g. budget)</li> </ul>	<ul style="list-style-type: none"> <li>no immediate action identified</li> </ul>	<ul style="list-style-type: none"> <li>authority for line management seems to be appropriate</li> <li>authority for transversal domains does not seem to be sufficient</li> </ul>	<ul style="list-style-type: none"> <li>➤ improve authority of managers of transversal domains</li> </ul>
4. Just Culture	emphasize internal and external just culture	<ul style="list-style-type: none"> <li>take care about reporting (lack of), perform active lobbying for just culture (i.e like IFATCA in some countries)</li> </ul>	<ul style="list-style-type: none"> <li>C and S discuss just culture topics regularly with external authorities</li> <li>Steering Group Inquiries (SGI) established</li> </ul>	<ul style="list-style-type: none"> <li>activities are running</li> <li>influence of skyguide is relatively small</li> <li>impact not yet visible</li> </ul>	<ul style="list-style-type: none"> <li>➤ re-evaluate in 3 years</li> </ul>
5. Communication	improve safety information	<ul style="list-style-type: none"> <li>be more proactive in safety information dissemination</li> <li>promote which info is available (from reporting, audits, etc..)</li> </ul>	<ul style="list-style-type: none"> <li>reshape of Safety Bulletin intended</li> <li>new safety portal published on skydoc</li> <li>data access will be improved via safety portal</li> </ul>	<ul style="list-style-type: none"> <li>actions are running or intended</li> </ul>	<ul style="list-style-type: none"> <li>➤ improve form and content of the Safety Bulletin in order to promote safety more efficiently and according to needs</li> </ul>
	enhance feed-backs and lessons learned	<ul style="list-style-type: none"> <li>implement new exchange platforms (e.g like project lunch sessions)</li> <li>improve reporting back to the line</li> <li>publish also positive outcomes (i.e. closed SIRs)</li> <li>improve the contact with ATCOs</li> </ul>	<ul style="list-style-type: none"> <li>safety tours</li> </ul>	<ul style="list-style-type: none"> <li>actions taken not sufficient</li> </ul>	<ul style="list-style-type: none"> <li>➤ enhance feed-backs and lessons learned with appropriate means</li> </ul>
	create a safety committee	<ul style="list-style-type: none"> <li>take as basis the existing committees for associations (e.g strategic and training) and evaluate if a safety committee shall be implemented additionally</li> </ul>	<ul style="list-style-type: none"> <li>Steering Committee skyguide – Unions has been established</li> </ul>	<ul style="list-style-type: none"> <li>Action has been implemented</li> </ul>	<ul style="list-style-type: none"> <li>no further decision necessary</li> </ul>