#### **General Questions**

What is the ACS project all about?

What is the problem you're trying to solve? What's wrong with the tests we have now?

If there are problems with the knowledge test, why can't you just fix those and leave the rest alone?

What's wrong with the PTS?

**How does the ACS approach improve the PTS?** 

Why does the ACS have a separate section for risk management? Isn't that just the latest buzz word?

How does the ACS approach improve the knowledge test?

What are all these acronyms? (ARC, ARAC, ATST WG, ACS WG)?

Who are the industry participants? What expertise do they have?

How will you provide the "clear link" connecting knowledge/skill performance standards, guidance, and test materials?

Isn't the real problem related to deficient skills? If so, what is the point of this change?

How can you map knowledge to skills?

What benefits come from mapping knowledge to skills?

How will use of the ACS approach change airman training?

What do you mean when you say that the ACS concept is consistent with SMS principles?

How much will the ACS cost in terms of money and manpower?

**Doesn't this kind of change require a formal rulemaking process?** 

When will the ACS be in effect?

Will the ACS be electronically available?

How often will the ACS be updated?

What did you do with the comments submitted to the public docket on the draft ACS documents?

#### **Applicant-related Ouestions**

How will use of the ACS approach change airman training?

Won't the transition to the ACS make the knowledge test a lot harder?

Won't the ACS approach dramatically increase the length (and expense) of the practical test?

Doesn't the ACS approach increase the cost of flight training?

Doesn't the ACS approach increase the standards?

Why does the ACS mix the terms "learner" and "student pilot?"

Why use the term "airman" instead of "pilot" or "aviator?"

Will the FAA update its public sample knowledge tests to reflect the ACS?

When will the FAA's sample knowledge exams be updated to reflect the ACS codes, so that we can see how the agency will apply the codes?

#### **Instructor-related Questions**

Why is the Authorized Instructor ACS different?

How will the ACS change the way I teach ground school and flight training?

What's the difference between the ACS and a training syllabus?

Will part 141 schools have a grace period to update and transition their TCOs and associated syllabi from PTS to ACS?

Should the FAASTeam become involved in ensuring the CFI community is trained and prepared?

<u>How does an "average" CFI learn how to teach risk management? Has the FAA developed a source</u> for this information?

Reading the descriptions of risk management, I believe that many CFIs and at least some DPEs will need some more specific technical guidance on how to integrate this in training and testing.

<u>Is it assumed that correct answers/explanations of risk are found in handbooks such as the Pilot's Handbook of Aeronautical Knowledge? How does an experienced "average" CFI obtain this knowledge? CFIs will ask us those types of questions.</u>

I could not find "scenario based training or testing" mentioned in the ACS but it is referenced in FAQ. Some evaluators will use that to drop SBT. Is that what was intended? Are we assuming that CFIs will use SBT in their training?

#### **Evaluator (DPE)-related Questions**

How will the ACS affect the way I conduct a practical test?

Did I hear that I can already use the ACS to conduct practical tests in lieu of the PTS?

Won't the ACS approach dramatically increase the length (and expense) of the practical test?

Since the airman knowledge test report (AKT) is valid for 24 months, how does a DPE (evaluator) handle a valid AKT issued under the LSC code system once the ACS is in place?

Will the FAA update its public sample knowledge tests to reflect the ACS?

When will the FAA's sample knowledge exams be updated to reflect the ACS codes, so that we can see how the agency will apply the codes?

What document should we use to retrain and evaluate an applicant's areas of deficient or weak knowledge?

Will the ACS codes point me to the exact text in the handbooks and other references?

<u>It sounds like I might need a suitcase to carry all the paper needed to conduct an initial CFI</u> practical test. How big a document is the Authorized Instructor ACS going to be?

How can risk management be tested on a knowledge test?

How do you expect to evaluate soft skills?

What's the point of changing terms to words like "evaluator?"

Are there formal plans to train or familiarize DPEs with the ACS? Issues such as plans of action and how to train/evaluate risk management will need attention.

#### **Other Questions?**

Do you have a question not addressed here? If so, please use the " $\underline{\text{Contact Us}}$ " link on the  $\underline{\text{AFS-630}}$  website to make the inquiry.

#### **General Questions**

#### What is the ACS project all about?

The goal of this project is to improve airman training and testing by implementing an integrated, holistic system that clearly aligns testing with certification standards and guidance.

Eventually, there will be an Airman Certification Standards (ACS) document for each airman certificate and rating. The ACS will replace today's Practical Test Standards (PTS).

The ACS is essentially an "enhanced" version of the PTS. It adds task-specific knowledge and risk management elements to each PTS Area of Operation and Task. The result is a holistic, integrated presentation of specific knowledge, skills, and risk management elements and performance metrics for each Area of Operation and Task. The ACS defines what an applicant must **know**, **consider**, and **do** to pass the knowledge and practical tests for a certificate or rating.

There is a unique ACS code for each task element, which provides a mechanism for the FAA to align standards with guidance and test questions and maintain that alignment. [back]

#### What is the problem you're trying to solve? What's wrong with the tests we have now?

The knowledge test is an important component of the airman certification process. It is intended to measure an applicant's understanding of the rules, regulations, and knowledge areas required to earn an FAA airman certificate.

Unfortunately, many view the knowledge test as deeply flawed because it has historically included too many questions that are overly broad, overly complex, trivial, outdated, and sometimes irrelevant. Consequently, the knowledge test is often regarded as a rote memorization exercise that has no real value for aviation safety education and training, and little (if any) connection to real world operations in today's National Airspace System (NAS).

