



Jason Bittner, PMP, MPA. July 2025

Ahead of the Curve

Course Updates & Conversions

2025 AASHTO RAC
Annual Meeting



INNOVATIVE SOLUTIONS
TO COMPLEX PROBLEMS



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Agenda

- ▶ Introductions
- ▶ Ahead of the Curve objective and background
- ▶ Updates to the Training Program
- ▶ Project Status and Next Steps



▶ Research Team



backstreet
consulting

▶ ARA

- Jason Bittner, Principal Investigator
- Neil Janes, Administrative support and researcher
- Mike Betts, Instructional designer
- Brian Garmon, Strategic communicator
- Lisa Schofield, 508-compliance specialist
- Elena Kiselev, Graphic Designer

▶ Backstreet Consulting

- Chris Hedges, research manager/subject matter expert



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Project Objective and Background



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Project Background

Ahead of the Curve Idea:

- ▶ Develop and deliver a coordinated and continuing training program that enhances the knowledge, skills and abilities of those who manage transportation research programs
- ▶ Original course brain-child of a TRB task force
 - 2010-2011
- ▶ NCHRP project series developed course content



Background and History

2011

TRB Technical Activities Council

- Initial Discussions
- Course Development
- TRB Conduct of Research Committee

2012 - 2023

NCHRP Projects

- Developed four core courses and twelve elective courses

2025

Transfer to AASHTO

- Technical Training Solutions (TTS)
- Course Updates
- 508-compliant course addition

Slide 6

NJO Insert dates and other relevant history of the project
Neil Janes, 2025-06-10T17:08:03.257

AOTC Program Objectives

High Quality

Ensure high quality research programs and projects

Value

Better communicate the value of research and results to others

Stature

Raise the profile and awareness of transportation research and research management

Community

Help create a community of practice and sense of belonging to a profession



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Ensure high quality transportation research programs and projects that contribute to meeting transportation goals.

Better communicating the value of research and research results to those outside of the research community, particularly those with the ability to implement innovation and technology enhancements.

Raising the stature of those who manage transportation research and innovation programs.

Providing those who manage research and innovation programs with a sense of belonging to a profession, a community for networking and for sharing good practices, and pride in serving society.



AOTC Benefits

Helps onboard new research program and project managers

- Enhances knowledge, skills, abilities of seasoned research managers

Helps develop a national community of practice

Trains research managers in new ideas

Enables research program knowledge capture and transfer

Provides tools to display value of research to stakeholders





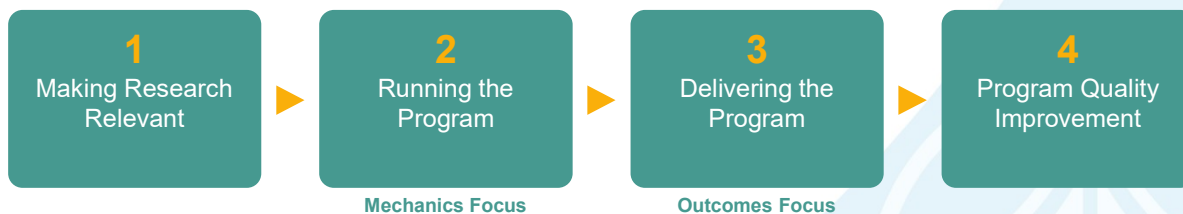
AOTC Overview

- ▶ Four Core Courses
 - Making Research Relevant
 - Running the Research Program
 - Delivering the Program
 - Quality Improvement
- ▶ Twelve electives
 - Ranging from intellectual property to research needs statements
- ▶ Courses included in next slides





Core Courses



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Elective Courses

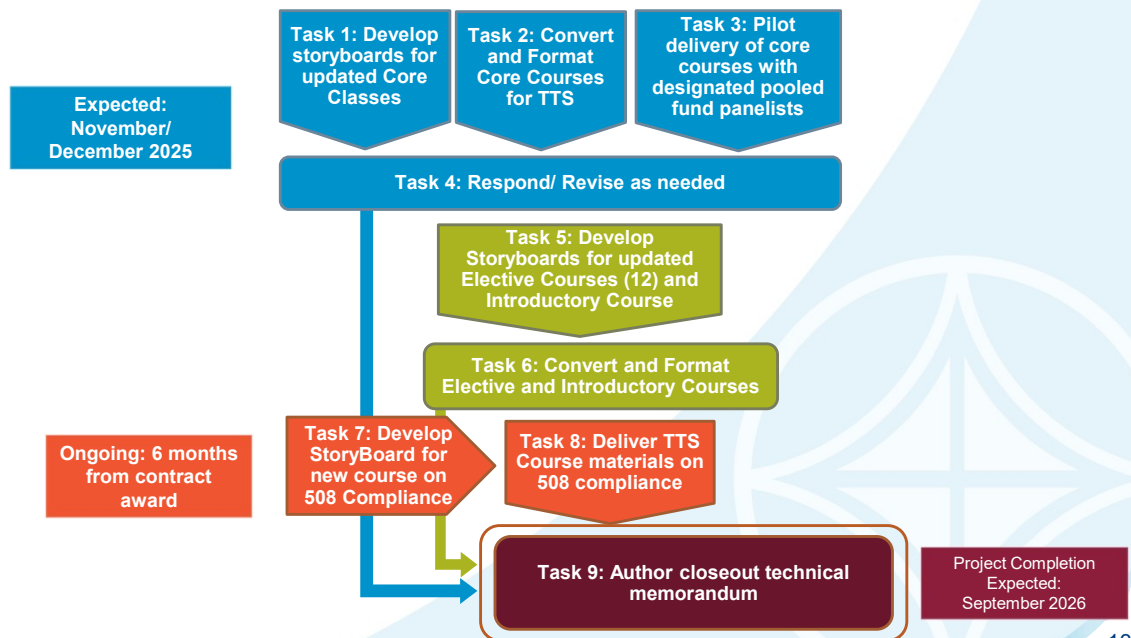
1. Effective Problem Statements
2. Performance Measurement
3. Knowledge Management
4. Building a Champion Driven Research Program
5. Innovation Management and Risk Management
6. Funding
7. Scientific Methods
8. Intellectual Property, Innovation and Technology Transfer
9. Strategic Planning for Research
10. Building Trusted Research Partnerships
11. Continuous Quality Improvement
12. Program Design

