SWANWICK – SAFETY in the WILD

Day to Day Safety Observation Course participant's Hand Out

D2D Safety Observation Method -

Content:

1. Introduction

“How do you measure safety?”

In ATC, we all take safety for granted. It goes without saying that everyone involved in ATC does their utmost to keep it safe, and no-one really doubts that we do a very good job. So much so in fact that, until relatively recently, no-one thought to pose the question: “How safe are we?”. Do we really know what it is that we do each day that keeps us safe? Do we know how good we are on a daily basis at catching errors before they develop, or at preventing dangerous situations from developing in the first place?

Our faith in our ability to keep it safe gets rocked occasionally by an incident, Safety Significant Event (SSE) or Airprox, which exposes flaws in the environment and actions taken by the parties involved. We investigate these and try to establish what went wrong, with the intention of preventing it from happening again. Whilst this is an important and valuable process, it takes a long time and several events for us to establish a trend, and during this time we risk having another incident from similar causes. We only expose the things that went wrong, and we do not capture the thousands of good things which are done to keep things safe. The Incident Investigation process is therefore retrospective and may focus attention on the negative aspects of our safety, whilst not recognising the positive ones. It is usually also a very small sample, with rates of occurrence at the more serious end of the scale, of less than 3 per 100,000 movements. The other 99,997 movements which are kept safe by ATC skills go unrecorded.

Day to Day Safety Measures is one of the first times any ATC provider has tried to address this issue, and it is inevitable that the process and skills will develop with expanding experience. What you are training for and practising now is the best method yet identified for capturing the things that keep us safe. The aim is to observe, in a non-threatening and non-judgemental way, a controller doing their daily task, and to record the employment of some agreed and observable techniques which controllers may use to maintain high levels of safety. By observing these techniques in practice and maybe, over time, recording trends in the occurrences, we can all gain more understanding of what it is we do to keep it safe, and answer the question **“How safe are we?”**.

An effective safety improvement culture relies upon three things:

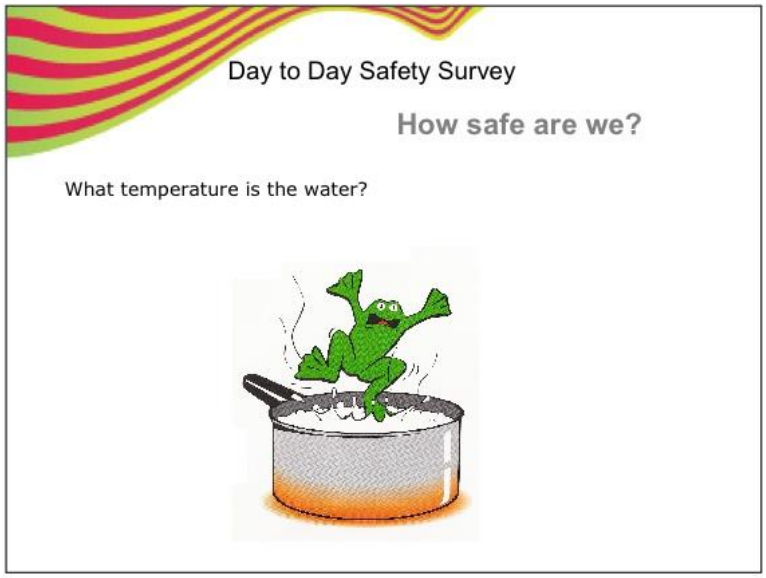
- Being aware of the risks;
- Implementing improvements focussed upon reducing those risks;
- Measuring the effect of improvements on performance.

Day to Day Safety Survey and the Incident investigation process are key to this.

2. The PowerPoint presentation

What's covered in this presentation?