The root cause of these problems is the lack of a "knowledge test standard" corresponding to the Practical Test Standards, which the FAA developed years ago as a means to define acceptable performance of the "flight proficiency" (skills) that 14 CFR part 61 specifies for each certificate and rating. Rather than develop a separate KTS, the industry group recommended that the FAA address this deficiency by integrating required "aeronautical knowledge" elements into the existing PTS Areas of Operation/Tasks. This integrated document is called the Airman Certification Standards, or ACS. [back]

## If there are problems with the knowledge test, why can't you just fix those and leave the rest alone?

The original idea was to "fix testing." In September 2011, the FAA convened a group of industry experts to recommend ways to accomplish this goal. This group – the Airman Testing Standards and Training Aviation Rulemaking Committee (ARC) – quickly determined that there is no way to fix the knowledge test in a meaningful and sustainable way without having a knowledge test standard akin to the PTS.

The ARC briefly considered proposing a "Knowledge Test Standards" (KTS) document that would be the knowledge test companion to the skill-focused PTS. The ARC discarded this approach as unworkable, fearing that creation of separate KTS documents could result in divergence between the KTS and the PTS, burden stakeholders with an additional set of

documents, and require a greater expenditure of shrinking FAA resources to develop, deploy, and maintain a full range of KTS documents.

The ARC concluded that aviation safety and stakeholder needs, including the core desire for a more relevant FAA knowledge test, would be best served by integrating task-specific aeronautical knowledge into the appropriate Area of Operation/Task in the existing PTS, and by adding task-appropriate risk management elements for each Area of Operation. The ACS would thus define not only the performance metrics for knowledge and skill, but also the required content for guidance materials such as the FAA-H-series handbooks and for relevant knowledge test questions. [back]

#### What's wrong with the PTS?

The PTS provides metrics to define acceptable performance of the "flight proficiency" skills listed in 14 CFR part 61 for a given certificate or rating. Most people believe that the PTS generally serves its intended purpose but, like all such documents, it has become bloated over the years with an ever-expanding list of "special emphasis" items, repetitive or overlapping Areas of Operation/tasks, and poorly-defined additional requirements (e.g., evaluation of the applicant's risk management and aeronautical decision-making skills). [back]

#### How does the ACS approach improve the PTS?

The ACS approach does not increase or expand any of the skill evaluation requirements in the existing PTS, but it significantly improves the PTS in several ways. The ACS:

- Provides integrated guidance that defines performance metrics for aeronautical knowledge as well as flight proficiency (skill).
- Strengthens the PTS by explicitly defining the aeronautical knowledge needed to support each Area of Operation/task. This linkage enhances the relevance of the testing/training process for adult learners by clearly answering the "why do I need to know that?!" question.
- Enhances safety by using the risk management section in each ACS Area of Operation to translate abstract terms like "aeronautical decision-making" into specific safety behaviors relevant to each task.
- Eliminates "bloat" by consolidating duplicative or overlapping tasks in the existing PTS. [back]

## Why does the ACS have a separate section for risk management? Isn't that just the latest buzz word?

The PTS already requires evaluation of the applicant's risk management abilities, but the existing document does not offer the kind of concrete "what do I have to do?" guidance that users need and deserve. The rationale for including a risk management section in the ACS is to enhance safety by translating abstract terms into specific safety behaviors relevant to each task. The ACS is also intended to communicate and demonstrate that risk management is a continuous process that includes identification, assessment, and mitigation of task-specific hazards that create risk. The risk management element identifies the circumstantial issues that aviators must consider in association with a particular task. [back]

#### How does the ACS approach improve the knowledge test?

Accepted best practices for any certification process stipulate that training and testing be based on a job/task analysis. The ACS documents function as the required job/task analysis, because

they define the knowledge and skills needed to perform at the level of the target certificate or rating. In this way, the ACS approach better serves the applicant, the instructor, and the evaluator. And because the process of developing the ACS requires a thorough review and update of knowledge and skills for airman certification, it aligns with certification industry standards for periodic review and revision of the job/task analysis. In addition, the ACS approach will enable the FAA to create and maintain a clear link between the regulations, knowledge/skill performance standards, guidance, and test materials. [back]

#### What are all these acronyms? (ARC, ARAC, ATST WG, ACS WG)?

To ensure transparency and diverse representation and to benefit fully from industry expertise, the FAA used several existing organizational structures.

ARC refers to the Airman Testing Standards and Training Aviation Rulemaking Committee, which the FAA chartered in September 2011 to make recommendations for more effective training and testing. ARCs are the required forum for rulemaking projects, but they are also used as a way for the FAA to benefit from stakeholder expertise in non-regulatory efforts, such as this project. The FAA selected the ARC's membership and convened it in September 2011. The ARC submitted its report and nine recommendations to the FAA on April 13, 2012.

ARAC is the Aviation Rulemaking Advisory Committee (ARAC), a formal standing committee of aviation associations and industry representatives. ARAC provides a transparent legal framework for industry stakeholders to provide advice and recommendations to the FAA. ARAC performs its FAA-assigned tasks through expert-level working groups. To date, ARAC has established two separate working groups to work on the Airman Certification Standards project.

