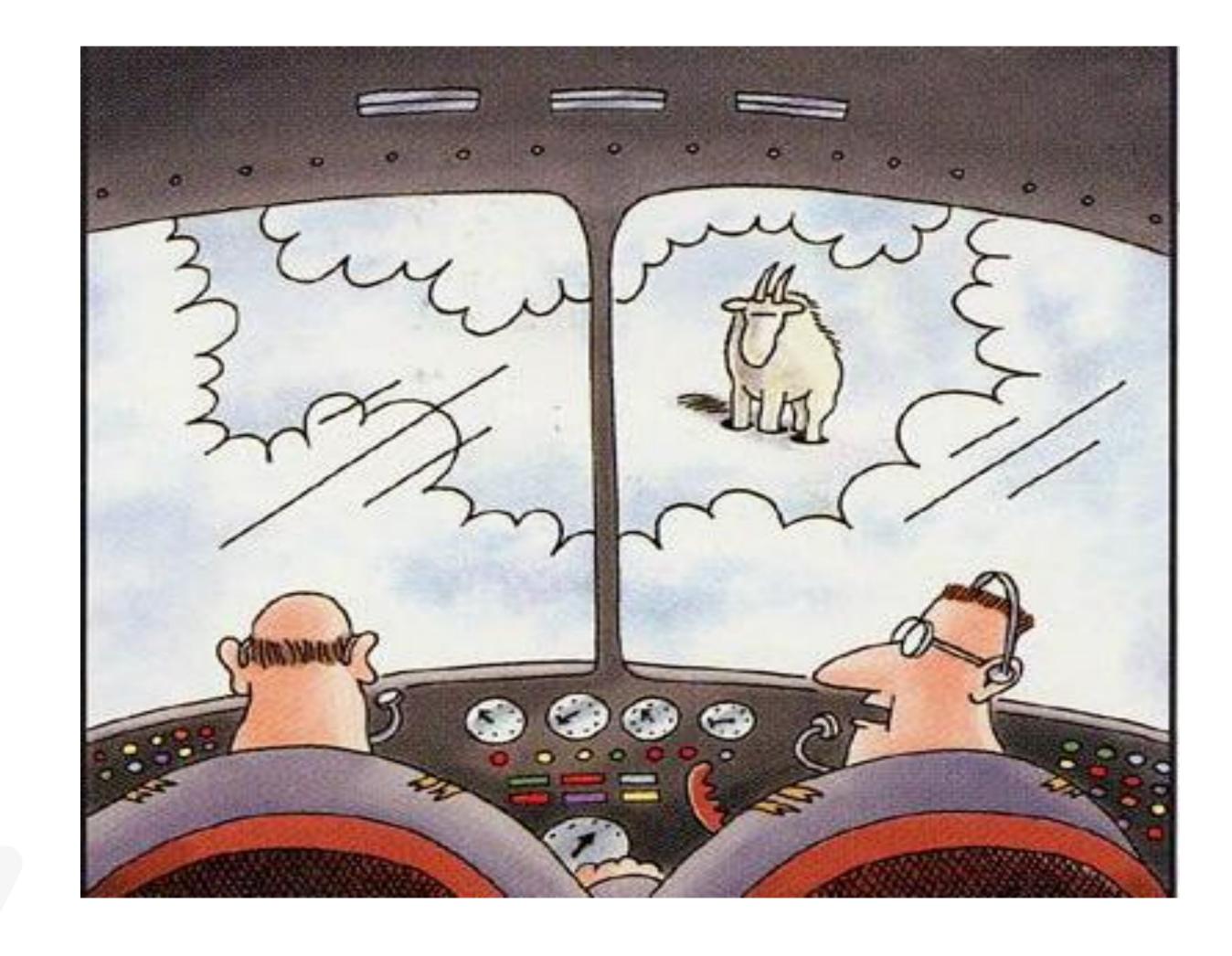






Hazard Identification

"Say ... what's a mountain goat doing way up here in a cloud bank?'









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PEOPLE
PROCESS
PERFORMANCE

PILOT LIVED EXPERIENCE PROJECT

Understanding measuring impact of Work-

Related Stress (WRS) on wellbeing,

performance and safety?

- Why do some pilots cope better than

others? - Resilience

Change - solutions for pilots and industry?



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PEOPLE
PROCESS
PERFORMANCE

3 Pillars of Health

Wellbeing

Biological

- Sleep
- Exercise
 - Diet

Psychological

- Attitude to life
- Stress Management & Coping Techniques
- Meaning & Purpose

Social

- Interpersonal relationships
- Support Network



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Stress Coping & Self Management

- People vary in relation to their ability to cope successfully with stress (including WRS)
- The practice of healthy behaviours strengthens the person's resistance to stress
- Substitution of maladaptive coping with more adaptive coping
- Common stress coping strategies include exercise, the practice or relaxation techniques and seeking social support and/or social participation.





What is happening with Pilot Wellbeing?

- Semi-structured informal interviews (n=103)
- Workshops (n=33)
- Interviews and workshops with industry stakeholders (n=7)
- Anonymous online health questionnaire (n=1,059)

Depression

Burnout

Anxiety

Disengagement

Suicidal Ideation

Emotional Exhaustion

Susceptibility vs Resilience
Wellbeing I vs Wellbeing II



(

Pilot mostly coping well

2 Pilot mostly coping well but impact on physical health

> Pilot experiencing difficulty but mostly coping well

> > Pilot mostly coping but long-term 4 impacts

> > > Pilots not coping 5

> > > > 6

Extreme Cases

Errors leading to a near-miss. Picked up by other pilot.

