



How Pilots Manage Distractions





Neil Piper

Head of Content: Messe Frankfurt
South Africa

Opening



Annelie Reynolds

Show Director: Aero South Africa

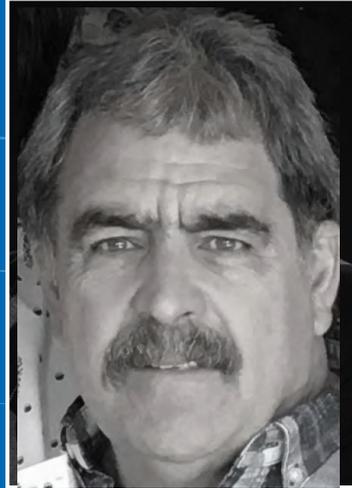
Welcome

PANELISTS



Ari Levien

MayDay SA



Cobus Toerien

ALPA-SA



Caroline Koll

Essential Pilot



Santjie White

ICAO SAR EXPERT

Agenda

- Speaker Session: Ari Levien – MayDay-SA
- Speaker Session: Cobus Toerien – ALPA-SA
- Speaker Session: Caroline Koll – The Essential Pilot
- Speaker Session: Santjie White - *ICAO SAR EXPERT*
- Q&A
- Closing



Franz Smit

MD: PilotInsure

Moderator



Ari Levien

MAYDAY SA

mayday-sa





Safety First Aviators campaign

MAYDAY-SA

Managing Distraction

1 December 2021

Presented by Ari Levien



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- Phone: **012 333 6000** (ask for MAYDAY)
- Website: www.mayday-sa.org.za
- Follow us on FaceBook: Mayday-SA
- Email: maydaysouthafrica@gmail.com



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TASK MANAGEMENT

- Cognitive research shows people can perform **two tasks** concurrently only in **limited circumstances** even if **skillful** in performing each task separately
- Humans have two cognitive systems
 - **Conscious control** – slow & painful
 - **Automatic** – rapid, fluid, task-specific & requires little attention
- Real-world tasks require a mix of both



CONSCIOUS CONTROL

- Novel tasks
- Task perceived to be critical, difficult, or dangerous
- Prevent habit capture
- Choose among competing activities
- Conversation requires conscious control



IMPLICATIONS

- Eliminate divided attention wherever possible
- Practice makes easier
- Recency makes easier
- Good situational awareness reduces the chance for surprise interruptions – beware habit capture





SITUATIONAL AWARENESS

Yeah it's important 

DISTRACTIONS

90% of aviation distractions fall into 4 categories:

1. Communication
2. Head-down work
3. Searching for traffic
4. Responding to abnormal situations



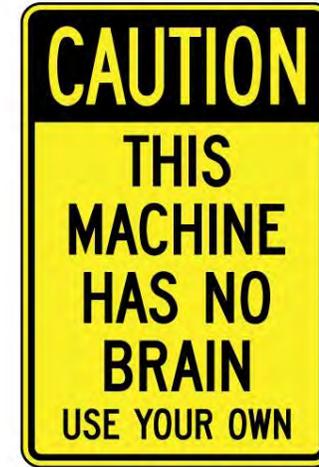
REDUCING VULNERABILITY TO DISTRACTIONS

- Recognise that conversation is a powerful distractor
- Recognise that head-down tasks greatly reduce ability
- Schedule activities to minimise conflicts
- When two tasks must be performed concurrently, set up a scan
- Treat interruptions as red flags
- (Crew) Explicitly assign PF/PNF responsibilities
- Clarity in communications



TAKE AWAYS

- Prioritization: **ALWAYS FLY THE AIRCRAFT**
- Aviate, Navigate, Communicate, Manage
- **UNABLE & STAND BY**
- Sterile Cockpit – especially passengers!
- Manage sources of distraction
 - Brief passengers before flight
 - Phones & electronics
- SLOW DOWN – give yourself time
- PPPPPP