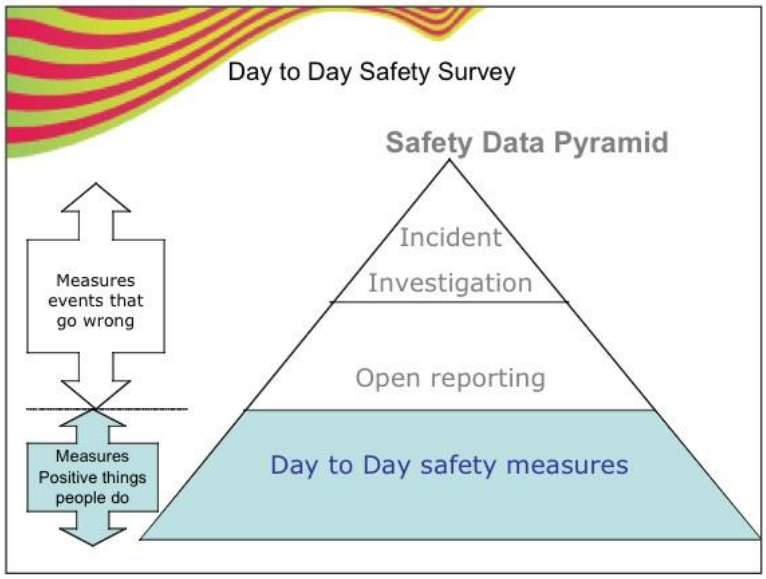
How hot are we running our operations?
What will Day to Day safety survey do for us?
What they are not?
Day to Day safety survey examples
How do we collect the data?
How will we start?
Next steps



When a frog is put in a pan of water which is gradually heated, the frog will not notice the water getting hotter until its muscles can not move. The inevitable will occur.

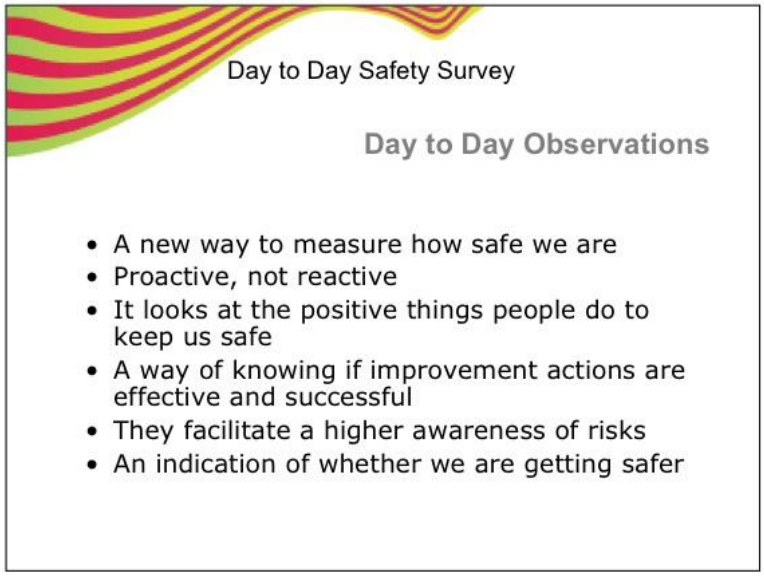
If the frog is put in hot water, it instantly reacts and jumps out.

If we are talking about safety – how hot is the water?



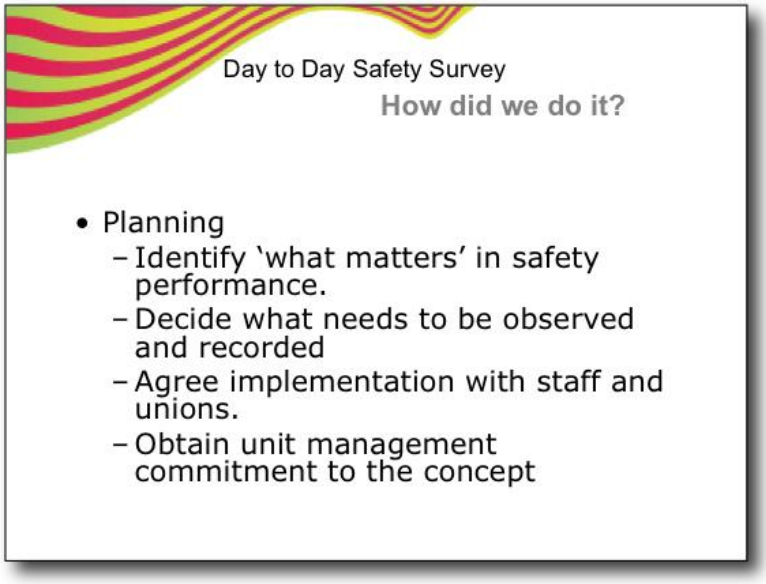
Incident Investigation and Open reporting measure things that go wrong.
(It is accepted that there might be pockets of the organisation where open reporting is measuring more)

