



Back to Flying under Challenging Conditions brought on by Covid-19





Neil Piper

Head of Content: Messe Frankfurt
South Africa

Opening

PANELISTS



Andre Roos

Aviation Risk
Specialist, Claims and
Accident Investigator



Rhett Shillaw

*Blogger and
Author at Startup
to Shutdown*



Ari Levien

MayDay-SA

Agenda

- Moderator Opening: Neil Piper – *AERO South Africa*
- Speaker Session: Andre Roos – *Aviation Risk Specialist, Claims and Accident Investigator*
- Speaker Session: Rhett Shillaw – *Blogger and Author at Startup to Shutdown*
- Speaker Session: Speaker Session: Ari Levien – *MayDay-SA Representative*
- Q&A
- Closing



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Aviation Risk Specialist, Claims and
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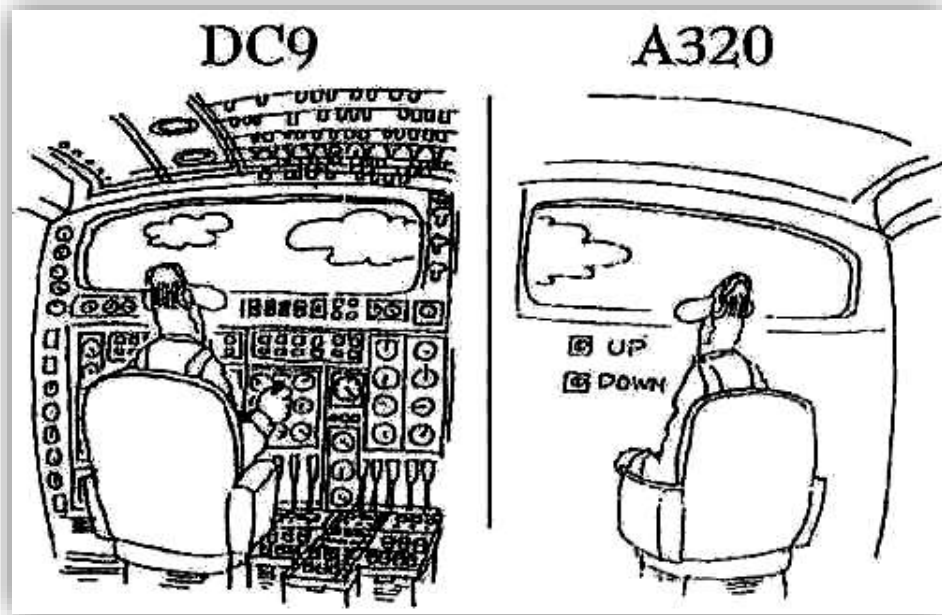
AGE RELATED COGNITIVE DECLINE

Understanding, Identifying and
Mitigating the Risk

Andre Roos.

