

Against **the Clock**

Rushing to get into the air is never a remedy for 'hurry-up syndrome' or 'get-there-itis'.

When time pressure is a factor, mistakes are easy to make. The ticking of the clock can heighten stress and lead to potentially dangerous actions like skipping steps or attempting to multitask. Overcoming the pressure by remaining focused is key to keeping safe.

Time pressure has been a causal factor in many aviation accidents. Of note was its part in the collision of KLM Flight 4805 and Pan Am Flight 1736 at Los Rodeos Airport in Tenerife on 27 March 1977. This accident resulted in 583 fatalities, and only 61 survivors.

Leading up to the accident, both sets of flight crew were watching the clock, with their decisions significantly influenced by time pressures. The KLM crew were rushing their departure to return to Amsterdam within their duty time. In addition, both the KLM and Pan Am crews were rushing to beat poor weather conditions.

It isn't just pilots who can be affected by time pressure. A 2008 University of Illinois study into errors made by aircraft maintenance technicians found that time pressure was a key contributing factor among unsafe acts. Pressure has also been highlighted in Gordon Dupont's 'Dirty Dozen' list of preconditions relating to aviation maintenance errors.

CAA Aviation Examiner Marc Brogan says that pilots need to have discipline and good habits in their preflight planning and preparation, regardless of any time pressure.

He also emphasises the need for pilots to have a plan and stick to it. "People will always stretch their limits; they will always go that little bit further.

"And it's about having an attitude that 'she *won't* be right'. Think about it and prepare for any eventuality. Picture what you would do in the event that something goes wrong."

Skipping a step

From cooking through to aviating, skipping a step can be a recipe for disaster. It might seem like skipping ahead could save time, but it might end up costing more time, let alone safety. After all, processes are designed to help us complete tasks as safely and efficiently as possible.

Putting his instructor's hat on, Marc says the reason behind the way we do things is key, but it's something people often miss.

"The way instructors pass that knowledge on is extremely important. They must explain the how and why this has become a way of doing something, and the outcomes."

When first learning a process, such as trying a recipe for the first time, we often follow it to the letter to get it right. However, with time and experience, the written recipe is dropped and we rely on memory. Complacency can set in, with steps skipped consciously or unconsciously.

This is where actively working through your checklists is especially important.

CAA Aviation Safety Advisor Carlton Campbell described the risk of pilot complacency in a previous issue of *Vector*: "Complacency can affect pilots who fly routine days, particularly if they're doing repetitive short-leg flights. Or operating in a comfort zone of flying the same aircraft, on the same route, on the same day each week."

Marc believes that pilots can become complacent about what they are doing – flying.

"Air travel and flying for fun has become such a regular part of life. People forget that we are operating in an environment that we are not made for, so they need to stop and think about the outcomes, and what can go wrong."

Rushing through or skipping a step to save time, whether intentionally or not, can have significant consequences, especially once you're in the air. "You can't pull over; you can't stop and think about it – you have to keep flying," says Marc.

CAA's Ryan Nicholl, the team leader of 125/135 flight ops, says pilots should learn to recognise the feeling of being rushed as a cue that prompts them to slow down and go about their tasks more deliberately.

"When we rush, our focus tends to narrow and we lose the ability to make quality decisions that take into account all relevant information, and use all available resources to the full extent.

"Sometimes you just have to accept that you're going to run late."

Some key steps to give extra thought to include weather checks, fuel checks, and checklists.

Weather checks

Before every flight, it's important to conduct a weather check of your planned route, even if you fly it often. A previous "I learned about flying from that" story in *Vector* demonstrated the importance of this. The pilot hadn't checked the latest weather forecast before flying into deteriorating weather conditions. While the pilot was eventually able to land safely,



they could have avoided the situation by taking the time to check the weather before their flight.

Get up-to-date aerodrome forecasts and consider potential weather issues. This is especially important with certain types of terrain such as mountainous regions where weather can change very quickly.

Even if you're only planning a very short trip, it's a good idea to check the weather as thoroughly as you would for a longer trip. If you're not sure about the conditions, ask someone, says Marc Brogan, "Don't be afraid to ask local pilots".

Fuel checks

Fuel management errors have been identified as causal factors in aviation accidents and incidents, including when time pressure was present. A study by McElhatton and Drew in 2008 called *Hurry-Up Syndrome*, found 10 percent of time pressure-related incidents involved fuel errors.