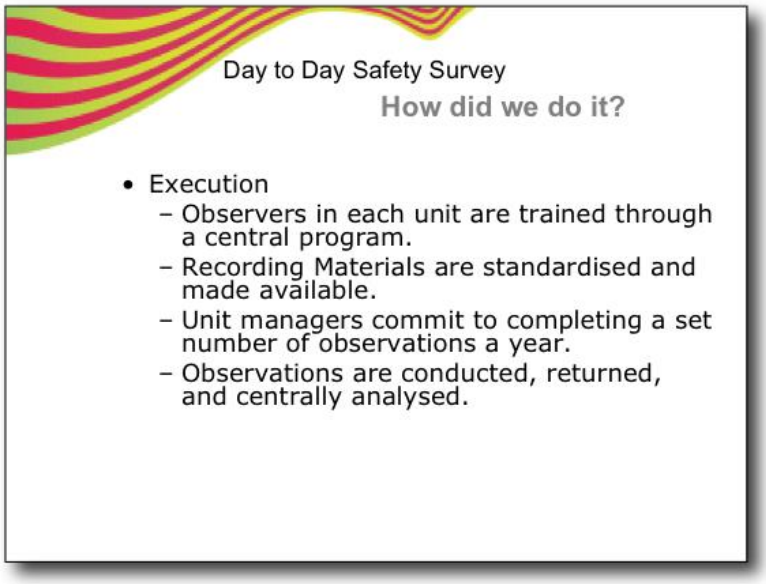
Day to Day safety survey is aimed at measuring the positive things people do to keep us safe.



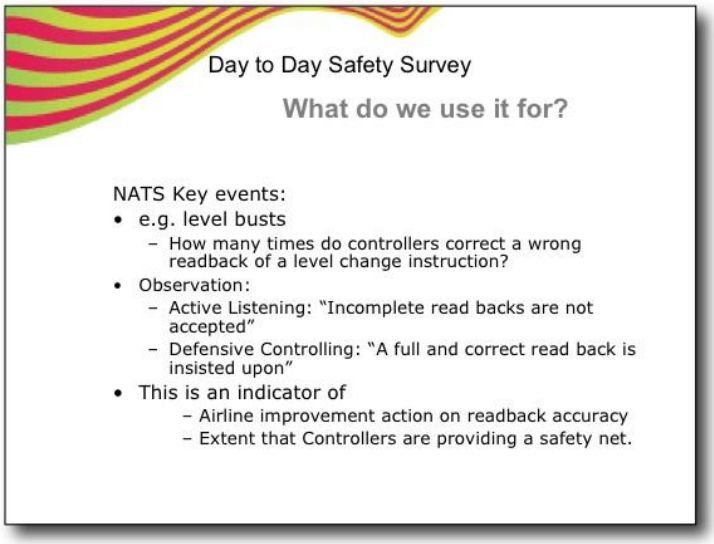
The key things Day to Day safety measures do for us are:

- *They reinforce positive behaviours to reduce risk.*
- *They give a faster feedback on identified improvements.*
- *They enable an increase in operational awareness regarding risk and recovery.*
- *Inform the Operational Techniques group.*