- The ATST WG is the Airman Testing Standards and Training Working Group. To benefit from industry expertise in implementing the ARC recommendations, in August 2012 the FAA asked ARAC to accept this task. ARAC formed the Airman Testing Standards and Training Working Group (ATST WG, which consisted of aviation education and training professionals from all major segments of this community, to perform the specific tasks requested by the FAA. The ATST WG submitted its report to its parent body, ARAC, in mid-September 2013. ARAC accepted the <u>ATST WG report</u> and submitted it to the FAA on September 30, 2014.
- The ACS WG is the Airman Certification System Working Group. In order to continue the work started under the auspices of the ATST WG, in December 2013 the FAA asked ARAC to accept another set of tasks. ARAC established the ACS WG to perform this work. [back]

#### Who are the industry participants? What expertise do they have?

In convening the original <u>Aviation Rulemaking Committee (ARC)</u>, and in its subsequent taskings to the <u>Aviation Rulemaking Advisory Committee (ARAC)</u>, the FAA stipulated that these groups should include aviation professionals with experience and expertise in airman training and testing, and technical experts having an interest in the assigned task. The FAA sought a wide range of members to ensure that all aspects of airman testing and training, including best practices, would be considered in the development of its recommendations.

Consequently, membership on the ARC and on each of the two ARAC-established working groups has included flight instructors, designated pilot examiners, the aviation academic community, industry advocacy associations, and training and test preparation providers involved with aviation training and testing in 14 CFR Part 61, 141, 142, and 121 environments. Based on

an additional tasking from the FAA that ARAC accepted in December 2015, the ACS WG will soon add up to five new members with expertise in part 65 and part 147.

To support the work and to ensure that the FAA has a full understanding of the groups' work and the rationale for their recommendations, the FAA assigns subject matter experts from a number of its policy divisions to attend these meetings. [back]

## How will you provide the "clear link" connecting knowledge/skill performance standards, guidance, and test materials?

The ACS coding system provides the mechanism for establishing and maintaining alignment of standards with guidance and test questions. Each ACS includes a series of letters and numbers after each task. These codes provide the means to correlate the tasks in the ACS with guidance and testing, and to keep them aligned going forward. The ACS codes will supersede the current system of "Learning Statement Codes" (LSC), which is too limited to serve as the mechanism for alignment and too complex to effectively serve the needs of the FAA and the stakeholder community.

The ACS coding system has four elements that are anchored in the ACS (i.e., in the standard itself, not in reference documents like the current LSCs).

#### PA.XI.A.K:

 $PA = (private\ pilot\ airplane) - identifies\ the\ applicable\ ACS.$ 

XI = Area of Operation (Night Operation)

A = Task (Night Preparation);

 $K1 = Task \ element \ [knowledge (K), skill (S), risk management (R)]$ 

#### The ACS-based codes will:

- *Clearly align guidance and test questions to the ACS;*
- Make the airman knowledge test report meaningful to stakeholders (applicant, instructor, evaluator);
- Provide a means for automated generation of tests, whether using the existing test forms or future randomized selections; and
- Eliminate subjectivity and vastly simplify system management requirements for the FAA. [back]

#### Isn't the real problem related to deficient skills? If so, what is the point of this change?

Aviators love to debate, and we can argue endlessly about what really causes accidents. Perhaps we can agree, though, that most accidents have multiple causes. According to the AOPA Air Safety Institute, the three leading general aviation (GA) fatal accident factors are maneuvering flight, continued VFR into IMC, and loss of control on takeoff. These factors all imply some degree of deficiency in the pilot's knowledge, skill, and risk management abilities. Even the world's best stick-and-rudder pilot is at risk for loss of control if he or she has an inadvertent flight into IMC because of deficiencies in weather knowledge or risk management ability. Safety is not served by emphasizing just one of these three abilities. On the contrary, each supports the others.

The ACS is an improvement over the current system, because it offers a holistic approach to aviation training and testing – it integrates knowledge and risk management with skills, and it provides a way to ensure that the elements of the certification process – standards, guidance, and testing – are correlated to these abilities and aligned with each other. [back]

#### How can you map knowledge to skills?

The <u>ARAC ATST WG</u> invested considerable time developing a standardized approach to integrating knowledge and risk management with the skills in the existing PTS Areas of Operation/tasks. To assist the FAA in this process, the ATST WG's final report described its PTS-to-ACS transition methodology in detail. In summary, the ATST WG sought to:

- Ensure that all aeronautical knowledge topics listed in 14 CFR part 61 are addressed in the appropriate Area(s) of Operation in the ACS
- Define the knowledge topics required to support the skill area for the level of airman certificate covered by the target ACS.
- Calibrate the required knowledge to the level of the airman certificate or rating level.

The group took a similar approach to risk management. Drawing from the special emphasis topics in the existing PTS and sources such as the FAA Risk Management Handbook (FAA-H-8083-2), the group listed specific, practical, risk management tasks, skills, or behaviors appropriate to each Area of Operation. [back]

#### What benefits come from mapping knowledge to skills?

Most accidents have multiple causes, and many involve at least some degree of deficiency in the pilot's knowledge, skill, and risk management abilities. Each of these abilities supports the others. The ACS reflects this reality because it offers a holistic approach to aviation training and testing – it integrates knowledge, skills, and risk management, and it provides a way to ensure that the elements of the certification process – standards, guidance, and testing – are correlated to these abilities and aligned with each other.

Another benefit is that the holistic ACS approach is consistent with principles for effective adult education and meaningful testing. According to Malcolm Knowles, effective instruction and education of adults occurs when they perceive a need for certain knowledge or skills, understand how the area of learning relates to what they want to achieve, and recognize how the area of learning applies to the life or work context.