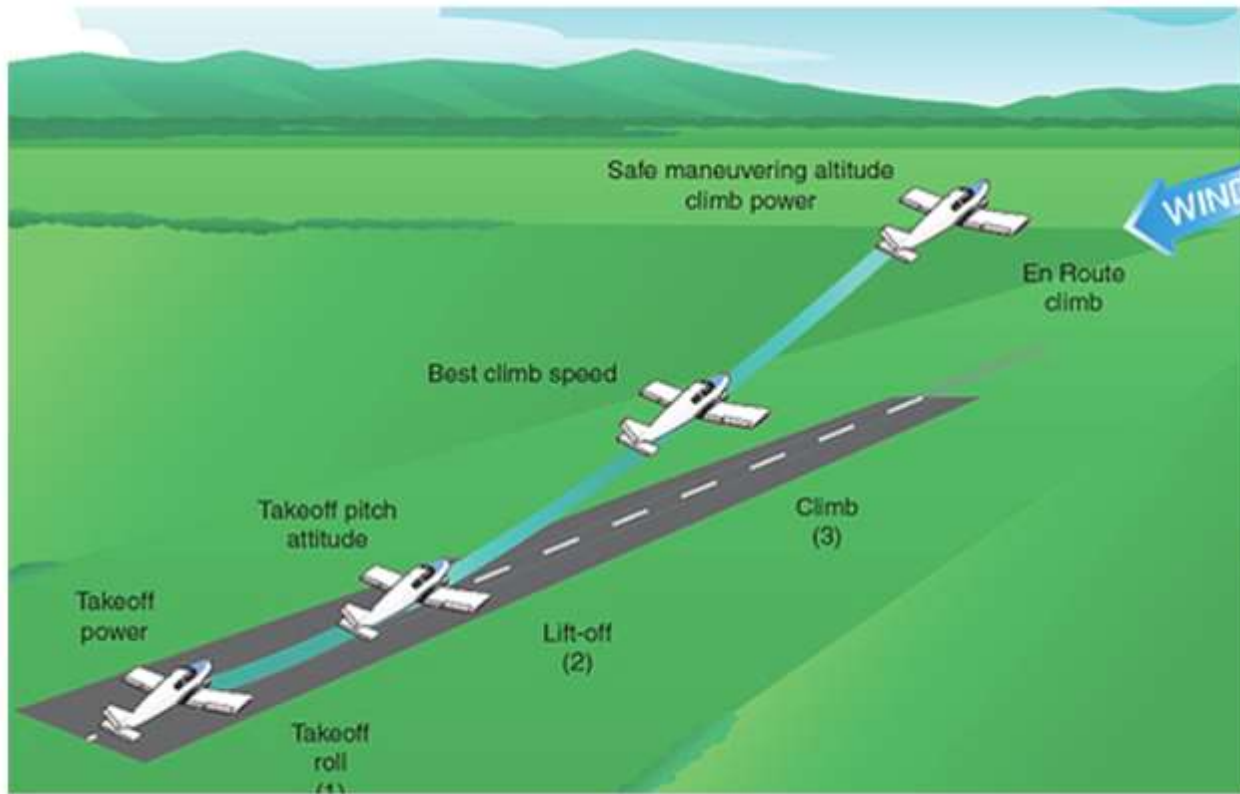
MSc. Safety and Accident Investigation (Air Transport)

Human in the Loop