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Cobus Toerien

ALPA-SA

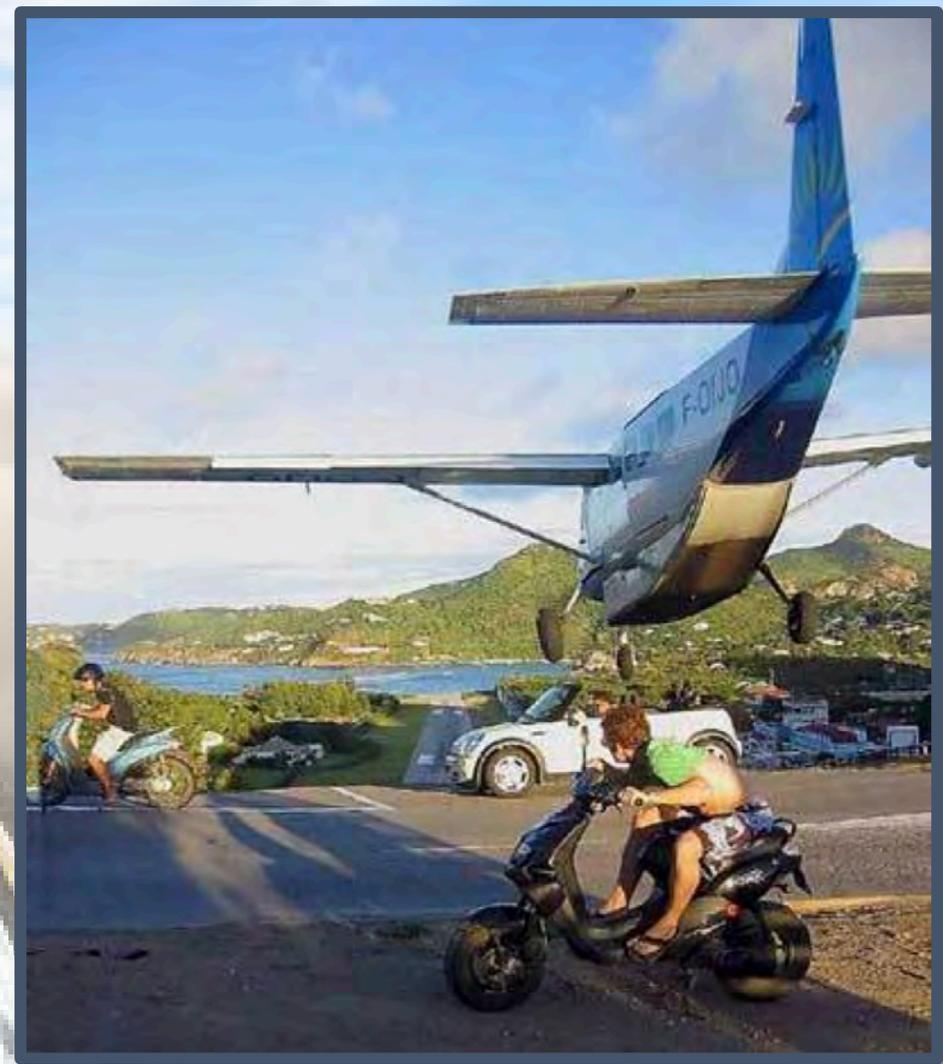
SAFETY FIRST AVIATOR CAMPAIGN 2021

01 December 2021



PROP CLEAR!!!

Distractions come in many forms...





Distractions and interruptions can severely compromise flight safety if they occur during critical phases of flight.

General aviation pilots are particularly at risk because they usually do not have additional flight crew members to assist them.

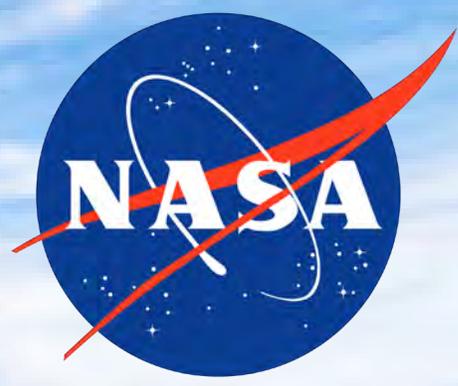


**Cockpit
Distractions
Can Set a
Deadly
Chain of Events
in Motion**



#FlySafe





Factor
Communications
Head-down activity
Response to abnormal c
Searching for traffic afte

