ROYAL AERONAUTICAL SOCIETY

# PSYCHOSOCIAL RISK MANAGEMENT AND MENTAL HEALTH

## THE MENTAL HEALTH CHALLENGE TO CIVIL AVIATION SAFETY IN THE 21ST CENTURY

RAeS Human Factors Specialist Group

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A Royal Aeronautical Society Briefing Paper

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The views expressed in this paper reflect those of the WSG and contributors and do not represent the formal view of the RAeS.

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Psychosocial Risk Management and Mental Health support is a crucial enabler of creating a 'fit for purpose' civil aviation industry for the 21st Century. Organisations in multiple sectors are now following WHO and ILO guidelines, national guidelines, regulations and legislation in creating positively healthy workplaces which benefit all stakeholder groups. Civil aviation should embrace this and be a world leading sector in implementing solutions, and I applaud the RAeS for publishing this document to help frame the discussion.

Professor Sir Cary Cooper CBE FAcSS

In my view, the issue of psychosocial risk management and its consequential adverse impact on employee mental health, as a risk factor in civil aviation greatly lags behind physical risk in the health and safety landscape. Things are now rapidly changing. With the growing focus of Psychosocial Risk Management and mental health in multiple jurisdictions, supported by the advent of ISO 45001 and the recent 45003, the area is now an increasing focus for domestic and international regulators. It is also particularly important for multi-jurisdictional organisations, such as airlines, as well as national organisations, such as airports, MRO, ATC and other safety-critical stakeholders.

I also see a clear trend from merely regulatory guidance towards enforcement internationally. The legal test for liability in English Common Law is an objective one – ie what Directors and Senior Managers ought to have known, rather than what they claimed to have known. In my personal view, there can be no doubt that Boards and Employers need to have these issues at the very top of their risk registers. Regulators and Prosecutors wait in the wings.

Gerard Forlin KC. BL (Ireland)

# PSYCHOSOCIAL RISK MANAGEMENT AND MENTAL HEALTH

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**RAeS Human Factors Specialist Group**

# Foreword

As the global civil aviation industry moves forward after the seismic shock of the Covid pandemic, it is facing increased environmental pressures, and growing competition for staff from other sectors. The recognition that the positive mental health and wellbeing of the people who make it function safely and efficiently 24/7, 365 days a year has been brought into sharper focus.

Since the Germanwings tragedy in 2015, there has been a move towards incorporating approaches towards mitigating the risks to safety posed by mental health issues. This has been predominantly focused on pilots as the key risk vector. This situation has been brought to the fore again with the media reports, prior to a formal report being issued, of the Alaska Airlines incident in October 2023.

The RAeS Human Factors (HF) Wellbeing Specialist Group (WSG) has been engaged with the issue since 2015. Over this period WSG members have been involved with establishing international conferences, developing Pilot Peer Support initiatives, and conducting research into prevalence rates of common mental health disorders in European civil aviation stakeholder groups including, but not limited to, aircrew.

The trend in both the conference series the WSG established at the Royal Aeronautical Society in 2016, and the research into mental ill-health prevalence rates done at Trinity College, Dublin, has been towards identifying that significant risks to safety are prevalent in all safety-critical stakeholder groups. The view of the WSG is that an approach that provides acceptance and recognition of this would benefit the industry, and individual stakeholder groups, within a proactive, Safety 2 philosophy (see Annex E).

The WSG considers that the growing recognition and acceptance of the concept of Psychosocial Risk Management (PsRM) being promoted in multiple jurisdictions for industry, and the International Standards Organisation 45003 approach (see Annex A) offer a possible route towards creating a practical and pragmatic starting point for the industry.

The paper highlights the key areas of the civil aviation ‘eco-system’ that would be positively impacted by a coherent approach to managing and mitigating staff mental health and wellbeing using this approach.

The view of the RAeS HF WSG is that an approach based on the information outlined in this document could provide a positive ’tailwind’ for the industry addressing the challenges in the 21st Century environment.

The purpose of this paper is to contribute to the development of a response to the emerging recognition of the safety risk posed by the mental health and wellbeing of all civil aviation personnel.

Marc Atherton, CPsychol, MRAeS, FRSA
Chair, RAeS HF WSG

# PSYCHOSOCIAL RISK MANAGEMENT AND MENTAL HEALTH

## THE MENTAL HEALTH CHALLENGE TO CIVIL AVIATION SAFETY IN THE 21ST CENTURY

### SECTION 1: THE GOAL

Key to keeping the industry operating safely and efficiently are the people who work in the aviation industry. Annex B outlines a summary of key safety-critical stakeholder groups that the WSG is of the view need to be included in any psychosocial risk management approach.

We expect professionalism, expertise and commitment in aviation personnel. Supporting these personnel, professionally and personally, is a crucial element in keeping the sector functioning safely and efficiently.

In the industry, physical health and safety is well understood and managed in terms of operational and personnel risk. The role psychosocial health and safety plays in both operational and personnel risk is receiving a growing focus since the Covid pandemic.

In terms of understanding and acceptance, in the view of the WSG, psychosocial risk is in a similar place to pilot fatigue before the introduction of Fatigue Risk Management regulations and best practice in the period around 2010. Building on this View, in 2020, the EASA safety communications team and the WSG drew up the following statements as a draft set of goals.

**At the individual level**

… a state in which the individual is able, through the self-awareness and self-management of the physical, psychological, social and practical aspects of their life, to work positively and productively coping with the stresses they face while achieving their personal goals and contributing in a meaningful way.

