



## Safety Management System

# Safety Bulletin

No. 04/24

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## Safety Conversations in Clubs

**Purpose.** This Bulletin builds on SB 02/24 *Safety Differently 2 - Improving Collective Safety* and provides guidance for all clubs and members on alternative approaches to discussing safety issues that can build positive capacities for safety. This bulletin is intended to foster positive safety dialogue within and between clubs, underpinning improvements in safety culture.

### Introduction: Building on Safety Differently 2 – Safety Dialogue

*Nobody, ever, prepares to launch a towplane or glider, perform maintenance on a tug or glider, or work in an aerodrome environment, with the intention of coming to harm. Most times we get it right, despite environmental factors and threats, despite inevitable human errors and omissions, or unintended glitches in our operations and safety procedures. Sometimes it goes wrong... Let's strive to get it right!*

*We need to redefine safety. It's not just the absence of accidents. It's the presence of capacities to do complex stuff really well, to excel in the routine, to respond to the variations. It's going beyond seeing people as the cause of problems, instead seeing people as the solution to problems.*

Understanding accidents and errors is important and necessary, yet only part of what is needed in the sport of gliding. What went wrong? Why? Pilot error? Maintainer error? Why? How did we set up the conditions for that error? Training shortfalls? Why? Supervisor lapses? Why? People not listening? Gaps in understanding? Why? Too much pressure on individuals? Normalised deviance? Why?

So, let's consider the *presence or absence of safety dialogue*. Let's ask about the extent of open safety discussions between our club members, on the flight line, operations point, in hangars and clubrooms, in panel and committee discussions, before, during and after flying operations. Are people willingly talking about safety issues and potential risks, or nervously talking around observed problem issues and people? Are there positive and pre-emptive discussions, or negative whispers after the fact?

No organisation is perfect in why, how and when it communicates. There are limits to effective communications and awareness building. So, how do we best encourage *open and respectful safety dialogue throughout a club*, between silos, bottom up raising of issues to responsible officers? How do we generate beneficial safety dialogue between members? That's what we are exploring here<sup>1</sup>.

*In the best clubs, all members see how they can contribute usefully, improve their sense of belonging and feel valued. People listen and are receptive to lateral ideas.*

<sup>1</sup> Insights from discussions at PACDEFF Human Factors Conference 29-30 Oct 24, Prof Sidney Dekker (Griffith Uni), Mr David East (Crew Fusion), Matt Hall (MHR), Shane Tobin (UPRT Australia).

**Challenge Networks.** These are environments where positive permission is given to speak up, ask questions, raise concerns, question whether alternatives should be considered.

If something is seen that is not safe, or not understood, do you speak up – or shut up?

Challenge networks<sup>2</sup> give psychological safety to speak up. These may exist on an airliner flight deck or glider cockpit, an operating theatre or maintenance hangar, a safety critical facility or runway operations point. Anyone can speak up. Curiosity and awareness are rewarded.

*“If there’s anything you see or sense that you don’t like, please say something, let me know, and I will do the same for you.”*

A strength of this approach is that it can cut across authority, perceived rank and status gradients. Another is that it can allow “weak signals” of disquiet about risk exposure to be assessed. It also underpins a culture of mutual respect. Learning is encouraged. Supervisors share the power to intervene with others and invite all to contribute. One-on-one, it has greater positive power to permit individuals to challenge and question.

Perhaps this principle can be stressed in daily operations briefings, and preflight, and before complex tasks are performed (eg glider rigging). Perhaps also debriefings after unusual events.

### **Useful Language for Safety Conversations.**

If we accept that all manner of occurrences and errors can have organisational and cultural causes as well as human fallibility, then the **5 HOP Principles** (Human and Organisational Performance)<sup>3</sup> give useful starting points for conversations.

The 5 HOP Principles:

1. Error is normal
2. Blame fixes nothing
3. Systems and Context drive behaviour
4. Learning and improving is vital
5. Leadership response to failure matters

Example: Someone ground tows a glider on a rough runway with a squishy soft tail dolly tyre.

Response 1: “You fool! What possessed you to tow it a kilometre damaged like that? I can’t trust you to do anything right. It’s stuffed now, your fault. Go back to the hangar now and fix the tyre.”

Response 2: “Was the tyre fully inflated at the hangar? When did you notice the problem? What route did you take? So you’re tired and dehydrated? Did you ask anyone for help? Who is at the hangar now? The tyre pump battery is flat? Ok let’s charge the battery, replace the tyre together. We need a backup battery. We should work more in pairs when moving gliders.

In Response 1, we see fixation on an individual error, attribution of blame, lack of awareness of chains of causality, organisational contributions, no improvement motivation, and retributive leadership culture.

In Response 2, we see a remedial focus, exploration of chains of causality including environmental, organisational and human factors, motivation to seek learning and improvement, restorative leadership culture. Guess which one is far more likely to prevent recurrence.

<sup>2</sup> Prof Sidney Dekker, PACDEFF 2024

<sup>3</sup> David East, PACDEFF 2024

Another approach to encouraging simple safety conversations, bottom up and top down, is encouraging discussion of the **Four Ds** – “Please tell us anything that you think is *Dumb, Different, Dangerous or Difficult, that needs attention.*”

#### The 4Ds

1. Dumb – What does not make sense or frustrates you?
2. Different – What has changed or surprised you?
3. Dangerous - What poses a risk, is a hazard, or challenging?
4. Difficult - What is unusual, demanding or difficult?