Sources: NASA - ASRS

% of Events
50 to 68%
16 to 22%
14 to 19%
8 to 11%

boldmethod ➔

The 10 Worst Distractions For Pilots

1) Traffic you hear, but can't see



2) "Bad" Passengers



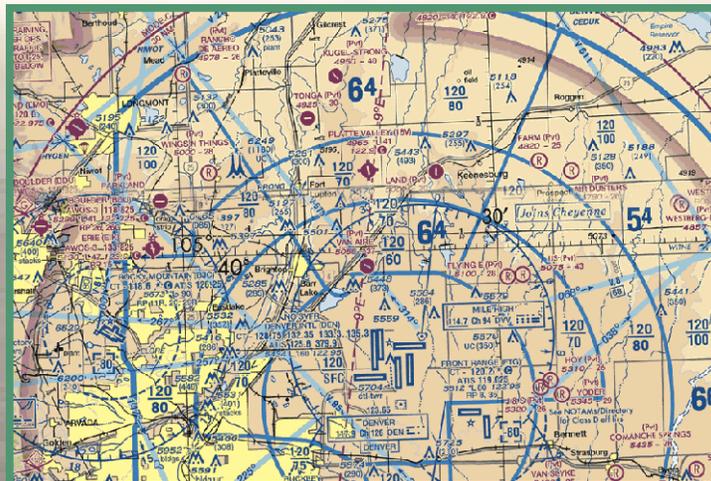
3) Back Seat Pilots



4) Unfamiliar Aircraft



5) Unfamiliar Airspace



6) Non-Essential Electronics



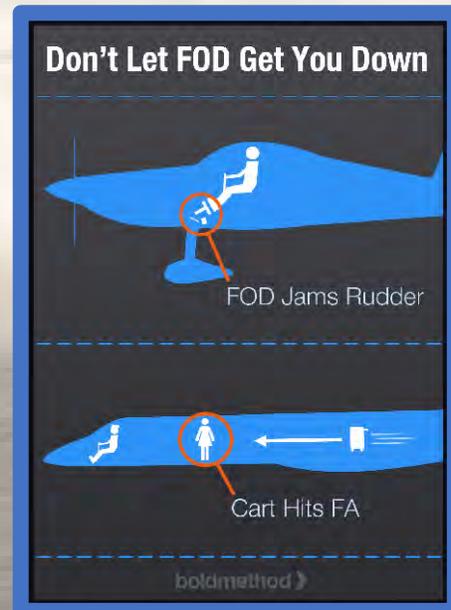
7) Unnecessary Radio Congestion



8) Cluttered Avionics



9) FOD



10) Open Doors & Windows



There are many more distractors! I.e. - High Workload



Emergencies



“People in aviation are as susceptible to electronic distractions as anyone else.”



People in aviation are as susceptible to electronic distractions as anyone else.



A phone conversation was implicated Hudson mid-air collision between a tour helicopter and a Piper Lance that killed nine people.

Managing Distractions



Managing Distractions:

Some distractions [and interruptions] may be very subtle and insidious, therefore, the **first priority is to recognise and identify.....**

The second priority is to **re-establish situational awareness**, as follows:

- **Identify** what I was doing
- **Ask** - Where was I interrupted
- **Decide / Act** - What decision or action shall I take to get 'back-on-track?'"



- ❖ Recognise that **conversation** is a powerful distracter
- ❖ Recognise the impact of “**head-down tasks**” on flying & monitoring
 - ❖ Suspend **noncritical** duties when appropriate
 - ❖ Treat interruptions as **red flags**



**B744 at ORT
22 Dec 2013**

I.e., a call from ATC while running a checklist



❖ **SLOW DOWN & FOCUS**

**“Slow is smooth,
and smooth is fast!”**



Always FLY your aircraft!



Thank you





Caroline Koll

ESSENTIAL PILOT



ESSENTIAL PILOT

Keeping flying fun!

LOSS OF CONTROL



CAROLINE KOLL

A perspective view of a road stretching into the distance under a blue sky with wispy clouds. The road is dark asphalt with a white dashed line down the center and yellow solid lines on the sides. The sky is a vibrant blue with soft, white clouds. The overall scene is bright and clear.

What is Loss of Control?

Loss of control inflight (LOC-I) refers to accidents and incidents in which the pilot has **temporarily**, or **completely**, lost the ability to maintain control of an aircraft in flight.

Typically, results in an extreme **deviation from the intended flight path**.



Loss of control accidents are most often **fatal**.