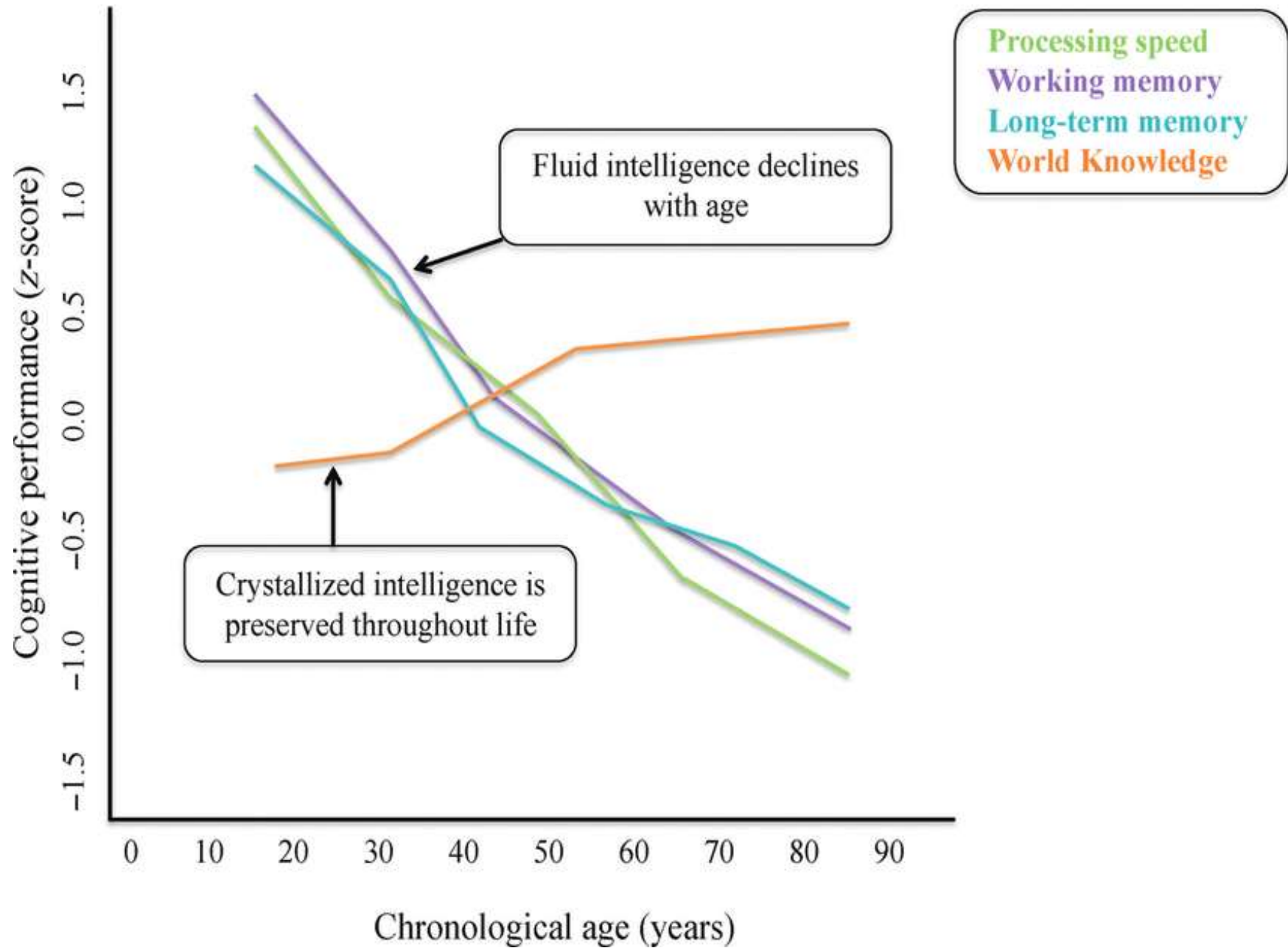
- Aeronautical Decision Making (ADM)
- Ability to handle a Dynamic Emergency
- External Factors

