

May 21, 2019

REQUEST FOR INFORMATION (RFI) –ADMINISTRATION OF FAA KNOWLEDGE TEST FOR RECREATIONAL FLYERS

1. Background

On October 5, 2018, the President signed the FAA Reauthorization Act of 2018 (Pub. L. 115-254). Section 349 of that Act immediately repeals the Special Rule for Model Aircraft (Section 336 of Pub. L. 112-95; Feb. 14, 2012) and replaces it with new conditions to operate recreational small unmanned aircraft without requirements for FAA certification or operating authority. The Exception for Limited Recreational Operations of Unmanned Aircraft established by Section 349 is codified at 49 U.S.C. 44809.

Section 44089 (a)(7) requires recreational flyers to pass an aeronautical knowledge and safety test and make proof of test passage available to the FAA or law enforcement upon request. Section 44809(g) requires the FAA to develop, in consultation with stakeholders, an aeronautical knowledge and safety test that can be administered electronically by the FAA, community based organizations, or other persons designated by the FAA. This test is intended to demonstrate a recreational flyer's understanding of aeronautical safety knowledge and rules for operating unmanned aircraft.

Because many UAS are marketed as consumer goods, are available for purchase at general retailers, and can be flown straight out of the box without any training, it's currently easy for someone to take flight with little or no knowledge of aviation rules or safety practices. The FAA sees the knowledge test requirement described in the statute as an opportunity to educate recreational flyers on UAS safety and as a means to bring new flyers into the existing aviation safety culture.

In order to achieve those goals, the FAA realizes that the test must be easily accessible and not overly burdensome to complete. In an effort to meet the objectives of widespread safety education and high completion rates, the FAA intends to develop basic training content that will help test takers learn pertinent information and complete the required test quickly and successfully.

The FAA is developing the training and testing content in consultation with industry. However, the FAA recognizes that manufacturers, community based organizations, academic institutions, retailers, and others may be best suited to administer the test so as to reach the largest audience and generate the highest completion rate. The FAA recognizes that this knowledge test and training content is just one element in establishing a safety mentality for recreational flyers. The FAA anticipates that the test administration designees will establish relationships with test takers and will offer additional resources that aid and encourage safe flight and community building.

The FAA has a long history of developing knowledge tests that are administered by third parties, also referred to as designees. Because these tests are required for airman certification, they are typically administered at a physical testing location so that test takers can be verified and supervised by a trained test proctor. However, this means of delivering a knowledge test may exceed the intent of congress and may not meet the intent of the requirement, or the needs of the recreational flyer community.

To best address the requirement for the test to be delivered electronically, third party entities (hereafter referred to as designees) should be afforded the opportunity to host the FAA training and test content on platforms that make the test easy to access, and effective at delivering basic safety information.

The FAA will provide the testing and training content to the testing designees. There will be no fee, payment or other funding from the FAA to designees, but designees may incur cost to effectively administer the content and track the results of those who complete the test. This will help standardize the test and protect the integrity of the testing and training content and will enable the FAA to update material when necessary.

The designees would administer the training and testing content and may retain testing data for a to-be-determined period of time. The FAA expects that a variety of entities and service providers will be interested in administering the knowledge test. The FAA is agnostic as to the business model of the testing designees, and expects that knowledge testing services will be provided at no cost to the FAA. The FAA anticipates that many designees will be able to administer the test, however as long as a single designee is available, the testing designee model is viable. The FAA does not intend to administer the test or store any data. However, the FAA and other government entities may need to be able to have access to the testing data in order to audit the data, conduct investigations, and perform oversight duties as required. Under this proposal, the FAA would establish the operational framework (requirements and criteria) for a testing designee. To the extent that the designee will be maintaining records on behalf of the FAA, it may need to comply with one or more of the following statutes with respect to records it maintains for the FAA: the Federal Records Act; the Privacy Act of 1972; and the E-Government Act, including, but not limited to, maintaining records in accordance with approved record schedules and providing privacy notifications to testers.

