

FAA Air Transportation Centers of Excellence

COE Overview

Government/Academic/Industry
Strategic Partnerships

Presented at: **COE for UAS Public Meeting**

Presented by: **Patricia Watts**
FAA Centers of Excellence

Date: **Wednesday May 28, 2014 (9:30 AM)**



Federal Aviation
Administration



Agenda

- **COE Enabling Legislation**
- **COE Selection Criteria**
- **Geographic Distribution**
- **Competitive Process**
- **COE Requirements**
- **Evaluation/Selection**
- **Funding Combinations**
- **Oversight**



Administrator, Jane Garvey, with Congressman Mica
COE GA Dedication, Washington, DC

~ Introductions ~

COE Legislative Authority – P.L. 101-508



Omnibus Budget
Reconciliation Act of 1990
Public Law 101-508

Title IX – Aviation Safety
and Capacity Expansion Act

“The Administrator may make grants to one or more colleges or universities to establish and operate several regional centers of air transportation excellence, whose locations shall be geographically equitable. The responsibilities of each regional center shall include, but not be limited to, the conduct of research concerning airspace and airport planning and design, the air transportation environment, aviation safety and security, the supply of trained air transportation personnel including pilots and mechanics, and other aviation issues pertinent to developing and maintaining a safe and efficient air transportation system....each center may make contracts with nonprofit research organizations and other appropriate persons....”

COE Legislation (Selection Criteria)

“(d) Selection Criteria: The Administrator shall select recipients of grants under this section on the basis of the following criteria:

(1) the extent to which the needs of the State in which the applicant is located are representative of the needs of the region for improved air transportation services and facilities.

(2) the demonstrated research and extension resources available to the applicant to carry out this section.

(3) the ability of the applicant to provide leadership in making national and regional contributions to the solution of both long-range and immediate air transportation problems.

(4) the extent to which the applicant has an established air transportation program.

(5) the demonstrated ability of the applicant to disseminate results of air transportation research and educational programs through a statewide or regionwide continuing education program.

(6) the projects the applicant proposes to carry out under the grant.”

FAA COE Geographic Distribution

Alternative Jet Fuels & Environment

Washington State Un. (Lead)
 Massachusetts Inst. Of Tech (Co-Lead)
 Boston Un.
 Georgia Institute of Technology
 Missouri Un. Of Science & Technology
 Oregon State University
 Pennsylvania State Un.
 Purdue Un.
 Stanford Un.
 Un. of Dayton
 Un. of Hawaii
 Un. of Illinois – UC
 Un. of North Carolina – CH
 Un. of Pennsylvania
 Un. of Tennessee
 Un. of Washington

Airliner Cabin Environment-Intermodal Research (ACER/Rite)

Auburn Un.- Admin Lead
 Kansas State Un. – Tech Lead
 Harvard Un.
 Purdue Un.
 Boise State Un.
 Un. of Med & Dentistry of NJ

Noise and Emissions Mitigation (PARTNER) MIT (Lead)

General Aviation (PEGASAS)

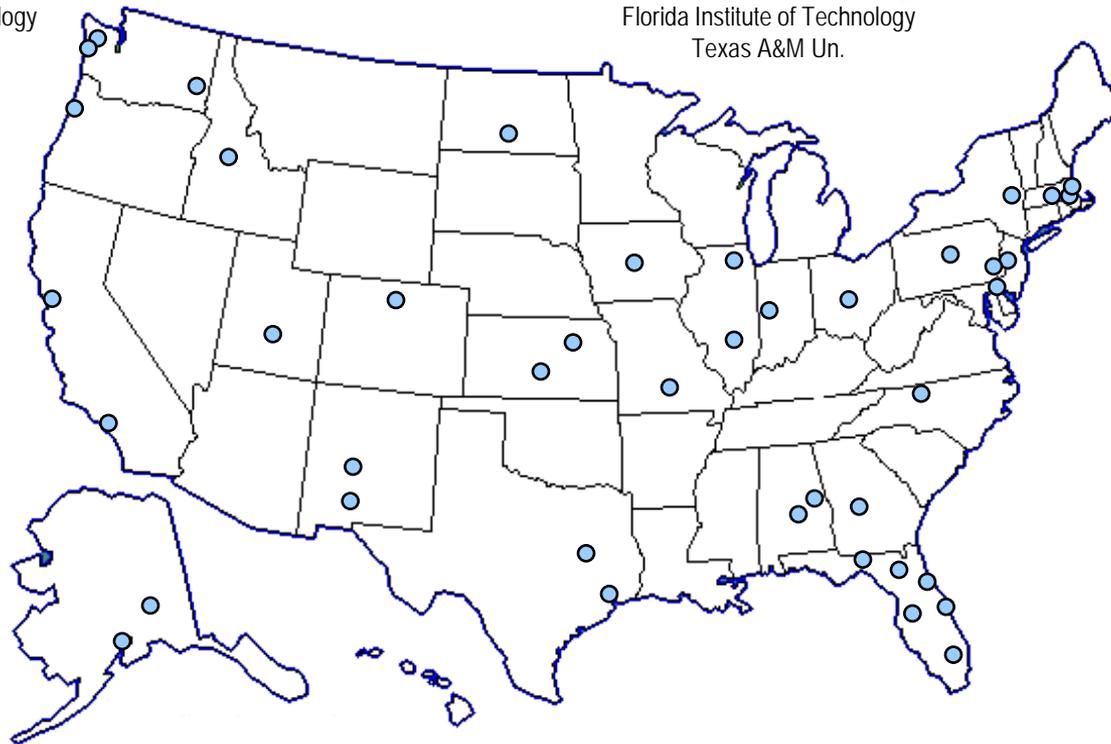
Purdue Un. (Lead)
 The Ohio State Un.
 Iowa State Un.
 Georgia Institute of Technology
 Florida Institute of Technology
 Texas A&M Un.

