

# FAA Air Transportation Centers of Excellence

## COE Organizational Structures

Government/Academic/Industry  
Public/Private Partnerships

Presented to: **COE UAS Public Meeting**

Presented by: Patricia Watts  
FAA Centers of Excellence

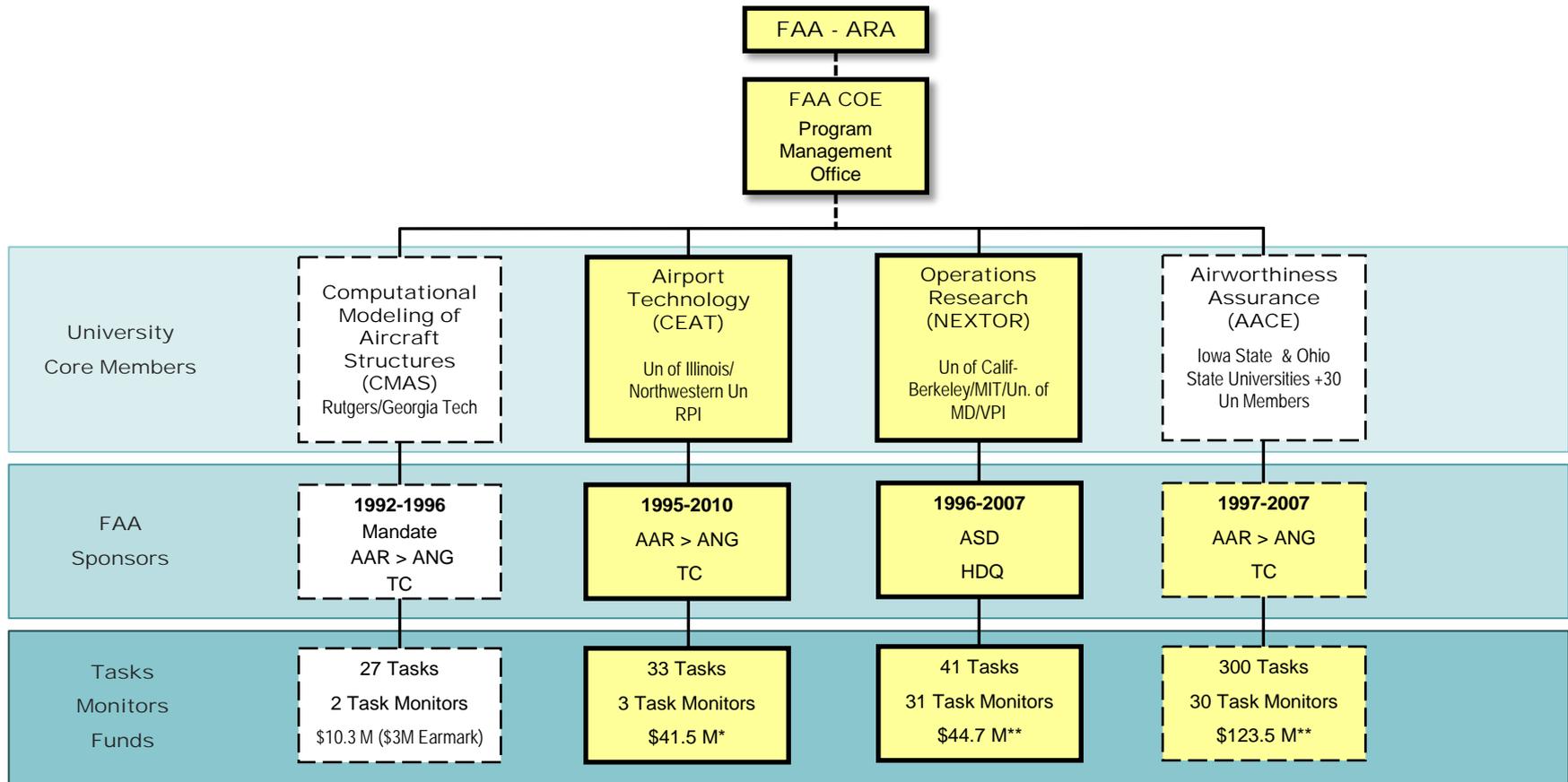
Date: Thursday, May 29, 2014 (1 PM)