**At the organisation level**

… a state in which the organisation, through its culture, policies, procedures and resources mitigates the physical and psychosocial risks (eg high levels of stressors) to an individual, and the individual is able to work and develop in an atmosphere of respect, fairness, honesty and open communication without fear of sanction or discrimination.

Parallel to this, the WHO and ILO in 2022 set out four key aims for organisations globally with regards to staff mental health in work:

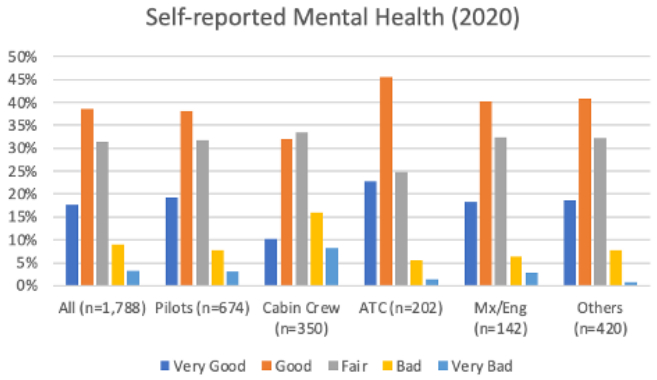
Prevent Negative Mental Health outcomes
Promote Positive Mental Health
Support Staff with Mental Health Issues
Create a Positive and Supportive Culture

It is proposed that the current concept of individual focused mental health initiatives and psychological safety, would be components of a systemic Psychosocial Risk Management approach supporting the mental health and wellbeing of all stakeholder groups within a Safety 2 philosophy. Annex C provides graphical representations of the core principles suggested.

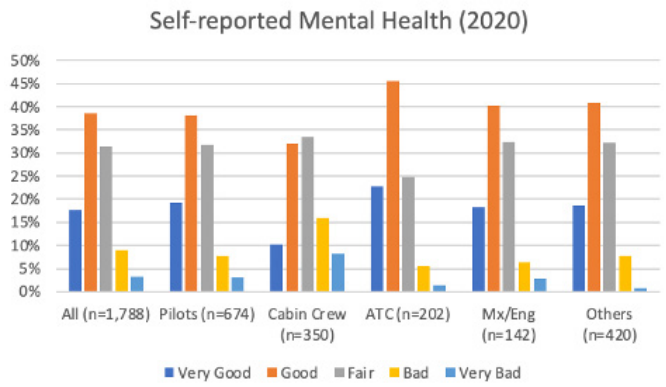
The goal of this paper is to contribute to the discussion around the inclusion of the management of psychosocial risk in the workplace, as it impacts all aspects of the mental health and wellbeing of safety-critical groups, within a proactive safety management perspective for the industry and provide possible ISO's that can help prevent verified health issues.

### SECTION 2: SCALE OF THE CHALLENGE

Since 2016, the Lived Experience Wellbeing Survey Project at Trinity College Dublin (TCD), has examined the levels of psychological wellbeing in safety-critical aviation workers in Europe. High levels of self-reported mental health issues are prevalent in all safety-critical stakeholder groups, not just cockpit crew. Figures from the 2020 TCD EU survey are shown below (©TCD, 2023).



The data clearly shows that the mental health issues are prevalent in all safety-critical groups surveyed. The same research has shown consistently that safety-critical staff do not see their organisations as supportive of their challenges.




Highlighting the risk, EASA in 2018 mandated pilot peer support programmes. They have a typical usage rate of 3 to 4%. The data shows an incidence rate of 12% to 15% for mental distress in pilots. This gap poses a clear potential risk to safety, and the TCD data shows that the risk goes beyond pilots to all the safety-critical groups surveyed.

Additionally, the TCD research shows high levels of 'burnout' in pilots. Burnout is now recognised by the World Health Organisation (WHO) as a work-related psychological syndrome (WHO, 2023) linked with poorly designed and badly supported systems of work causing high levels of stress, with adverse performance impacts on individuals and organisations.

Annex D presents the latest available figures on Burnout from the TCD research survey. This data suggests that the scale of the problem facing the sector is significant from this form of psychological syndrome as it interacts with conditions, such as depression and anxiety among others. Different safety-critical groups may exhibit different prevalence rates posing different levels of potential risk.

## **SECTION 3:** THE REGULATORY LENS

The issues of psychosocial risk management and Mental Health in the workplace is now the focus of much international and national health and safety regulation and guidelines.

Underpinning this are the WHO, and International Labour Organisation (ILO) 2022 research and guidelines on the topic. In addition, the International Standards Organisation recently published Guidance 45003:2021 *Psychosocial risk management in the Workplace*.

In Europe, the EU Occupational Safety and Health Agency (2021, 2022) published guidelines on Managing Psychosocial Risk in the Workplace. Legislation is expected to follow in line with existing physical risk regulations.

> *Preventing psychological harm is an essential part of creating a healthy and safe workplace. Psychosocial risks and work-related stress impact significantly on the health of individuals, organisations and national economies.* **EU OSHA, 2022**

The response to Work Related Stress (WRS) is experienced at the individual level, and it is appropriate to recognise that it may never be possible to ensure that all individuals are insulated from the adverse consequences of WRS. Recognising this, a balanced judgement would need to be reached of the risk of harm versus the mitigation requirements for an organisation. This balance would need to be considered in framing a compliance response to any regulatory approach.