None – pilot self-corrects

N/A

N/A

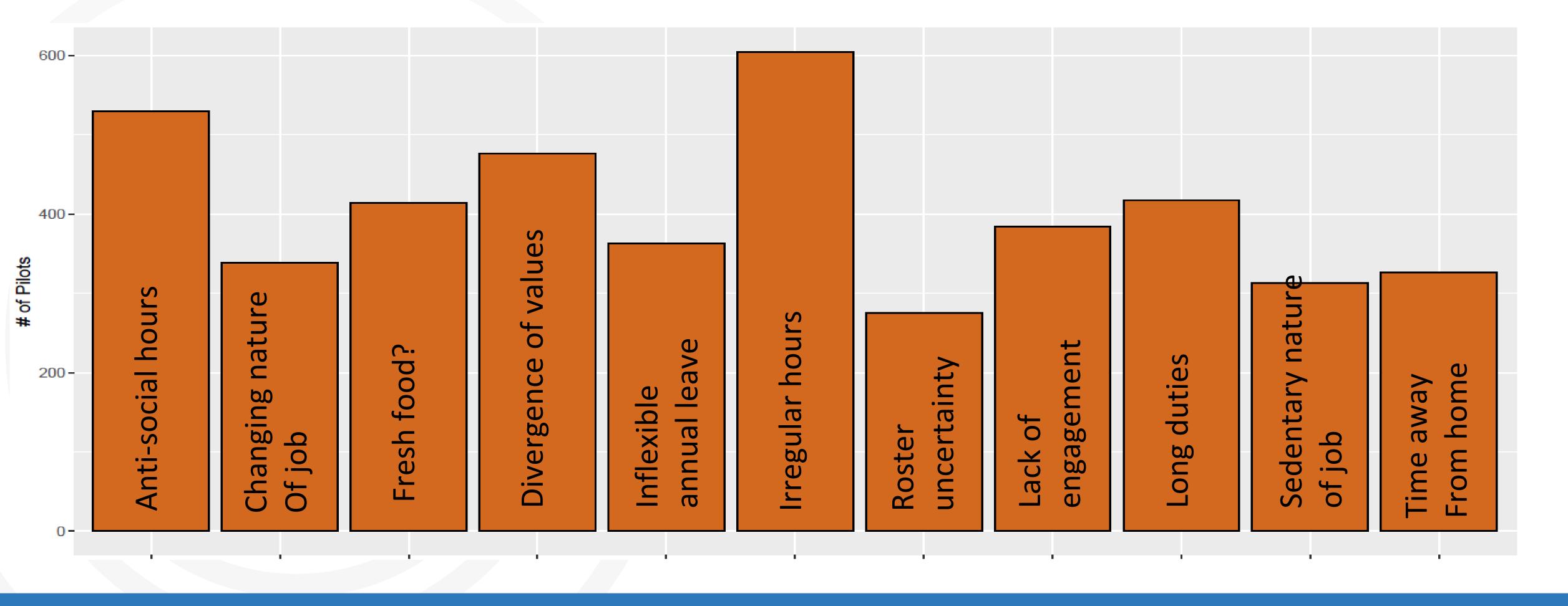
Potential for Serious incident/Fatal Accident

Workshop Findings

Impact Scenarios Identified by Pilots

(Cahill, Cullen & Gaynor, 2018)

