

**2021 Vehicle Technologies
Annual Merit Review
June 21– 25, 2021**

**Guidelines and Slide Examples
Technology Integration (TI) Presentations**

Table of Contents

| | |
|--|----|
| Changes at a Glance for 2021 | 5 |
| Submission Deadline | 6 |
| Legal Indemnification | 7 |
| General Guidance and Instructions | |
| Creating and Naming Your Presentation Files | 8 |
| Overall Presentation Structure | 9 |
| Formatting Your Presentation | 10 |
| Adding Images to Your Presentation | 11 |
| Animations and Videos | 12 |
| Content Restrictions | 13 |
| Copyright Restrictions | 14 |
| Use of Logos | 15 |
| Recommended Slide Order | 16 |
| Preparing Your PowerPoint for Web-Publication / PDF | 17 |
| • Adding Alt Text to Your Presentation | 18 |
| • Adding Presentation Detail Information | 20 |
| • Creating Final Version of Your Presentation | 21 |
| • Creating PDF Version of Your Presentation | 22 |
| • Verifying PDF File | 23 |
| Submitting Your Presentation | 24 |

Table of Contents (Continued)

| | |
|--|----|
| Presenting at the AMR | |
| Oral Virtual Presentations | 25 |
| Presentation Time Limits | 26 |
| Additional Information | 27 |
| Late Information Addition | 28 |
| TI Review Criteria | 29 |
| Slide Instructions and Examples | |
| Slide Titles and Key Results | 30 |
| Instructions for Specific Slides | 31 |
| • Title Slide | 32 |
| • Overview | 35 |
| • Project Objectives | 38 |
| • Project Approach | 41 |
| • Milestones | 43 |
| • Project Accomplishments and Progress | 45 |
| • Collaborations | 48 |
| • Overall Market Impact | 50 |
| • Summary | 52 |

Table of Contents (Continued)

Slide Instructions and Examples (continued)

- | | |
|-----------------------------------|----|
| • Technical Back-Up | 54 |
| • Reviewer Only | 55 |
| ○ Publications and Presentations | 56 |
| ○ Critical Assumptions and Issues | 57 |

Changes at a Glance for 2021

- All oral presentation and posters must be turned in to ORAU (VTAMR@ORAU.org) no later than **May 14, 2021**.
- **Please NOTE:**
 - The AMR will be hybrid (virtual/in-person).
 - The Checklist will not be required but we strongly suggest that you follow it when preparing your presentation material.
 - Please use a 16:9 aspect ratio for your slides.

Submission Deadline

Presentations are due to
VTAMR@ORAU.org no later than

May 14, 2021

No exceptions!

Legal Indemnification

FOR INFORMATION ONLY. DO NOT INCLUDE IN PRESENTATION.

By submitting a presentation file to Oak Ridge Institute for Science and Education (ORISE) for use at the U.S. Department of Energy's (DOE's) Vehicle Technologies Office Annual Merit Review Meeting and to be provided as hand-out materials, and posting on the DOE's website, except for employees of the Federal Government and DOE laboratory managing and operating contractors, the presentation authors and the organizations they represent agree to defend, indemnify and hold harmless ORISE, its officers, employees, consultants and subcontractors, and the DOE from and against any and all claims, losses, liabilities or expenses which may arise, in whole or in part, from the improper use, misuse, unauthorized use or disclosure, or misrepresentation of any intellectual property claimed by others. Such intellectual property includes copyrighted material, including documents, logos, photos, scripts, software, and videos or animations of any type; trademarks; service marks; patents; and proprietary, or confidential information.

Employees of Federal Government agencies and DOE laboratory managing and operating contractors collectively represent and warrant that they have acquired the rights and/or permission for use of all intellectual property, as listed above and claimed by others, that is needed for developing and submitting a presentation file to ORISE for use at the DOE's Vehicle Technologies Office Annual Merit Review Meeting, and to be provided as hand-out materials, and posted on the DOE's website.

Creating Your Presentation Files

- ❑ Your presentation is public and will be posted to the DOE Vehicle Technologies Office (VTO) Annual Merit Review (AMR) website.
- ❑ You are required to create the following two files:
 1. A Microsoft PowerPoint file following the instructions and guidelines contained within this PowerPoint template. Acceptable formats for presentations are either .ppt or .pptx
 2. Once your PowerPoint presentation is complete, you must create a PDF version of your PowerPoint presentation following the instructions in this document.
- ❑ You may design your slides on either a PC or a Mac.

