DESIDE

Idea In Short

The DESIDE (Detect, Estimate, Set safety objectives, Identify, Do, Evaluate) decision-making framework is a structured approach originally developed for use in aviation to help pilots navigate complex situations and make critical decisions under pressure. This systematic method enables pilots to methodically work through challenges by breaking down the decision-making process into six distinct stages, with a particular emphasis on safety. By following these steps - detecting the problem, estimating its significance, setting clear safety objectives, identifying potential solutions, implementing the chosen action, and evaluating the outcome - pilots can ensure they consider all relevant factors before taking action, always prioritizing safety. While rooted in aviation, the DESIDE framework has proven valuable in various professional contexts where critical thinking, effective decision-making, and a focus on key priorities are essential, offering a clear roadmap for navigating both routine operations and high-stakes scenarios.

The DESIDE framework, which stands for Detect, Estimate, Set safety objectives, Identify, Do, Evaluate, is a structured decision-making approach primarily utilized by pilots in aviation . It is designed to enhance situational awareness and facilitate effective responses in dynamic environments where safety is paramount. This framework is grounded in principles of human factors engineering, which emphasize the importance of understanding human behavior and decision-making processes in high-stakes situations.

Detect

The first step in the DESIDE framework involves the detection of critical information and cues from the environment. This phase is essential for establishing situational awareness and recognizing potential threats or changes in circumstances that may impact flight safety. Pilots are encouraged to utilize their observational skills and situational awareness to perceive changes in the environment that could pose risks to their operation. Effective hazard detection often incorporates the use of technology and experience to monitor flight

conditions continuously, leading to better decision-making outcomes. Pilots must remain vigilant, utilizing both their training and the capabilities of advanced avionics systems, such as Electronic Flight Instrument Systems [EFIS], to identify issues as they arise. Enhanced situational awareness, facilitated by integrated displays that aggregate critical flight data, allows pilots to perceive hazards effectively.

Estimate

Following detection, the next step is to estimate the implications of the identified issues. Pilots analyze the situation to gauge its severity and potential impact on safety, leveraging their training and experience to assess risks accurately. Once hazards are detected, pilots must estimate the potential impact of these threats. This involves assessing the likelihood of an event occurring and its potential consequences. Risk assessment models, such as risk matrices, can be employed to evaluate the severity of the identified risks based on two criteria: the likelihood of the event and the extent of potential loss. The goal is to develop a comprehensive understanding of how these hazards could influence flight safety.

Set Safety Objectives

In this phase, pilots set clear safety objectives that align with their operational goals. Setting safety objectives is pivotal in guiding pilot actions toward minimizing risks. Objectives may vary depending on the situation, but typically involve maintaining safety margins and ensuring operational reliability. The integration of Artificial Intelligence within EFIS enhances this process by providing real-time data analytics, helping pilots to formulate objectives based on current conditions and potential outcomes. These objectives provide a guiding framework for decision-making, ensuring that safety remains the priority throughout the flight process. In this phase, pilots also define specific safety objectives to mitigate the identified risks. This includes establishing personal minimums and operational limits based on their assessment of the situation. By setting clear objectives, pilots can focus on creating actionable strategies to ensure a safer flight experience. This proactive approach not only enhances individual safety but also contributes to overall aviation safety standards.

Identify

Following the establishment of safety objectives, pilots identify potential courses of action that align with these goals. This involves considering various strategies for risk mitigation,

such as altering flight paths, utilizing alternative navigation methods, or implementing safety checklists like "IMSAFE" to ensure personal readiness for flight operations. The ability to identify practical solutions is further supported by advancements in training programs that emphasize cockpit resource management and digital interface navigation. The identification step involves recognizing possible courses of action based on the established objectives. This stage emphasizes the importance of considering multiple options and evaluating their potential outcomes to ensure a comprehensive approach to decision-making. After setting objectives, pilots identify the resources and strategies necessary to achieve these safety goals. This involves considering various alternatives to mitigate risks, such as altering flight plans, delaying departures, or seeking additional support from crew members. Pilots must critically evaluate the effectiveness of their chosen options and be prepared to adapt to changing circumstances.

Do

Once options have been identified, the next step is to implement the chosen course of action. This phase requires effective communication and coordination among team members to execute decisions efficiently and safely. The 'Do' phase is where pilots implement the identified strategies and plans to manage the risks effectively. This includes executing the flight operations as planned while continuously monitoring for any deviations or emerging hazards. The ability to execute with precision is critical, as it directly affects the overall safety of the flight. The "Do" phase entails the execution of the identified course of action. Effective execution requires pilots to be adept at operating both traditional and modern avionics, ensuring they can respond swiftly to changing conditions. Utilizing advanced autopilot features and integrated navigation systems can significantly reduce pilot workload while maintaining flight safety.

Evaluate

The final step in the DESIDE framework is the evaluation of the outcomes resulting from the actions taken. Pilots reflect on the effectiveness of their decisions, assessing whether safety objectives were met and identifying areas for improvement in future operations. After completing the flight, pilots reflect on the effectiveness of their risk management strategies and assess whether their safety objectives were met. This evaluation process is essential for learning and improvement, enabling pilots to adapt their decision-making processes for future flights. Continuous feedback and assessment contribute to the overall enhancement

of aviation safety practices. The evaluation step is critical for assessing the effectiveness of the decisions made during the flight. Pilots must continuously monitor outcomes, adapting their strategies based on real-time feedback from the aircraft systems and their own situational awareness. This iterative process allows for ongoing risk assessment and decision-making refinement, ultimately contributing to enhanced aviation safety and operational efficiency.

Summary

The DESIDE decision-making framework, born from the high-stakes world of aviation, offers a structured and effective approach to problem-solving that can be invaluable in corporate settings. By systematically working through each step - Detect, Estimate, Set safety objectives, Identify, Do, and Evaluate - business leaders can make informed decisions that prioritize critical objectives, whether they be safety, security, quality, or integrity. As with any tool, the effectiveness of DESIDE in corporate settings will depend on proper training, consistent application, and a commitment to continuous improvement and evaluation.