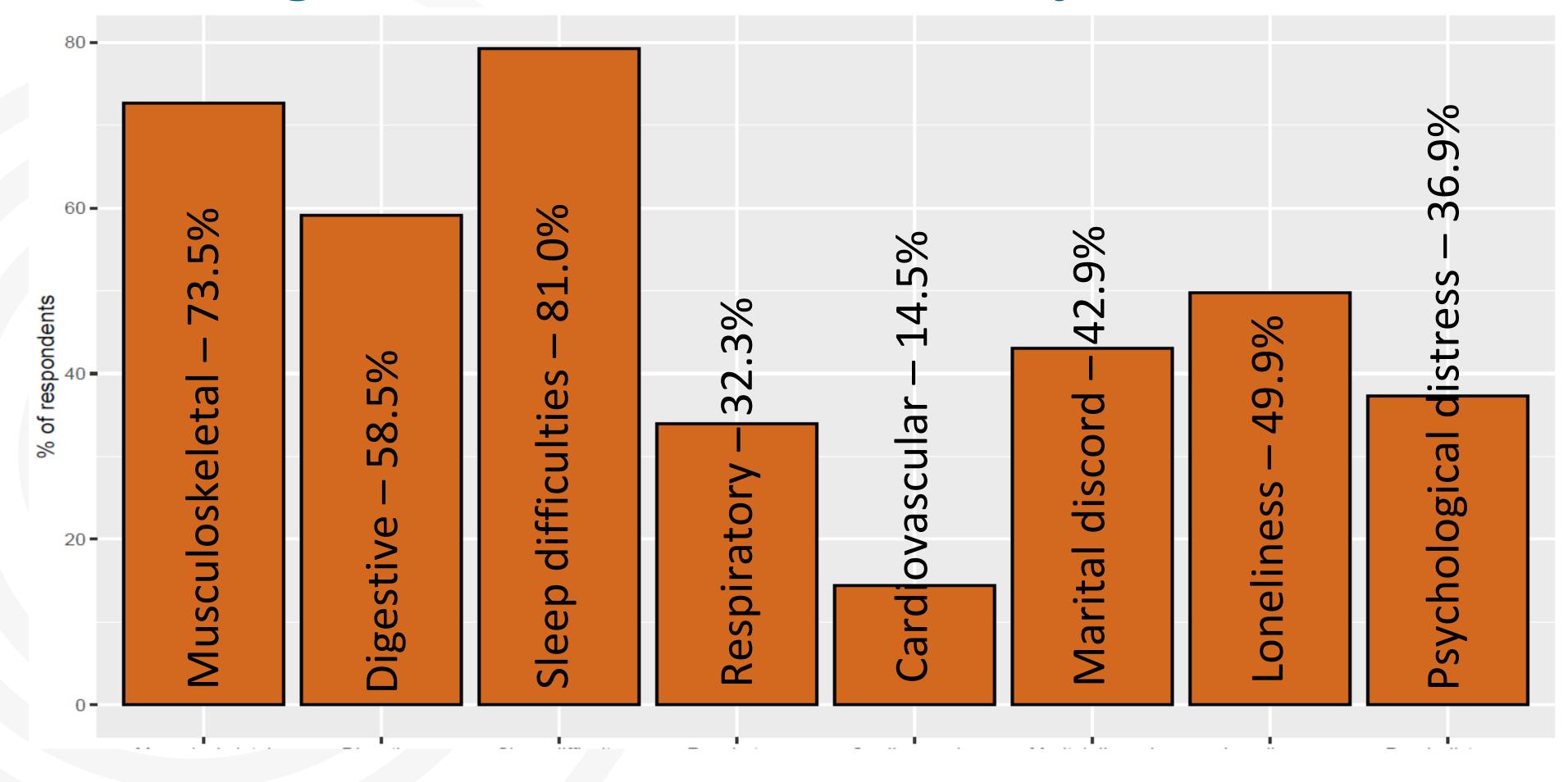
Sources of Work Related Stress







Wellbeing Issues suffered due to job







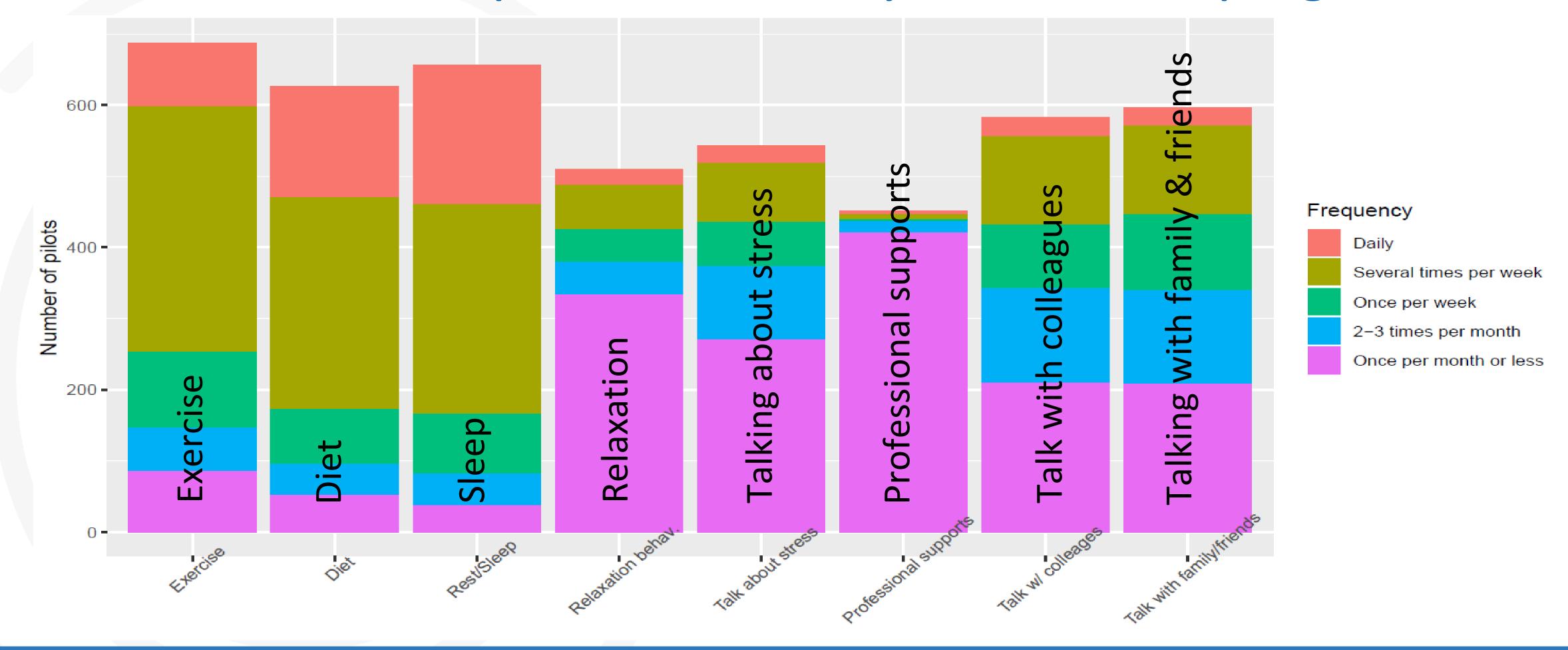
Pilot Lived Experience Survey & Stress Coping

- Not all pilots are suffering
- Nearly 60% are using coping mechanisms to manage
 WRS and its impact on wellbeing
- Pilots using coping mechanisms were found to have lower depression severity levels.