New Project is adding a course on Accessibility and 508 Compliance



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Project Overview



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Highlights

- ▶ Course delivery migration
 - In-person to virtual/on your own time


- ▶ Course updates
 - Streamlined presentation
 - Enhanced student engagement/interaction
 - Updated info

- ▶ New 508-Compliance course



Storyboard Format

- ▶ Visual roadmap of a narrative
- ▶ Breaks down individual slides including narrative and slide features
- ▶ Offers ongoing comments/feedback
- ▶ Maps out user experience
- ▶ Includes
 - Text on screen
 - Slide preview
 - Narration
 - Notes
 - Review Feedback

Ahead of the Curve – Making Research Relevant	
Text on Screen:	Narration:
Slide Name: Program Objectives	<p>The ahead of the curve program has four programmatic objectives related to quality, value, stature, and community. These four objectives are utilized to develop learning outcomes throughout this training program. Our first objective is to ensure high quality research programs and projects that contribute to meeting organizational goals. Our second objective is to better communicate the value of research and results to others in terms of the relevant impacts and benefits compared to the cost of research. Our third outcome relates to stature – to help raise the profile and awareness of transportation research and management. Finally, ahead of the curve aims to help create a community of practice and sense of belonging to a profession.</p> <p>Source/Notes:</p> <p>Each box appears in sync with the language above</p>
Slide Bullets:	
<ul style="list-style-type: none"> • High Quality. Ensure <u>high quality</u> research programs and projects • Value. Better communicate the <u>value</u> of research and results to others • Stature. Raise the <u>profile and awareness</u> of transportation research and research management • Community. Help create a <u>community</u> of practice and sense of belonging to a profession 	
Preview: Screen 6/45	Review Feedback:
	

Project Updates



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Updated Slide Deck/Master

- ▶ Streamlined
- ▶ Modern look-and-feel
- ▶ Same branding/scheme
- ▶ Enhanced user experience
 - Fits widescreen

Staffing Examples				
Structure for Success				
	Dept A	Dept B	Dept C	Dept D
Project X				
Project Y				
Project Z				

Updated Master

Before



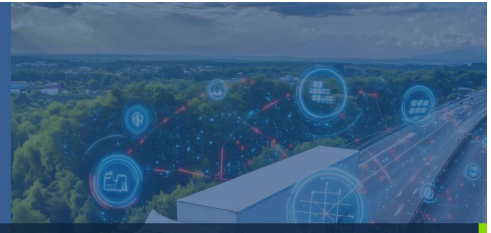
20xx

Making Research Relevant Core Course

Ahead of the Curve Training Program:
Mastering the Management of Transportation Research
Sponsored by the National Cooperative Highway Research Program Project 20-105

After

MAKING
RESEARCH
RELEVANT
CORE
COURSE




Mastering the Art of Transportation Research Program Management

Sponsored by the Transportation Pooled Fund TPF-5(536)

AHEAD OF THE CURVE
TRAINING PROGRAM

Updated Master

Before



PROGRAM GOAL AND OBJECTIVES

- Overview of the Ahead of the Curve Training Program

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After

Program Goal

To develop and deliver a coordinated and continuing TRB training program that enhances the knowledge, skills, and abilities of those who manage transportation research and innovation programs.

