

**FAA Center of Excellence  
for  
Technical Training and Human Performance**

**A Roadmap for Leveraging the Capabilities of Academia to Address Salient  
Research Challenges in Aviation**

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# Background

- Strategic Framework Project
- Development of a Research Roadmap
- Curating Research Themes and Questions
- Cataloguing Research Capabilities

# Strategic Framework Project

- Initial strategies focused primarily on the needs of the Air Traffic Organization
- The potential for additional sponsors and research in additional areas beyond air traffic required that the framework expand
- The framework evolved through conversations within the CoE and from input from existing and new potential stakeholders in government and industry

# Research Roadmap

- The Research Roadmap evolved as the scope and scale of the CoE's research expanded
- Initial efforts to identify and operationalize research themes and specific research questions included an industry survey, focus group conversations, and participation in industry association meetings

# Research Themes

- Four broad themes emerged through the work of CoE member institutions and discussions at meetings in Norman, Oklahoma; Philadelphia, Pennsylvania; and Prescott, Arizona
- These themes are:
  - Workforce development and training
  - Human factors
  - Safety
  - Analytics

# Research Questions

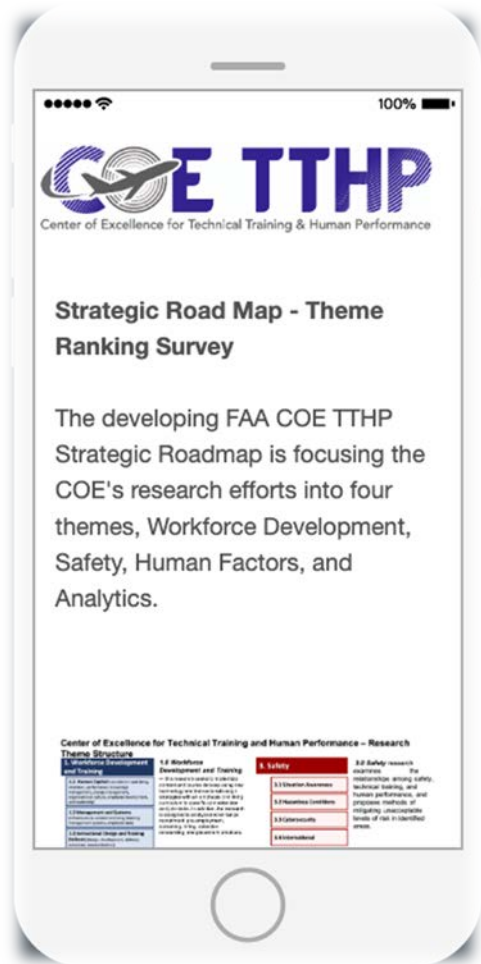
- A broad range of research questions were suggested and evaluated
- Questions were curated through extensive conversations between CoE members and stakeholders
- Not surprisingly, not all questions fit neatly in the four themes

# Research Roadmap Document

- Seth Young, Scott Tarry, and April Williams distilled the themes and questions into a Research Roadmap document
- You have copies of the Executive Summary for the Research Roadmap
- Digital copies of the Executive Summary and the Catalog of Themes and Questions will be available via the CoE TTHP website

## University Feedback

### Survey Distributed to Rank and Rate Relative Strengths of Research Themes



For each theme, please provide your evaluation of your institution's strengths.

	Very Strong	Moderately Strong	Less Strong
Workforce Development	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Safety	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Human Factors	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Analytics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



## University Feedback: Ranking respective strengths of focus areas

<b>TTHP ROADMAP PRIORITIES BY SCHOOL</b>				
	Rank of Each Topic Area			
<b>School</b>	<b>Workforce Development</b>	<b>Human Factors</b>	<b>Safety</b>	<b>Analytics</b>
Auburn University	1	4	3	2
Drexel University	4	1	2	3
ERAU Daytona	2	3	1	4
ERAU Prescott	1	3	2	4
Inter American University	1	2	3	4
Purdue University	2	1	3	4
The Ohio State University	4	1	2	3
Tulsa Community College	3	1	2	4
University of Akron	4	2	3	1
University of Nebraska - Omaha	1	4	2	3
University of North Dakota	3	2	1	4
University of Oklahoma	1	2	4	3
Western Michigan University	1	3	2	4
Wichita State University	2	1	3	4
average	2.14	2.14	2.36	3.36
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>