Pilot Lived Experience Survey & Stress Coping



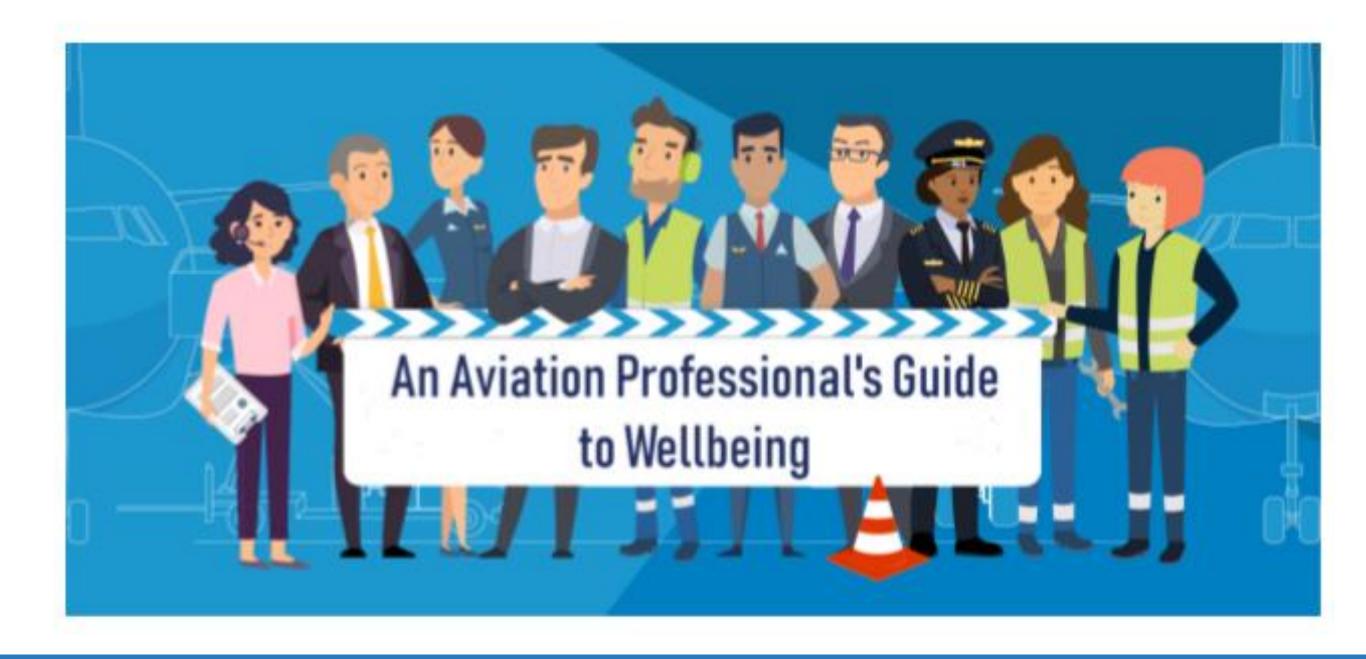




How to Fly Straight & Level in Turbulent Times











COVID Situation & Need for Resilience

Pre COVID-19, pilots experiencing WRS and wellbeing challenges

Is EASA IR/Guidelines Enough?
Have we the right tools to cope (Pilots, Airlines, Industry)?

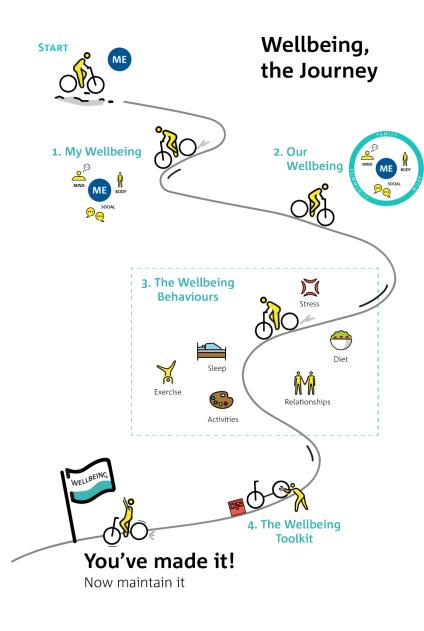


1: In work

2: Off work

3: Going back to work



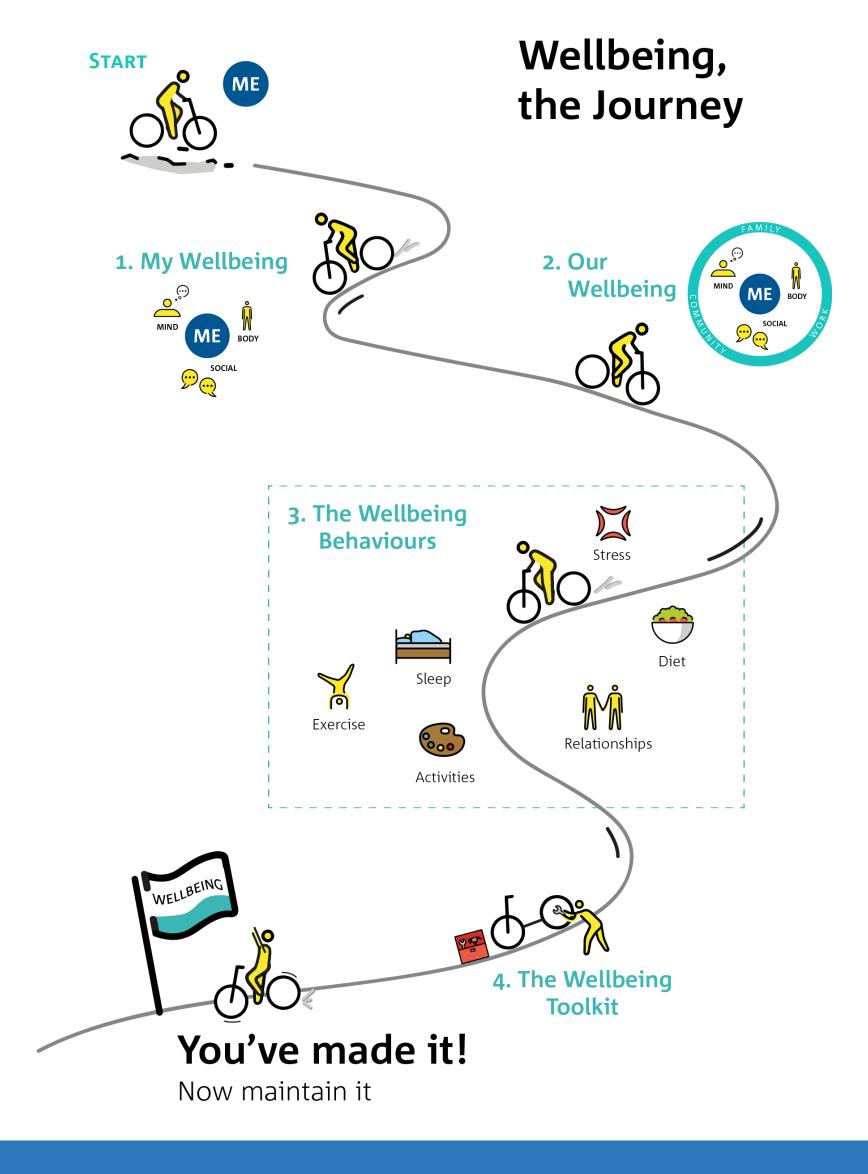






Resilience & Wellbeing Journey

- Resilience is defined as the 'demonstration of positive adaptation in the face of significant adversity
- It is a response to stressful circumstances, as opposed to a trait or capacity residing in the person (Fikretoglu and McCreary, 2012)
- Process
- Wellbeing Journey (FSF, 2020)



