In the UK, the Health and Safety Executives have the workplace Stress Management Standards. These are likely to be extended to include a broader range of psychosocial risks. In the UK and Ireland, OSH legislation already exists that requires the identification of hazards and management of known associated risks – psychosocial risks are now included.

In the US, the Occupational Safety and Health Act (OSHA) contains specific guidelines for improving employee mental health in the workplace. In Canada the Centre for Occupational Health and Safety (CCOHS) has implemented the Psychological Health Safety Management Standard relevant to all organisations. In Australia the Federal Government published to WorkSafe ACT (2021-2023) which places a duty on the employer to manage psychosocial risks in the workplace and support the mental health and wellbeing of staff.

These initiatives at a national level place on employers a legal duty of care to provide a safe working environment which now covers psychological factors as well as physical.

Civil aviation will be subject to these regulations both nationally and globally. As a global industry, meeting

national regulation and legislation is a complex issue, particularly as it impacts international aviation treaties. The industry will need to be able to manage this growing focus on Psychosocial Risk in the workplace environment.

ICAO MH Guidance (expected Q3/2023), the EASA/EU MESAFE study (expected Q3/2023) and the FAA Rulemaking Committee on Pilot Mental Health reporting (2023/2024) are indicative of the move towards possible regulatory frameworks for managing psychosocial and mental health risk factors in the sector.

These initiatives will impact civil aviation at both a national and international level, and the regulatory impact of them will need to be comprehensively managed.

## **SECTION 4:** THE SAFETY LENS

To maintain, and even improve, the safety record of the industry going forward as volumes of traffic continue to increase and operations become more complex, is challenging. With the advent of space, sub-orbital vehicles and autonomous vehicles, the WSG view in integrating PsRM and MHWB into existing safety management approaches is an essential element, as the industry approaches the growth projections for the 21st Century.

The relationship between psychosocial hazards, work-related stress, mental ill-health and safety is complex. The key is Work Related Stress (WRS). WRS triggers the body's fight, flight or freeze response which results in physical, cognitive and emotional changes in individuals. When maintained over extended periods of time, this can adversely impact the physical, cognitive, and behavioural performance of individuals, and can make them less diligent, more impulsive and prone to engage in atypical risk-taking behaviour.

Studies in non-aviation sectors have shown that moderate to high levels of psychological distress result in an increase in work related accidents, or failures, by a factor of 1.4:1 for individuals. Evidence published by the US Surgeon Generals' Office in Q4 2023 reported a rate of 1.6:1 in US industry where organisations have cultures resulting in high levels of worker psychological distress, bolstering the link between poor workplace culture and accident/incident rates.

In aviation we have sadly experienced several examples where psychological stress reached critical limits in the last decade.

Elements of this background prompted the UK CAA to state:

> *'The psychological wellbeing and positive mental health of commercial pilots is of fundamental importance to safe Commercial Air Transport (CAT) operations*
>
> **United Kingdom CAA 09/2018: Pilot Support Programme – Guidance for Commercial Air Transport (CAT) Operators**

What is shown by available evidence is that moderate to high levels of psychological distress can result in impaired concentration and decision making, changes in risk attitude and behaviour, increased impulsivity, depression and anxiety.

These characteristics are also found in personnel suffering from the effects of burnout caused by high levels of work-related stress (WRS) (WHO 2021).

ATC organisations already recognise and manage the risks associated with incident-related stress on the performance of operators and have proactive policies to mitigate its impact. With pilots we acknowledge the detrimental effects of disrupted sleep patterns on performance in terms of Flight Time Limitations and Fatigue Risk Management in scheduling policies. WRS can impact performance in a similar fashion and warrants the same focus on monitoring and mitigation.

Given the above, monitoring and mitigating the adverse impacts of PsRM and MHWB should be two crucial pillars of the industry going forward in supporting all safety-critical stakeholder groups within a safety-driven paradigm.

## **SECTION 5:** THE INSURANCE LENS

Crew Mental Health is a top priority for insurance providers.

The mental health of pilots has been a subject of great interest for the insurance sector for many years, and has been the focus of presentations during recent International Union of Aerospace Insurers (IUAI) Annual Members' Conferences. An early incident of note was the Japanese Airlines Flight 350 in February 1982 when the captain allegedly activated the engines' thrust reversers during approach to Haneda Airport, leading to 24 fatalities. This was but one of many incidents. Too many.

A Bloomberg News study[1] conducted in June 2022, focusing on crashes involving Western-built commercial airliners, revealed that pilot murder- suicides ranked as the second most prevalent cause of airline crash deaths between 2011 and 2020.

Additionally, the study found that deaths resulting from pilot murder-suicides increased over the period from 1991 to 2020, while fatalities due to accidental causes significantly decreased. Notably, if China Eastern Airlines Flight 5735 is confirmed to be an intentional act, it would indicate that deaths caused by intentional acts have surpassed all other causes since the beginning of 2011.

From an insurers' perspective, an airline's approach to crew health – both physical and psychological – is one of a plethora of aspects to be examined and understood when undertaking risk assessment. Currently, insurers are very much reliant on pilot medical assessment protocols. Alongside these difficulties is the reality that mental health problems can strike an individual at any time. There is a growing recognition of the difficulties caused by mental health issues across the general population, and from an aviation perspective, this trend is further heightened because of the inherently stressful working environment within which aircrew operate.