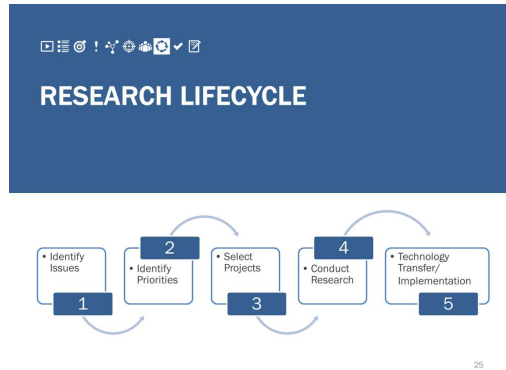


AHEAD OF THE CURVE | MAKING RESEARCH RELEVANT

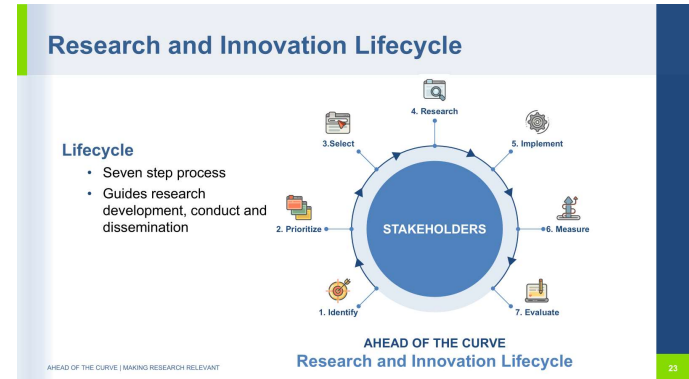
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Updated Master/Information: Research Lifecycle

Before



After





Student Engagement/ Interaction

- ▶ Changing format/delivery method requires enhanced engagement
- ▶ Goal: interaction every ~15 minutes
 - Best practice in online engagement
- ▶ New features
 - Handout style exercises
 - “Knowledge check” style quizzes





Knowledge Checks

- ▶ Found throughout each presentation
- ▶ Summarizing sections of each course
- ▶ Integrate into AASHTO TTS Learning Management System

Knowledge Check: Research Lifecycle

True or False

Program and process evaluation is NOT an integral part of the research and innovation lifecycle?

FALSE

AHEAD OF THE CURVE | MAKING RESEARCH RELEVANT

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Engagement Activities

- ▶ Variety of engagement activities
- ▶ Intent
 - Hands on approach
 - Apply course material
 - Content/format varies
- ▶ Examples
 - Web-quests
 - Elevator speech exercise
 - Develop your own “cheat-sheet”
 - Application of resources/websites





Sample: Elevator Speech

- ▶ Intent: students develop their own elevator speech on the importance/value of their research program
- ▶ Handout-style exercise walks through key steps
 - Students write, record, and revise their elevator speech
- ▶ Includes slide placeholder within presentation
 - Walks through intent and outcome of exercise



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Exercise: Elevator Speech

Your Two-Minute "Elevator Speech" (See Handout and Exercise)



- Help develop a high-level, brief pitch for your transportation research program
- Explain the importance/value of research
- Useful for communicating with a wide variety of stakeholders including leadership and public

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Ahead of The Curve: Mastering the Art of Transportation Research
Importance and Value of Research



Exercise: Your Two-Minute "Elevator Speech"

- What societal challenges or agency priority goals and visions does transportation research help aim to achieve or alleviate?
- How does transportation research drive innovation and solve problems in your state, at your agency, and nationally?

Example Core Message:

"Transportation research enables transportation agencies to implement and deploy emerging and new technologies and processes that save lives, reduce congestion, enhance mobility and reliability of the transportation system, and save taxpayers' dollars."

Step 2: Identify Key Supporting Points

Next, break down the core message into 3-4 key points that will support your argument. Keep it simple and focused on what your audience needs to know.

Prompt Questions:

- What are tangible challenges or visions that transportation research contributes to at your agency or at your state?
- Does your agency have any qualitative or quantitative values developed to showcase the importance of research? This may include quotes, storytelling, or quantitative analysis, such as return on investment of a particular project or program.
- How does transportation research impact everyday people, even if they don't see it directly? Are there surprising facts or findings behind transportation research at your agency?
- What is the main focus of your research program? This may center around innovative pavement design, technology deployment, safety, or other key areas. Consider tailoring your elevator speech to highlight the work your research program has done in this area.

Step 3: Create the Structure of Your Speech

Now that you have your core message and key points, it's time to structure your speech in a way

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Project Status and Next Steps



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LMS Integration

- ▶ Utilizing AI-developed voice to read script/narration
- ▶ SCORM files integrate seamlessly into AASHTO's TTS LMS





Project Status

- ▶ Developing course storyboards – have all 4 core courses ready for review
- ▶ SCORM files for TTS LMS
- ▶ Started on 508-compliance course
- ▶ Content updates to core courses and elective courses





508-Compliance Course

- ▶ 105-120 minute training course on 508-Compliance
- ▶ Title: Ensuring Digital Accessibility: A Guide to Section 508 Compliance
- ▶ Course outline
 - Overview of accessibility, disability, and assistive technologies
 - Legal landscape
 - Web Content Accessibility Guidelines (WCAG)
 - Creating accessible documents
 - Accessible multimedia





Next Steps

- ▶ Meet and discuss updates with panelist and committee
- ▶ Continue to highlight the AI voice narratives, training for better sound



Thank you!



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