

Stress is Not a Personal Problem. It's an Operational Risk.



In aerospace, stress is often treated as a personal challenge rather than a measurable operational risk. But operational history tells a different story.

Stress is not simply an emotional state; it is a **performance hazard**. It degrades situational awareness, communication, and procedural discipline long before a crew recognizes the symptoms in themselves.

The Anatomy of a Compounding Failure: Yeti Airlines 691

The final investigation into **Yeti Airlines Flight 691** illustrates why mindset alone is not enough. When operational pressures align—unfamiliar procedures, high workload, and challenging terrain—a single human error can penetrate every remaining layer of defense.

On January 15, 2023, the flight crashed during the approach to the newly opened Pokhara International Airport in Nepal. Seventy-two lives were lost. The investigation didn't find a mechanical failure. It found a **performance-under-pressure** problem.

The Context of the Crash:

- **Operational Load:** The crew was on their third sector of the day.
- **Environmental Pressure:** The airport had only been open for two weeks.

- **Navigational Complexity:** The approach required a tight visual pattern that did not meet stabilized approach criteria.



Yeti Airlines Flight 691 in Nepal

The "Invisible" Critical Error

Inside the flight deck, the crew was managing an unfamiliar visual approach, ongoing instruction, and aircraft configuration changes below 1,000 feet AGL—all during one of the highest-workload phases of flight. Checklist discipline began to erode. Cross-checks failed.

In this high-pressure environment, both propellers were inadvertently moved into the **feathered position**. Thrust was lost. Because attention had become increasingly narrowed under workload and stress, the crew did not immediately recognize the condition despite multiple warnings.

What the Investigation Did NOT Find

What makes this case chilling is what was absent from the report:

- The crew was **fully qualified**.
- The aircraft was **completely airworthy**.

- The pilots were **within duty limitations** and well-rested.
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How Stress Degrades Performance

Recent research (Cahill et al.) shows that elevated stress narrows attention and impairs working memory. Under pressure, the brain shifts from **proactive decision-making** to **reactive problem-solving**.

The most dangerous aspect? The degradation remains invisible to the operator. Safety margins quietly deteriorate until the situation is already unstable.

Structure Over Motivation

We cannot manage human performance through willpower alone. Aerospace manages it through **Structure**:

1. **Standardized Procedures (SOPs):** Creating consistency when workload and pressure begin increasing.
2. **Stabilized Approach Criteria:** Hard gates that mandate a go-around when parameters aren't met.
3. **Independent Oversight:** External audits or coaching* that identify "normalized deviance" before it results in a hull loss.

Experience alone is not a safety system. Repeatable, validated process is.

Aerospace safety has never depended on perfect people. It depends on systems designed to recognize human limitations before a single mistake becomes irreversible.

What are you doing to identify unnamed threats in your operation?

**WYVERN's Flight Leader Program provides ongoing independent coaching and operational oversight designed to help organizations identify emerging risk, strengthen procedural discipline, and support continuous safety improvement before small deviations become systemic threats.*

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References

- Nepal Aircraft Accident Investigation Commission. *Final Report on the accident of ATR72-212A version 500 (Registration: 9N-ANC), Yeti Airlines Flight 691, Pokhara, Nepal, January 15, 2023.* (view on our website: <https://www.wyvernlimited.com/air/>)
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- Cahill, J., Cullen, P., Anwer, S., Wilson, S., & Gaynor, K. (2021). *Pilot Work Related Stress (WRS), Effects on Wellbeing and Mental Health, and Coping Methods.* The International Journal of Aerospace Psychology.