



Captain Brian Teske

STAYING IN CONTROL LESSONS FROM HOME

When his father returned from the hospital with new medications, **Captain Brian Teske**, created a detailed chart to help him stay organised. However, his father used the chart differently than expected, bringing to light simple but valuable lessons about practical versus planned implementation of procedures and policies.

KEY POINTS

- **Work-as-imagined and work-as-done:** Even with seemingly clear instructions, there can be significant differences between how systems are designed to be used and how they are actually used in practice.
- **The role of adaptations:** Frontline workers often adapt procedures to fit practical realities within safety parameters, highlighting the importance of considering user input when developing policies and tools.
- **Collaboration and communication:** Effective safety and operational procedures in high-risk environments, such as aviation, benefit greatly from collaboration and communication between different stakeholders.
- **Understanding human factors:** Understanding human factors and the variability in how individuals perform tasks is crucial for creating effective safety management systems.
- **Continuous feedback:** Continuous feedback from frontline employees, such as pilots and air traffic controllers, is essential for refining procedures to ensure they are both practical and safe.

Recently, my father returned home from the hospital with new medications that he needed to continue taking. To help him, I created a simple chart on paper to help him to stay organised. The chart contained the medicine name, dosage, and dosage times, and I taped the chart in the cabinet as a reference tool for him. He understood the importance of taking each pill at the correct time and in the correct order and believed I had clarified the instructions using the visual chart to make it easier for him.

Confident that he understood this, I left him to assemble all the medicines for the next day, satisfied that the chart would fulfil its purpose. However, upon returning, I realised things had gone differently than planned. He did not use the chart as I had imagined. Instead, he took the chart down, placed it on the counter, and put the pills onto the grids until he filled all of the grid.

Figure 1: Medication Chart

Medication List	Morning	Afternoon	Evening	Bedtime	As Needed
ABC XYZ	X				
ABC XYZ		X			X
ABC XYZ				X	
ABC XYZ	X				X
ABC XYZ				X	
ABC XYZ	X				
ABC XYZ		X			
ABC XYZ				X	
ABC XYZ					X Wednesday
ABC XYZ					
ABC XYZ		X	X	X	X
ABC XYZ		X			

MAINTAINING CONTROL

I quickly noticed a discrepancy between my intended use of the chart and how my father had used it – my work-as-imagined and his work-as-done (see *HindSight* 25). His use produced a better outcome while remaining within my safety construct. Even with clear instructions and a seemingly straightforward system, things can go differently than planned or anticipated.

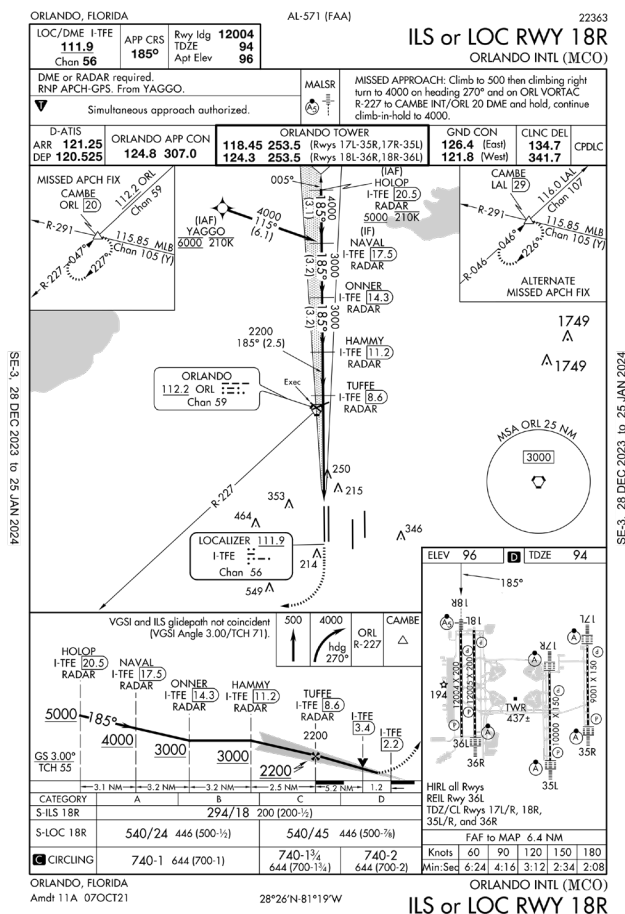
“There is often a disconnect between how policies and plans are written and how frontline staff performs the work, and between who is ‘in control’ of different kinds of work.”

There is often a disconnect between how policies and plans are written and how frontline staff performs the work, and between who is 'in control' of different kinds of work. According to the Flight Safety Foundation's Learning From All Operations group (a group of international aerospace experts exploring how to learn from the entire operation, see <https://flightsafety.org/toolkits-resources/learning-from-all-operations/>), this can be common even in high-risk operations. A gap between policy and practice highlights a need to line individuals interact with rules and researchers have written about how gaps consider workers' practical realities (e.g., *indSight* 25 explored the topic of work-
ne.

