



FAA CHALLENGE: SMART AIRPORT STUDENT COMPETITION

Q&A SESSION

OCTOBER 24, 2019

Q&A SESSION AGENDA

2:00PM THURSDAY, OCTOBER 24, 2019

- I. Welcome & Introductions
- II. Brief Overview of the Challenge and why it is important to the FAA
- III. Technical Questions Received in Advance
- IV. Programmatic Questions Received in Advance
- V. Additional Questions?
- VI. Wrap Up

WELCOME AND INTRODUCTIONS

Thank you all for submitting Expressions of Interest to participate in this year's FAA Challenge: Smart Airport Student Competition!

FAA Challenge Steering Committee:

Kenneth Allendoerfer

Carla Hill

Armando Gaetano

Ed Marciano

Joe Galushka

Chris Smith

NIA Challenge Program Staff:

Stacy Dees

Shelley Spears

Victoria O'Leary

Shannon Verstynen

OVERVIEW OF THE FAA CHALLENGE: SMART AIRPORT STUDENT COMPETITION

The Federal Aviation Administration is sponsoring the FAA Challenge: Smart Airport Student Competition (“Smart Airport Challenge”) to recognize students with the ability to demonstrate innovative thinking focused on improving the efficiency and effectiveness of smart technology in and around the airport environment while enhancing the overall traveling experience. The FAA is using this competition to stimulate and advance innovation in aviation research; promote the development of a robust aviation workforce to support a growing and evolving aerospace system; develop a pipeline to fill current and projected shortages via partnerships with academia and industry; and drive a passion for aviation in today’s youth of all ages and backgrounds. The FAA intends to incentivize university-level students at accredited United States-based colleges and universities to think creatively in developing solutions to transportation technology challenges while addressing the human factors aspects of the traveler’s experience, and to share those innovations with the broader community.

TECHNICAL QUESTIONS

1. What is the biggest challenge that the FAA is facing today?

Keeping up with the pace of technological change and leveraging commercially available solutions to solve complex problems.

Many. One of them is maintaining the safest Air Traffic Control (ATC) system in the world while building the workforce of the future. Refer to the [FAA Strategic Plan FY2019-2022](#).

2. How are the airlines involved in the smart airport project?

They are not directly involved with this effort, but several airlines have ongoing efforts to improve passenger experience, reduce boarding times, and identify new revenue streams.

Airlines are potential sponsors. They are currently not working with the FAA on a SMART Airport project. The FAA Acquisition Management System (AMS) does not have a SMART Airport Program that has entered the Service Analysis and Strategic Planning Phase. This FAA Challenge is essentially the first step in the pre-AMS phase, Research and Service Analysis.

TECHNICAL QUESTIONS

3. Is having a prototype of the product necessary for this competition? If we are suggesting the making of an application, prototype, etc., do we have to build it? If so, do we have to submit it with the project proposal before January 13?

A prototype of the product is not a requirement but may be beneficial. Submissions will be judged on technical merit, therefore submissions that have a prototype, functional examples, or demonstrable concepts would be scored accordingly throughout the selection process. Other methods to demonstrate your solution may be simulations (computer or video) or graphics.

TECHNICAL QUESTIONS

4. What are the most important factors that need to be considered to stand out in the competition?

The most important factors would be demonstration of problem understanding, a solution that is practical and reaches an important population, and your team's ability to communicate its solution.

DIRECTION: Canvas of SMART Airport concept is wide open. Refer to Challenge website information. Refer to [FAA Reauthorization ACT 2018 Section 145](#):

SEC. 145. SENSE OF CONGRESS ON SMART AIRPORTS.

It is the sense of Congress that the Administrator of the Federal Aviation Administration and the Secretary of Transportation should produce a smart airports initiative plan that focuses on creating a more consumer-friendly and digitally connected airport experience. The plan should include recommendations on modernizing technologies to provide more efficient check-ins, shortened security lines, Wi-Fi and GPS upgrades, as well as improvements of aircraft turnaround for on-time boarding and flights. The purpose of the initiative is to invest in technologies and infrastructure toward better-connected airports while providing appropriate national security and cybersecurity for travelers.