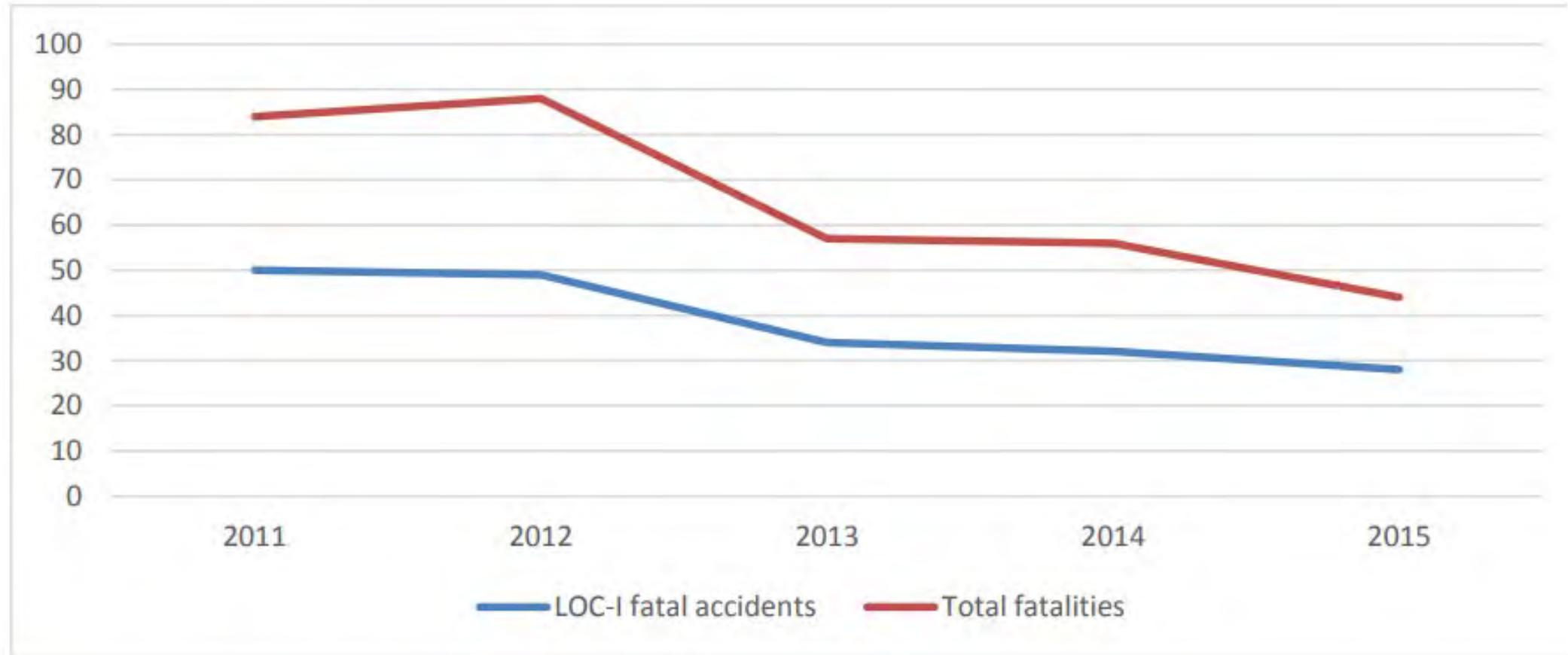


Figure 1 - Loss of control in flight accidents and fatalities in General Aviation 2011-2015



How does a trained pilot
lose control?