Having recognised the problem, what is important is to find a solution. The belief from within the IUAI is that there is not a single solution. Understanding and dealing with the problem requires a multi-layered approach, including pre-screening, regular periodic and ad-hoc assessments, medical assistance and easily accessible support programmes that operate on a 'non-punitive' basis and where there is mutual trust between the airlines and their employees. More recently, a new approach called psychological strength training has been proposed to treat the entire crew force as a preventative addition to the ongoing efforts. Much like Crew Resource Management / Threat and Error Management (CRM/TEM), this would become an ongoing training requirement for all crew members. From an insurer's perspective this approach has promise.

Aspects relating to crew mental health need to be shared and understood across the industry so that solutions can be found, just like any other aspect of safety facing the aviation sector. Insurers are keen to work alongside the wider aviation sector as it continues to understand the full extent of the problem and how best to mitigate it both for the benefit of the individuals working in the sector, but also to promote a safer environment for all stakeholders.

## **SECTION 6:** THE LEGAL LENS

From a legal perspective, the Germanwings tragedy brought to the fore issues around the contingent liability for employers relating to acts undertaken by their employees due to mental health problems. This section presents some relevant issues from a legal perspective.

General health and safety legislation in major jurisdictions, such as the EU, UK, US, Canada and Australia require that employers provide a safe working environment for their staff. Up until recently, the focus has been on physical factors. This is now changing to include psychosocial hazards in the workplace. There is evidence of increasing numbers of staff exhibiting high levels of burnout, stress, depression and anxiety in work settings, particularly since the Covid epidemic. This can have an adverse impact on organisational and individual safety and wellbeing.

The approach to risk identification and management taken around mental health and general wellbeing could trigger liability issues. Further, failure to act appropriately, whether by omission or commission, could expose employer organisations, including their Boards of Directors and Governing Bodies, to different types of liability.

### ANY LEGAL ENTITY WILL NEED TO CONSIDER A RANGE OF FACTORS, INCLUDING:

- Whether ISO 45001 and ISO 45003 frameworks are being implemented and monitored.
- The existing or evolving domestic and international guidance from relevant regulatory authorities.
- The role of existing international aviation treaties.
- The form of risk assessment and mitigation that the organisation had adopted.
- The internal reporting structures in place.
- Any relevant cross-border issues.
- Are there any specific organisational liability, insurance, or reputational issues at stake.
- The detailed incorporation of specific jurisdictional legal professional privilege being addressed by organisations.

The emerging focus on psychosocial hazards can pose significant legal risk for organisations if not properly addressed and mitigated. The reputational risk implications must also be fully considered. Please note that this section is only a personal view of

[1] https://www.bloomberg.com/news/articles/2022-06-13/murder-suicides-by-pilots-are-vexing-airlines-as-deaths-mount#xj4y7vzkg

the contributing author and should not be considered as legal advice. Appropriate guidance should be taken prior to acting on any points raised above and generally in this paper.

## **SECTION 7:** THE FINANCIAL LENS

Civil aviation is a complex global integration of multiple business, financial and regulatory element, All changes to operations or capabilities have financial implications. Implementing a psychosocial risk management solution as an integral part of an SMS (safety management system) will come with initial costs.

Even if mandated by regulation, the industry will need to be able understand the cost-benefit aspects of the approach.

There is an existing body of evidence that shows that investing in Mental Health and Wellbeing programmes shows a positive Return-On-Investment (ROI) with data from non-aviation sectors globally.

Deloitte (2017, 2020) provide a comprehensive model for the financial case for investment in mental health programmes in organisation to support the UK Government Farmer Review.

Using data from Germany, Australia and Canada, where there were existing voluntary or regulatory frameworks in place, the modelling undertaken shows that investments produce positive ROI based on reduced absenteeism, reduced medical/EAP claims, reduced 'presenteeism' and, importantly, reduced staff turnover coupled with increased engagement and productivity. An average positive ROI for mental health investments in 2020 was found to be typically 5:1.

This is supported by sectoral analyses by McKinsey (2022) showing high positive ROI from investment in mental health support. McKinsey points out that it can be difficult to see these benefits without addressing both individual and organisational aspects of meeting the challenge.

Published figures from other sectors show ROI figures for investment in organisational mental health and wellbeing programmes typically in the range 2.5 to 5.0 to 1.0 depending on the scale and structure of the programme. In the US, a 2021 National Safety Council study, in association with Chicago University, showed a 4:1 cost benefit ratio for investment in mental health programmes in the workplace.

The EU, ILO and WHO have also produced information showing that investments in organisational mental health programmes show a positive ROI in addition to other gains.
This information would suggest that there are positive ROI benefits to organisations from investing in comprehensive mental health programmes which would translate into civil aviation.

The financial evidence from other sectors would suggest that there could be clear financial benefits when implementing a comprehensive psychosocial risk management solution addressing mental health challenges. It could also be an integral part of organisational risk management if integrated into an SMS in aviation stakeholder organisations.

## **SECTION 8:** THE ESG LENS

Environmental, Social and Governance (ESG) is rapidly becoming a critical criterion for any commercial organisation in meeting investor, market and regulatory transparency requirements.

Civil aviation is engaging positively with the Environmental requirement through changes to operational procedures (eg carbon emission reductions, propulsion technology advances) attuned to 21C environmental and sustainability issues.

The sector has an excellent Governance approach within the existing ICAO, Regional, and National Regulator licensing framework of international law and treaty. The professional accreditation of staff at all levels supports this.

The Social pillar of the ESG triad includes aspects of organisational performance concerning staff policies and practice.