TECHNICAL QUESTIONS

5. For the most part, airlines keep their data proprietary. What is their point of view on this project?

The FAA and the airline industry are not currently collaborating on this effort, but several airlines have ongoing efforts to improve passenger experience, reduce boarding times, and identify new revenue streams.

6. Is there anything specific here that needs to be addressed in our project?

Canvas of SMART Airport concept is wide open. Refer to the Challenge website.

7. What are the most critical changes that we must address to improve efficiency?

The challenge is to improve the traveler's transportation experience, not necessarily to improve efficiency.

8. Are airports going to adapt to Artificial Intelligence (AI) technologies? Are there any foreseeable limitations with AI integration?

Yes, there are a number of international airports currently exploring AI to improve efficiency, reduce costs, and predict operations.

TECHNICAL QUESTIONS

9. Are there any areas you do not want us to attempt to address?

Canvas of SMART Airport concept is wide open. Refer to the [FAA Reauthorization ACT 2018 Section 145](#).

10. What is a smart airport?

Canvas of SMART Airport concept is wide open. In that, the [FAA Authorization ACT 2018 Section 145](#) has only recently conceptualized this initiative. *We are looking for that definition to be created by the participants of this Challenge.*

11. What is the level of technicality necessary in the "Project Plans" portion of the submission? How detailed does the project have to be?

No specific technical capability level is required. However, evaluations of Project Plans would score more detailed, complete, and mature levels accordingly.

12. Should our solution be aimed at large hub airports, or for all airports? Should we only concentrate on the airport we are using as a model?

That is entirely up to the project team. If you focus on a smaller airport you should attempt to show how the solution can scale to address larger hub airports.

Teams should scope the applicability of the concept they develop based on meeting the evaluation and selection criteria. Determine the resources and time frame available in meeting the Challenge timeline and, if selected, as a finalist presenting a robust as capable version of the concept.

TECHNICAL QUESTIONS

13. Is it acceptable to "rethink" a current technology and its implementation?

Absolutely, just be sure that you are not violating intellectual property rights of the Original Equipment Manufacturer (OEM). Also, keep in mind that there is a selection criteria of Originality.

14. What kind of passengers are we aiming for?

Commercial aviation passengers. The challenge states “submissions must incorporate solutions that ensure that diverse passenger populations are able to successfully navigate and use our airports and transportation systems to get them where they plan to go.” You can focus on passengers with special needs, elderly, young children etc., but anything that improves a passenger’s experience is fair game.

15. Can we use only our territory's international airport as reference for the project? (Specifically, Puerto Rico?)

Absolutely, just be sure to show how your project generalizes/scales to other airports.

TECHNICAL QUESTIONS

16. Should our project address all of the topics listed, or can we pick a subset of issues to address?

17. For this project do we need to follow a budget that you guys will determine?

Your solution need not address all the topics, but clearly address all the issues you present in your problem statement.

The FAA is not providing any funding to support this Challenge other than the Prize to the winner and limited travel funding to the three finalists. It is your challenge to obtain required funding to develop your concept if it is required.

PROGRAMMATIC QUESTIONS

1. What does "selection status" mean? On the calendar, it states: March 1, 2020 teams notified of selection status.

2. What is the standard format for the project and is there a page limit?

"Selection status" refers to whether or not a team's Project Plan Proposal was selected as a finalist for the FAA Challenge. Teams will be either "selected" or "non-selected." We receive many excellent ideas, but we can only select three finalist teams for this competition.

Specific Project Plan Proposal formatting instructions can be found on the Submissions page of the FAA Challenge website. Papers are limited to a maximum of 100MB and must be in PDF format. Some subsections have page limitations. Your proposal should include:

1. Cover page
 2. Table of contents
 3. Summary statement
 4. Problem statement & background
 5. Project description (2 sections with several subsections)
 6. Letters of support
 7. Any additional materials
-

PROGRAMMATIC QUESTIONS

3. We would like to make an explanation video. Do we need to do one? Is it recommended?

Proposal videos are not required for the FAA Challenge: Smart Airport Student Competition. Videos may be included in the Project Description, Section 2.3 Optional subsection, with a reference to it in the main Plan where appropriate.

4. Can Green Card holders participate?

Yes. Team members, including all faculty advisors and students, must be citizens or permanent residents of the United States.

5. In what point of view should we write the document (1st, 2nd, or 3rd person point of view)?

Third person is standard for technical papers. Please use third person.