Federal Aviation  
Administration



# FAA Air Transportation Centers of Excellence

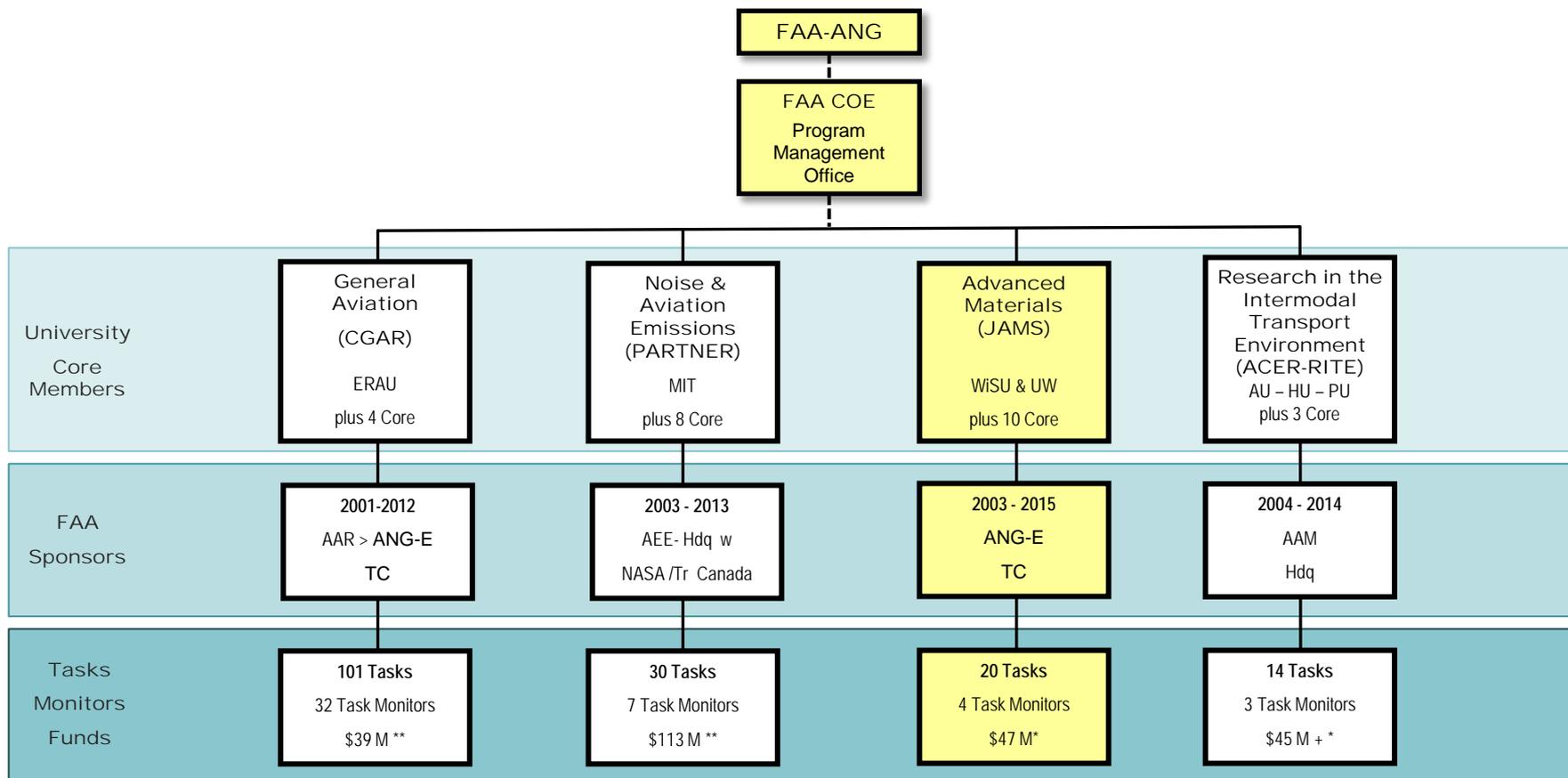


\* All dollar amounts indicated reflect grant awards and include matching funds.

\*\* All dollar amounts indicated reflect grant awards, matching funds, other funding vehicles, and contracts.