By mapping specific items of aeronautical knowledge and actionable risk management practices with the flying skill performance metrics in the existing PTS, the ACS meets these needs and significantly enhances the educational value of the FAA knowledge test.

Finally, the holistic ACS approach is consistent with accepted industry practices for any certification process. The ACS documents function as the required job/task analysis, because they define the knowledge and skills needed to perform at the level of the target certificate or rating. In this way, the ACS approach better serves the applicant, the instructor, and the evaluator. [back]

#### How will use of the ACS approach change airman training?

With clearly defined standards for knowledge, skill and risk management, airman training can be conducted more effectively to ensure that applicants who complete flight and ground training are safe, competent aviators as well as successful in passing the FAA knowledge test. Training and testing will be aligned, which means that "test prep" will be a review of the ground school curriculum rather than a separate, unrelated step to learn questions for the sole purpose of passing a test. [back]

#### What do you mean when you say that the ACS concept is consistent with SMS principles?

The safety management system (SMS) framework provides a systematic approach to achieving acceptable levels of safety risk. The holistic ACS concept for the overall airman certification system is consistent with SMS, because it addresses each of the four SMS "pillars:"

- Safety Policy that demonstrates FAA senior management commitment to continually improve safety through enhancements to the airman certification testing and training system; specifically, better integration of the aeronautical knowledge, flight proficiency, and risk management components of the airman certification system;
- Safety Risk Management processes that create a structured means of safety risk management decision making to identify, assess, and determine acceptable level of risk associated with regulatory changes, safety recommendations, or other factors requiring modification of airman testing and training materials;
- Safety Assurance processes which allow increased confidence on the part of industry and FAA stakeholders in risk controls through a continual review of FAA products and the systematic, prompt and appropriate incorporation of changes arising from new regulations, data analysis, and safety recommendations; and
- Safety Promotion framework to support a positive safety culture in the form of training and ongoing engagement with both external stakeholders (e.g., the aviation training industry) and FAA policy divisions. [back]

#### How much will the ACS cost in terms of money and manpower?

Today's airman certification system is far more costly than it should be for both the FAA and stakeholders, because the absence of a knowledge standard and the lack of standardized and solid integration of standards, guidance, and testing leads to disconnects and errors that have to be corrected on a piecemeal basis. For the FAA, the shortcomings of the present system also make it difficult to coherently accommodate and integrate requests for new or enhanced material on so-called "special emphasis" topics.

For stakeholders, the current system is costly because it creates uncertainty and leads to expensive last-minute or off-cycle changes and corrections to training and test preparation materials. It is certainly costly for applicants, instructors, and evaluators, if only because of the time wasted in teaching or learning topics that have no value for safe operation in today's National Airspace System (NAS).

While there will be an initial investment needed to implement the ACS approach, the industry group's proposal for a phased transition – designed to match the existing schedule for updates – will minimize the cost. [back]

#### Doesn't this kind of change require a formal rulemaking process?

No. Like the PTS, the ACS simply defines the metrics – the standards -- for meeting the regulatory requirements that 14 CFR part 61 enumerates for aeronautical knowledge and flight proficiency. The ACS does not change any of the requirements in 14 CFR. [back]

#### When will the ACS be in effect?

We are targeting June 2016 for implementation of the Private Pilot Airplane (PAR) ACS and the Instrument Rating Airplane (IRA) ACSs. The FAA will implement the Commercial Pilot Airplane (CAX) ACS only when the ACS Exam View Board has completed the process of reviewing, revising, and assigning ACS codes to CAX questions.

Because AFS-630 may not have its new test management services contract in place by June, it may not be possible to report ACS codes (in lieu of LSC codes) for areas of missed knowledge on the Airman Knowledge Test Report (AKTR) right away. In consultation with the industry members of the ACS WG, however, the FAA has determined that the aviation community will benefit from the ability to use the PAR and IRA ACS. These ACS documents have been extensively reviewed and prototype-tested, In addition, the FAA has reviewed, revised, and coded all active PAR and IRA questions to the respective ACS. Anyone who uses the ACS as a guide to training and test preparation for the PAR or IRA knowledge tests will be well prepared. Even without the listing of ACS codes on the AKTR, the ACS presentation format will make it easier for applicants, instructors, and evaluators to do remedial training and testing of missed items.

The industry-led Airman Certification System Working Group continues to develop the Authorized Instructor ACS and the Airline Transport Pilot ACS documents. Because the scope of, and requirements for, these certificates are more complex, it will take longer to complete, prototype, and introduce these two ACS documents.