## University Feedback: Identifying Higher ranked focus areas

Schools that ranked focus area "1" (bold) or "2"			
<i><b>Workforce Development</b></i>	<i><b>Human Factors</b></i>	<i><b>Safety</b></i>	<i><b>Analytics</b></i>
<b>Auburn University</b>	<b>Drexel University</b>	<b>ERAU Daytona</b>	<b>University of Akron</b>
<b>ERAU Prescott</b>	<b>Ohio State</b>	<b>University of North Dakota</b>	Auburn University
<b>Inter American University</b>	<b>Purdue University</b>	Drexel University	
<b>University of Nebraska - Omaha</b>	<b>Tulsa</b>	ERAU Prescott	
<b>University of Oklahoma</b>	<b>University of North Dakota</b>	The Ohio State University	
<b>Western Michigan</b>	<b>Wichita State</b>	Tulsa Community College	
ERAU Daytona	Inter American University	University of Nebraska - Omaha	
Purdue University	University of Akron	Western Michigan University	
Wichita State University	University of Oklahoma		

## University Feedback: Rating respective strengths of focus areas

TTHP ROADMAP PRIORITIES BY SCHOOL					
	Rate of Each topic Area				1 = very Strong
School	Workforce Development	Human Factors	Safety	Analytics	2 = moderately Strong
					3 = Less Strong
Auburn University	1	2	2	1	
Drexel University	3	1	2	2	
ERAU Daytona	1	1	1	1	
ERAU Prescott	1	1	1	1	
Inter American University	1	2	2	3	
Purdue University	1	1	2	2	
The Ohio State University	2	1	2	2	
Tulsa Community College	3	3	3	3	
University of Akron	3	1	1	1	
University of Nebraska - Omaha	1	3	2	2	
University of North Dakota	2	1	1	2	
University of Oklahoma	1	1	3	2	
Western Michigan University	1	2	1	3	
Wichita State University	1	1	2	3	
average	<b>1.57</b>	<b>1.50</b>	<b>1.79</b>	<b>2.00</b>	
	<b>2</b>	<b>1</b>	<b>3</b>	<b>4</b>	

## University Feedback: Identifying Higher rated focus areas

Schools that report " <b>very strong</b> " or " <b>moderately strong</b> " strengths in each focus area			
<i><b>Workforce Development</b></i>	<i><b>Human Factors</b></i>	<i><b>Safety</b></i>	<i><b>Analytics</b></i>
<b>Auburn University</b>	<b>Drexel University</b>	<b>ERAU Daytona</b>	<b>Auburn University</b>
<b>ERAU Daytona</b>	<b>ERAU Daytona</b>	<b>ERAU Prescott</b>	<b>ERAU Daytona</b>
<b>ERAU Prescott</b>	<b>ERAU Prescott</b>	<b>University of Akron</b>	<b>ERAU Prescott</b>
<b>Inter American University</b>	<b>Purdue University</b>	<b>University of North Dakota</b>	<b>The Ohio State University</b>
<b>Purdue University</b>	<b>The Ohio State University</b>	<b>Western Michigan University</b>	<b>University of Akron</b>
<b>University of Nebraska - Omaha</b>	<b>University of Akron</b>	Auburn University	Drexel University
<b>University of Oklahoma</b>	<b>University of North Dakota</b>	Drexel University	Purdue University
<b>Western Michigan University</b>	<b>University of Oklahoma</b>	Inter American University	University of Nebraska - Omaha
<b>Wichita State</b>	<b>Wichita State</b>	Purdue University	University of North Dakota
The Ohio State University	Auburn University	The Ohio State University	University of Oklahoma
University of North Dakota	Western Michigan University	University of Nebraska - Omaha	
		Wichita State	

# University Feedback: Matrix of Relative Strengths

		1 = very Strong			
		2 = moderately Strong			
		3 = Less Strong			
			<b>Strength Rating</b>		
		<b>Workforce Development</b>	<b>Human Factors</b>	<b>Safety</b>	<b>Analytics</b>
	<b>Auburn University</b>				
	<b>Drexel University</b>				
	<b>ERAU Daytona</b>				
	<b>ERAU Prescott</b>				
	<b>Inter American University</b>				
	<b>Purdue University</b>				
	<b>The Ohio State University</b>				
	<b>Tulsa Community College</b>				
	<b>University of Akron</b>				
	<b>University of Nebraska - Omaha</b>				
	<b>University of North Dakota</b>				
	<b>University of Oklahoma</b>				
	<b>Western Michigan University</b>				
	<b>Wichita State University</b>				

# University Feedback: Soliciting Faculty and Laboratory Capabilities