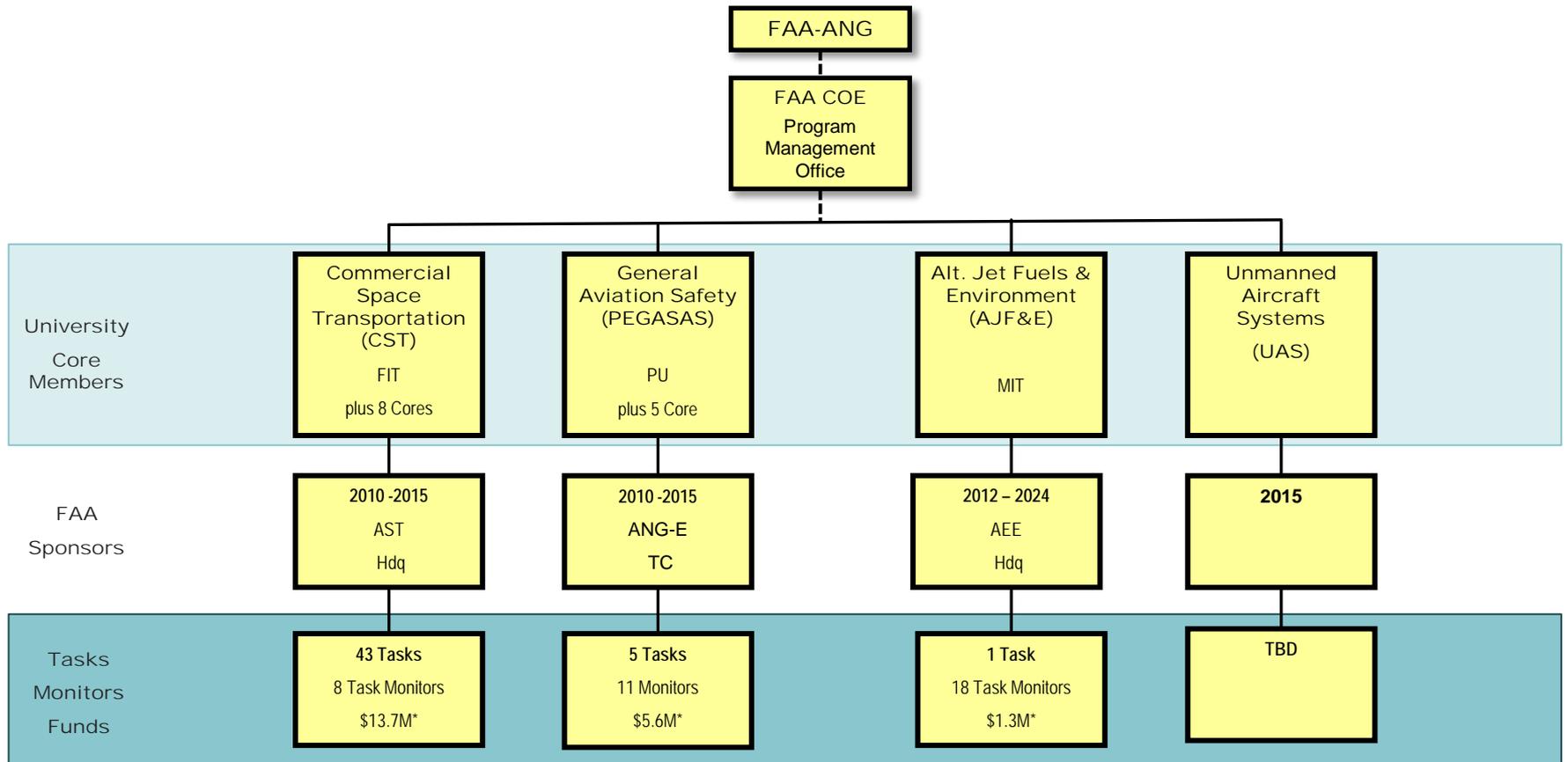
# FAA COEs – Active: In Phase Down



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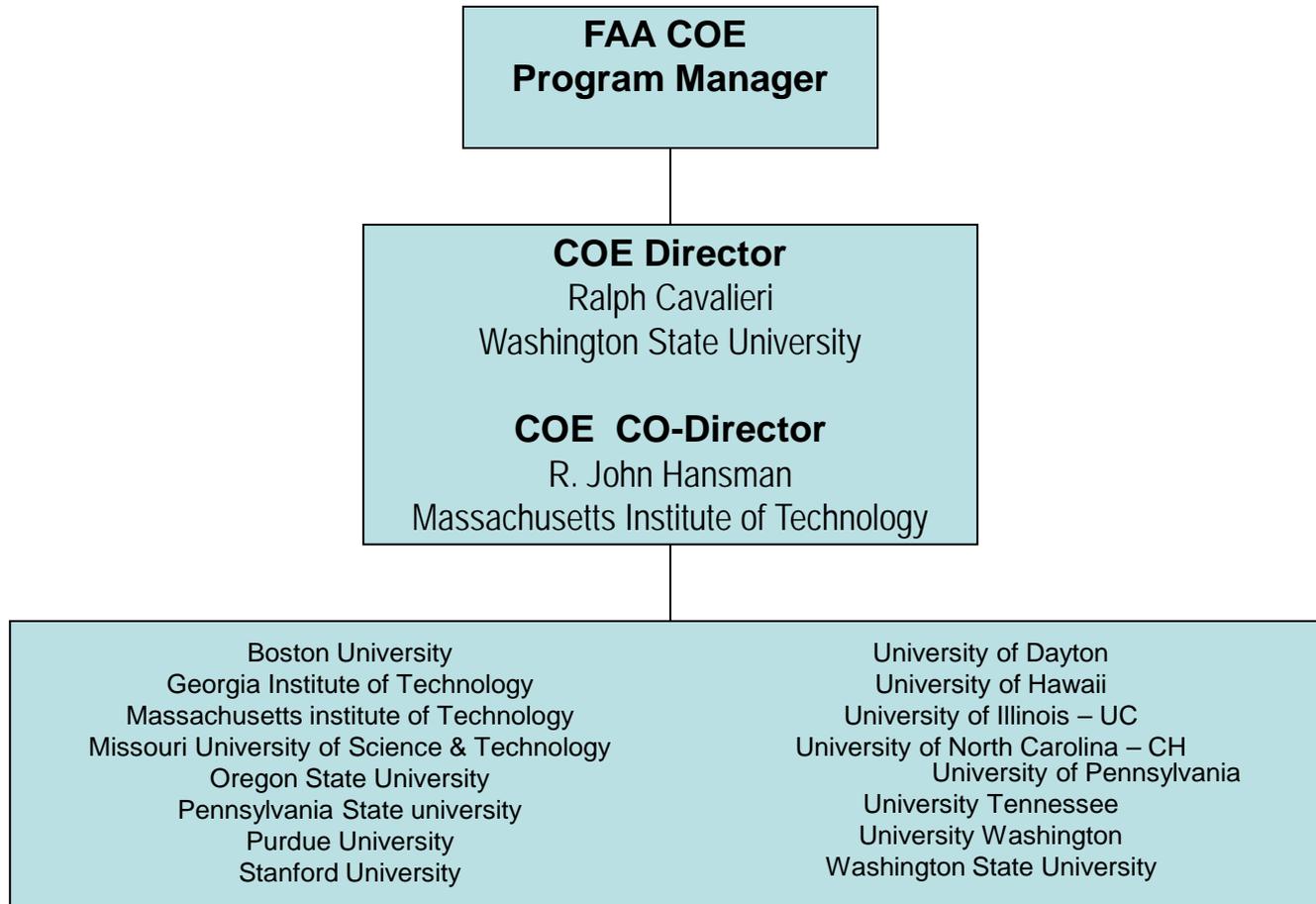
# FAA COEs – Active: Phase I