Testing designees would be allowed to administer the test if they enter into an

agreement with the FAA to provide specific services and demonstrate they can meet a set of required operating rules. The relationship between the testing designee and the FAA would be governed by a legal framework signed by both parties called a memorandum of agreement (MOA), which will be generated in parallel with the operational framework. This MOA is not intended to be, nor shall it be construed to be, a formal legal partnership, corporation, or other business organization.

2. Objectives for this RFI

The primary objective of this RFI is to develop a relationship between the FAA and third party entities (commercial, non-profit, academic, or other) that will allow the entities to be able to administer the knowledge training and test content on various platforms that are positioned to maximize access to the recreational flyer community.

The FAA is considering providing the training and testing content as web based training that is SCORM 1.2 compliant intended for learning management systems (LMS), but the content should run on any HTML enabled device and other interfaces may be considered. The FAA may require designees to track results from the testing to include number of completions and information of any persons provided proof of passage, so applicants with LMS would be preferred. Additionally, any designee would be required to provide test takers with a proof of passage documents (physical or electronic) that contains standardized data elements. The FAA recognizes that there is a range of testing user interface and administration models that could be adopted and is soliciting information on options and recommendations from entities who may be interested in working with the FAA on this opportunity. We are seeking to develop arrangements that would allow the FAA to leverage non-government innovation and allow entities to provide subject matter expertise and appropriate data collection mechanisms.

The FAA recognizes that many entities have developed strong relationships with the UAS operating community, often through the implementation of technology services that UAS operators utilize to plan UAS operations. The FAA would like to utilize the knowledge gained from these relationships to deliver the knowledge test to recreational flyers in known and trusted environments.

The purpose for this RFI is to:

1. Engage with entities that are interested in becoming testing designees with the intent of pursuing the establishment of a practical approach to test administration and data sharing, if needed.
2. Develop relationships with entities to administer the training and testing to the widest audience possible.
3. Develop a standard electronic record that will be issued to the test taker upon completion and will serve as proof of passage for the purposes of FAA and local law enforcement oversight.

The many existing and potential combinations of testing options and designees

requires a flexible and dynamic approach to test administration and information exchange that will fulfill immediate needs for enabling testing as well as anticipate future needs for continuing education.

This program offers private entities the unique opportunity to provide testing services with the full authority and expertise of the FAA backing the service. The FAA envisions that testing designees will incorporate this service into their existing platforms, mobile applications, curriculums, and/or membership benefits.

The FAA understands that third-party entities may have the capability to develop and deploy applications and enhancements to existing applications at a speed that the government cannot duplicate. The FAA would benefit from an arrangement with such an entity through reduced overall cost, fresh viewpoint on application features and functionality, and significant improvement in time-to-market.

3. General Instructions

- 3.1. The FAA is soliciting broad feedback in response to this RFI. Responses could include: (i) a business model and answers to the topics and questions in section 5, and/or (ii) any additional comments and recommendations for the FAA to consider.
- 3.2. Narrative responses to the RFI should not exceed 5 single-sided pages in length, and must be emailed in .pdf or .doc(x) file format to the Contracting Officer at Curtis.Fields@faa.gov by 11:59pm eastern time on Thursday, September 12, 2019. Responses received after this time and date will not be reviewed.
- 3.3. Responses to this RFI must not be construed as a commitment or a promise to contract by the Government.
- 3.4. Responses to the RFI should be complete and demonstrate capability, not merely affirm the respondent's capability (e.g.: The response must go beyond the statement that, "XYZ company can provide O&M support.").
- 3.5. Responses should address each of the questions in section 5, Topics and Questions, and may also include areas of interest to the responder either covered by areas of scope in section 4, or other topics, as determined by the responder.
- 3.6. The FAA intends to review the responses received in response to this RFI to determine which respondents may be invited to participate in further discussions with the FAA and the potential cohort. These discussions may ultimately lead to the execution of a Memorandum of Agreement (MOA) in accordance with the FAA's Other Transaction (OT) authority set forth in 49 U.S. Code § 106. The FAA does not intend to provide funding on any agreement(s) that results from this RFI.
- 3.7. The selection of respondents to be invited to participate in further discussions will be at the sole discretion of the FAA, and will be based on a combination of factors including, but not limited to the following:

- 3.7.1. The number and nature of responses received
- 3.7.2. The proposed business model and how effective it will be at meeting the FAA's purpose and objectives set forth in section 2
- 3.7.3. The response to topics and questions in section 5
- 3.8. All questions regarding this RFI must be sent to the Contracting Officer at Curtis.Fields@faa.gov by 11:59pm Eastern Time on August 27, 2019. Questions and answers will be posted publicly for the benefit of all potential respondents.

4. Scope

Following is an enumeration of the activities, capabilities, processes, techniques, and capabilities that may result from this RFI. This list is illustrative and not exhaustive.

- 4.1. Research, development, prototyping, experimenting, testing, etc., technology solutions to enable widespread administration of a standardized web-based training and testing
- 4.2. Security, privacy, performance, and quality strategies associated with critical information storage and possibly sharing
- 4.3. Examples of capabilities to effectively design, host, and administer all aspects of the training and testing and issue qualifications to those passing it, and store data securely for FAA purposes.
 - 4.3.1. Other capabilities as required
- 4.4. Examples of platforms and technologies that may be applicable
 - 4.4.1. SCORM 1.2 compliant learning management systems (LMS)
- 4.5. Examples of governance frameworks
 - 4.5.1. FAA External Data Access Initiative (EDAi)
 - 4.5.2. National Information Exchange Model (NIEM)
 - 4.5.3. Health Information Exchange Governance
- 4.6. Examples of security, privacy, performance, and data quality considerations

5. Topics and Questions

Respondents to this RFI are invited to provide responses to the topics and questions enumerated in this section. Respondents are also invited to elaborate on the general objectives and scope of the RFI as enumerated in previous sections. Responses received will be reviewed by FAA to determine which respondents, if any, warrant follow-up discussions in accordance with Section 3.7 above. Respondents are free to organize their responses as they see fit.

- 5.1. Describe your organization and explain why you believe you are qualified to

participate in this opportunity.

- 5.2. What do you consider would be the most effective model for administering the training and testing content, and how would it benefit both the designee and the FAA?
- 5.3. How should the training and testing content be delivered by the FAA to designee(s) administering the test?
- 5.4. How would you divide roles and responsibilities between the designee(s) and the FAA?
- 5.5. What recommendations would you make concerning governance and collaboration?
- 5.6. What are the basic criteria for a designee applicant?
- 5.7. What, if any, testing data should be stored, how long should it be stored, and how should it be made available to the FAA and law enforcement?
- 5.8. Demonstrate that you be able to maintain FAA records in accordance with the Federal Records Act, the Privacy Act, and the E-Government Act if determined applicable, and provide the required notifications in connection to these laws, as appropriate. How can you ensure the integrity of the data and address privacy concerns?
- 5.9. How would you handle test takers that are minor children under the age of 13?
- 5.10. What data should the test taker be required to submit to the test administrator in order to take the test?
- 5.11. Describe how you would verify the identity of the test taker.
- 5.12. How would you recommend issuing proof of test passage to the test taker? What information would be included on the record? Who should set the standard?
- 5.13. How can FAA or a law enforcement entity (LE) verify the proof of passage record? Should the FAA and LE request data from the designee?
- 5.14. Demonstrate your experience developing interactive user interfaces and capabilities, including experience with developing mobile applications and/or standardized tests. Include a discussion of platforms, tools, methodologies.
- 5.15. Identify other potential collaborators, such as other government agencies and support contractors, who the respondent believes should be part of the collaboration phase.
- 5.16. Describe the spectrum of potential approaches to administering the knowledge test and training. How long would your recommended approach take to implement?
- 5.17. Describe your experience with SCORM compliant Learning Management Systems (LMS). Include discussion on your ability to host a SCORM compliant LMS.

5.18. What additional technical standards, conventions, or other capabilities are needed to facilitate the design and administration of the training and testing content by designees?