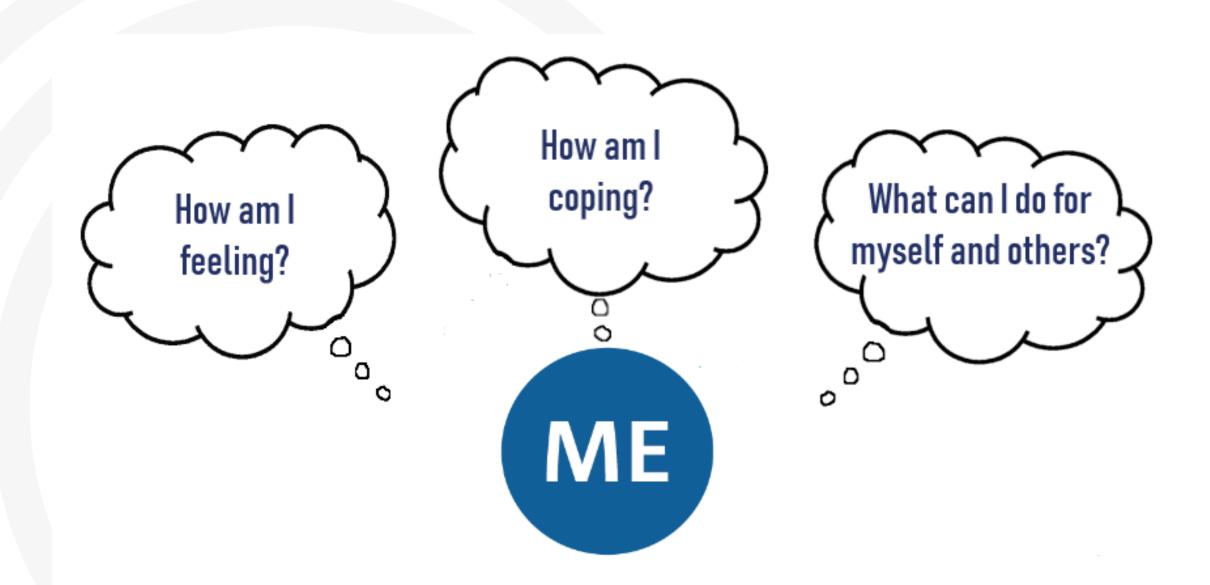


Now maintain it

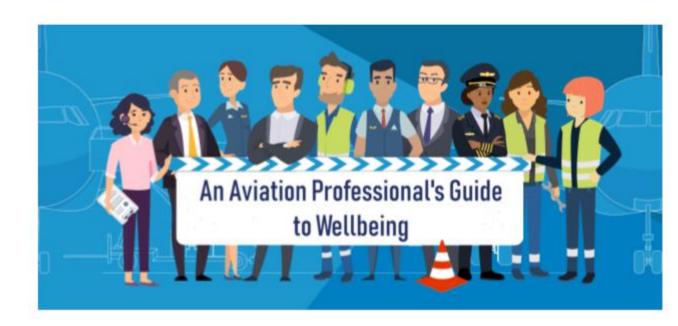




3 Wellbeing Questions







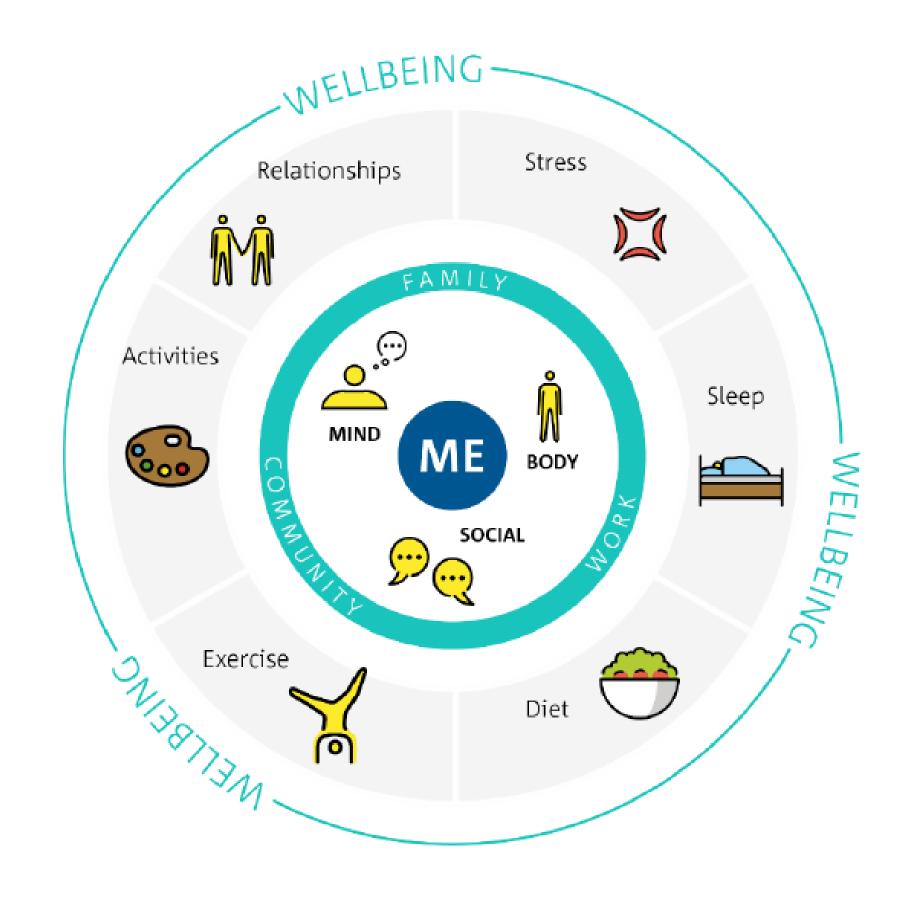
Flight Safety Foundation: An Aviation Professional's Guide to Wellbeing (2020)

https://flightsafety.org/wp-content/uploads/2020/04/Guide-to-Wellbeing.pdf



Wellbeing Management Across the Three Pillars

		1		
Pillar	Example	How Am I Doing?	What Can I Do to Improve	
		Current Rating/ Status?	this? What Am I Currently	
		(Good, Ok, Poor)	Doing to Improve this?	
Biological	Sleep, Diet, Exercise			
Psychological	Attitude to life, Mood,			
	Stress Management, Use of			
	Coping Strategies			
Social	Support network, social			
	support			







Weekly/Daily Checklist

WEEKLY TO DO

AREA	MON	TUE	WED	THU	FRI	SAT	SUN
Stress							
Sleep							
Diet – Breakfast Lunch Dinner							
Physical Exercise							
Activities							
Relationships							