[back]

#### Will the ACS be electronically available?

Yes, the ACS documents for each certificate and rating will be electronically available, just as the PTS documents are today. Sample (draft) versions of the Private Pilot Airplane (PAR) and Instrument Rating Airplane ACS are already posted on the <u>AFS-630 web page</u>. [back]

#### How often will the ACS be updated?

The FAA intends to establish a regular, predictable schedule for updates to the ACS and all other components of the airman certification system. These include the ACS itself, the H-series handbooks, and knowledge test materials. The agency will establish this update schedule in consultation with industry members of the ARAC Airman Certification System Working Group. [back]

#### What did you do with the comments submitted to the docket on draft ACS documents?

The FAA established several public dockets on behalf of the various industry working groups. As planned, the industry groups used this feedback to refine the draft ACS documents. You will see that feedback reflected in the current draft ACS for the private pilot certificate and the instrument rating. Other comments and questions were very valuable in pointing out areas requiring clarification. The <u>ARAC ATST Working Group's report</u> includes a detailed summary of how it addressed each public comment. [back]

#### **Applicant-related Questions**

#### How will use of the ACS approach change airman training?

With clearly defined standards for knowledge, risk management, and skill, airman training can be conducted more effectively to ensure that applicants who complete flight and ground training are safe, competent aviators as well as successful in passing the FAA knowledge test. Training and testing will be aligned, which means that "test prep" will be a review of the ground school curriculum rather than a separate, unrelated step to learn questions for the sole purpose of passing a test. [back]

#### Won't the transition to the ACS make the knowledge test a lot harder?

No. In fact, applicants who have been training properly all along are likely to find the FAA knowledge test a lot easier, for several reasons. First, the knowledge test will be a reflection of the training applicants receive in ground school. Instead of having to "learn" or memorize information that isn't relevant to knowledge and skills actually needed for operation in today's National Airspace System (e.g., the now-deleted questions on ADF/NDB) the test will consist of questions coded via the appropriate ACS to specific Areas of Operation/Tasks. Second, ACS-coded questions will make it much easier for applicants, instructors, and evaluators to specifically identify and retrain on weak areas. Overall, the ACS-enabled correlation of training and testing will make the process easier because knowledge testing will be meaningful and relevant – not an exercise in memorizing information you will never need in real-world operations. [back]

## Won't the ACS approach dramatically increase the length (and expense) of the practical test?

No. In fact, a more integrated and efficient presentation of the material to be tested could even shorten the test, especially if the evaluator has more confidence in the quality and meaning of the applicant's knowledge test score. Once it is possible for the FAA to report ACS codes on the Airman Knowledge Test Report, evaluators will be able to effectively and efficiently re-test any deficient knowledge identified on the airman knowledge test report to ensure the applicant has trained to proficiency in all areas. [back]

#### Doesn't the ACS approach increase the cost of flight training?

No. In fact, a more integrated and efficient presentation of the material to be tested could make training far more effective and efficient for all stakeholders, and thus less costly. Instructors will be able to effectively and efficiently remediate any deficient knowledge identified on the Airman Knowledge Test Report in preparation for the practical test. [back]

#### Doesn't the ACS approach increase the standards?

No. The ACS approach does not increase the standards. Except for those areas where the ACS consolidates overlapping or redundant Areas of Operation/tasks in the existing PTS, none of the PTS material has changed. The knowledge and risk management sections simply define the standards for meeting the requirements in 14 CFR part 61. [back]

#### Why does the ACS mix the terms "learner" and "student pilot?"

The education and training industry has generally adopted the term "learner," because it conveys recognition and respect for adults' experience and motivation. We followed this convention in most instances. However, the ACS retains the term "student pilot" when it refers

to certification activities involving an individual who is a student pilot within the meaning of 14 CFR part 61. [back]

#### Why use the term "airman" instead of "pilot" or "aviator?"

The regulations use the term "airman" to encompass the full range of aviation functions that require an FAA certificate or rating. Not all airman certificates and ratings are for pilots or aviators; some apply to aircraft maintenance technicians, dispatchers, and other specialties. We continued to use this term because it includes all aviation functions that require an FAA certificate or rating, and because it is used in the regulations. That ACS WG did not recommend a change because changes that require rulemaking are beyond the scope of its charter. [back]

#### Will the FAA update its public sample knowledge tests to reflect the ACS?

Yes. The Private Pilot Airplane (PVT PAR) and the Instrument Rating Airplane sample tests on the <u>AFS-630 web page</u> include questions that have been reviewed and coded to the draft Private Pilot Airplane and Instrument Rating Airplane ACS documents that are now being prototypetested. [back]

## When will the FAA's sample knowledge exams be updated to reflect the ACS codes, so that we can see how the agency will apply the codes?

The Private Pilot Airplane (PAR) and Instrument Rating Airplane(IRA) sample tests on the <u>AFS-630 web page</u> already include questions that have been reviewed and coded to the draft Private Pilot Airplane ACS and Instrument Rating Airplane ACS documents that are now being prototype-tested in Orlando and Seattle. [back]

#### **Instructor-related Questions**

#### Why is the Authorized Instructor ACS different?

Because the ACS is intended to be a foundation for the entire airman certification testing and training system, the industry groups invested considerable effort developing an ACS framework that can be consistently applied to the majority of airman certificates and ratings.

The current industry group, the ARAC Airman Certification System Working Group, is still working to develop the Authorized Instructor ACS. As it currently stands, the draft AI ACS follows the overall conceptual framework developed for the private pilot ACS and the instrument rating ACS, but its construction reflects fundamental differences between the family of pilot certificates/ratings and the instructor certificate. The core of the AI ACS addresses practical application of the instructional concepts and techniques presented in the traditional Fundamentals of Instructing (FOI). The AI ACS uses appendices to define the acceptable standards for knowledge, risk management, and skill in the aeronautical proficiency tasks unique to a particular instructor certificate or rating.

The AI ACS also takes an enhanced approach to risk management, by covering not only requirements for teaching risk management, but also the need for an instructor to identify and mitigate the risk inherent in giving flight instruction.