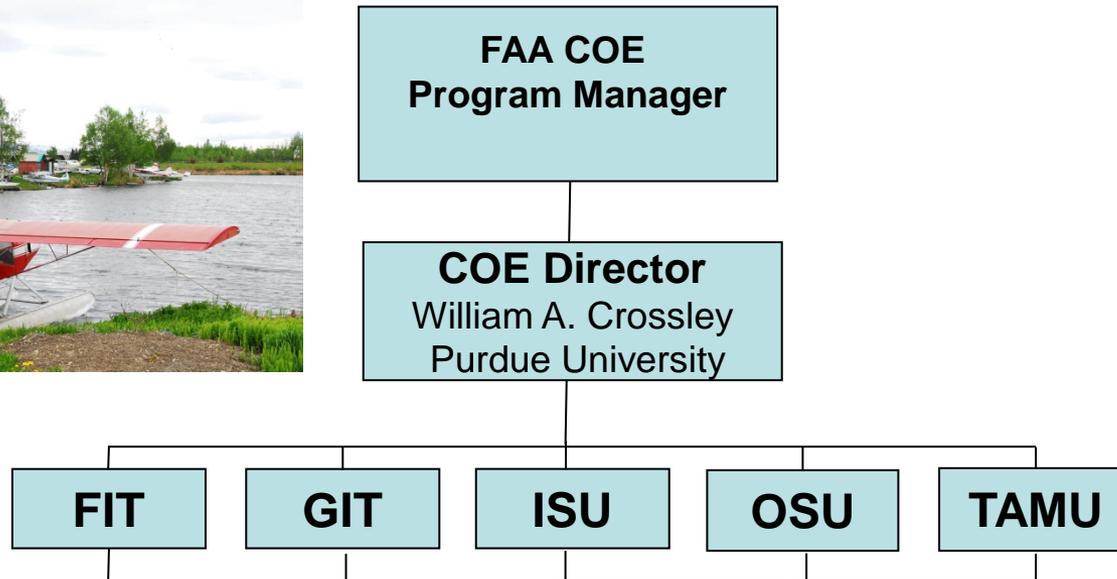
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# COE for Alternative Jet Fuels and Environment (AJF&E)



# COE for General Aviation Safety (PEGASAS)

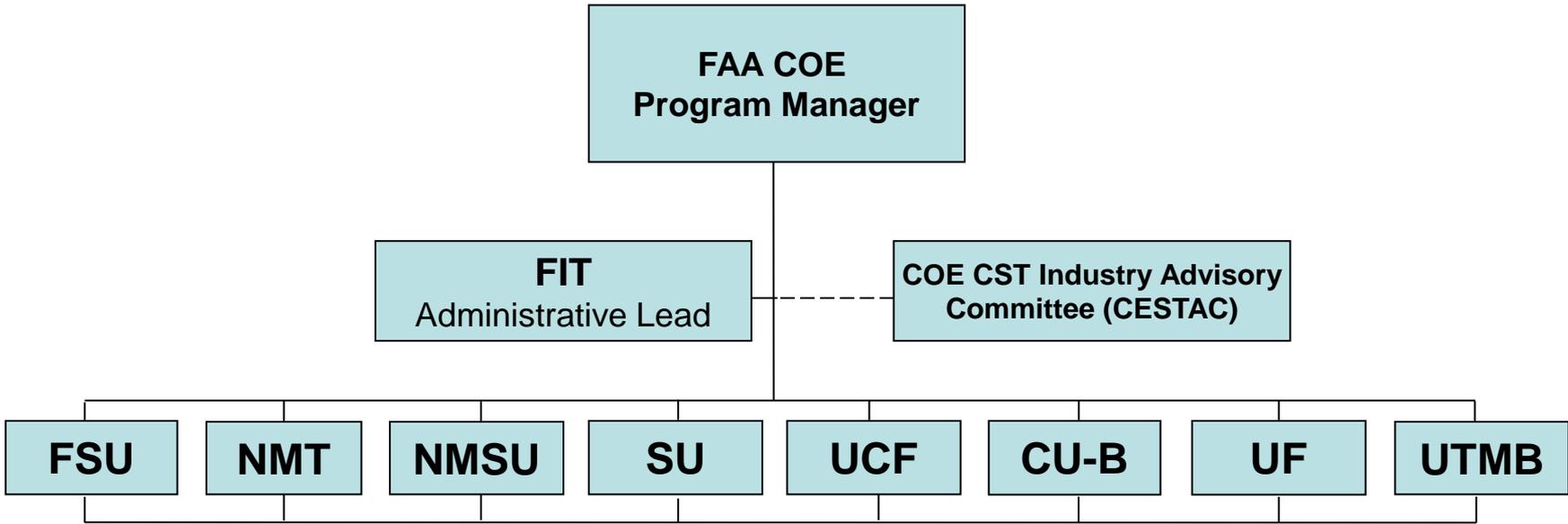


Purdue University  
Florida Institute of Technology  
Georgia Institute of Technology