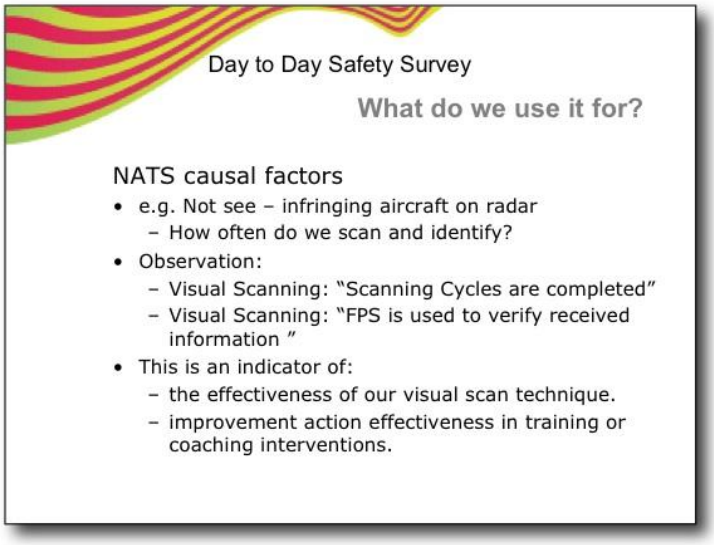

Day to Day Safety Survey
How did we do it?
• Planning
– Identify 'what matters' in safety performance.
– Decide what needs to be observed and recorded
– Agree implementation with staff and unions.
– Obtain unit management commitment to the concept


Day to Day Safety Survey
How did we do it?
• Execution
– Observers in each unit are trained through a central program.
– Recording Materials are standardised and made available.
– Unit managers commit to completing a set number of observations a year.
– Observations are conducted, returned, and centrally analysed.

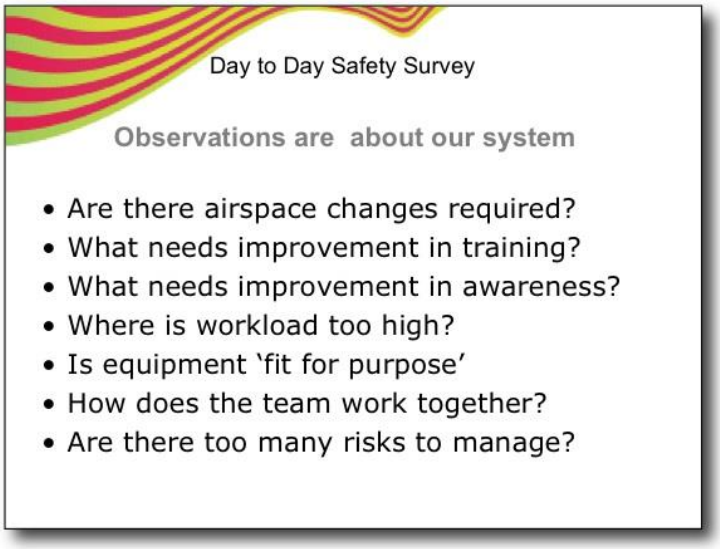

Day to Day Safety Survey
What do we observe?
• Visual Scanning Cycle
• Active Listening
• Defensive Controlling
• Multiple Input Processing (MIP)
• Strip Management



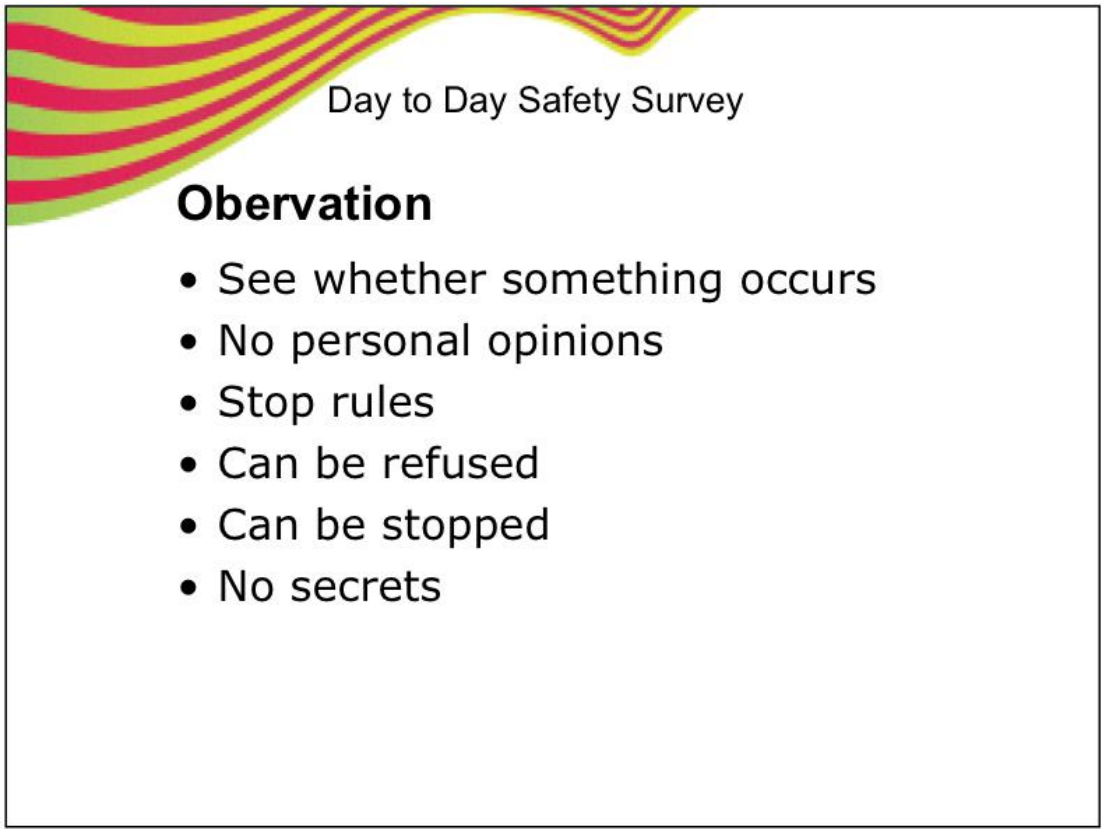
This example has come from the recent level bust trial.
Results have shown a 40% reduction in the number of times controllers have had to correct a wrong readback. We have analysed this and we believe it is an improvement by the operators.