Naming Your Files

- ❑ Use the file name that ORAU sent you in your presentation request email to name your electronic PowerPoint and PDF files:

Proj#_PI LastName_2020_o

Example: T1002_smith_2020_o

Overall Presentation Structure

- **Primary Presentation:** These are the slides you will actually be presenting.
 - **Maximum 15–20 slides for 30-minute time slots**
 - Please only include work that has taken place since the 2020 AMR.
- **Technical Backup Slides:** These will be included in the presentation file, but are intended primarily to answer questions or provide supplemental information. These will be posted on the VTO AMR website.
 - **Maximum 5 slides**
 - Place these slides after the main presentation and separate them with a divider that says “*Technical Backup Slides.*”
- **Reviewer-Only Slides:** These will not be posted on the VTO AMR website.
 - We do not require reviewer-only slides, but we recommend that you prepare slides to elaborate on issues of interest to the reviewers.
 - There is no limit to the number or required format, but you should limit the number of slides to essential information and not overwhelm the reviewers.
 - Place these slides after any “Technical Backup” slides and separate them with a divider that says “*Reviewer-Only Slides.*”

Formatting Your Presentation

- ❑ Please use a 16:9 format for your presentation:
 - Design → Slide size → Widescreen (16:9) for PCs; File → Page Setup → Slides sized for → 16:9 for Macs.
- ❑ Do not use proprietary fonts. All fonts in the presentation must be standard across Windows and Mac platforms or information may be lost when creating the Adobe PDF version of your presentation.
- ❑ Use only Arial, Times New Roman, Courier New, Verdana, or Trebuchet MS.
- ❑ Use at least a 12-point font. Fonts should be large enough that audience members in the back of the room can read the slides.
- ❑ Ensure there is high contrast between text and background for best readability. We recommend a white background along with black or dark text. Light or gray text is hard to read at a distance so adjust your template accordingly.
- ❑ Please remove any copyright indicia from your company template so that your presentation can be posted on the AMR website.
- ❑ Spell out acronyms and chemical formulas the first time that you use them.
- ❑ Add Alt Text to all graphics, tables, and charts.
- ❑ Fill out the Properties box for your presentation.

Adding Images to Your Presentation

- ❑ Do not Copy/Paste images into your presentation.
- ❑ Insert the image using the “Insert/Picture/File name” menu option of PowerPoint rather than Copy/Paste for PC users.
- ❑ Insert the image using “Insert/Picture/Picture From File” menu option of PowerPoint rather than Copy/Paste for Mac users.
- ❑ Crop images in an image processing software instead of PowerPoint. Save the images as an external file (.jpg and .png file formats work well).
- ❑ Inserting original images into your presentation is best for preserving image clarity. If originals are not available, it may be an indication the image is copyrighted.

Animations and Videos

- ❑ Use animated text and/or figures only if absolutely necessary. Unnecessary animations can distract the audience from your message.
- ❑ Be aware that animations do not convert to PDF and animated information may not be visible to reviewers or in the final PDF posted on the VTO AMR website.
- ❑ Videos do not translate to PDF reliably and will not be posted on the VTO AMR website.

Content Restrictions

- ❑ Your presentation is public and will be posted on the VTO AMR website.
- ❑ You must include the phrase “This presentation does not contain any proprietary, confidential, or otherwise restricted information” on at least the first slide (you may put on all slides if you wish).
- ❑ Do not include any proprietary or confidential information. It is your responsibility to ensure that any subcontractor information is not proprietary or confidential.
- ❑ You must remove the copyright indicia on your company template if that indicia is part of the template; otherwise, we cannot post your presentation on the VTO AMR website.
- ❑ Your presentation may not include any slide that has “Official Use Only” or “Sensitive” or any similar wording or information that your organization might construe as being in such categories.
- ❑ You must include the phrase “Any proposed future work is subject to change based on funding levels.” on all slides with future-looking statements.

Copyright Restrictions

- ❑ If you use any **copyrighted information or graphics or intellectual property**, it must be properly attributed.
- ❑ Do not assume subcontractor information may be used without their approval.
- ❑ Do not assume that information or images published on a website can be used without permission.
- ❑ If you use copyrighted graphics (including copyrighted photos and journal and magazine covers), you must provide written permission along with your submitted file for it to be accepted by DOE for the purposes of the AMR.
- ❑ Intellectual property includes copyrighted material, including documents, logos, photos, scripts, software, and videos or animations of any type; trademarks; service marks; patents; and proprietary or confidential information.
- ❑ Also see the indemnification statement on page 7.

Use of Logos

- ❑ **Do NOT** use the DOE logo or seal in your presentation. Some examples include:



- ❑ **Do NOT** use the EERE slide template.
- ❑ If you use corporate logos for organizations other than your own, secure permission for use.

Recommended Slide Order

- Title Slide - must include Project ID, name of principal investigator, name of presenter if different, and “This presentation does not contain any proprietary, confidential, or otherwise restricted information.”
- Overview Slide - must include timeline, budget, barriers, and partners
- Project Objectives
- Milestones (if not included as part of Approach)
- Approach
- Project Accomplishments and Progress
- Collaboration and Coordination among Project Team
- Market Impact and Sustainability
- Summary Slide
- Technical Back-Up Divider Slide
- Technical Back-Up Slides
- Reviewer-Only Divider Slide
- Reviewer-Only Slides
 - Publications & Presentations
 - Critical Assumptions & Issues

Preparing your PowerPoint for Web-Publication / PDF

- ❑ You must create your web-ready PDF file (the file that will be published on the VTO AMR website) using the following instructions on the next pages (p. 18-23) to:
 - Add Alt Text
 - Add presentation detail information
 - Create and verify the final PDF.