Forbes (2021) stated 'a mental health lens is essential for organisations to fully understand their impact... on employees..... and ESG metrics provide a mechanism to track this over time'. Aviation organisations must realise that, whilst it is not their responsibility to actively manage the mental health of their staff, they are responsible for managing any adverse impact of the workplace and its work-related operational structures on the mental health of employees.

PWC Australia (2022) stated 'Following Government legislation, Boards should be asking "have we included Psychosocial Risk in the company's Risk Register?"

Harvard Law School (2020) noted that institutional investors are asking to understand corporate approaches to supporting the mental health of employees driven by the potential adverse impact on

organisational performance resulting from high staff turnover, degraded performance, and organisational liability risk in high value, knowledge intensive sectors. Given the recent difficulties the aviation industry has experienced in both retaining and recruiting staff, perhaps this should be of concern.

McKinsey (2019) stated that positive ESG ratings results in higher performance and reduced financial pressure on organisations from increased productivity, staff motivation, pro-social work behaviours, employer attractiveness to labour, and staff discretionary effort. Within this, the role of organisations supporting staff mental health and wellbeing is a crucial enabler.

What is clear from the above is that within ESG the role played by HR policies in managing Psychosocial Risk, in monitoring, reporting and mitigating it, is crucial. Within the ESG approach to organisational performance and transparency the right PsRM and MHWB policies are key to organisational performance, reputation and sustainability.

There are currently moves to expand the ESG framework to an ESG+H model. The H represents explicit reporting on Health and Wellbeing policies as they impact organisational performance (ESG+H Coalition, USA). This is linked to the growth in regulatory and legislative requirements around role that psychosocial risk management will play in successful 21C organisations following WHO/ILO guidelines, and in the case of civil aviation a sustainable global industry.

## SECTION 9: THE HR LENS

The role that positive staff mental health and wellbeing plays in the HR space is now well understood.

*'the importance of putting the mental wellness of our employees first cannot be underscored enough'*

**US SHRM Foundation, 2022**

Professional HR representative bodies in numerous jurisdictions have shown that organisations that proactively support the mental health of their staff gain a significant organisational benefit.

Research from the US, UK and other national professional bodies show that organisational mental health support programmes for staff which:

*'... can increase employee engagement, fostering a joint commitment to organisational success.... research shows that the main risks ...are now psychological'*

**UK CIPD, 2022**

The Canadian Government view is that positive mental health supports:

*'.....enhanced employee ... commitment, job satisfaction, organizational citizenship behaviours, job performance and reduced stress'*

**Canadian CCOHS, 2022**

A positive, and clearly articulated, culture and set of policies that supports staff mental health and wellbeing provides some clear overall benefits to an organisation in the areas of staff:

- **Recruitment Retention Engagement Performance**

Available data (Gallup 2002, PWC 2021) shows that organisations that do not address the topic suffer from increased:

- **Absenteeism staff turnover work injury claims EAP utilisation**

Additionally, data shows that 'presenteeism', workers performing below typical standards, is also significantly reduced.

From an HR perspective, the implementation of an organisational mental health monitoring and support programme, founded on the concept of psychosocial risk, is an essential pillar in supporting organisational sustainability and success.

The benefits of the approach should be applicable to civil aviation, albeit recognising the global nature of the industry and the cultural complexity that would need to be considered.

## SECTION 10: THE SOLUTIONS LENS

Psychosocial risk management will be a core component of creating successful, sustainable organisations in 21st Century global civil aviation.

The sector has faced similar challenges in the past and met them with adaptable approaches within a clear international framework that contributes to the safe and efficient operation of key stakeholders. An example of this is the evidence-based and data-driven approach taken to Fatigue and Fatigue Risk Management for pilots which offers lessons relevant to both how to, and how not to, implement a programme of this nature.

Looking at Psychosocial Risk from a similar perspective it becomes clear that the industry would need a flexible approach to managing the risk that would be adaptable to different stakeholder

organisation groups operating within a focused safety global framework.

Viewed as part of a Safety Management approach to operations an evidence-based and data-driven approach that could capture relevant quantitative data in an appropriate format would be required. In this area the use of digitally enabled, mobile technology may offer a viable means of meeting the need subject to validation.

It is suggested that adopting and adapting ISO 45003:2021, (Psychosocial Risk Management, see Section 12) to fit within the global civil aviation sector could provide a basis for an approach to both managing mental health and meeting Safety Management System requirements.

Additionally, the WHO/ILO Guidelines on workplace mental health could form part of a framework for the sector, integrating guidance and regulation, integrating existing EU, US, Canadian, Australian, UK and German workplace Health and Safety mental health approaches, and existing aviation specific solutions.

Building on existing ICAO and EASA/EU MH Guidelines and using the ISO 45003 framework to create a solution approach would allow aviation organisations to tailor situation specific implementations within a coherent organising framework aligned with a Safety 2 approach to risk management.

The solution to managing mental health as both an obligation to staff and a legal duty of care, within the Psychosocial Risk paradigm, will have benefits to the sector in a range of areas (op cit).

The complex global nature of the sector, operating 24/7, with National Aviation Authorities and National laws will require a flexible but coordinated approach across the sector.

## **SECTION 11:** SUMMARY AND RECOMMENDATIONS

The title of this document is; *psychosocial risk management and mental health: The mental health challenge to civil aviation safety in the 21st century.*

In the view of the RAeS HF WSG, a policy of proactive psychosocial risk management offers the potential to be a significant 'tailwind' for the industry moving into the post-pandemic 21st Century. The positive impact that it could offer in terms of enhanced performance, safety, cultural and operational aspects of the industry outlined in this document are, the WSG proposes, outcomes that could benefit the industry globally.