This example has come from recent infringement data. Results have indicated that this problem is a greater risk than first realised. It has led to eye movement tracking research to clarify the problem.



It is important to emphasis that Day to Day safety survey is focussed on the 'system' not the 'individual'


Day to Day Safety Survey
Obervation
• See whether something occurs
• No personal opinions
• Stop rules
• Can be refused
• Can be stopped
• No secrets

3. Observation rules and techniques.

To observe: Notice or perceive something and register it as being significant.
Watch carefully and attentively.

As we can see, observing is more than just looking at something or somebody. It seems as if observing is more like looking for something specifically, with a purpose. This means that the observer needs to know what they are looking for in order to observe correctly. If not, the observer would return to looking about and hoping to notice something.

Also interesting in this definition is the emphasis on registering the observed as being significant. This significance lies in the meaning that is given to what is observed within a certain context. In other words, if we do not know what the context of the observed behaviour is, we cannot give significant meaning to it. In order to notice or perceive something, the observer must watch carefully and attentively. If not, the significance of what is seen can easily be missed and the observer would not observe what they are looking for.

Objective or subjective observations.

If an observation is meant to be objective, the observer is not supposed to give meaning to what they observe, or to interpret what they see in order to give significance to it. This means that the description of the items that are to be observed has to be very precise and cannot include any kind of qualifier which the observer would have to interpret. An example of objective observation is: *the controller speaks into the microphone.* This is a fact to which no meaning needs to be given in order to be able to observe it. It does not matter why the controller speaks into the microphone or whom the controller is talking to, all that matters is the fact that the controller performs the action of speaking into a microphone. The observer in this case needs to be able to identify the microphone in order to observe the action.

Subjective observations can include a certain degree of interpretation by the observer. This leaves some room for the description of the items to be observed. They do not have to be as precise and descriptive as is the case with an objective observation. An example of a subjective observation is: *the controller speaks clearly into the microphone.* In this case it is the observer who will interpret *clearly* as being observed or not. There are quite a few drawbacks about the subjective observation. In many cases it is the context and circumstances that will determine whether the observer observes the desired item. *Clearly* is a qualifier which is not understood in the same way by everybody. It is also depending on ambient noise, for instance, whether the controller spoke clearly or not. No matter how clearly the controller speaks, what if the receiver does not find it clear at all, has it still been clear? Subjective observations therefore require a clear and agreed description of the items to be observed. Also, subjective observations can only be carried out by Subject Matter Experts (SMEs) since they are the ones who would know what certain actions mean within certain contexts.

Objective observations produce data which have better value for scientific analysis whereas subjective observations produce data which give an overview of what is going on, based on the expertise and opinion of the observers.

