



## FAA/Industry Training Standards (FITS) Questions and Answers

### 1. What is FITS?

In partnership with industry and academia, the FAA/Industry Training Standards (FITS) program creates scenario-based, learner-focused training materials that encourage practical application of knowledge and skills. The goal is to help pilots of technically-advanced aircraft (TAAs) -- which have more automation and often greater performance capability -- develop the risk management skills and in-depth systems knowledge needed to safely operate and maximize the capability of these aircraft in the National Airspace System (NAS).

### 2. What is a technically advanced aircraft (TAA)?

A TAA is an aircraft that contains GPS navigator with a moving map, plus any additional systems (e.g., an autopilot combined with a GPS navigator is also a TAA). Many new TAAs have highly integrated systems, including advanced engine management, integrated cockpit systems, and “glass cockpit” avionics (i.e., primary flight displays and multifunctional displays). Typically, new TAAs also have a greater performance envelope (speed, range, altitude) than “legacy” aircraft.

### 3. Is FITS a regulatory approach?

No. In a rapidly changing aviation environment, regulatory action is not always the most appropriate or effective way to promote safety. In order to keep training products and tools fully up-to-date and reduce product cycle times, the FITS program is deliberately designed around technical standards rather than around regulatory or policy issues that would require longer development and production times.

FAA *acceptance* (not “approval”) of FITS standards developed by the industry, academic, and FAA partnership is a quality control mechanism. The products developed through the FITS program are industry voluntary consensus standards. However, since FITS develops standards intended to promote safety and to comply with the FAA regulations and policies already in place, it is incumbent upon the FAA to ensure that they are consistent and to help make them available to the public.

#### **4. What is industry's role?**

Where training on new aircraft and new avionics is concerned, safety and best practices dictate making full use of the knowledge and expertise held by manufacturers, instructors, schools, and other members of the general aviation community. Consequently, FITS is a broad-based partnership that includes a number of entities, ranging from large organizations training organizations like ERAU and UND; aviation associations like NAFI and AOPA; aerospace manufacturers, to smaller organizations like the Aero-Tech flight school in Kentucky. These participants bring a wide range of expertise, experience, and perspectives to the development of FITS products.

To validate the results of using FITS products and explore the many issues arising from the use of TAAs, ERAU, UND, and other respected institutions constitute the Center for General Aviation Research (CGAR, which is one of the FAA's Air Transportation Centers of Excellence). The CGAR consortium seeks to address the critical needs of general aviation through collaborative studies and research. As such, CGAR forms a cumulative repository of knowledge, and encompasses the entire spectrum of research and development from basic research to engineering development and prototyping.

#### **5. What is "scenario-based training?"**

Scenario-based training (SBT) is a training system that uses a highly structured script of real-world experiences to address flight-evaluation in an operational environment. Consistent with the concept of training the way you fly and flying the way you train, FITS places more emphasis on whole task training and uses carefully planned scenarios structured to address TAA flight-training objectives in a real world operational environment. Scenarios give the pilot an opportunity to practice for situations that require sound aeronautical decision-making. The FITS curriculum guides also require that scenarios be adapted to the flight characteristics of the specific aircraft and the likely flight environment, and that they require the pilot to make real-time decisions in a realistic setting. SBT thus provides an effective method for the development of judgment and decision-making skills. Ideally, all flight training should include some degree of scenario-based training, which helps develop decision-making, risk management, and single pilot resource management skills (SRM).

#### **6. Will FITS increase the cost of flying?**

Industry members of the FITS team support the program in part because it adds structure and value to private sector training and experience requirements for certain types of aircraft. Without the structure of a well-designed FITS syllabus, insurance companies and flight schools may seek to limit their risk and exposure by resorting to the traditional minimum requirements based on time-in-type and/or a specified number of hours with a flight instructor. FITS standards, by contrast, are based on quality of instruction rather than quantity (proficiency based rather than hour based), and thus provide greater value – possibly at less expense – than current private sector financial risk management practices offer. Initial data we are receiving from FITS training providers do show a reduction in flight time required to meet standards.

## **7. The existing Practical Test Standards (PTS) have stood the test of time, and the GA safety record really isn't that bad. So why do we need FITS?**

The FAA works hard to ensure that the Practical Test Standards (PTS) are kept up-to-date and that the PTS tasks are consistent with ensuring that a pilot has the skills necessary to operate in the “real world” general aviation flying environment. The PTS, however, necessarily concentrates on defining the basic levels of knowledge and aircraft control skill needed to handle both the physical airplane and what some experts call the “mental” airplane. Because the complexity of TAAs (e.g., automated systems, systems integration, and performance) puts greater demands on the pilot than “legacy” aircraft, FAA partnered with industry and academia to develop training tools to help pilots meet these challenges, manage risk, and safely maximize the capability of these aircraft.

## **8. Does the FAA intend to expand FITS to training for “legacy” aircraft?**

The FITS program was established to address the need for targeted training on technically advanced aircraft (TAAs). FITS itself was not intended for training on non-TAA aircraft. However, the concepts at the core of the FITS program (i.e., risk management, aeronautical decision-making, situational awareness, and single pilot resource management) are not unique to FITS or to TAAs, and many flight training professionals strongly believe that these concepts should be integrated more effectively into other areas of flight training. The FAA is consulting closely with industry on ways to address this need.