The AI ACS is not intended to be a stand-alone document. Just as a flight instructor certificate must be accompanied by a commercial pilot certificate, the AI ACS is to be used in conjunction with the ACS for the pilot certificate or rating for which the instructor-applicant seeks to provide instruction. In addition to mastery of the knowledge and skills defined in the authorized instructor ACS, the instructor-applicant must demonstrate instructional competence for Tasks in the ACS for the appropriate certificate level or rating, to include analyzing and correcting common learner errors. [back]

#### How will the ACS change the way I teach ground school and conduct flight training?

In several ways, the ACS should help you teach more effectively, and more efficiently, in both ground and flight training activities:

The integrated ACS approach clearly shows how knowledge, skills, and risk management are connected for any given Area of Operation/Task.

- With clearly defined standards for knowledge, risk management, and skill, airman training can be conducted more effectively to ensure that applicants who complete flight and ground training are safe, competent aviators as well as successful in passing the FAA knowledge test.
- Training and testing will be aligned, which means that "test prep" will be a review of the ground school curriculum rather than a separate, unrelated step to learn questions for the sole purpose of passing a test.
- Defining the terms and concepts now presented in a list of "special emphasis" items in the PTS introduction, and placing them in the right context, will simplify teaching these topics. The presentation of risk management enhances safety, and it can also contribute to much greater standardization in teaching and testing these concepts. [back]

#### What's the difference between the ACS and a training syllabus?

The ACS defines what the applicant must know, consider, and do in order to earn an airman certificate or rating.

A training syllabus defines how (where, when and why) these standards are met.

Accepted industry practices for any certification process stipulate that it be based on a job/task analysis. The certification process must analyze, define, and publish the domains and tasks that are a part of the certification process. It must further identify the knowledge and skills associated with performance of those tasks. The required knowledge and skills become the basis for development of assessment activities.

The ACS documents function as the required job/task analysis, as they define the knowledge and skills needed to perform at the level of the target certificate or rating. In this way, the ACS approach better serves the applicant, the instructor, and the evaluator. Because the process of developing the ACS required a thorough review and update of knowledge and skills for airman certification, it also aligns with certification industry standards requiring periodic review and revision of the job/task analysis. [back]

## Will part 141 schools have a grace period to update and transition their TCOs and associated syllabi from PTS to ACS?

The FAA plans to implement the ACS for PAR and IRA on June 15, 2016 and cancel the PTS for PAR and IRA as of that date. We will publish the final version of the ACS for PAR and IRA 60 days before the June 15, 2016 effective date. This period will provide time for flight schools to update their Training Course Outline (TCO) documents, as well as allow time instructors and applicants to wrap up existing training and transition to the ACS. Because the FAA validation process (which is done before the agency releases an ACS) establishes that any given ACS includes all PTS material, and because the ACS does not change any of the performance metrics and parameters of the PTS, the change may be as simple as stating that "Our TCO will reference in the ACS in place of the PTS." [back]

## Should the FAASTeam become involved in ensuring the CFI community is trained and prepared?

Yes. We have already used the FAA Safety Briefing magazine and the biweekly FAAST Blast emails to report on the progress of the ACS development effort. We sent an ACS informational memo to all FAASTeam Program managers in June 2015, and we have made a standard ACS presentation and information brochure available for FAASTeam Program Managers to use in their briefings and presentations. We have also started the CFI orientation and education effort by encouraging FIRC providers to develop an elective module on the ACS in their course offerings.

During the most recent ACS WG's Face-to-Face meeting with the FAA team in January 2016, the group assigned the task of developing a detailed implementation plan to one of its existing subgroups. This plan will include extensive outreach, and will be coordinated with the FAA team's formal ACS change management plan. [back]

### How does an "average" CFI learn how to teach risk management? Has the FAA developed a source for this information?

Yes. In general, we seek to use the Pilot's Handbook of Aeronautical Knowledge to support ACS knowledge task elements, the Airplane Flying Handbook to support ACS skill task elements, and

the Risk Management Handbook to support risk management task elements. A planned revision to the Aviation Instructor's Handbook will specifically and explicitly address risk management, both in terms of teaching these concepts to applicants and in terms of managing the risks inherent in flight training.

In addition, both the FAA and the ACS WG have reviewed ACS task elements to ensure that we have guidance to support them, and the FAA's ACS Exam Review Board is careful to verify that we provide an appropriate reference for each knowledge test question that we review or develop. [back]

# Reading the descriptions of risk management, I believe that many CFIs and at least some DPEs will need some more specific technical guidance on how to integrate this in training and testing.

Risk management training and testing is already required, but the ACS improves the current structure by explicitly listing specific procedures and behaviors relevant to risk management for each task. It also improves the ACS by defining the items listed under "special emphasis" in the PTS and integrating them into the context of the appropriate task(s). Feedback from prototype participants suggests that this approach clarifies and simplifies risk management training and testing for all concerned. We also intend to address this point in developing ACS guidance for applicants, instructors, evaluators, and inspectors. [back]

# Is it assumed that correct answers/explanations of risk are found in handbooks such as the Pilot's Handbook of Aeronautical Knowledge? How does an experienced "average" CFI obtain this knowledge? CFIs will ask us those types of questions.