On a global level, National Health and Safety legislation is acknowledging psychosocial risk management (PsRM) in the workplace, and the threat it poses to staff mental health and wellbeing (MHWB). It is now part of the duty of care for employers in providing a safe working environment to the extent of identifying and taking 'reasonable precautions' to mitigate these risks. The definition of 'reasonable precautions' is an area for due consideration when balancing all the 'lenses' outlined in this paper.

The World Health Organisation (WHO) and International Labour Organisations (ILO) highlighted this in 2022. Specific legislation, regulation and guidance material has been published in different jurisdictions (eg, EU, UK, US, Canada and Australia) with different levels of progress in meeting the challenge evident. The civil aviation industry will, against this background, be subject to a varying, but growing, legal and regulatory focus around PsRM and MHWB.

The RAeS HF WSG view is that the process that psychosocial risk follows to impact operational, and personnel risk is:

Unmanaged PsH ➔ WRS ➔ CMHD (Depression, Anxiety, Chronic Stress, PTSD, D&A abuse, Burnout) ➔ Risk.

This paper suggests that intervening from the PsH/PsRM stage would be essential in Safety Management terms to be in line with other safety management policy and procedures in civil aviation. The content of this paper represents the views of the key contributors (see Annex E). A list of key definitions for reference is provided at Annex F.

This paper aims to raise awareness of the issues of psychosocial risk management (and its relationship to Mental Health) in civil aviation as a global industry, and foster discussion around creating an integrated approach to the benefit of operational, personnel and safety aspects of the industry for all safety-critical stakeholder groups.

It is suggested that, given the scope and potential impact of integrating an aviation specific approach equivalent to ISO 45003/psychosocial risk management into safety systems, across multiple stakeholder groups in the industry, is an initiative that would best fall under the remit of ICAO.

Establishing a strategic working group to frame the best way forward is, in the view of the HF WSG, the most effective way to bring a balanced view of psychosocial risk management and mental health forward for the industry.

Within this approach, other key stakeholder groups (including but not limited to: IATA, IFALPA, IATCA, AOC/Regional/Business Jet, Airport, MRO and Staff representative organisations, plus Insurers, Aeromedicine, Regulators, Legal and other relevant groups (eg RAeS, Flight Safety Foundation) could then be involved as appropriate.

The following specific recommendations are areas that the RAeS HF SWG see as a necessary, but not exhaustive, set of topics that would need addressing to structure a coherent, practical approach that a working group of the type outlined above might consider. The HF WSG recognises that other specific recommendations may be relevant based on the perspectives of key stakeholder groups as knowledge and understanding of the issues evolve.

**RAeS HF WSG Specific Recommendations:**

1. Create a summary industry briefing document covering psychosocial risk management, ISO 45003, and current national and international guidance and regulatory standards.
2. Consult and create an informed 'statement of intent' for dissemination and discussion at a global level to include all key stakeholder groups coordinated by ICAO.
3. Sponsor research into current prevalence rates for mental ill health (including Burnout, WHO 2022) in safety-critical stakeholder groups to provide a robust evidence base to inform discussion and policy formulation.
4. Sponsor research into the links between psychosocial risk, mental ill-health and safety-related behaviour in aviation specific safety-critical stakeholder groups.
5. Assess and outline how psychosocial risk and mental health monitoring and mitigation could be integrated into Safety Management System operation and reporting.
6. Collate and assess current initiatives in psychosocial risk management and mental health support in safety-critical stakeholder groups.
7. Assess existing standards (eg ISO 45003, Canadian PH SMS, Australian MaW, UK HSE SMS, EU PSRM, US guidance) for suitability, and possible harmonisation, to create a guidance briefing for the aviation industry.
8. Create an agreed cost/benefit modelling approach for considering PsRM and MH programmes in civil aviation.
9. Create a forum where key safety-critical stakeholder groups can be involved in furthering the discussion around PsRM and MHWB in civil aviation.
10. Review and produce a summary of technology enabled solutions that could allow at-scale monitoring and mitigation to reflect the nature of the industry's global 24/7/365 footprint.
11. Review and produce a summary of existing initiatives into safety-critical human factors programmes (eg Fatigue Risk Management, Pilot Peer Support) for relevant lessons and insight.
12. Review and produce a summary of the legal implications of PsRM and MHWB in terms of existing international treaties and national regulatory frameworks.
13. Liaise with the aviation insurance sector to assess the implications of incorporating psychosocial risk and mental health management programmes.

# ANNEXES

## ANNEX A PSYCHOSOCIAL RISK AND ISO 45003

**Psychosocial Risk at Work Regulations and Guidance: EU status as a benchmark.**

Psychosocial risks refer to factors in the workplace environment, and the organisation of work, that may lead to stress, anxiety, and other mental health issues among employees. Psychosocial Risks in the workplace are of growing importance globally. The WHO and ILO are promoting them to be a Health and Safety issue on a par with Physical Risks in the workplace.

Using the European Union (EU) as a benchmark there are currently no formal and specific Psychosocial Risk regulations, but they are likely to evolve over the coming years. The EU has, however, provided guidance and directives related to the occupational health and safety implications of Psychosocial Risks, and the obligation of employers to manage them. The EU Framework Directive (Health and Safety) 89/391/EEC lays down general principles for improving safety and health at work. It forms the basis for addressing psychosocial risks, as it obliges employers to protect the safety and health of their employees in all aspects related to work.