Engine Failure After Take-Off



**4 Seconds
to React**

**5 Seconds
before Impact**



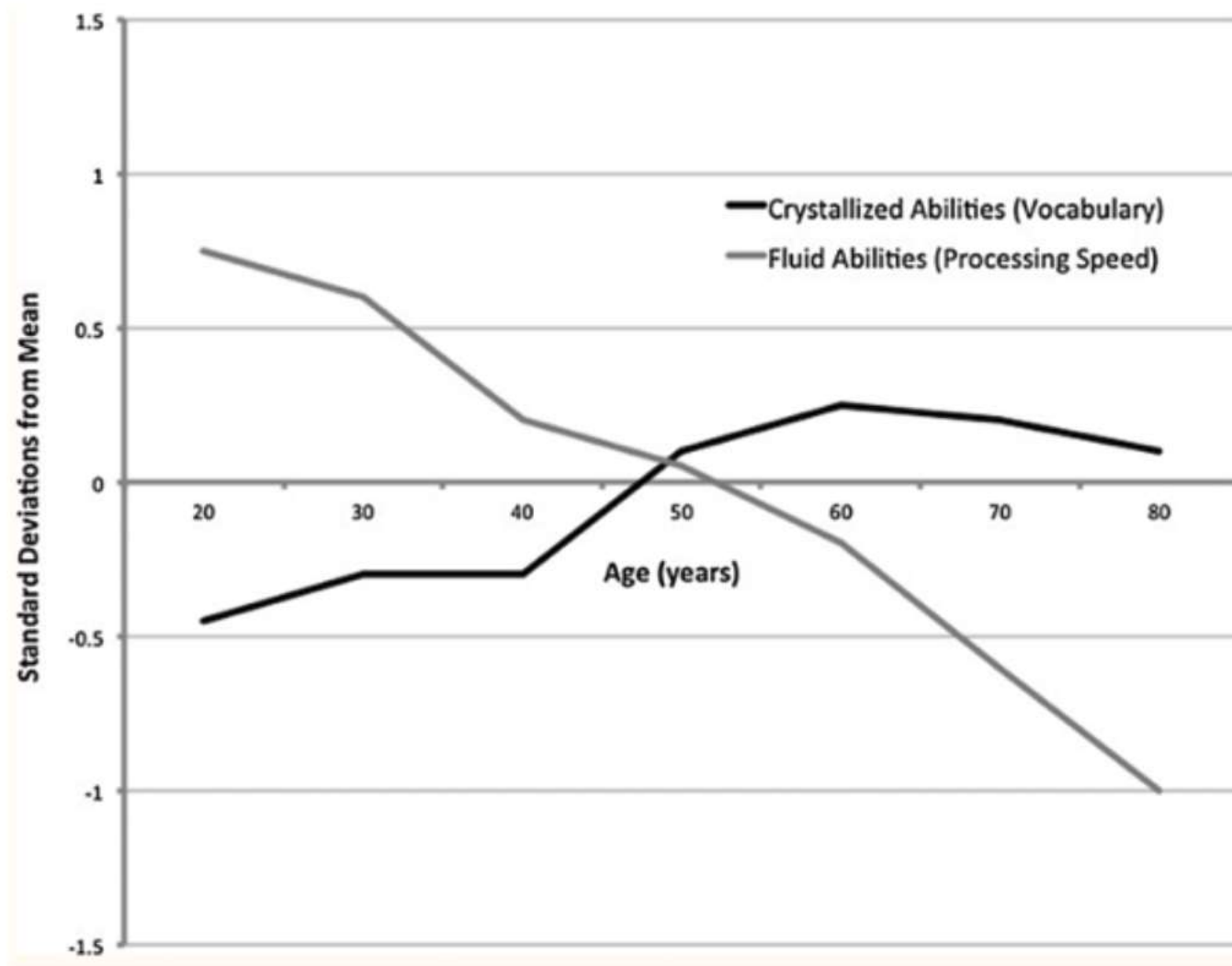


Figure 1 Crystallized and fluid abilities versus age. Zero line represents the mean or average performance (Murman, 2015).

*Age Groups * Injuries Crosstabulation*

		Injuries				
		None/Minor	Serious	Fatal	Total	
Age Groups	<20	Count	15	2	3	20
		% within Age Groups	75.0%	10.0%	15.0%	100.0%
	21-30	Count	77	9	34	120
		% within Age Groups	64.2%	7.5%	28.3%	100.0%
	31-40	Count	73	18	47	138
		% within Age Groups	52.9%	13.0%	34.1%	100.0%
	41-50	Count	133	34	88	255
		% within Age Groups	52.2%	13.3%	34.5%	100.0%
	51-60	Count	104	45	119	268
		% within Age Groups	38.8%	16.8%	44.4%	100.0%
	61-70	Count	51	24	68	143
		% within Age Groups	35.7%	16.8%	48%	100.0%
	71-80	Count	9	3	21	33
		% within Age Groups	27.3%	9.1%	64%	100.0%
	>80	Count	0	1	2	3
		% within Age Groups	0.0%	33.3%	67%	100.0%
Total		Count	462	136	382	980
		% within Age Groups	47.1%	13.9%	39.0%	100.0%



What to do?

- Know about Age Related Cognitive Decline
- High Flight Recency – 4 Hours per month – The best mitigating factor
- Do not jump between Aircraft type, stick to one type as much as possible.
- Acknowledge and respect the Dunning Kruger Effect
- Pay attention to the presentation – Normalization of Deviance

