FAA Challenge - Smart Airport Student Competition

The FAA challenges undergraduate and graduate students to develop innovative ways to use smart technology in and around airports to enhance the overall travel experience.

Department of Transportation - Federal Aviation Administration

CHALLENGE DETAILS

- TOTAL CASH PRIZES OFFERED: $25,000
- TYPE OF CHALLENGE: Ideas; Software and apps
- SUBMISSION START: 09/16/2019 12:00 AM ET
- SUBMISSION END: 01/13/2020 11:59 PM ET

Description

Background

The FAA is sponsoring the FAA Challenge - Smart Airport Student Competition 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.

The FAA is sponsoring the competition under authority of the FAA Acquisition Management System (AMS), 49 U.S.C. 106(l) and (m).

Timeline

Submissions: The FAA Challenge competition will begin and submissions will be accepted between September 16, 2019 and 11:59 PM ET January 13, 2020.

*Expression of Interest:*Teams are encouraged to submit an Expression of Interest to compete in this FAA Challenge by 11:59 PM ET October 16, 2019.

Finalist Announcement: A panel of FAA judges will conduct an evaluation and select three finalist teams, which will be announced by March 2020.

Demonstration and Awards: Finalist teams will be invited to New Jersey to demonstrate their concepts in May of 2020. A $25,000 award will be given to the lead university of the winning team.

Challenge Goals

Using smart technology to improve the traveler's transportation experience from home, in the airport environment, and to his/her final destination, the concept strives to address the following goals:

- **Efficiency** - Identify more resourceful options for getting the traveler and his/her belongings from home to the final destination. Considering multiple transportation modes, their interfaces and schedules, costs, support services, environmental, safety and security optimization; address various special needs and preferences. Develop tools and processes to be used to improve the overall travel experience.
- **The Airport** - Consider the airport design to more creatively utilize space and improve the quality of time spent while in transit. Navigate the airport property and terminal more effectively using new technologies, virtual and augmented reality scenarios, and various means of communication. Take into account emerging ways to positively impact and enrich the airport environment and improve the traveler's productivity, amusement, and overall enjoyment while

at the airport.

- **Effectiveness** - Develop various options to reduce delays and costs throughout the travel experience and facilitate interactions to enhance travel logistics. Address variables such as those traveling with special needs, time of day, weather, congestion and unsafe road conditions. Consider enhanced methods to improve and accelerate various processes such as ticketing, security and customers' screenings to reduce wait time throughout the journey.
- **Technology and Tools** - Apply technological innovations, procedures, techniques and strategies to provide solutions to streamline and enhance all aspects of traveling logistics. Consider the way the traveler navigates from home, to and through the airport, coordinates ground transportation, compares costs, makes reservations, parks, moves self, baggage and belongings, and travels to safely, securely and more expeditiously arrive at his/her final destination.

Please carefully review the challenge announcement and the official competition website for the most up-to-date competition details.

Prizes

Finalist teams will be invited to demonstrate their concepts at the FAA William J. Hughes Technical Center (FAA Technical Center) and at a technical symposium in Atlantic City, New Jersey in May of 2020. A stipend of up to $6,000 will be awarded to each of the three finalist teams to help offset the cost of traveling to New Jersey to demonstrate their concepts.

Student participants of each finalist team will receive certificates. Finalist teams will also be invited to an awards ceremony where a $25,000 prize will be presented to the lead university of the winning team.

Rules

The FAA Challenge - Smart Airport Student Competition is open to teams of undergraduate and graduate students at accredited United States based colleges and universities. Teams may include senior capstone students, clubs, multi-university or multi-disciplinary students. Teams are encouraged to collaborate and work in concert with industry partners.

See the challenge announcement for complete eligibility requirements, rules, terms and conditions.

Teams that do not comply with the rules, terms and conditions may be disqualified.

Judging Criteria

Initial Screening

The Prize Administrator will initially review entries to determine that all required submission elements are included and to determine compliance with eligibility requirements.

Evaluation and Selection

The FAA Challenge Steering Committee (SC), a panel of FAA subject-matter-experts, will evaluate, rate and rank submissions. After evaluating, rating and ranking the submissions, the SC will select three finalist teams. The finalist teams will be notified by March of 2020. Decisions will be based on the following factors (All factors are important and will be considered. However, the SC will give the "technical merit" factor the most weight in the screening process.):

- **Technical Merit**
  - Has the submission presented a clear understanding of the associated problems being addressed?
  - Has the submission developed a logical and workable solution and approach to solving the problem/s?
  - What are the most significant aspects of this concept?
  - Has the submission clearly described the breadth of impact of the innovation?
- **Originality**
  - To what extent is this concept new, or in what way is this a variation of an existing idea?
  - How is this concept unique?
  - Was the concept developed independently within the team or in cooperation with others?
- **Impact**
  - To what extent does this project have the potential to make a significant impact and/or contribution to the way the traveling public navigates the airport environment and the overall traveling experience?
  - Has the submission clearly defined the direct beneficiaries of this concept and the breadth of impact of the various components of the innovation?
  - How has this group measured the impact of the concept?
  - To what extent does the concept simplify and expedite the travel experience and appeal to users based on intuitive design and ease of use?
- **Practicality**
  - Who directly benefits from this concept?
  - Can the improvements and the related activities be implemented in a practical manner?
  - To what extent does the concept demonstrate a reasonable path for implementation?
  - How likely is the concept to be accepted and easily used by the public sector?
  - What are the costs anticipated to be incurred and the costs saved by executing this concept compared to the benefit to the traveler?

How To Enter

STEP I

Expression of Interest: Due by 11:59 PM ET on 10/16/2019

Academic institutions are strongly encouraged to submit an expression of interest to compete prior to submitting entries. Teams who indicate interest by the stated deadline will be invited to participate in an exclusive Question and Answer (Q&A) Session with the SC prior to the proposal due date. Expression of interest must be submitted by 11:59 PM ET on October 16, 2019 via an online form available at the http://faachallenge.nianet.org website.

See Page 9 of the challenge announcement for Expression of Interest requirements.

STEP II

Submission Requirements for Project Plan Proposals: Due on or before11:59 PM ET on 01/13/2020

Submission packages must consist of the following elements submitted in the following order:

1. **Cover Page**
2. **Table of Contents**
3. **Summary Statement**
4. **Problem Statement and Background**
5. **Project Description**
6. **Letter(s)**
7. **Additional Materials**

See pages 9-12 of the challenge announcement for page lengths and detailed Submission Requirements.

Submissions must be transmitted electronically via the website submission form by 11:59 PM ET on January 13, 2020. Late submissions will result in disqualification. Any other form of submission may be rejected.

Point of Contact

Have feedback or questions about this challenge?Send the challenge manager an email