Grants \$2.8M  
Matching \$2.8M

Iowa State University  
Ohio State University  
Texas A&M  
Plus 10 Affiliates

# COE for Commercial Space Transportation (CST)



Florida Institute of Technology  
 Florida State University  
 New Mexico Institute of Mining and Technology  
 New Mexico State University  
 Stanford University

Grants: \$5.7 M  
 Matching: \$8M  
 Total LOE \$13.7M

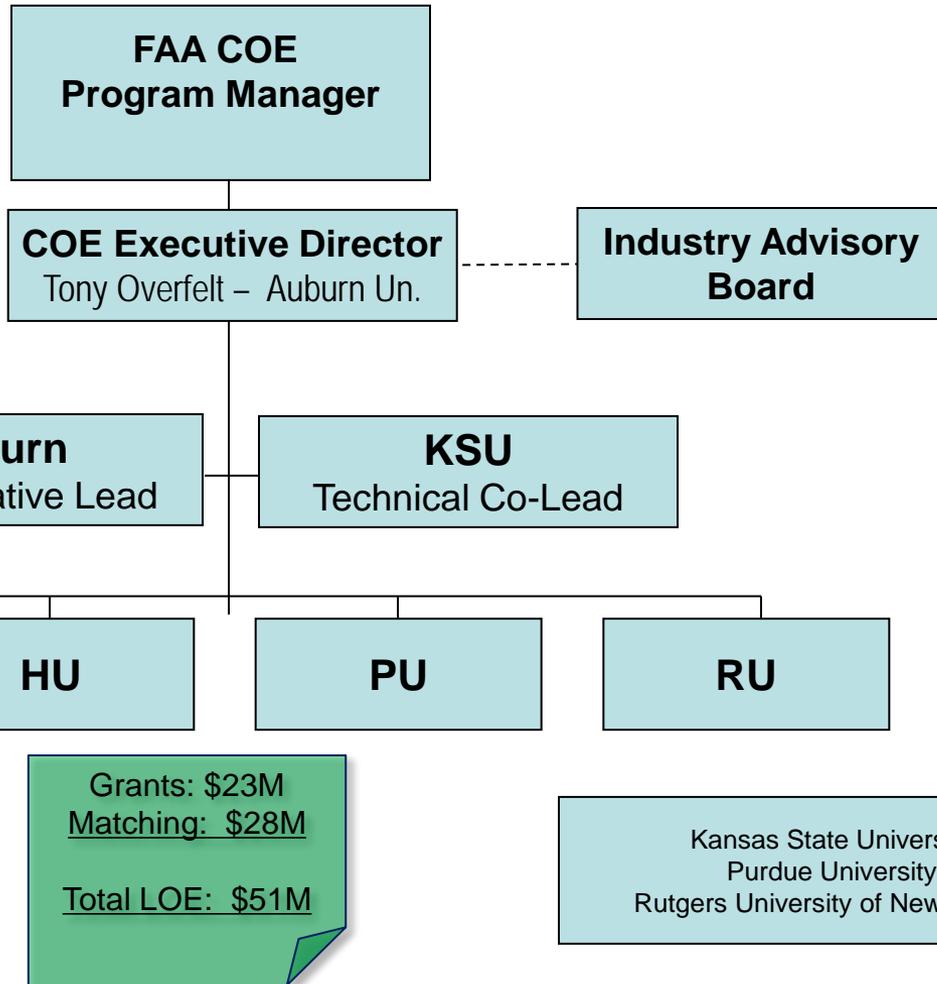
University of Central Florida  
 University of Colorado at Boulder  
 University of Florida  
 University of Texas - Medical Branch  
 at Galveston