Pilot Wellbeing Behaviour Model

1: Pilot Lived Experience

2: Impact Model & 6 Scenarios

Lived Experience & Issues

Sources of WRS

Health Outcomes

Relationship between WRS, wellbeing, performance & safety

Six Scenarios

3: Model of Coping

4: Behaviour Change: Motivations, Enablers & Barriers

Predictors of good mental health and wellbeing

Regression model – strategies and depression outcomes

Motivations

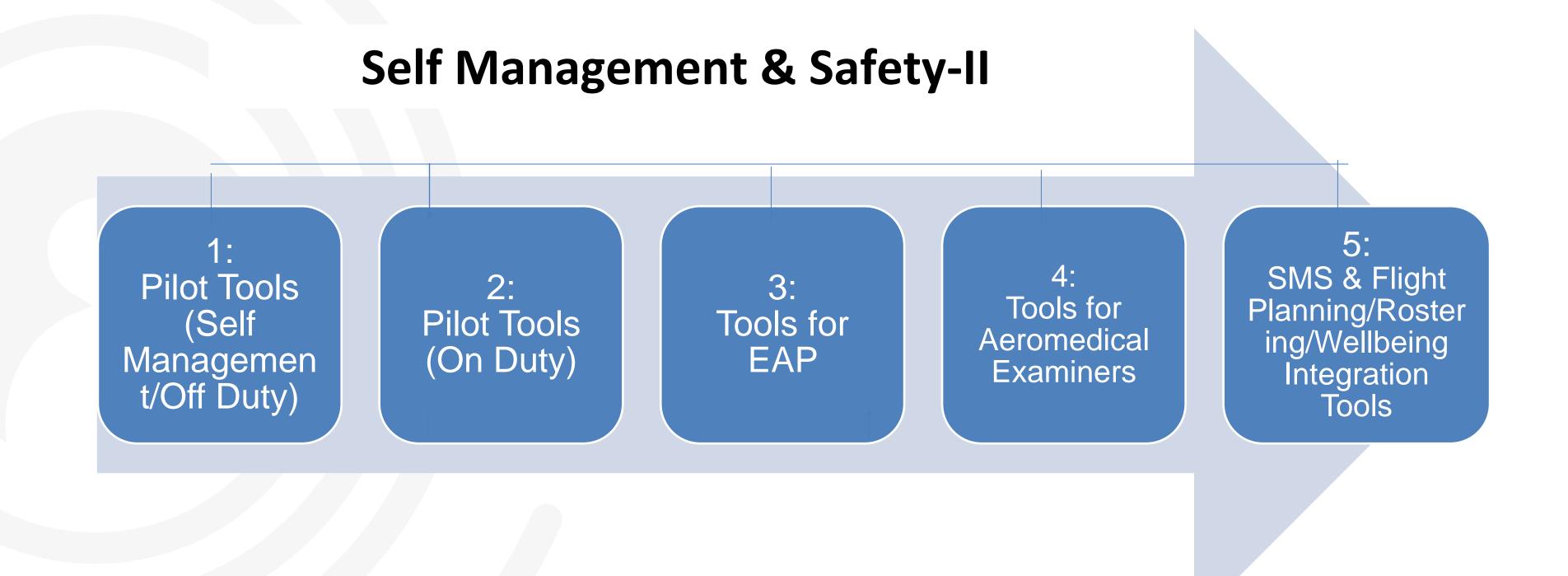
Enablers

Barriers



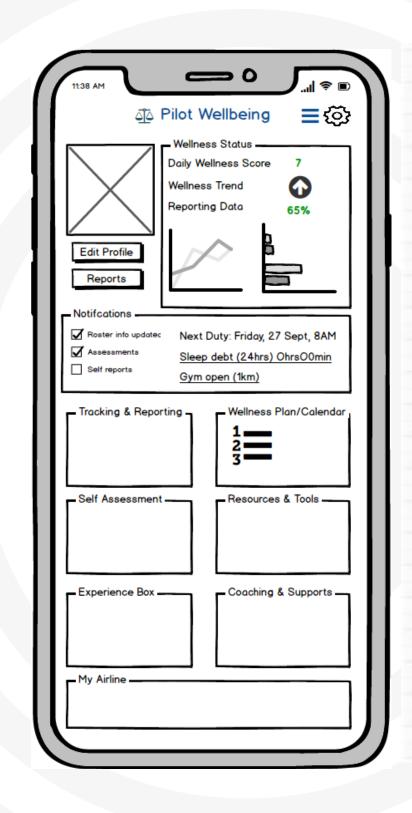


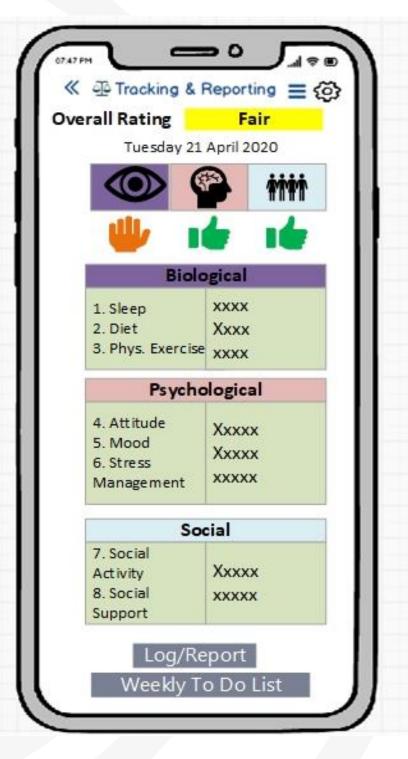
Research Roadmap: Tools for Pilots, Airline & Industry