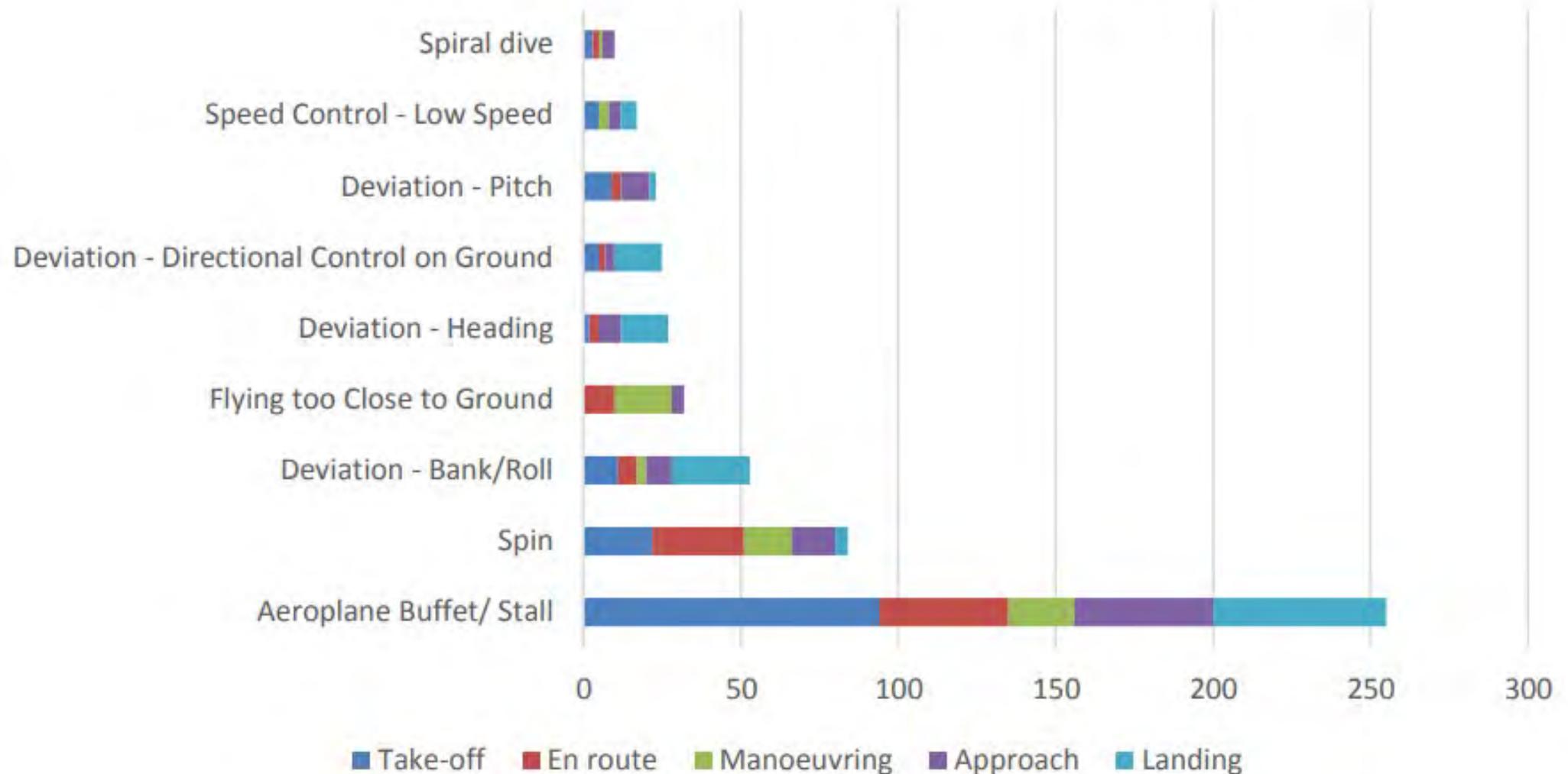


Causes of Loss of Control accidents:

- Poor decision making.
- Failure to recognize an aerodynamic **stall** or **spin** and execute corrective action.
- Intentional failure to comply with regulations.
- Failure to maintain **airspeed**.
- Failure to follow procedure.
- Pilot lack of proficiency.

Aerodynamic **Stalls** and **Spins** are most likely in LOC

Aircraft Upset Event types per Flight Phase 2011-2015





Distractions AND Loss of Control

A man in a red shirt is pointing towards a woman in a cockpit. The cockpit features two digital displays showing flight data and a map. The text "Do you Think it won't happen to you ?" is overlaid on the image.

Do you Think it won't
happen to you ?

1. Weight & balance



Check your weight and balance...

Effects of flying over weight:

- Higher take off speed
- Longer take off run
- Reduced rate and angle of climb
- Lower maximum altitude
- Shorter range
- Reduced cruising speed
- Reduced manoeuvrability
- Higher stalling speed
- Higher approach and landing speed
- Longer landing roll



Check your weight and balance...

Prevention:

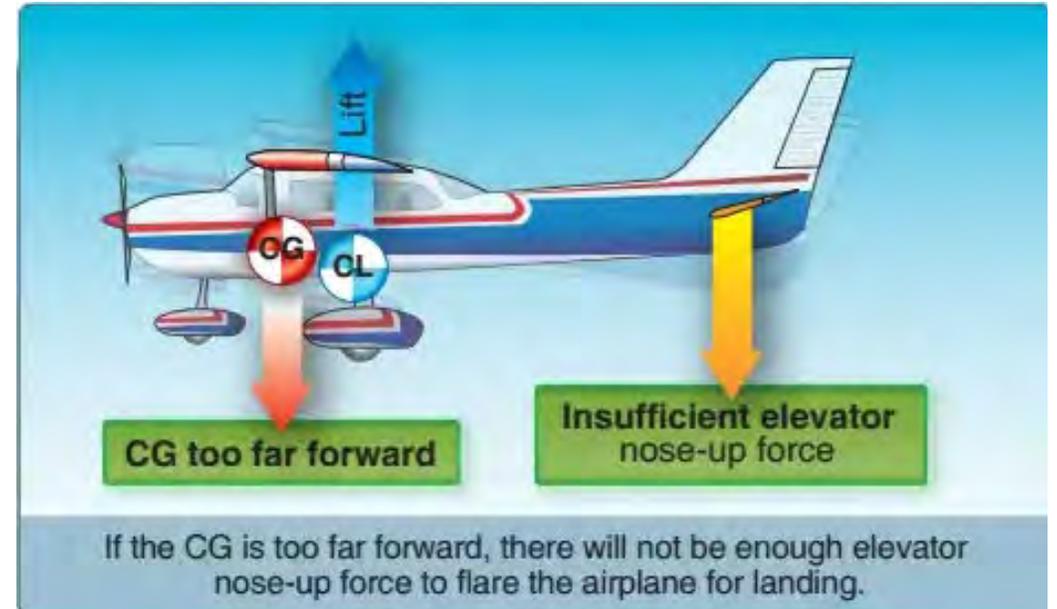
- Be knowledgeable in the effect of weight on the performance on the particular aircraft.
- Get an accurate account of weight.
- Check performance charts. don't assume!