# COE CST Industry Advisory Committee (CESTAC)

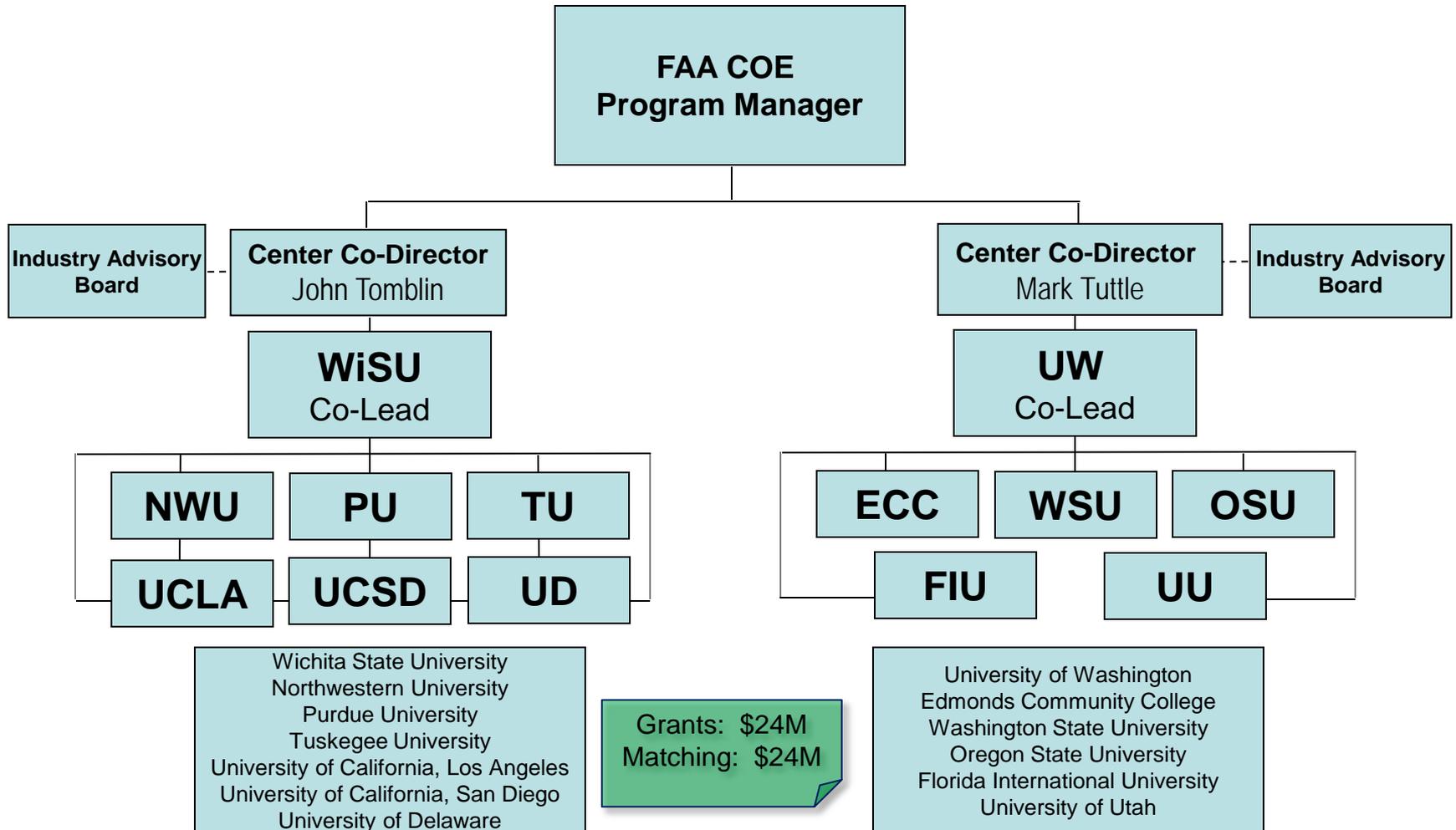
**JHR Consulting**  
**The Tauri Group**  
**Florida Institute of Technology**  
**Space Florida**  
**Affiliate, Spaceworks Enterprises**  
**National Aerospace Training and**  
**Research Center (NASTAR)**  
**Jacobs Technology, Inc.**  
**Boeing Space Exploration**  
**Scitor**  
**Ball Aerospace**  
**Lockheed Martin Space**  
**Systems Company**  
**United Launch Alliance (ULA)**  
**Commercial Spaceflight Federation**  
**Wyle**  
**ACTA**  
**Space Systems Loral**  
**SATWEST, LLC**



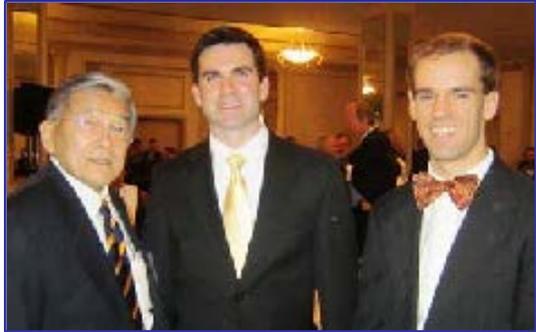
# COE for Cabin and Intermodal Transportation (ACERite)



# Joint COE for Advanced Materials (JAMS)



# COE for Aircraft Noise & Aviation Emissions Mitigation (PARTNER)



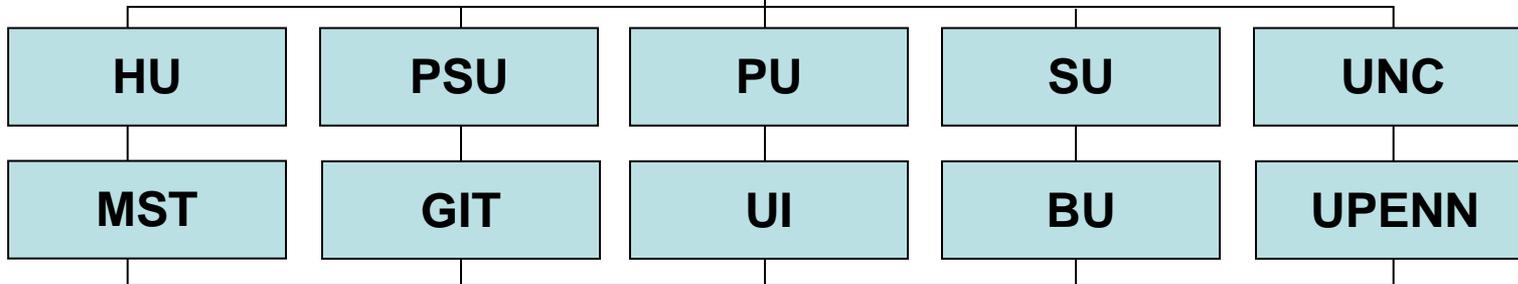
*Former Secretary of Transportation Norman Mineta & 2014's SOY Matthew Opliger (WSU) and Philip Wolfe (MIT)*