Commercial Space Transportation

Florida Institute of Tech – Admin Lead
 Florida State Un.
 New Mexico Inst. Of Mining & Technology
 New Mexico State Un.
 Stanford un.
 Un. of Florida
 Un. Of Central Florida
 Un. Of Colorado at Boulder
 Un. of Texas Medical Branch

Advanced Materials

Un. of Washington (Co-Lead)
 Wichita State Un. (Co-Lead)
 Edmonds Community College
 Florida Internal Un.
 Northwestern Un.
 Purdue Un.
 Oregon State Un.
 Tuskegee Un.
 Un. of California at LA
 Un. of Delaware
 Un. of Utah
 Washington State Un.



General Aviation (CGAR)

Embry Riddle Aeronautical Un. (Lead)

Operations Research (NEXTOR)

UMD (Lead)

Airworthiness Assurance (AACE)

Airport Technology

Un. of Illinois (Lead)



The COE Competitive Process - Overview

- **Pre-solicitation**
 - **Conduct Internal FAA Needs Assessment**
 - **Issue Draft Solicitation**
 - **Host Public Meeting**
 - **Open Period of Comment**
- **Final Solicitation**
- **Proposal Submission**
 - **Technical Evaluation**
 - **Management and Fiscal Review**
- **AOA Selection with DOT - Announcement**



DOT Garret A Morgan Grants Program joins with COE Member, Rutgers University.

Students visit FAA Tech Center
Pavement Test Machine

Establishment

- **Enter Into Cooperative Agreements with Each University**
- **Award Grants**
- **Assign Contract Tasks**

Administration

- **Yr 1 – Quarterly meetings**
- **Yrs 2 – 5 Semi-Annual reviews and reports**

COE Requirements

* FAA:

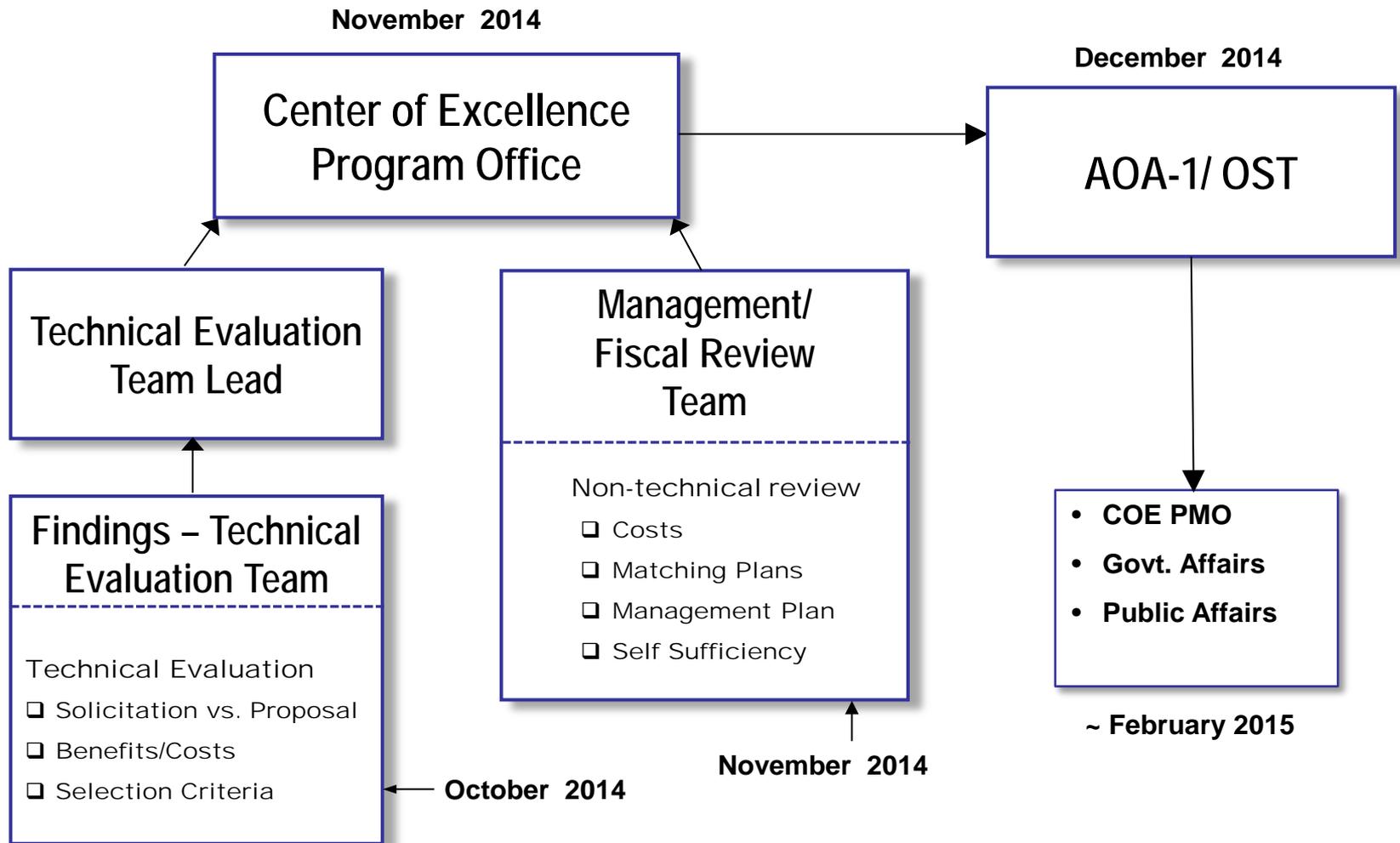
1. Administrator concurs with request
2. Conducts competitive process; Administrator serves as selecting official with OST
3. Makes a long-term commitment to provide base funding annually

* UNIVERSITIES:

1. Generate matching contributions from non-federal sources (>\$250M), engage industry affiliates
2. Make long-term commitments to provide facilities, faculty & students
3. Assure mgmt & SME oversight, coordinate activities, avoid duplication of effort

- * BOTH: *Assure Geographic equity* re funding and locations, and maximize synergies throughout the COE

Evaluation/Selection Process



COE Funding Combinations



COE for Operations Research
(NEXTOR) - UC Berkeley

- **COE Cooperative Agreements:** negotiated with each core university, year 1
- **COE Grants:** for Public Purpose, require matching funds to establish, operate and conduct research, year 1. **Mandated by Congress (PL. 101-508)**
- **Cost-share Contracts:** for FAA Purpose – award following (competitive) establishment, year 2
 - ❖ As set forth in PL. 101-508: *Centers may contract with others as appropriate*
 - ❖ Centers may also receive funding from any public or private source
 - ❖ **FAA may use: R+D, F+E and Ops Funds**

Oversight & Streamlined Administration

- The FAA Office of Primary Interest - sponsoring organization assigns a COE Program Manager to each Center
- **Funding sources assign a Task Monitor to each task / University PI**
- **The Gov't funds COE projects on an on-going basis** following proposal submission and technical evaluations conducted by the task sponsor
- **Following competitive process & AOA selection, projects are funded:**
 - For public purpose – via grants, or
 - For FAA purpose to obtain deliverables – via IDIQ contract
- **Members meet quarterly during first year, semi-annually thereafter.** Universities and industry affiliates host meetings to review research progress and plans, enhance partnership opportunities, and seek matching contributions
- **FAA reassesses COE management, projects, and progress within each Phase; COE PMO requests official audit of matching contributions**



Center of Excellence Benefits

- **Promote** academic, government & industry scientific networks prepared to enhance the safety, security & efficiency of the national airspace system
- **Augment** government resources (\$:\$) and leverage funds through flexible and responsive public/private partnerships
- **Expand** the U.S. math & science pipeline, support STEM goals, and facilitate aerospace recruitment opportunities
- **Provide** a formal strategy & trusted structure to coordinate a national research agenda and related education, and training
- **Advance** U.S. technology and expertise while satisfying Congressional mandates



Congressman Oberstar meets with COE Students & Faculty
at TRB Council of University Transportation Centers
Awards Ceremony celebrating the
DOT Outstanding Students of the Year

“The nation must immediately reverse the decline in and promote the growth of a scientifically and technologically trained U.S. aerospace workforce.”

Final Report of the Commission on the Future of the United States Aerospace Industry



FAA Air Transportation Centers of Excellence



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