... and C of G for your trip!

Effects of exceeding CG forward limit:

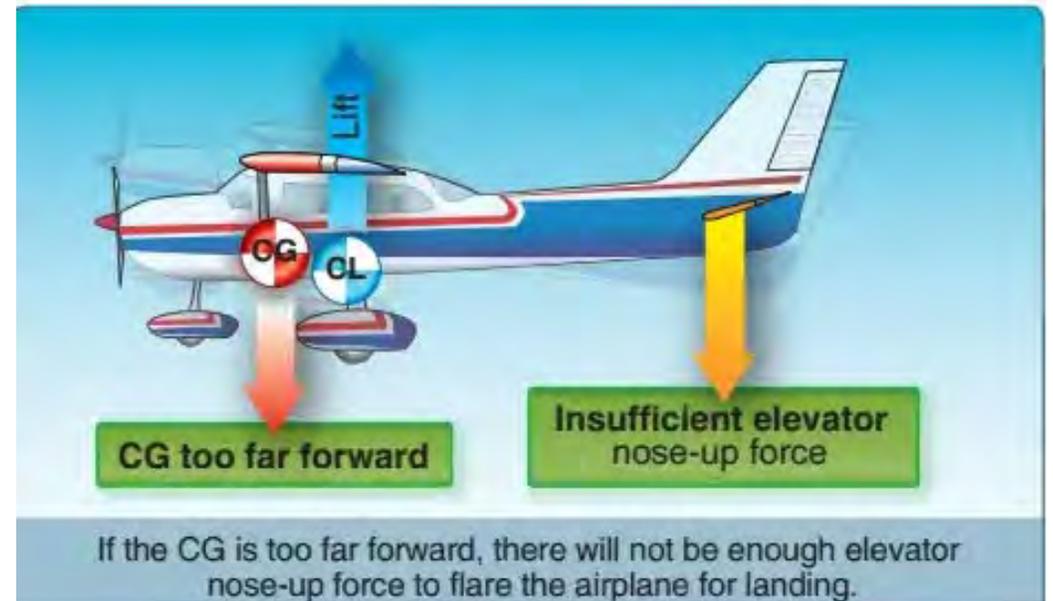
- Increase in fuel consumption and a decrease in range and endurance.
- Increased take-off distance.
- Increased stall speed
- Requires increased elevator deflection to maintain balance.



... and C of G for your trip!

Effects of exceeding CG aft limit:

- Longitudinal stability is reduced = light stick forces and possibly overstressing the airframe.
- In an inadvertent spin, a flat spin would likely develop and result in a difficult recovery.
- Range and endurance decreased due to increased drag caused by extreme manoeuvres.



A view from an airplane cockpit looking out at a large, snow-capped mountain peak under a cloudy sky. The cockpit's instrument panel and the pilot's profile are visible in the foreground, framing the view of the mountain.

2. OBSTACLES

Increasing pitch attitude to avoid an obstacle

Dangers

- Pitching up during a climb out to avoid an obstacle, can lead to a **stall**.
- Pilot is distracted by the obstacle ahead, instead of focusing on critical procedures.



Increasing pitch attitude to avoid an obstacle

Prevention

- Pre-flight planning – **know the terrain**.
- Calculate performance for **weight**, **density altitude** and **wind**.
- Be realistic about your aircraft age!