**FAA COE Program Manager**

**COE Center Director**  
Ian Weitz/Steven Barrett

**MIT**

**Industry Advisory Board**  
(100+ Members)



Massachusetts Institute of Technology  
Harvard University  
Pennsylvania State University  
Purdue University  
Stanford University

**Grants: \$51M**  
**Matching: \$51M**

University of North Carolina – CH  
Missouri Science and Technology  
Georgia Institute of Technology  
University of Illinois  
Boston University  
University of Pennsylvania



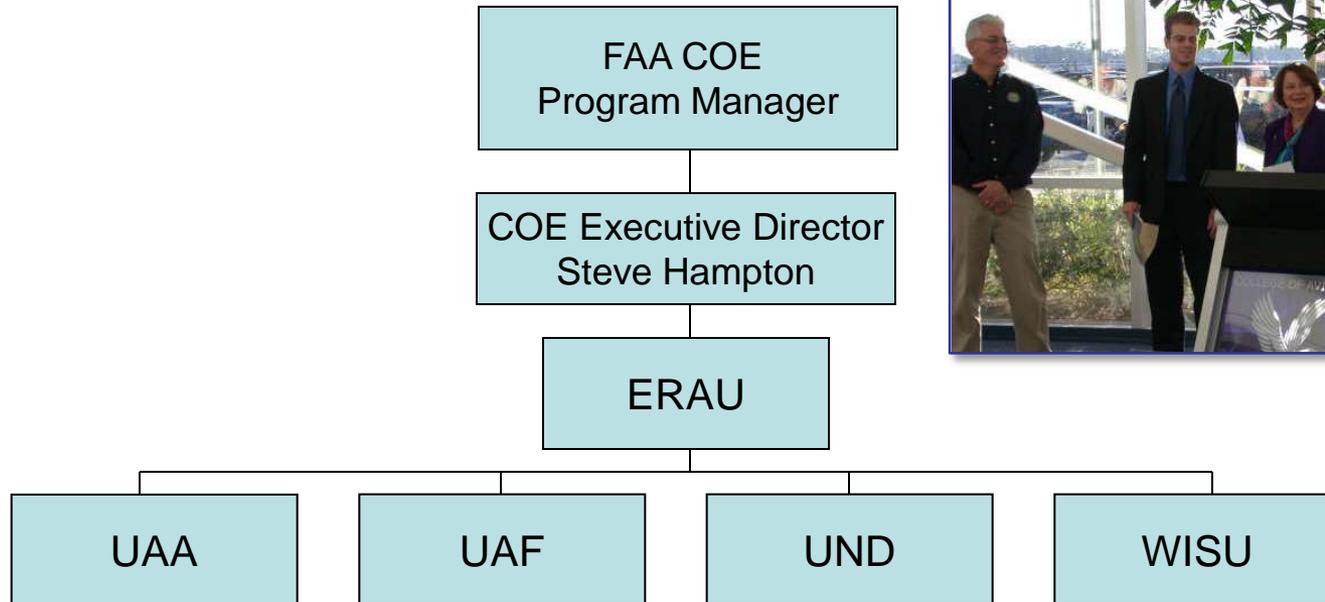
# FAA / NASA / Transport Canada COE for Aircraft Noise & Aviation Emissions Mitigation (PARTNER)

Aerodyne Research, Inc.  
Aerospace Industries Association  
Airbus  
Air Line Pilots Association  
Air Transport Association of America  
Airports Council International - North America  
American Institute of Aeronautics and Astronautics  
Bay Area Air Quality Management District  
Bell Helicopter Textron, Inc.  
Boeing Commercial Airplanes Group  
Delta Air Lines, Inc.  
General Electric Aircraft Engines  
Gulfstream Aerospace Corporation  
Indiana Department of Transportation  
Lockheed Martin Aeronautics Company  
Logistics Management Institute  
Massachusetts Port Authority  
Metron Aviation, Inc.