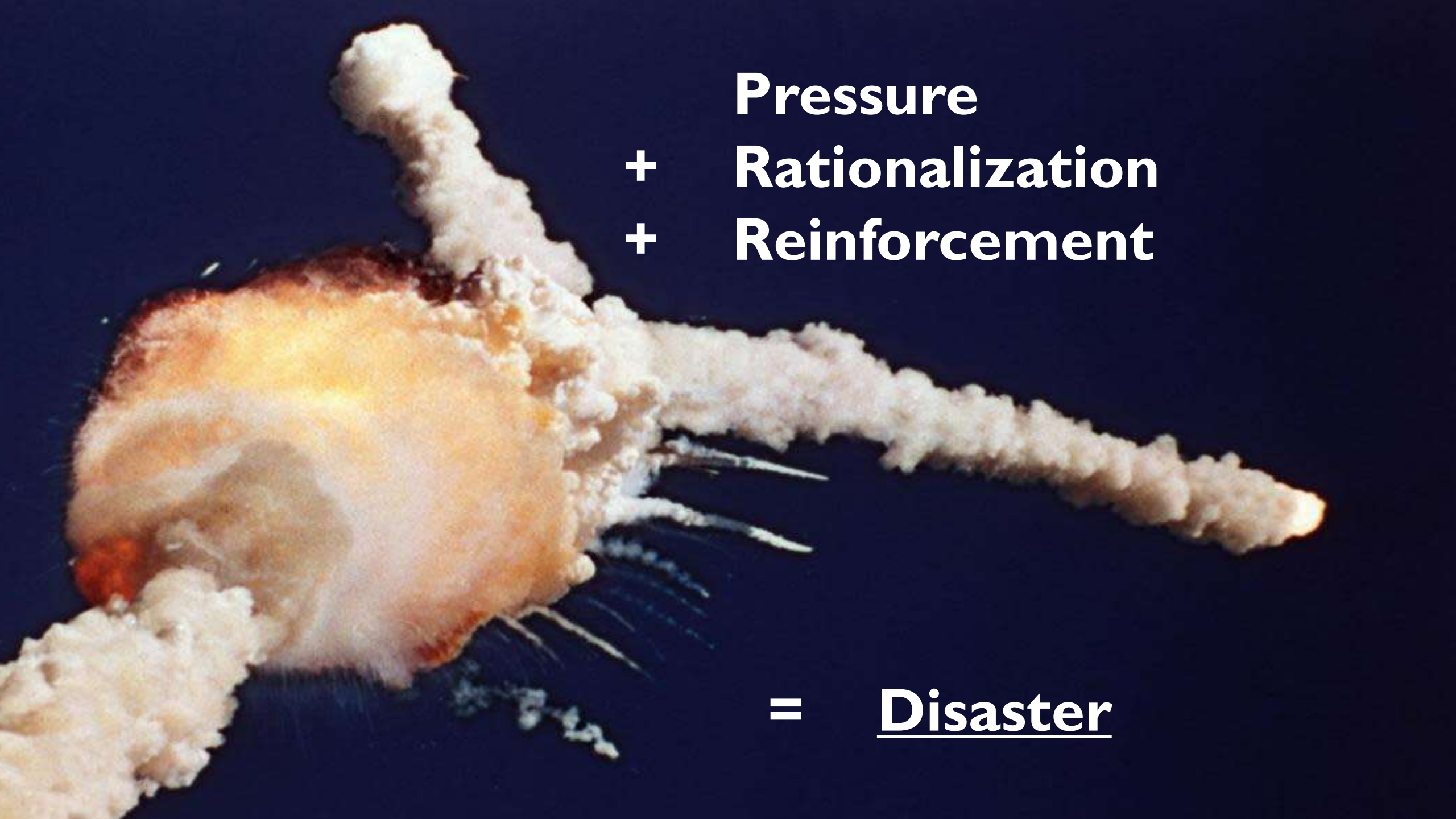


Rhett Shillaw

Blogger and Author at Startup to Shutdown



NORMALIZATION OF DEVIANCE



Pressure
+ Rationalization
+ Reinforcement

= Disaster

PRESSURE

- Pressure to meet an "over-ambitious" schedule of 24 shuttle flights a year by 1990.
- NASA's 'we can do anything' attitude.
- Unheeded warnings & a number of close calls in flight since the second shuttle launch in 1981.