6. Is it required for the document to be in the APA format?

You can use any format you like, but please remain consistent throughout your paper.

PROGRAMMATIC QUESTIONS

7. If we want to change something in the synopsis or if we can't develop one of the proposals, do we have to notify you guys of the change?

8. What criteria do you guys use to determine the project as a success for this challenge?

9. For our proposal, are we limited to what we submitted in our EOI?

You do not need to alert us of any changes that occur prior to the Project Plan Proposal submission stage. If you are selected as a finalist and must make significant changes to your plan, please reach out to us and let us know as soon as possible.

The evaluation criteria can be found on the FAA Challenge Guidelines page. The percentage for each section is broken down as follows:

- Technical Merit (Max 40%)
 - Practicality (Max 30%)
 - Impact (Max 20%)
 - Originality (Max 10%)
-

No. We understand that your ideas and concepts will evolve throughout the semester as you do research and testing, and we encourage you to submit the best version of your ideas with the Project Plan Proposal.

PROGRAMMATIC QUESTIONS

10. If we enter the finals are all expenses paid for the trip (meaning transportation and hotel)?

Finalist teams will be reimbursed up to \$6,000 for travel costs associated with attending the Challenge Forum, including transportation and lodging.

11. Could you please explain more detail about the University nomination letters and supporting letters?

The University Nomination Letter will describe the university's:

- support to the project team and plan;
- commitment to provide access to proper university resources, facilities, and equipment to the team to enable completion of the project as proposed; and
- commitment to make accommodations for team members to attend the Challenge Forum if selected as a Finalist.

A template University Nomination Letter will be made available for teams to use on the Challenge website, on the Project Plan Proposal details page, next Monday. The letter must be signed by a Dean or Department Head (or appropriate alternative authority) from the university.

Optional additional Supporting Letters may be provided by any industry, government, or academic collaborators that your team is receiving support from. They should include a brief description of the type of support being provided to the team and a statement championing the plan's benefit(s).

MISCELLANEOUS QUESTIONS

1. Are industry partnerships valuable in the selection process?

There is no specific requirement to be partnered with any one specific industry partner or type of industry. The Challenge does encourage building academic and industry partnerships to develop concepts.

2. Who retains ownership of the Challenge solutions?

All submissions remain the property of the team.

3. My team intends to commercialize our idea. Can we still submit it to the Challenge? Will there be any issues with commercialization or ownership of our idea?

Yes, you can still submit it to the Challenge. However, your ideas will be presented in summary at a public conference during the FAA Challenge Forum. Teams will retain full ownership of their ideas.

4. Is an implementation/roll-out concept necessary?

A roll-out concept is not required but may be helpful to demonstrate solution practicality.

MISCELLANEOUS QUESTIONS

5. If we are suggesting an app, are we supposed to create the actual app?

A working app is not required; however, some method of solution description is. This may take the form of simulation (computer or video) or graphics.

6. How are we supposed to get the funds for the research and create what we are suggesting in our EOI?

University and industry partners are to provide all concept development funding.

7. How many teams submitted an EOI?

We do not make this information publicly available. However, we received strong interest in this Challenge.

MISCELLANEOUS QUESTIONS

8. How can we contact you in case of doubts during the development of the project plan proposal?

The judges cannot offer advice to any individual team. Questions may be sent to faachallenge@nianet.org and the program team will coordinate with the steering committee to provide a response. All questions and answers will be posted to the FAQ page on the Challenge website so that all teams have access to the same information.

9. Are there any examples of good projects, such as previous winners, somewhere? Are there any “best practices” you would like us to follow?

This is the first year that the FAA has sponsored this Challenge, therefore there are no previous projects to share as examples.

ADDITIONAL QUESTIONS?

Please send any questions to faachallenge@nianet.org.

CHALLENGE TIMELINE AND MILESTONES

Date	Description
September 16, 2019	Official launch of Challenge
October 16, 2019	Expression of Interest (EOI) deadline
October 24, 2019	Q&A webinar for teams who submitted an EOI
January 13, 2020	Project Plan Proposal deadline
By March 1, 2020	Teams notified of selection status
May 4, 2020	Technical Paper deadline
May 12-14, 2020	Technical Demonstrations and Awards Ceremony