Further, the Flight Safety Foundation's Learning From All Operations group discusses the concept of adaptive capacity, or adapting to specific situations by using their knowledge base and prior experiences to make safety adjustments. Like my father's situation, in which he maintained control of his own safety situation, aerospace professionals must have the capacity to adapt their actions when dealing with specific practices, all while staying within established safety parameters. By having the capacity to make operational adjustments, organisational personnel remain vigilant to the operations while 'staying in the loop' of information and decision making.

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STAYING IN THE LOOP: WORK-AS-PLANNED VERSUS WORK-AS-PERFORMED



Illustrative only. Not for navigation.

Frontline airline and air traffic operations workers must navigate complicated procedures and protocols daily while working with time pressures from tight schedules. Workers may be presented with the need to adjust from comfortable workflows. This is not because they are intentionally deviating from or disobeying standard operational procedures but because they need to adapt to specific operational pressures in specific context.

Several years ago, I had the opportunity to brief air traffic controllers at Orlando's Terminal Radar Approach Control facility (TRACON) on my airline's flight management system (FMS) procedures for various approaches. The discussions covered the specific aircraft in our varied fleets, mainly the details and possible difficulties of executing a last-minute visual approach. The airspace around Orlando presented challenges on runway 18R due to a nearby airport underlying the ILS approach path, requiring a higher initial altitude and increasing the possibilities of unstable approaches and go-arounds.

Throughout my week there, I worked closely with the various TRACON team members to discuss our approach operations and clarify pilots' decision-making processes when given time-compressed instructions.



This engagement developed into a collaborative problem-solving and data exchange. It provided an opportunity for hands-on team building and to discuss a formalised departure sequence program, integral for coordinating departures between the airlines and ATC sectors. This exchange went beyond procedures; it reinforced the symbiotic relationship that helped to ensure smoother operations in the skies around Orlando. The dialogue enhanced our collective understanding and coordination between my airline and air traffic controllers, focusing on safety and efficiency, and offered a glimpse into the many complexities of each other's jobs.

“Controlling air traffic is both an art and a science, much like flying.”

What fascinated me most during these interactions was the reminder that controlling air traffic is both an art and a science, much like flying. Contrary to my conception of ATC uniformity from initial primary flight training, the controllers discussed their unique air

traffic control style. Their methods of controlling not only varied between different controllers, but were customised depending on the context, especially outside the Standard Terminal Arrival Routes (STARs) followed by aircraft on an instrument flight rules flight plans prior to reaching their destination. Understanding the localised ATC best practices allowed me to anticipate their workload better and make minute operational adjustments when flying in this airspace. Work-as-done varied by person and context, and this variability was essential to staying in control.

Additionally, as pilots, we often try to anticipate the needs of air traffic control flow to ensure a smooth transition during the flight. This interaction between pilot and controller, which varies from airport to airport, further highlights the complexity of aviation operations and the interactivity involved in all of us staying in control.

Responsibility for addressing the challenges faced by frontline employees rests with the leaders inside the aerospace industry. Management should encourage employees' involvement in policy and procedure formulation.

According to the International Civil Aviation Organization (ICAO), a frontline employee communication component of a Safety Management System (SMS) is an anonymous Aviation Safety Action Program (ASAP) that allows employees to address operational and safety issues. Pilots, controllers, and others contribute by sharing their experiences and providing insights into the complexities of operations. Incorporating these data as a communication feedback

loop can help inform policymakers of events that combine tacit knowledge, helping to bridge the gap between 'ideal' policies and required practical implementation (see Barshi et al, 2017).

My experience with the method of my father's use of the medication chart and the insights gained from the Orlando controllers about their customised controlling methods brought to light an interesting truth about human factors and system safety. Whether personal or professional, a gap between others' planned intent and one's own actual performance can exist and may be challenging to uncover. My father's modification to the medication chart as a stencil rather than a reference brought to light the user's imagination. Despite understanding the theoretical implications, I created a procedure in a vacuum without practical knowledge of using the process. Much like the ATC personnel I chatted with, they all maintained control of their practices while maintaining the information loop. Policies should be crafted and revised with frontline users' input and experiences. Research and feedback from pilots and controllers through programs like ASAP are invaluable, ensuring that policies are practical guidelines shaped by the realities of daily operations.

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BRIAN TESKE, A330 Captain, has flown various Boeing and McDonnell Douglas aircraft. He earned a PhD in Aerospace Sciences, Space Studies and Aviation, focused on safety management systems in commercial space and high reliability theory attributes in major airlines. Teske has taught as an Adjunct Professor at University of Dubuque and continues with safety initiatives within Flight Safety at his airline.