Forward Segment

**SRB
Forward
Assembly**



REINFORCEMENT

NORMALIZATION OF DEVIANCE

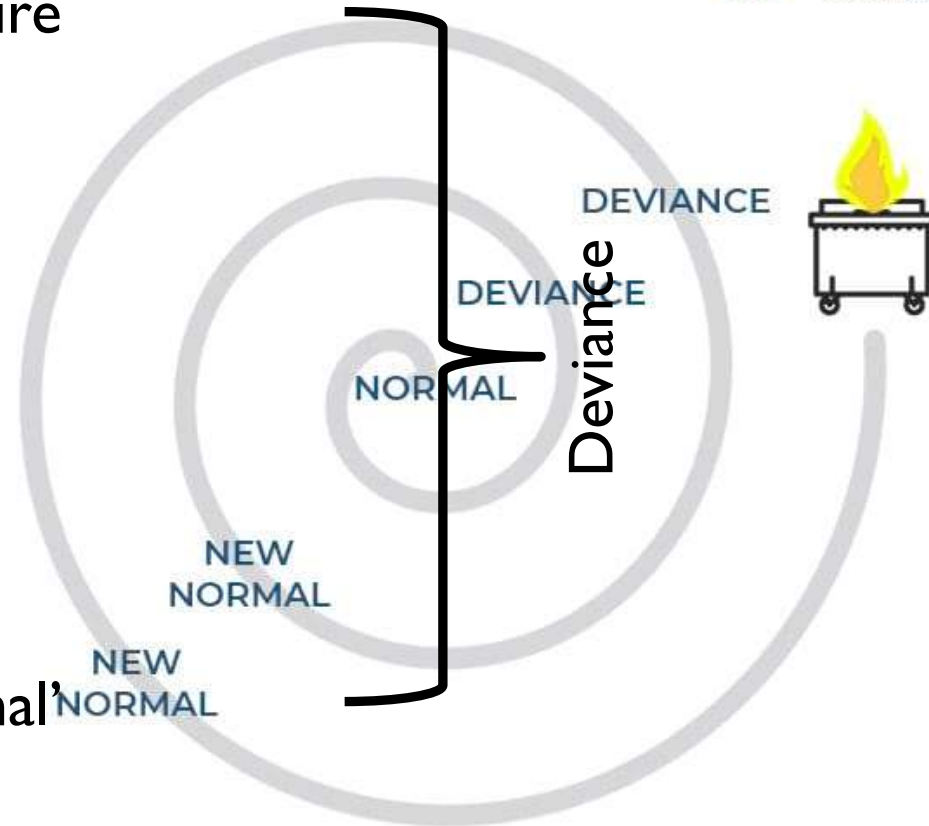
Standard Procedure



Social **normalization of deviance** means that people within the organization become so much accustomed to a deviant behavior that they don't consider it as deviant, despite the fact that they far exceed their own rules for the elementary safety.

- Diane Vaughan

New 'Normal'

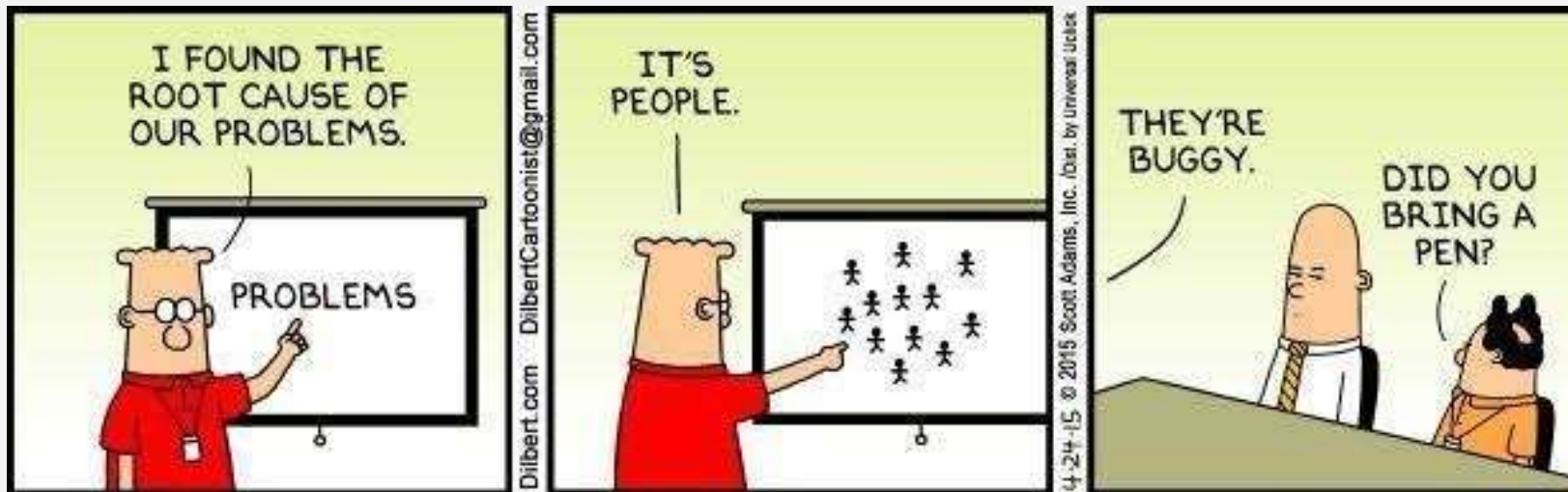




NORMALISATION OF DEVIANCE

The gradual process through which unacceptable practice or standards become acceptable

I. RECOGNIZE VULNERABILITY



- We're all human!