Both the FAA and the ACS WG have reviewed ACS task elements to ensure that we have guidance to support them, and the FAA's ACS Exam Review Board is careful to verify that we provide an appropriate reference for each knowledge test question that we review or develop. In general, we seek to use the Pilot's Handbook of Aeronautical Knowledge to support ACS knowledge task elements, the Airplane Flying Handbook to support ACS skill task elements, and the Risk Management Handbook to support risk management task elements. A planned revision to the Aviation Instructor's Handbook will specifically and explicitly address risk management, both in terms of teaching these concepts to applicants and in terms of managing the risks inherent in flight training. [back]

# I could not find "scenario based training or testing" mentioned in the ACS but it is referenced in FAQ. Some evaluators will use that to drop SBT. Is that what was intended? Are we assuming that CFIs will use SBT in their training?

There is no intent to drop the use of scenario-based activities in either training or testing. On the contrary, the Introduction (Airman Certification Standards Concept) clearly states that for appropriate items, "the evaluator will assess the applicant's understanding by providing a scenario that requires the applicant to appropriately apply and/or correlate knowledge, experience, and information to the circumstances of the given scenario." Both the FAA and the ACS WG also believe that the ACS structure itself supports scenario-based testing and training, because it presents specific elements of knowledge and risk management in the context of each skill task.

In addition, members of the ACS project team are drafting guidance for both FAA inspectors and external evaluators to provide clarity on the 'plan of action'. The draft guidance explains that the use of SBT is expected during a practical test. [back]

#### **Evaluator (DPE)-related Questions**

#### How will the ACS affect the way I conduct a practical test?

The ACS does not change the practical test, and it does not make the practical any longer than it takes to conduct a PTS checkride today. In fact, the ACS could expedite the practical test because it streamlines and combines overlapping and redundant tasks in today's PTS, and because it gives the evaluator more focused information on knowledge and risk management elements associated with each skill task. In addition, the ACS codes (which will appear on the Airman Knowledge Test Report in lieu of LSC codes once the FAA's new test management services contract is in place) give the evaluator much more specific information on items the applicant missed on the knowledge test.

The FAA does NOT expect the evaluator to cover every single knowledge and risk management element for each task. Just as in today's PTS-guided practical test, the evaluator must cover required task elements and include areas the applicant missed on the knowledge test in the oral assessment portion of the practical test. As is the case now, the evaluator will also have discretion to test additional knowledge and risk management elements if the Airman Knowledge Test Report and/or the applicant's response to questions suggests the need for more thorough coverage.

To further assist evaluators, the members of the ACS WG who are DPEs are developing ACS-based sample Plans of Action for the PAR and IRA practical tests. [back]

#### Did I hear that I can already use the ACS to conduct practical tests in lieu of the PTS?

In order to support the industry group's ACS prototyping efforts, in June 2014, the FAA's General Aviation and Commercial Division (AFS-800) issued a memo to all FAA headquarters and regional division managers to explain the ACS and authorize use of the appropriate ACS (in lieu of the PTS) to conduct both oral and flight portions of the practical test for the private pilot certificate and/or the instrument rating. It notes that

There is no requirement for an evaluator to carry the PTS in the aircraft when conducting a flight check. Rather, the requirements center on conducting the practical test in accordance with the Examiner Test Guide (Figure 7-8A to 7-8G) in FAA Order 8900.2 and in accordance with the metrics set forth in the appropriate PTS. Use of the ACS will meet these requirements.

#### The memo further states that

The use of the ACS by individuals, entities, and facilities involved in airman certification training programs to prepare applicants for the private pilot and/or instrument rating practical tests should not be discouraged. Any reference(s) to the use of the PTS standards in the training course outline should be considered synonymous with the ACS. In addition, use of the ACS by individuals, entities, and facilities selected by the ACS WG to participate in ACS prototype efforts during a practical test should not be discouraged.

The FAA is revising its guidance to inspectors and evaluators to reflect this information and support the planned June 2016 implementation of the ACS for PAR and IRA. [back]

### Won't the ACS approach dramatically increase the length (and expense) of the practical test?

No. In fact, a more integrated and efficient presentation of the material to be tested could even shorten the test, especially if the evaluator has more confidence in the quality and meaning of the applicant's knowledge test score. And, thanks to the ACS codes, evaluators will eventually be able to effectively and efficiently re-test any deficient knowledge identified on the airman knowledge test report to ensure the applicant has trained to proficiency in all areas.

The FAA does **not** expect the evaluator to cover every single knowledge and risk management element for each task. Just as in today's PTS-guided practical test, the evaluator must cover required task elements and include areas the applicant missed on the knowledge test in the oral assessment portion of the practical test.. As is the case now, the evaluator will also have discretion to test additional knowledge and risk management elements if the Airman Knowledge Test Report and/or the applicant's response to questions suggests the need for more thorough coverage.

To further assist evaluators, the members of the ACS WG who are DPEs are developing ACS-based sample Plans of Action for the PAR and IRA practical tests. [back]

# Since the Airman Knowledge Test Report (AKT) is valid for 24 months, how does a DPE (evaluator) handle a valid AKT issued under the LSC code system once the ACS is in place?

The FAA plans to publish the final versions of the Private Pilot Airplane (PAR) ACS and Instrument Rating Airplane (IRA) ACS in April 2016, with an effective date of 15 June 2016. Because it is likely that the system allowing us to list ACS codes on the Airman Knowledge Test Report will not in place by that time, stakeholders will continue to see LSC codes. Even without the ability to see the ACS codes, the fact that the FAA has coded all active PAR and IRA test questions to the respective ACS should make training and testing far more focused than they are today. [back]

#### Will the FAA update its public sample knowledge tests to reflect the ACS?

Yes. The Private Pilot Airplane (PAR) and the Instrument Rating Airplane (IRA) sample tests on the <u>AFS-630 web page</u> include questions that have been reviewed and coded to the draft Private Pilot Airplane and Instrument Rating Airplane ACS documents that are now being prototypetested in Orlando and Seattle. [back]

# When will the FAA's sample knowledge exams be updated to reflect the ACS codes, so that we can see how the agency will apply the codes?