Metropolitan Washington Airports Authority  
National Organization to Insure a Sound-controlled Environment (N.O.I.S.E.)  
O'Hare Noise Compatibility Commission  
Palisades Citizens Association  
Pratt & Whitney  
Raisbeck Engineering  
Regional Airport Authority of Louisville and Jefferson County  
Rolls-Royce, plc  
San Francisco International Airport/Community Roundtable  
Sikorsky Aircraft Corporation  
United Parcel Service Airline  
United Technologies Pratt & Whitney  
Wyle Laboratories



# COE for General Aviation (CGAR)



Embry-Riddle Aeronautical University  
University of Alaska at Anchorage  
University of Alaska at Fairbanks  
University of North Dakota  
Wichita State University

LOE \$38M

# COE for Airworthiness Assurance Phase II - University Members

Arizona State University  
Baylor University  
Carnegie Mellon University  
Embry-Riddle Aeronautical University  
Florida International University  
George Washington University  
Iowa State University  
Johns Hopkins University  
Lehigh University  
Mississippi State University  
New Jersey Institute of Technology  
North Carolina A&T State University  
Northwestern University  
Ohio State University  
Ohio University  
Pennsylvania State University

Purdue University  
Rutgers University  
Tuskegee University  
University of Arizona  
University of California at Berkeley  
University of California at Los Angeles  
University of California at Santa Barbara  
University of Dayton  
University of Maryland  
University of Missouri at Columbia  
University of North Dakota  
University of Utah  
University of Washington  
Wayne State University  
Wichita State University



# COE for Operations Research - Partners and Affiliates (NEXTOR)

## Core University Members

University of California-Berkley  
Massachusetts Institute of  
Technology  
University of Maryland  
Virginia Tech  
George Mason University

## University Partners

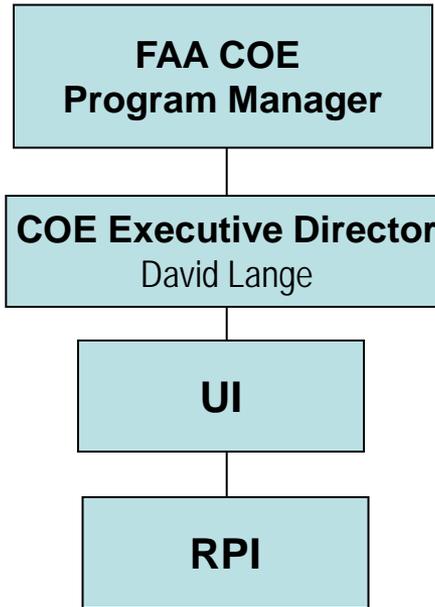
Air Force Institute of Technology  
Rensselaer  
San Jose State University  
University of Michigan  
University of Minnesota  
University of Rochester  
University of Southern California  
University of Texas at Austin

## Industry Affiliates

The Boeing Company	Massachusetts Port Authority
California Department of Transportation	Metron Aviation, Inc.
Draper Laboratory	Northrop Grumman
Federal Express	Sabre
Honeywell	San Francisco International Airport
Leigh Fisher Associates	Seagull Technology
Logistics Management Institute	Southern California Association of Governments
Maryland Aviation Administration	Virginia Department of Transportation
Los Angeles World Airports	



# COE for Airport Technology (CEAT)



Secretary of Transportation  
Rodney Slater and University of Illinois  
student Bill Vavrik  
DOT COE Student of the year

University of Illinois  
Rensselaer Polytechnic Institute  
NCA&T, ERAU

LOE \$41.5M

PUBLIC PARTNERS  
O'Hare Modernization Program  
City of Chicago

# Joint Center for Computational Modeling of Aircraft Structures (RITE)

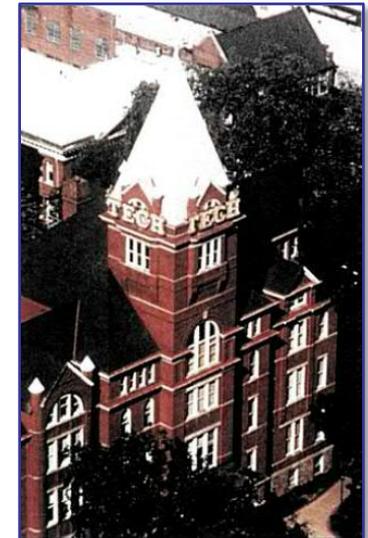


First COE University Co-Director,  
Dean Ellis Dill, Rutgers,  
The State University of New Jersey

- **Members Designated by Congress: \$3M**  
Operational 1993 through 1996

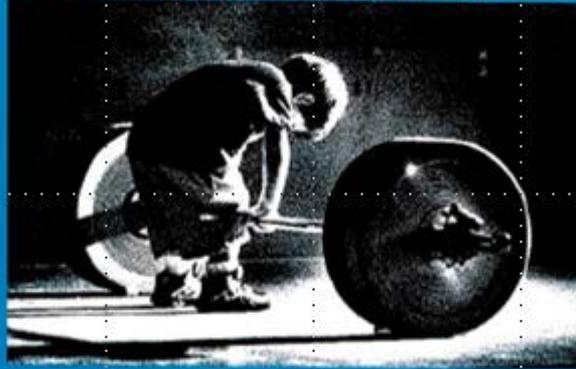
- **Technology areas funded through matching grants:**
  - **Widespread Fatigue-Damage**
  - **Residual-Life and Residual-Strength Estimations**
  - **Mechanical and Composite-Patch Repairs**
  - **Life-Enhancement Methodologies**
  - **Discrete Source Damage**

**Rutgers University and Georgia Institute of Technology**



# Q + A

## Lessons Learned



**Communications and collaboration are key and take time. Lots of time!**  
**Sustainability planning is long term**  
**Evaluation should be done continuously**  
***Surround yourself with “can do” people***



# FAA Air Transportation Centers of Excellence



## Contact:

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**Website: <http://www.faa.gov/go/coe>**