3. showing off

'Buzzing' and Low fly pasts

Dangers

- Pulling out of a dive can lead to a stall.
- Load factor increases beyond the aeroplane capability to produce lift.
- Aeroplane performance may be insufficient to maintain the climb, leading to an increase in pitch attitude.



4. GO AROUND



Poorly executed Go Arounds

Dangers

- Pilot is distracted by an **unusual situation** on the runway.
- Distraction leads to a **poorly executed procedure**, and **improper technique** which could lead to a stall in a sharp pull up.



Poorly executed Go Arounds

Avoidance

- **Procedures** for your aircraft should be **memorised** and **practised** regularly.
- **Review the procedure before every approach**, and brief passengers.
- Make the decision early.



5. Base to final



Overshooting Base to Finals

Dangers

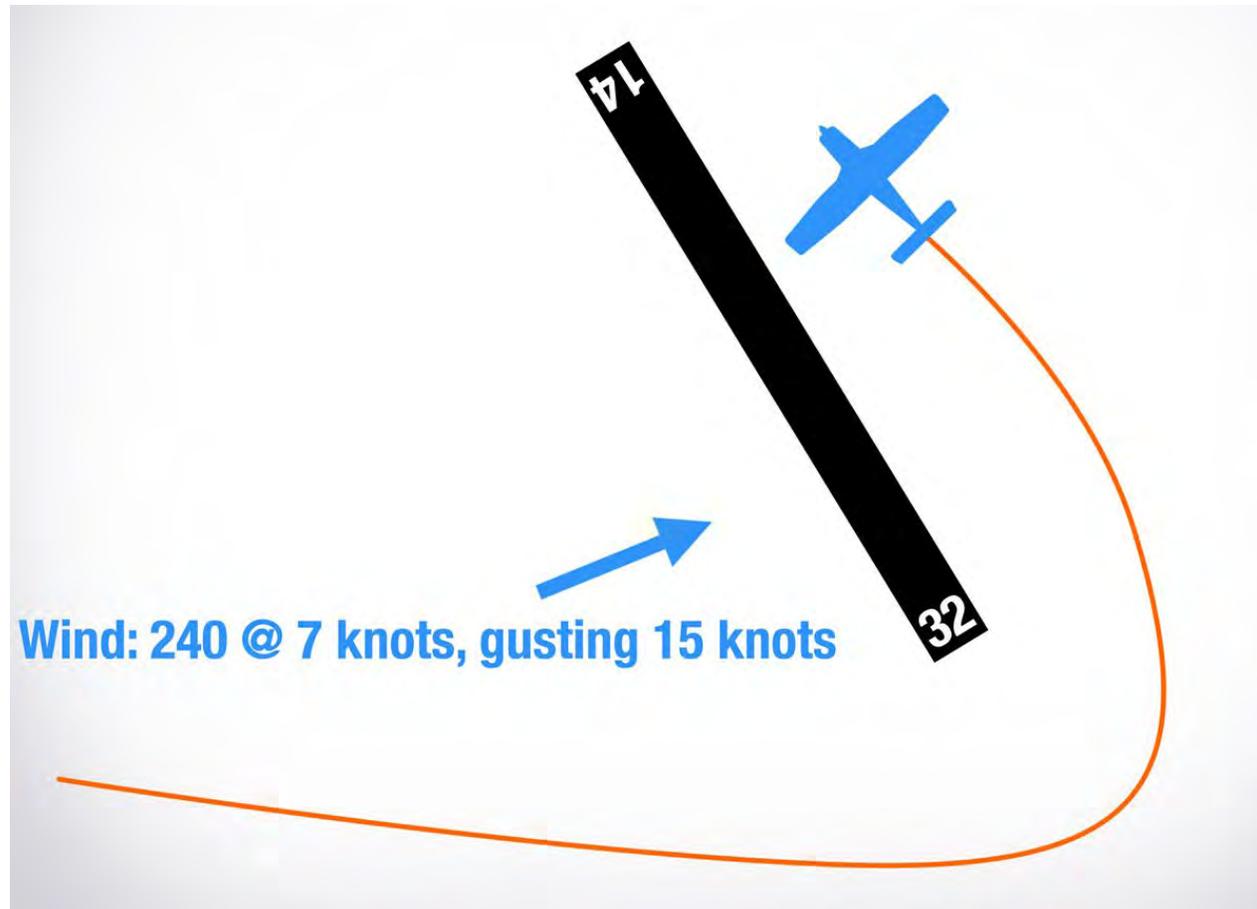
- Overshooting can lead to **steepening the bank angle**.
- **Load factor is increased** with increased bank angle, which increases stall speed.
- **Not anticipating wind** can lead to an overshoot.