The Private Pilot Airplane (PAR) and Instrument Rating Airplane (IRA) sample tests on the <u>AFS-630 web page</u> already include questions that have been reviewed and coded to the draft Private Pilot Airplane and Instrument Rating Airplane ACS documents that are now being prototypetested in Orlando and Seattle. [back]

## What document should we use to retrain and evaluate an applicant's areas of deficient or weak knowledge?

One of the strongest tools that the industry team developed for the ACS framework is a new coding system. When the ACS approach is fully implemented, ACS codes will replace the Learning Statement Codes (LSCs) that are used right now. The ACS codes have several very strong advantages over the Learning Statement Codes. The ACS codes are anchored in the

standard – not in handbooks and other reference documents, like today's Learning Statement Codes. ACS codes will guide training and testing from the beginning and, once they can be printed on the Airman Knowledge Test Report, they will provide sharper, more focused feedback to applicants, instructors, and evaluators on areas of missed knowledge. [back]

#### Will the ACS codes point me to the exact text in the handbooks and other references?

No. The ACS codes will point you to the specific area of missed knowledge in the standard, rather than to a handbook chapter or section. Because they are anchored in the standard – not in handbooks and other reference documents, like today's Learning Statement Codes – ACS codes will guide training and testing from the beginning and, once they can be printed on the Airman Knowledge Test Report, they will provide sharper, more focused feedback to applicants, instructors, and evaluators on areas of missed knowledge.

For example, when an applicant finishes the knowledge test today, he or she gets a computer test report that shows Learning Statement Codes are on the bottom of the form. The LSCs are intended to show the areas of knowledge the applicant missed on the test. To decipher the codes, the applicant, the instructor, and eventually the evaluator have to go to a separate publication and look up the codes. The codes are numerous, and some of them are overlapping. They are assigned somewhat subjectively, and they point to a broad area in one or more FAA reference documents. That makes it harder to ensure effective remedial training.

In the ACS world, though, the computer test report will list very specific ACS codes. For example, PA.III.B.K4 tells the applicant, the instructor, and the evaluator that there is a need to focus more on right of way rules. [back]

## It sounds like I might need a suitcase to carry all the paper needed to conduct an initial CFI practical test. How big a document is the Authorized Instructor ACS going to be?

The Authorized Instructor ACS is still in development, but the industry working group is mindful of the need to structure it in a way that is effective, user-friendly, and practical.

Overall, another benefit of the ACS approach is that it simplifies the kind of paper management that applicants, instructors, and evaluators must perform today. The ACS consolidates and integrates several existing knowledge exam guidance documents into the ACS for each certificate and rating. These include:

- The Private Pilot Test Guide (FAA-G-8082-17), which is 127 pages long and is updated approximately three times a year.
- The Learning Statement Reference Guide is 24 pages long and is updated approximately two times a year. Though it is the master legend for all LSCs that could appear on an airman test report, test guides also contain LSCs specific to each certificate and rating. The ACS and its coding system will eliminate the need for the Learning Statement Reference Guide, and also eliminate any possibility of inconsistencies among these documents.
- The Knowledge Testing Authorization Requirements Matrix is 24 pages long and is updated about three times a year. It includes details on each test issued, including number of questions and time allowed, applicant age requirements, endorsements or test authorizations required to qualify for the test, etc. [back]

#### How can risk management be tested on a knowledge test?

Risk management can be effectively tested on a knowledge test through the use of scenarios, common student errors, misconceptions, or frequent accident causes. Risk management questions will remain objective because they will be specific to an area of operation/task. [back]

#### How do you expect to evaluate soft skills?

So called "soft skills" are already evaluated through the use of scenarios and circumstances that require decision-making and judgment. By providing more specific guidance on the knowledge and risk management abilities and specific behaviors needed to support a particular skill, the ACS will give applicants, instructors, and evaluators much better guidance than they have in today's system. [back]

#### What's the point of changing terms to words like "evaluator" or "plan of action?"

One of the goals of this project is greater consistency. Instead of trying to list every category of person authorized to conduct a practical test (e.g., examiner, designee, designated pilot examiner, aviation safety inspector), the ACS uses the term "evaluator" to cover the entire range. The term "plan of action" is used in the current draft of the Authorized Instructor ACS because a plan of action for instruction better conveys the intended concept, and also because it corresponds with the requirement for an evaluator to have a plan of action for conducting the test. [back]

## Are there formal plans to train or familiarize DPEs with the ACS? Issues such as plans of action and how to train/evaluate risk management will need attention.

Absolutely. We started the familiarization process earlier this year, when AFS-640 sent a memo on the ACS to all DPEs. The memo included links to ACS material on the AFS-630 web page, as well as a copy of the AFS-800 memo authorizing use of the ACS in lieu of the PTS for the ongoing prototype testing work. The ACS project team will work with AFS-640 to develop appropriate online and classroom ACS training as the target implementation date approaches.

In addition, we have worked with AFS-650 to incorporate ACS references in new guidance for DPEs (8900.2), and AFS-800 has launched the process of adding ACS references and information to the FAA's 8900 Order. [back]