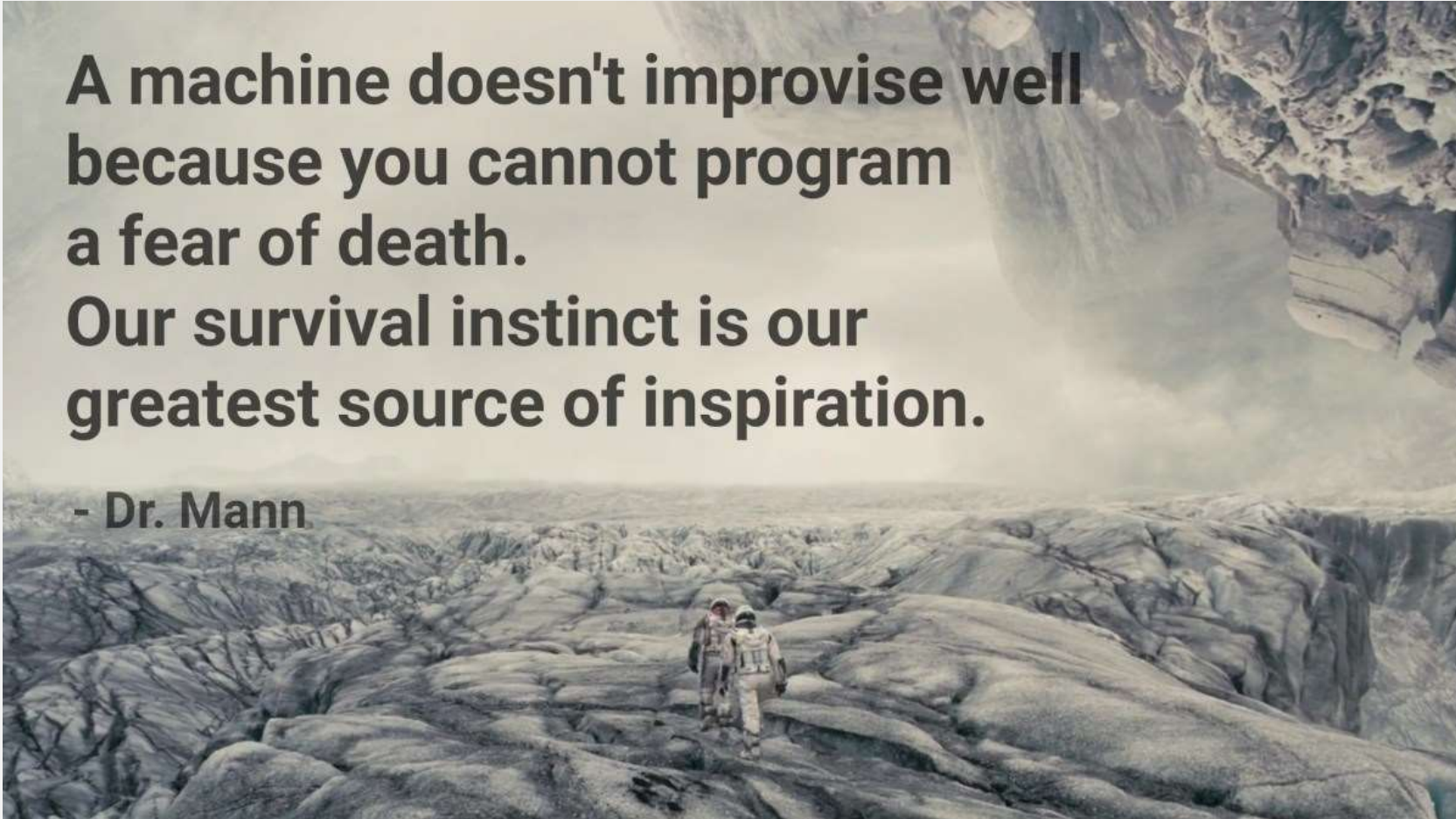
2. MEET THE STANDARDS



3. TRUST YOUR INSTINCTS

**A machine doesn't improvise well
because you cannot program
a fear of death.
Our survival instinct is our
greatest source of inspiration.**

- Dr. Mann



4. LEARN FROM OTHERS

A quote by Paulo Coelho is displayed over a background image of a forest at dusk or dawn, with the trees reflected in a body of water. The text is centered and reads: "EVERY TIME WE REPEAT THE SAME MISTAKE. THE PRICE GOES UP."

