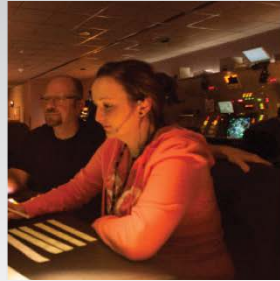


# CENTERS OF EXCELLENCE

TECHNICAL TRAINING &  
HUMAN PERFORMANCE



## COE Overview:

**Government/Academic/Industry Strategic Partnerships**

**Patricia Watts, Ph.D.**

*National Program Director, FAA Centers of Excellence*

Public Meeting | October 21-22  
DoubleTree by Hilton, Crystal City (Arlington), Virginia

[www.faa.gov/go/coe](http://www.faa.gov/go/coe)

# Agenda

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

## INTRODUCTIONS



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

# COE Legislative Authority – P.L. 101-508

“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....”



**Omnibus Budget  
Reconciliation Act of 1990  
Public Law 101-508**

**Title IX – Aviation Safety  
and Capacity Expansion Act**

# COE Legislation

## (Selection Criteria – Equally Weighted)

“(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.

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6. ***The projects the applicant proposes to carry out*** under the grant.”

# COE Core Teams: GeoDistribution

## Alternative Jet Fuels & Environment (ASCENT)

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

## Operations Research (NEXTOR)

Self Sufficient  
UMd (Lead)

## Airport Technology (CEAT)

Self Sufficient  
Univ. of Illinois (Lead)

## General Aviation (PEGASAS)

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

## Commercial Space Transportation (CST)

Univ. of Texas Medical Branch (Admin Lead)  
Florida State Univ.  
Florida Institute of Technology  
NM Institute of Mining & Technology  
New Mexico State Univ.  
Stanford Univ.  
Univ. of Florida  
Univ. of Central Florida  
Univ. of Colorado – Boulder

## Advanced Materials (JAMS)

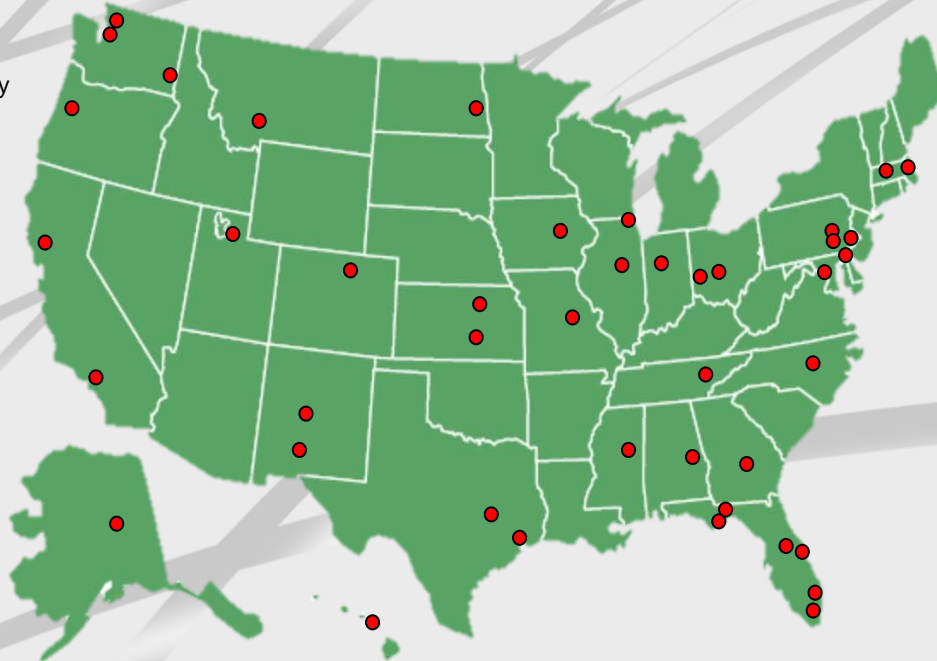
Univ. of Washington (Co-Lead)  
Wichita State Univ. (Co-Lead)  
Edmonds Community College  
Florida International Univ.  
Northwestern Univ.  
Purdue Univ.  
Oregon State Univ.  
Tuskegee Univ.  
Univ. of California – LA  
Univ. of Delaware  
Univ. of Utah  
Washington State Univ.

## Unmanned Aircraft Systems (ASSURE)

Mississippi State Univ. (Lead)  
Drexel Univ.  
Embry Riddle Aeronautical Univ.  
Kansas State Univ.  
Montana State Univ.  
New Mexico State Univ.  
North Carolina State Univ.  
Oregon State Univ.  
The Ohio State Univ.  
Wichita State Univ.  
Univ. of Alabama in Huntsville  
Univ. of Alaska Fairbanks  
Univ. of California, Davis  
Univ. of Kansas  
Univ. of North Dakota

## Airliner Cabin Environment: Intermodal Research (ACERite)

Auburn Univ. (Admin Lead)  
Kansas State Univ. (Tech Lead)





# The COE Competitive Process: Overview

## Pre-solicitation

- Conduct Internal FAA Needs Assessment
- Issue Draft Solicitation
- Host Public Meeting: Oct. 21-22
- Close Period of Public Comment

## Issue Final Solicitation

## Proposal Submission

- Technical Evaluation
- Management and Fiscal Review

## AOA w DOT: Announcement

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## Establishment

- Enter Into Cooperative Agreements with Each University
- Award Grants – September 2016
- Award Contract Tasks – 2017