Under existing H&S legislation, EU member states typically require employers to conduct risk assessments that encompass psychosocial risks. These assessments help identify potential stressors and provide a basis for implementing preventive measures. Employers are, based on the assessments undertaken, expected to take appropriate measures to prevent or mitigate psychosocial risks. This may include improving workplace conditions, addressing workload issues, and providing support mechanisms, like employee assistance programmes.

Within the EU H&S legislation, workers have a right to participate in decision-making processes related to their health and safety, including those concerning psychosocial risks. A possible solution approach lies within ISO 45003, which is a framework which supplements the widely used ISO 45001 in terms of workplace Health and Safety.

**ISO 45003: Occupational Health and Safety Management – Psychological Health and Safety at Work:**

ISO 45003 is an international standard published by the International Organization for Standardization (ISO). It specifically addresses the management of psychosocial risks in the workplace. ISO 45003 provides a framework for organisations to manage and promote psychological health and safety at work.

The standard outlines a systematic approach to identifying, assessing and managing psychosocial risks. This includes considering factors, like workload, job design, workplace culture and employee wellbeing. In total the Standard identifies typically 13 risk categories covering organisation structure, culture and interpersonal issues.

The Standard emphasises the importance of involving employees in the process of identifying, monitoring and mitigating psychosocial risks in the workplace, and promotes a cycle of continuous improvement. Organisations manage psychosocial risks using a structured measurement, analysis and mitigation framework. The Standard is designed to allow it to be integrated with existing management system standards in Health and Safety policy and procedures.

In a complex global civil aviation sector, the implementation of existing standards and guidance, along with potential formal regulations, can vary by country and organisation. A key part of any approach to managing Psychosocial Risk would be to check the current status of the topic and consult with local Regulators, legal experts, and other professionals to ensure effective compliance with applicable requirements and best practices is achieved.

## ANNEX B PRINCIPAL SAFETY-CRITICAL STAKEHOLDER GROUPS

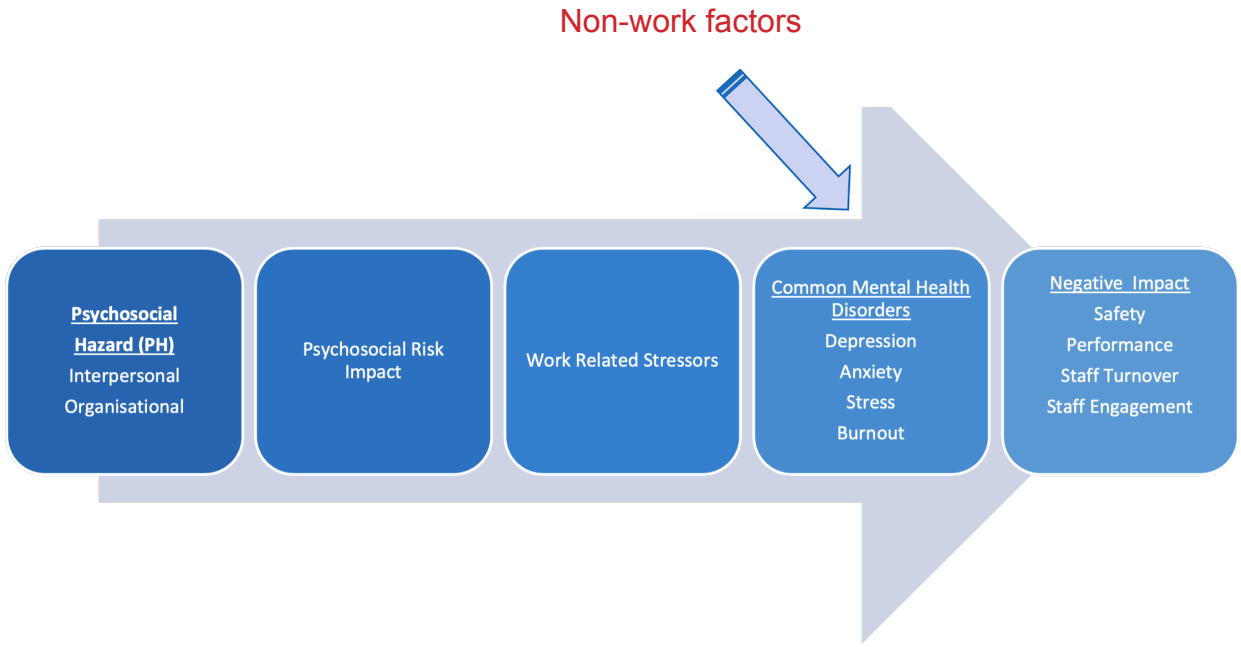

**Key Safety-Critical Stakeholder Groups**

Much of the focus in considering the risks posed to civil aviation has been on the role of the pilot. This paper suggests that the risk to safety posed by poor mental health in civil aviation is not exclusively the domain of the pilot community.