Since the Day 2 Day Observation Method is a subjective observation, we will look at some rules and traps of this method and we will not look further at objective observations.

Subjective observation rules.

The fact that the observers are experts themselves creates both advantages and disadvantages. Although they are considered to be able to assess a situation and context based on their own knowledge and expertise, they still have to remain objective in their observations. They must limit themselves to observe strictly what is described on the observation forms. This is not always easy

and the observers can be tempted to interpret what they observe and use their own preferences and opinion in order to give meaning to what they observe. Although observing means to look for something special and significant, **it is not the task of the observer to add significance to what they observe.** This is strictly the task of those who developed the observation method.

It can also be very tempting for the observers to compare what they observe with how they would have done it themselves. Again, this is not the intention of the observation. **The observer is not there to improve things.**

Thirdly, and probably the most important is that observers must be aware they are not there to assess a colleague or a situation. Particularly for On the Job Training Instructors (OJTI) this could prove to be difficult but they must keep in mind that **an observation is not an assessment.**

The task of the observer is strictly to note what is asked by the questions in the observation forms.

Stop rules.

An observer must resist the temptation to fall for one or more of these 'traps', linked with the following comments:

they should/could have.....

how can he.....

why don't they.....

that's not very clever.....

etc.

Whenever you find yourself thinking in these terms, **stop, consider what you're doing and start again.**

Tips.

Do

- be in time before the observation starts. You want to be fully prepared.
- focus on the observation. If possible, drink little sips of water to help you to remain concentrated.
- make sure you have a complete and correct mental picture of the traffic situation.
- be calm and confident.
- know the observation form by heart.
- recognise the stop rules.
- know when to stop the observation.

Do not

- speak with the controller(s) during the observation.
- interfere in any way unless safety requires you to.
- hesitate to stop the observation if necessary.
- tick an item if you're not 100% sure.
- use your own opinion as a basis for your observation.

4. Questions and answers.

Below are some of the most commonly asked questions about the Day to Day Safety Survey Method.

1. Why are we doing this?

We want a way of measuring our safety that is more proactive than the conservative ways, giving us a way of measuring the 'temperature' of the operation. The measures focus on the things that ATCO's do to keep us safe.

2. Why now?

As the traffic increases we will need to have an increasingly better understanding of the things we do that keep us safe. It is essential that we know the improvement activity we are making is directed at the right things and that they are effective. Safety measures will give us a quicker and clearer understanding of this.

3. What is the benefit to the ATCO?

Safety measures will help us understand the safety/capacity balance, they will help us understand the safety risks and which tools and techniques staff can use to reduce the risks.

4. Is this just a management tool to make ATCOs work harder?

No, Day to Day safety measures are a part of the work to increase awareness of risk and to equip ATCO's with tools and techniques to make us safer, it is not related to increasing traffic capacity.

5. Can ATCOs refuse to be observed?

Yes, however, we would like to understand the reasons.

6. Confidentiality – will the observer discuss individuals and what they have done?

No, this will be stressed in the training. The observer will be observing sectors and their assigned ATCOs, no names will be recorded or discussed with anyone.

7. Should observers be valid on the position being observed?

Not necessarily, it might be an advantage if they are not valid on the sectors being observed.

8. How long will the observers observe a position?

We will be encouraging the observers to observe handovers of a position but would limit the observation to 2 hours at any one time.

9. Will observers interact with the ATCOs being observed?

This will not generally be the case as we want to avoid distraction and try to ensure a de-personalised approach. If an ATCO does wish to discuss what happened and the observer is also willing to do this, it can be done away from the operations room. An ATCO can ask to view the observation form at anytime.

10. Can ATCOs terminate a session?

Yes, either the ATCO or the Observer can terminate a session, but we would request a reason why the termination was felt necessary

5. The Observation form.

The observations will take place in three separate sections, each lasting approximately 40 minutes. The observation forms reflect these sections.

- Visual scanning
- Strip Use
- Communication
- Hand over/take over
- Controlling techniques

The reason for this division is the simple fact that nobody will be able to observe all items in one session. The observer must be able to concentrate on what they are looking for and if there are too many items to concentrate on some things could be missed.

All parts of the forms are explained and discussed during the observer training.


observations
in progress