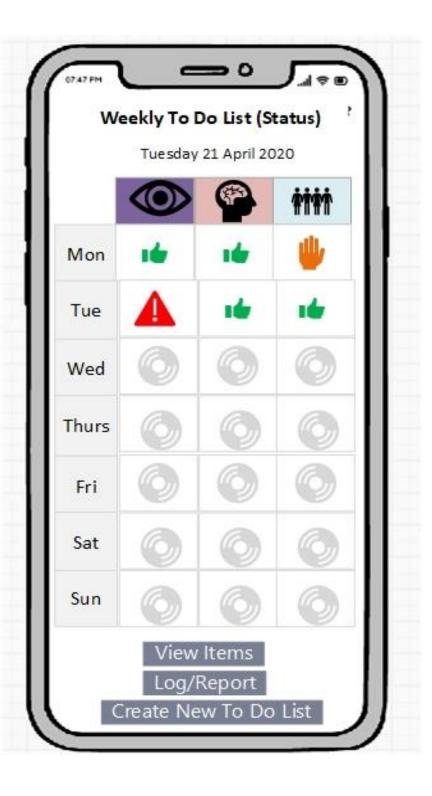


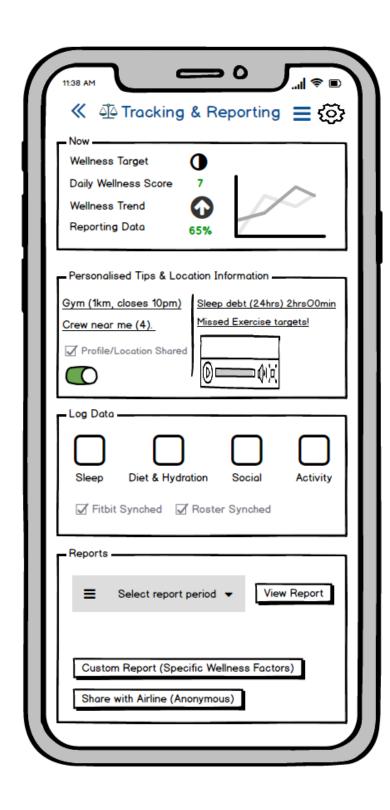


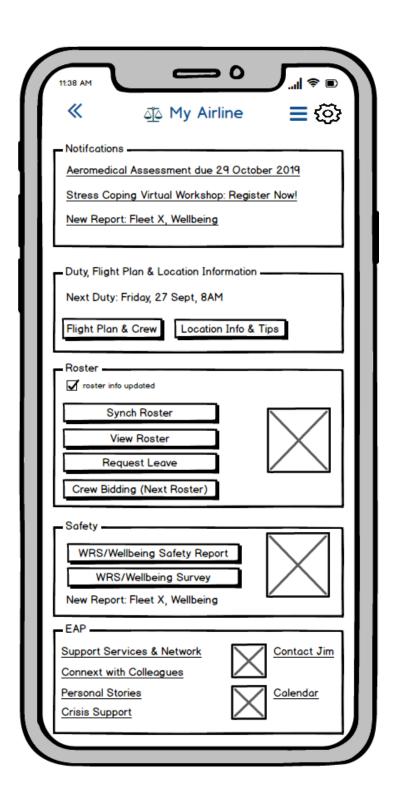
Research Roadmap: Tools for Pilots, Airline & Industry















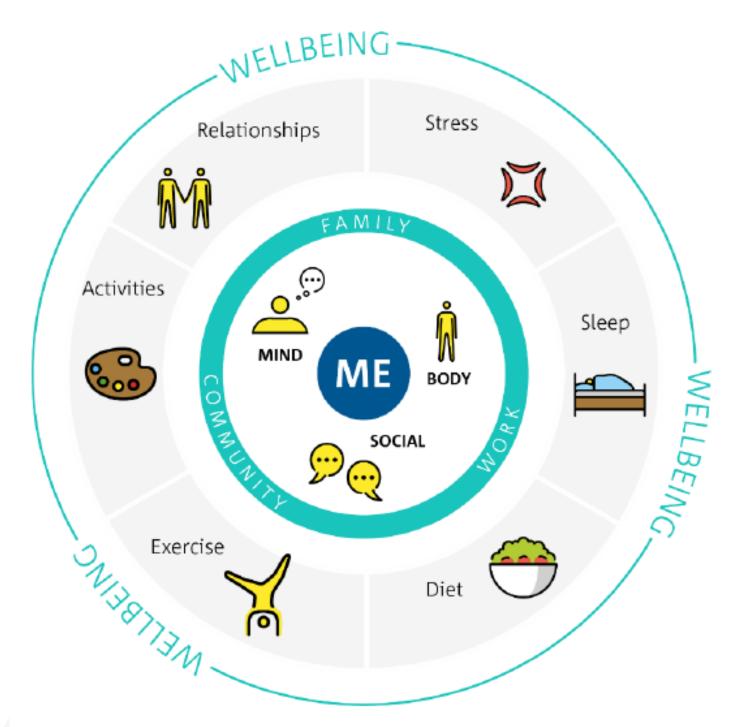
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Next Steps: Wellbeing Community & Virtual Challenge

- 1. Join a User Community
- 2. Participate in a wellbeing game/virtual challenge?





- In progress
- For more information, please email
 aviationwellbeing@gmail.com
- Or see:https://www.tcd.ie/cihs/projects/pilot-lived.php



RAeS 2021 Conference Preview

- Present our latest research
- Solutions to support positive wellbeing for pilots
- Progress: wellbeing community
- Wellbeing challenge/virtual game