Overshooting Base to Finals

Avoidance

- Plan for the wind.
- Never tighten the turn
- Go Around



Managing distractions depends on Pilot Capability

Highly Capable

- Recent on the aircraft
- Healthy
- Well Rested
- Worry free



Low Capability

- Not recent on the aircraft
- Stressed
- Tired
- Ill





ESSENTIAL PILOT
Keeping flying fun!

**Want to brush up your skills?
5% discount #rustypilot**

Contact:

Caroline +27849615511

Shamir +27647566356

info@jhbfflying.co.za



Santjie White

ICAO SAR EXPERT

SAFETY FIRST AVIATOR CAMPAIGN 2020/21



PROP CLEAR!!!



ALWAYS PLAN -
ALWAYS HAVE AN
OUT!!!!!!



OUR BIGGEST DANGER

“Attitude”



PILOT [pahy-luh t]
noun

1. A person who does precision gueswork based on unreliable data provided by those of questionable knowledge.

See also: wizard, magielan



“There is no such thing as a natural-born pilot. Whatever my aptitudes or talents, becoming a proficient pilot was hard work, really a lifetime’s learning experience. For the best pilots, flying is an obsession, the one thing in life they must continually do. The best pilots fly more than the others; that’s why they are the best.”



MIND SETS NEED CHANGING

"IT COULD HAPPEN TO ME"

- PLAN THE FLIGHT!
-
- CHECK THE WEATHER!
- KNOW YOUR AIRCRAFT AND ITS LIMITS!
- MAKE EARLY DECISIONS BASED ON SAFETY!
- VFR FLIGHT IS NOT RELIABLE TRANSPORT!





WE'RE ALL GOING ON A SUMMER HOLIDAY

AVIATE, NAVIGATE, COMMUNICATE!

ALWAYS LEAVE YOURSELF AN "OUT"!

NOTHING FLIES WITHOUT FUEL!

TAKE OFF IS OPTIONAL!

STAY OUT OF CLOUDS!





DO NOT GET YOURSELF INTO IMC CONDITIONS!

DO NOT GET YOURSELF INTO CFIT SITUATIONS!

NEVER LET AN AIRPLANE TAKE YOU SOMEWHERE THAT YOUR BRAIN DIDN'T GET TO FIVE MINUTES EARLIER!

WATCH OUT FOR LASER AND DRONE ACTIVITY!





DO NOT BECOME COMPLACENT!

DO NOT SWEAT THE SMALL THINGS!

ALWAYS DO PROPER CHECKS!

IF IT FEELS WRONG - IT IS WRONG!

**WHEN IN DOUBT, DRINK A BEER. THAT WILL GIVE YOU
EIGHT EXTRA HOURS TO PROPERLY PLAN!**

- **FILE FLIGHT PLANS - IT IS YOUR INSURANCE POLICY!!!!**
- **ACTIVATE YOUR FLIGHT PLAN - WITH ANY ATSU!!**
- **CANCEL SEARCH AND RESCUE - AT ANY ATSU!!!**



EMERGENCY

- **7700 - EMERGENCY**
- **7600 - LOST COMMUNICATION**
- **THIS WILL BE ACTIONED IMMEDIATELY BY ATC AND REPORTED TO THE ARCC WHO WILL MONITOR THE EMERGENCY AND ACTION ACCORDINGLY!**



WHAT IS REALLY IMPORTANT FOR SAR?

- WHO ARE YOU?
- WHERE ARE YOU?
- WHAT'S WRONG?
- YOUR INTENTIONS?



I'VE GONE DOWN, WHO DO I PHONE?

063 505 4164

063 505 5485

These are the numbers for the Duty SMC's, which in terms of ICAO Annex12 are obliged, by the South African Maritime and Aeronautical Search and Rescue Act and Regulations, to immediately respond to an aircraft in distress!



USEFUL NUMBERS

ARCC DUTY SMC: 063 505 4164

**BRIEFING OFFICE: Call share within South Africa
0860 359 669 (0860 FLY NOW).**

JOHANNESBURG ATCC: 011 928 6454/5

CAPE TOWN ATCC: 021 937 1119 / 1156



**FLY SAFE, STAY SAFE AND IF YOU NEED
A GUARDIAN ANGEL - PHONE ME, I
WILL FLY WITH YOU!!!!**

**Santjiew@outlook.com
+27 63 239 2151**





Q&A



DEFINING YOUR LIMITATIONS AS A PILOT