CAA's AvKiwi series on fuel, *Fuel for Thought*, profiled an accident from June 2014 involving a Cessna 152. The aircraft ran out of fuel on final approach to Ardmore aerodrome despite the pilots having completed fuel checks before the flight. The investigation determined that the contributing factors included rushed fuel checks and relying on assumptions.

Ensure you have sufficient fuel loaded for your journey, taking into account the minimum legal fuel reserves required, and the weather forecast. It's also good practice to plan alternative refuelling points along the route, just in case. Remember to have fuel in your tanks and time up your sleeve.

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For more advice on fuel management, check out the CAA's *Fuel Management GAP* booklet which is available at www.caa.govt.nz, "Quick Links > Publications > *Good Aviation Practice* booklets". You can also order a free copy by emailing info@caa.govt.nz.

Checklists

Rushing through checklists or skipping over any sections is a dangerous idea. The notorious Spanair Flight 5022 accident at Madrid-Barajas Airport in 2008 involved a number of checklist-related failures. These included checks relating to the flaps/slats settings which led to the aircraft's stall and subsequent crash.

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A key risk when going through familiar processes such as checklists is that of confirmation bias – the tendency to seek information that will confirm a decision or fulfil an expectation. For example, assuming and accepting that a particular control is set correctly despite it actually being incorrectly set.

"People see what they want to see," says Marc. "They are set in their mind."

Confirmation bias can crop up with weather checks too, says Marc. "People can look at the weather reports, and see that on paper they're good to go. But despite seeing storm clouds out the window, they push on."

"You've got to challenge your decisions to check they are rational," says Marc.

Consider local knowledge again; perhaps go and ask the pilot who just landed.

To help combat confirmation bias, spend the right amount of time going through your checklists thoroughly, and challenge them, regardless of potential time pressure.

Managing distractions

Marc recommends completing preflight checks without anyone beside you, especially if you are under stress or time pressure.

"Some people will take their friends and explain to them what they're doing – that's fine, but if there's any element that adds burden to what they're doing, then they are prone to making mistakes."

If you're ever disrupted during a preflight, and you can't remember where you were up to, go back and start again.

Also, don't answer your phone during your preflight. "It could be something stressful or upsetting, which could distract you completely," Marc says.

The myth of multitasking

When time pressures are high and there are many things to do, multitasking might feel like the logical solution. But this can cause real headaches.

Multitasking is a much debated subject as seen in American psychiatrist Dr Edward Hallowell's book, *CrazyBusy*. Hallowell described multitasking as a "mythical activity in which people believe they can perform two or more tasks simultaneously".

In an aviation context, Key Dismukes (former Chief Scientist for Human Factors at NASA's Ames Research Center) suggested in an article for *Aviation Safety Magazine* in August 2017, that "when multitasking, performing a procedural step out of sequence, or substituting an atypical procedural step for an habitual one, treat the situation as if it had a red caution flag".

So multitasking can actually have the opposite effect to saving time, and can lead to a greater chance of making a mistake.

It's best to avoid multitasking, where possible, to maintain a high level of focus on one task at a time. In many situations you may need to switch between tasks in quick succession, but consciously moving between individual tasks is quite different to trying to tackle everything simultaneously.

Competing demands can encourage an attempt at multitasking. Take for example going through a checklist and receiving a call from ATC when you're midway through.

Marc says, "There's immediacy sometimes – you need to reply straight away." Perhaps ATC clear you to line up and take off, but you're not ready as you're still going through your checklist.

"You'd just say 'Negative, I need another 30 seconds', while you complete your checklist."

Always be very clear in your lines of communication as well as in your use of your checklist.

"Your checklist is in an order for a reason and if your order gets disrupted, the quality of what you're doing is gone."

Remember your reason why

While time pressure can certainly be distracting, it's crucial to not lose sight of the task at hand – and why you're doing what you're doing.

Marc's biggest message for recreational pilots is that flying is meant to be safe and fun.

"If you start to run behind, just remember, you're doing it for fun. Is it still fun? Are you actually now trying to make something work that has become so hard that you should just say 'You know what, I think today might not be our day'."

"After all, there's no way for you to be able to make up for the time that just went by," he says.

Additional pressure can come from not wanting to let people down, especially if you've said you would take someone flying.

"It's better to disappoint people by saying, 'Look, I don't think it's going to happen today' than to scare them, hurt them, or kill them."

"People need to stop and ask themselves whether it really is that important to fly that day. Consider that the real end goal is to put the machine away and go home."

"And have fun, but fly safely while you're doing it." ■