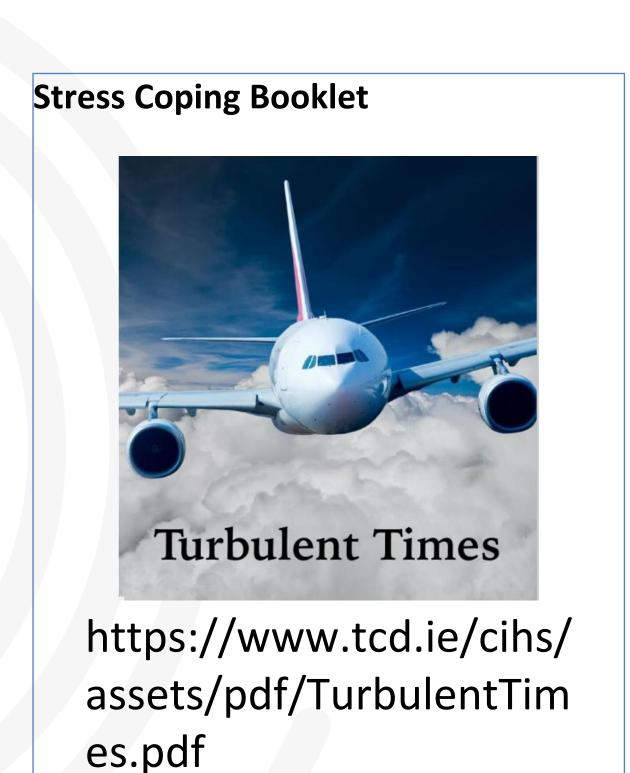
Resources

Moving Beyond Compliance, Safety-II Approach & Solutions for Pilots & Airlines Cognilion, Technology & Work https://dol.org/10.1007/s10111-019-00586-z ORIGINAL ARTICLE Interventions to support the management of work-related stress (WRS) and wellbeing/mental health issues for commercial pilots Joan Cahill O Paul Cullen Keith Gaynor Received: 1 May 2019 / Accepted: 24 July 2019 Springer-Verlag London Ltd., part of Springer Nature 2019 Abstract Research indicates that sources of work-related stress (WRS) impact on the physical, social, and psychological health of pilots. Furthermore, specific features of the job can increase a pilot's risk in relation to developing a mental health (MH)

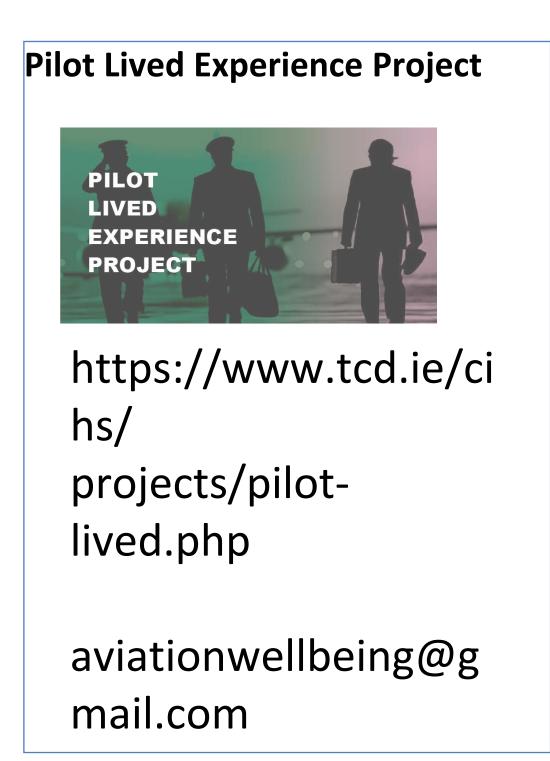
Cognition, Technology & Work https://doi.org/10.1007/s10111-019-00586-z

issue. It is impossible to remove all stress from the work life of pilots. A high stress situation may not necessarily be detrimental to the person, once they have learned to cope with it in a healthy manner. Nonetheless, risk pertaining to WRS need to be effectively managed by a pilot's employer. Therefore, it is important to identify solutions at an airline and pilot

self-management level. This paper reports on the findings of human factors research undertaken with com





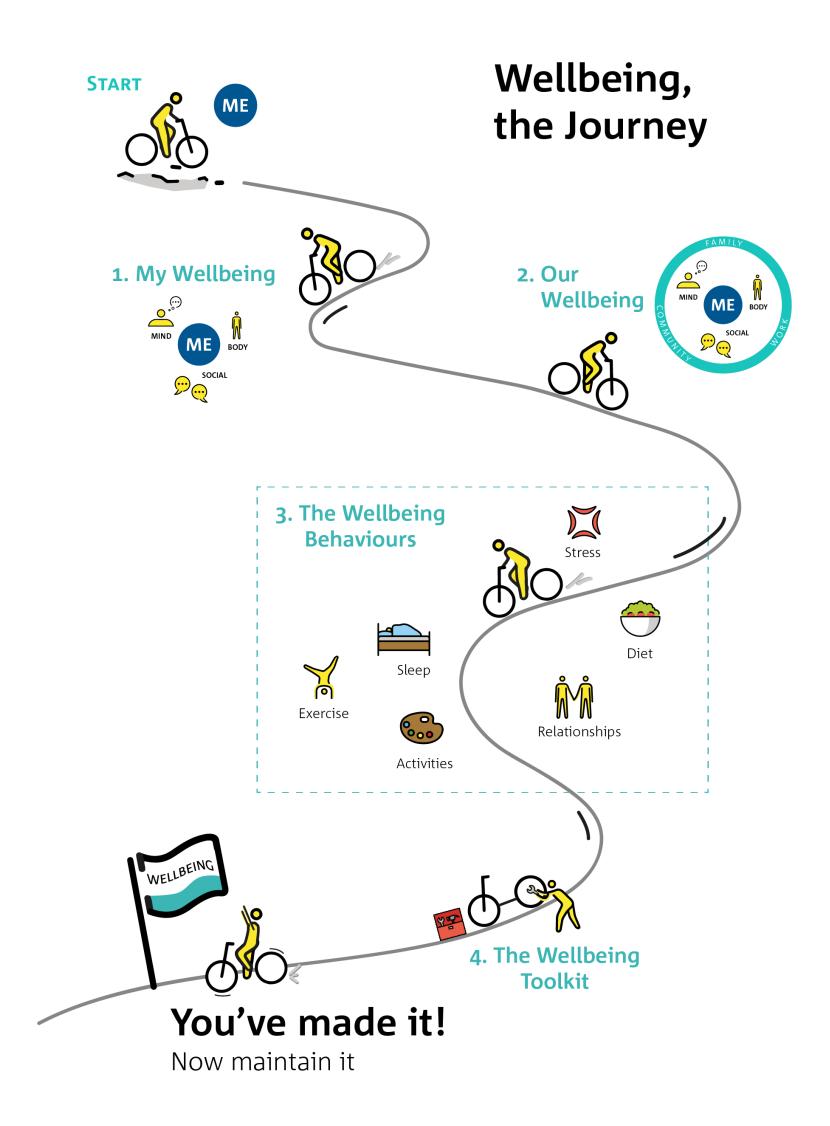




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Questions







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