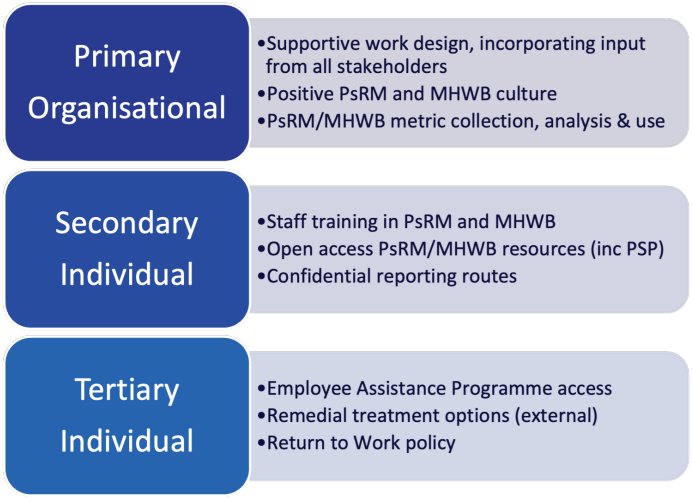
The graphic on the page before identifies key safety-critical stakeholder groups that must be considered as part of the safety landscape of civil aviation that can have a major impact. All of these stakeholder groups are integral to maintaining a safe and effective industry in the 21st Century post-Covid era.

Failing to have a coherent and practical approach to identifying and managing psychosocial hazards and risk for all these groups bring risks bringing negative consequences ranging from individual to organisational ones, with potentially catastrophic consequences in the extreme.

## ANNEX C PsRM/MH PROCESS FRAMEWORK AND INTERVENTION LEVELS




**Process flow – Mitigation to adverse impacts**




PSP – Peer support Programme

**Intervention levels**

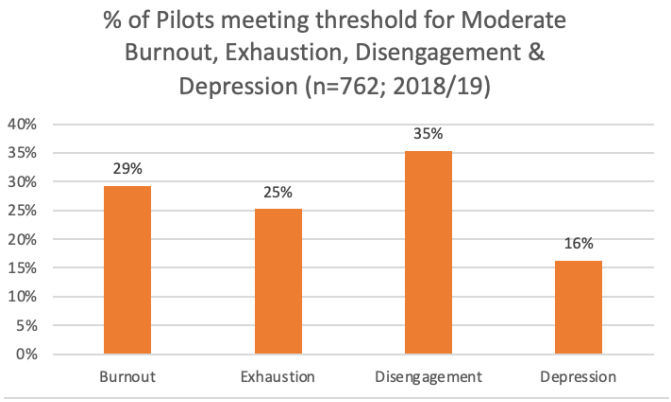
## ANNEX D BURNOUT STATISTICS: EU PILOT SURVEY, 2020-2021

Burnout is now a recognised mental health disorder in the WHO International Classification of Diseases (ICD11), with a known etiology and predictable consequences of disengagement, chronic exhaustion and depressive symptoms in individuals. These pose an existential threat to safety in a civil aviation context if unmonitored and unmitigated.

The available information from the Trinity College Dublin research surveys and analysis (2018 to 2019) on Burnout rates and associated mental distress rates in the EU pilot population indicates that there is a challenge to be met in mitigating the risks posed to the sector. There is no available equivalent data for other safety-critical groups from pre or post-Covid pandemic operations.

The potential safety implications of this syndrome are self-evident if not yet quantified, and as an emerging risk in the space of psychosocial risk and mental health should to be considered in any safety management system.

National Health and Safety legislation typically requires that organisations acknowledge, monitor, manage and mitigate 'known risks', with the publication of *WHO/ ILO and national guidelines on Psychosocial Risk, and the inclusion of Burnout in the WHO International Classification of Diseases* (ICD) volume 11 manual, it has clearly moved into the sphere of a known risk.




## ANNEX E SAFETY – 1 AND 2 PHILOSOPHY

In civil aviation, ensuring safety is paramount, and two prominent approaches to this are Safety 1 and Safety 2.

Safety 1, the traditional approach, focuses on what goes wrong. It operates on the principle that aviation systems are inherently safe, and accidents or incidents are primarily due to failures or breakdowns in components, procedures or human performance. Therefore, it emphasises compliance with established protocols, rigorous training and adherence to safety regulations to prevent undesired outcomes. The main strategy here is to identify past errors, understand their causes and implement measures to prevent their recurrence, typically through rule enforcement, incident investigation and emphasising human error as a key risk.

Contrastingly, Safety 2 is a more contemporary approach that shifts focus from what goes wrong to what goes right. It recognises that in a complex system like aviation, safety emerges from the capacity to succeed under varying conditions. Hence, this approach aims to enhance the system's overall resilience and adaptability, focusing on why operations succeed, understanding how everyday performance usually goes right, and how frontline operators can adapt safely to changing situations. Instead of merely learning from past failures, Safety 2 values learning from everyday successful operations, thereby fostering a proactive culture of continuous improvement and resilience.

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## **ANNEX G** KEY DEFINITIONS

| | |
|---|---|
| Psychosocial Hazard (PsH) | Psychological factors having an adverse performance impact. |
| Psychosocial Risk (PsR) | Individual and Organisational risk factors |
| Psychosocial Risk Management (PsRM) | Structured proactive approaches to mitigating PsRM risk |
| Work Related Stressors (WRS) | Work demands challenging individual coping capacity |
| Common Mental Health Disorders (CMHD) | Depression, Anxiety, Chronic Stress, Post Traumatic Stress |
| Burnout | Negative performance outcome of excessive demands. |
| WHO | World Health Organisation |
| ILO | International Labour Organisation |
| MHWB | Mental Health and WellBeing |
| WSG | WellBeing Specialist Group |
| RAeS | Royal Aeronautical Society |
| ICAO | international Civil Aviation Organisation |
| IATA | International Air Transport Association |
| IFATCA | International Federation of Air Traffic Controllers' Associations |
| IFALPA | International Federation of Air Line Pilots' Associations |
| FSF | Flight Safety Foundation |
| HF | Human Factors |


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