Like the HOP principles, 4Ds are conversation starters. Not rocket science. When members know it's OK to raise these issues, the communications are empowered and enabled. Both pre-operations briefings and post-operations debriefings are natural avenues for these discussions, but also during operations, Daily Inspections or maintenance.

Example: Different – Why is the vario intermittently switching off then restarting? Broken wires? Dodgy switch? Battery voltage low? Example: Dangerous / Difficult – Why is the wing walker wheel grabbing, skidding, juddering? Seized wheel bearing? Incorrectly installed? Misaligned?

In inherently hazardous occupations, people using the Canadian “Capacity Model” sometimes refer to **STKYs**, which stands for Stuff or S\*\*t That Kills You. STKYs are a useful shorthand way of thinking about calling out hazards, usually high energy ways of fragile bodies being damaged. STKYs can be grouped by type of energy:

#### STKYs. Stuff or S\*\*t That Kills You.

1. Gravity. Falls, dropped objects, crushing.
2. Kinetic energy. Fast-moving objects, missiles, transport, collisions.
3. Electrical energy. Electric shocks, shorts, faults, exposed wires, fault currents.
4. Mechanical energy. Power tools. Hydraulics. Mechanical failures, stresses, breakage.
5. Fire / Heat energy. Combustion, flashes, ignition, hot objects, combustible substances.
6. Chemical energy. Poisons, toxins, vapours, inhaled dusts
7. Biological / Biocontamination.
8. Radiation / Ionising energy.
9. Pressure changes. Blasts, high compression and decompression.
10. Temperature. Extreme heat and cold, rapid changes, physiological stresses.

It appears that people who enjoy calling a spade a shovel like using this concept as a safety conversation starter. Research affirms higher hazard identification rates using STKY thinking.

It's self-evident that gliding aerodromes, operations, hangars, operating points and facilities are potentially rich in STKY hazards. From aircraft propellers to moving vehicles, winch ropes to high voltage battery systems, slashers to weed killers, hydraulic tools to improvised tools, we face a diverse range of safety risk issues. All before we get airborne, which has its own inherent kinetic energy and gravity risks.

### Safety Margins

We sometimes need to have difficult conversations about serious lapses and erosion of safety margins. Violations and wilful breaches of discipline require resolute proportional responses.

Eroding safety margins can be countered to some extent by anticipatory processes, like Plans, Preparation, Decluttering, and Threat and Error Management. Some flying activities have obvious higher risk profiles, so the Planning and Preparation includes rehearsal of actions when things go wrong, including bug out responses<sup>4</sup>.

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<sup>4</sup> Matt Hall, PACDEFF 2024.  
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Managing risk involves managing the impacts of uncertainty on our objectives. Risk is a function of both likelihood and consequence – and in the case of flying and gliding, our defences to reduce likelihood require *application of safety margins, which may be invisible, or difficult to discern*. Higher risk requires greater discipline in monitoring and managing safety margins.

For student pilots, or low time, inexperienced pilots, with limited exposure to potentially hazardous circumstances, their ability to discern cues about eroding margins will be very limited. Example: Watching rate of drift downwind in strong winds aloft. Discerning flattening angles back to a safe circuit joining area. Discerning increased sink and the need to adjust heading.

Judgment and educative gaps may need to be addressed through debriefing, education and retraining, dual exposure to difficult conditions, dual coaching and training.

Tougher safety conversations may be needed for more experienced, overconfident, complacent, goal-fixated pilots pushing too far and deliberately eroding safety margins. Sometimes those pilots may be less receptive to this kind of necessary feedback.

So, how can we counter this? Even world-champion aerobatic pilots can affirm that:

Good decisions often have poor feedback, are often accepted without comment or praise; and Poor decisions usually attract copious bulk feedback, often unsolicited, sometimes unhelpful.

So, safety conversations should not always be about problems and errors or omissions. We have an obligation to our gliding peers to also have open discussions about really good decisions, preserving safety margins, making great choices when margins are eroded. Understanding our stress responses and safest priorities and actions when things go wrong is vital<sup>5</sup>. This is crucial in Learning and Experienced phases of our aviation careers, as we gain formative experience and judgements to survive and succeed into the Mature phase.

When and where safety margins are eroded, these safety conversations must address *how we perceive and monitor those margins, make necessary decisions to change our plans, and do things differently next time*. Objective reassessment of training needs or planning and oversight may be needed. Put another way, don't let unintended stuff-ups go to waste.

Awareness of shortcomings in situational awareness, judgement, decision making, informed by constructive safety conversations about discerning and managing safety margins, makes for better airmanship.

A positive aviation culture needs the best people in gliding to look out for those who we need to impact. There are no cookie cutters for growing people in aviation; everyone needs a tailored approach to developing skills and judgement. The same applies to safety margin judgements.

The very best pilots talk about this stuff with their gliding peers, admit errors and lapses, improve feedback and awareness for others to learn from. Which gets back to the first point: speaking up versus shutting up, building trusted challenge networks.

I hope this is beneficial to discussions with members in your clubs. Have a great summer.



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<sup>5</sup> Matt Hall and Shane Tobin, PACDEFF 2024  
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