## Monitoring/Oversight

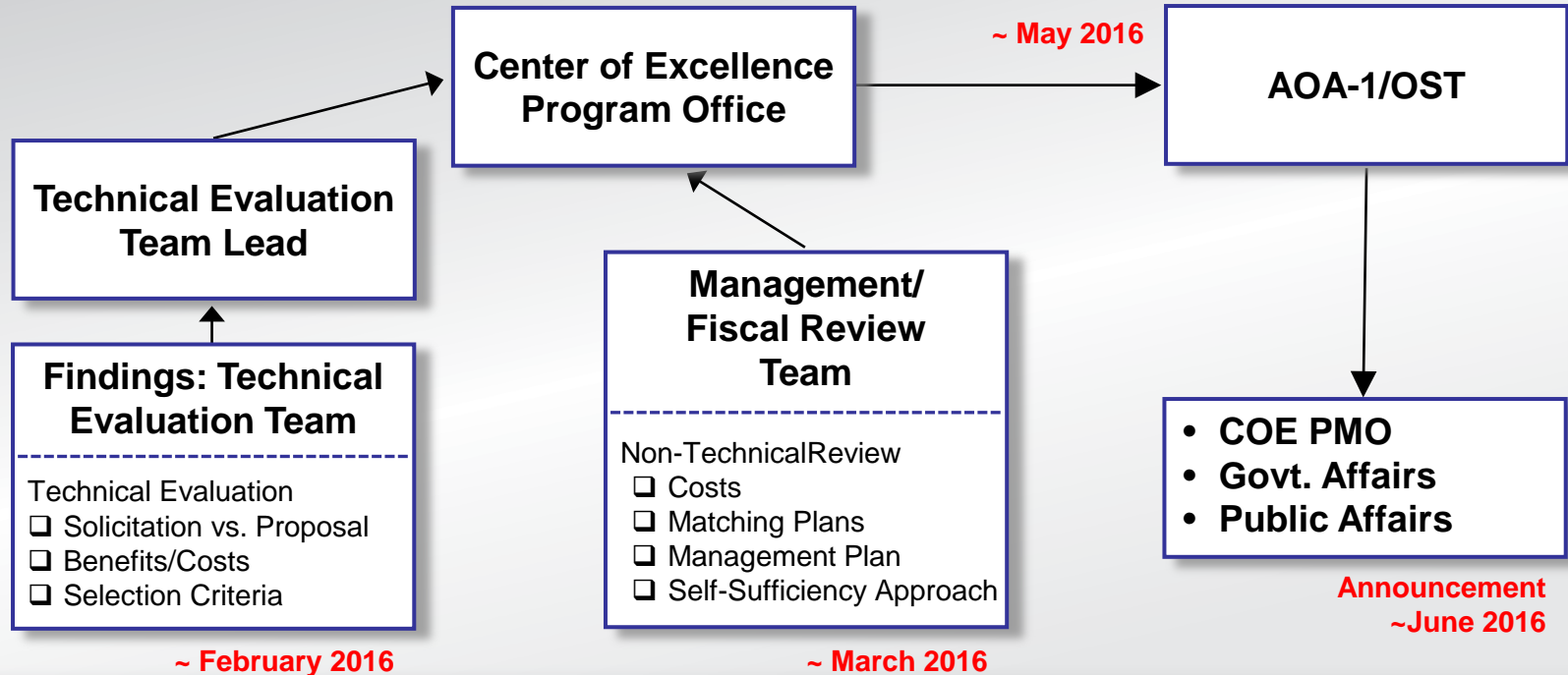
- Year 1: Quarterly meetings
- Years 2-5: Semi-Annual reviews and reports



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

Students visit FAA Technical Center National Airports Pavement Test Machine

# Evaluation/Selection Process



# COE Funding Combinations



COE for Operations Research  
(NEXTOR) UC Berkeley

- **COE Cooperative Agreements:** Negotiated with each core university establishes the Center
- **COE Grants:** For Public Purpose, require matching contributions to establish, operate and conduct research - **Mandated by Congress**
- **Cost-Share Contracts:** For FAA Purpose – award in year 2 following (competitive) establishment
  - 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** for each purpose



# Oversight & Streamlined Administration

- The FAA Office of Primary Interest - sponsoring organization assigns a COE Program Manager to each Center
- **Funding sources assign SME as Task Monitor to work w COE PI**
- **The Gov't funds COE projects on an on-going basis** following proposal submission and technical evaluations conducted by the task sponsor/SMEs
- **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 with sponsors, enhance partnership opportunities, and seek matching contributions from non-federal sources
- **FAA reassesses COE management, projects, and progress within each Phase; COE PMO requests official audit of matching contributions**

# COE Requirements

## **FAA:**

1. Administrator concurs with request to establish > Selecting official with OST
2. COE PMO conducts competitive process
3. OPI makes a long-term commitment to provide base funding annually

## **UNIVERSITIES:**

1. Generate matching contributions from non-federal sources, engage industry affiliates and others
2. Make long-term commitments to provide facilities, faculty, and students
3. Assure management and SME oversight, coordinate activities, avoid duplication of effort

**BOTH:** Assure *geographic equity* re: funding and locations, and maximize synergies throughout the COE and Government

# 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



**CONTACT:**

**Patricia Watts, Ph.D.**

*National Program Director*

FAA William J. Hughes Technical Center, ANG-A12

Atlantic City International Airport, NJ 08405

(609) 485-5043 | [patricia.watts@faa.gov](mailto:patricia.watts@faa.gov) | <http://www.faa.gov/go/coe>



Secretary of Transportation Norman Mineta,  
Chris Seher (FAA) and Patricia Watts (FAA)



Scott Pipkins, George Donohue, Bruce Singer,  
Virginia Shamy, Satya Atluri, Patricia Watts, Chris Seher



Sec. of Transportation Rodney Slater and Univ. of Illinois  
student Bill Vavrik, 1999 DOT COE Student of the Year