EVERY TIME WE REPEAT
THE SAME MISTAKE.
THE PRICE GOES UP.

PAULO COELHO



Ari Levien

Representative from MayDay-SA



Safety First Aviators campaign

MAYDAY-SA

Recognising & Fighting Deviance

27 October 2021

Presented by Ari Levien

PLEASE - SAVE and SHARE

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- Website: www.mayday-sa.org.za
- Follow us on FaceBook: Mayday-SA
- Email: maydaysouthafrica@gmail.com



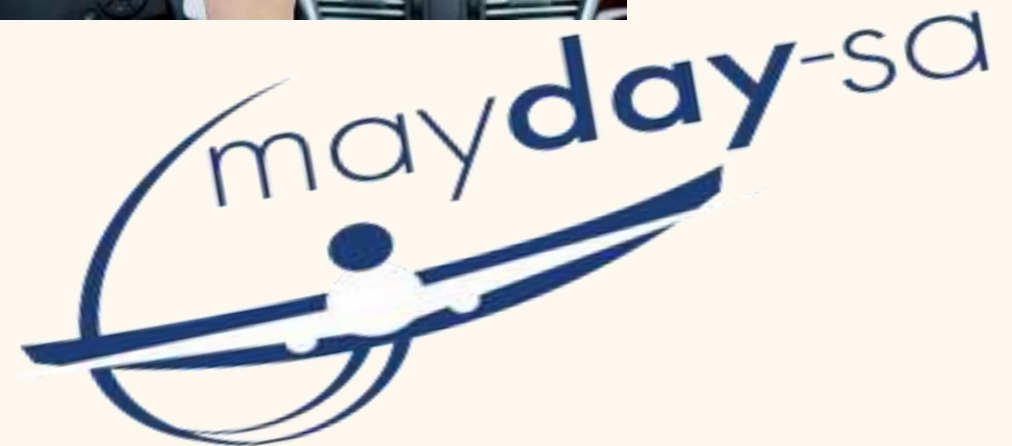
NORMALISATION OF DEVIANCE

- “The gradual process through which unacceptable practice of standards becomes acceptable. As the deviant behaviour is repeated without catastrophic results it becomes the social norm for the organization” *Dr Diane Vaughan*
- EVERY human endeavour seems to suffer from this condition



EXAMPLE OF DEVIANCE

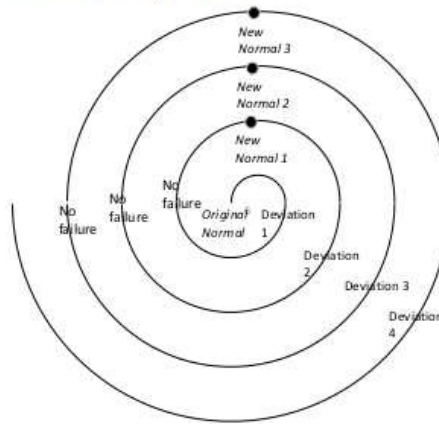
- Increasing number of drivers ignoring rules of the road
 - Use of phones while driving
 - Not stopping at traffic lights
 - Not stopping at signs
 - Speeding
- Not checking fuel & oil
- Rote use of checklists



WHY DOES THIS BEHAVIOUR STICK?

- Humans rationalize
- Lack of consequences
- Repetition of poor behaviour becomes habitual

The "Deviation Spiral"



FIGHTING DEVIANCE

- Regular review of rules and SOPs
- Self-critique
- Invite constructive feedback from those with experience – and those with different viewpoints
- Verbalise
- Look after each other
- Imagine explaining to spouse/partner/kids/parents/CAA
- Report “Near Misses” - Confess!



TAKE AWAYS

- Simple tools are not always easy!
- Remember the 5 hazardous attitudes and their antidotes
- Invite and welcome critique – strive for improvement
- Review your performance during and after every flight
- Aviation has many rules written in blood – there is usually an excellent reason to follow them!



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Q&A



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