Adding Alt Text to Your Presentation

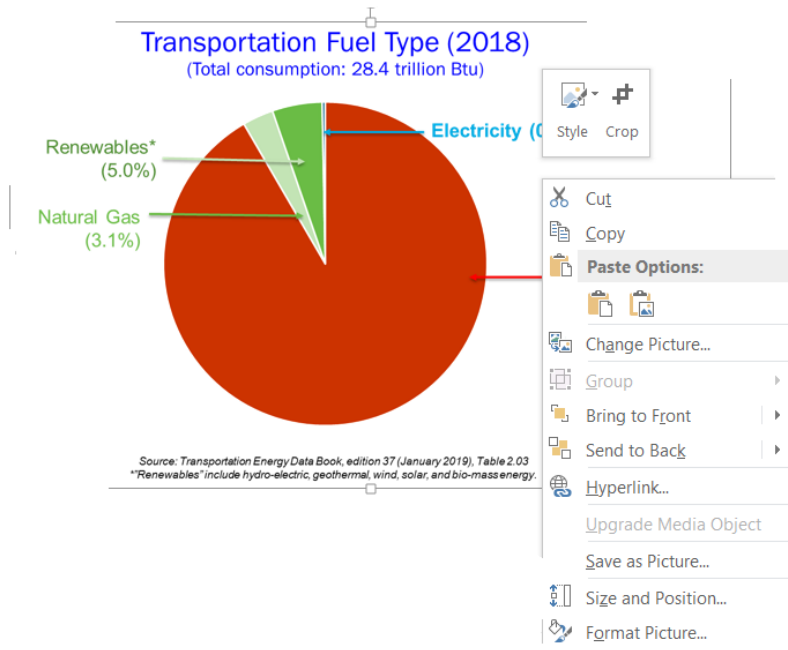
- ❑ You must add alternate text (Alt Text) to key graphics, charts, and tables on each slide.
- ❑ Alt Text helps visually impaired people who use screen readers to know what the picture shows.
- ❑ Be accurate and succinct. You do not have to say “image of...” or “graphic of....”

A good Alt-Text example of a picture of a crowd at a basketball game:

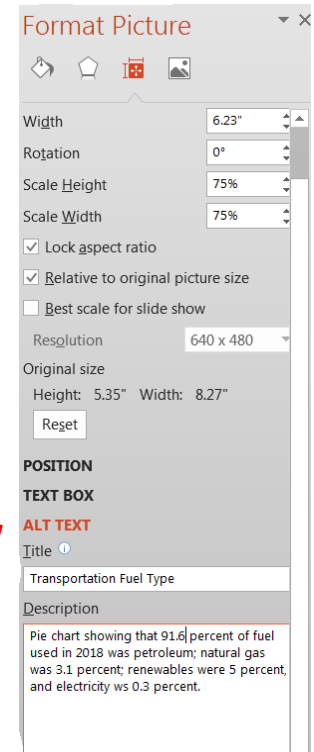
“A large, diverse group of cheering students, standing up, and fist-pumping on the bleachers of a basketball game.”

To Add Alt Text to a Chart, Graph, or Image

Note: These instructions are for PowerPoint 2013. If you have a newer version, you may be able to right click on the graph or chart and select “Edit Alt Text” directly from the menu.



1. Right click on the graph or chart and select “Size and Position...”

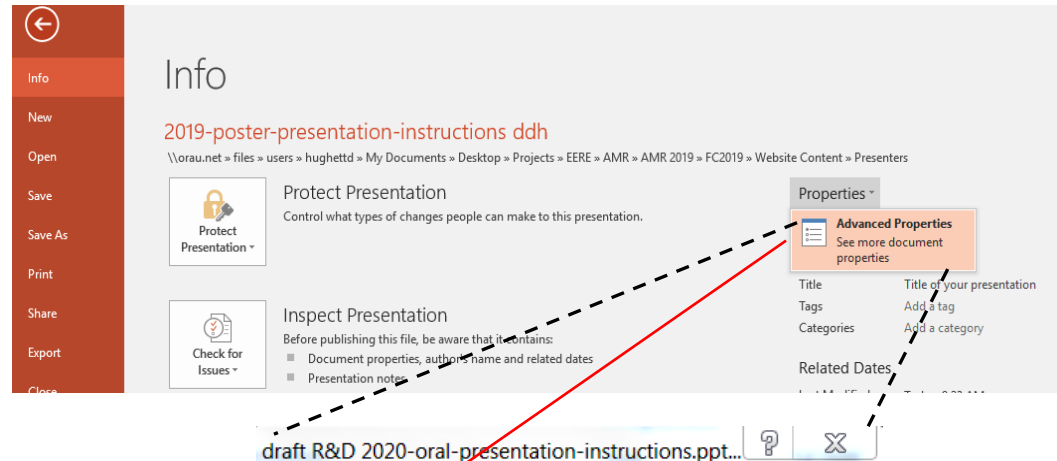


2. Select the “Alt Text” option and enter the **Title** and a short brief **Description** of the chart

3. Close the Format Picture pane to return to the PowerPoint slide

Adding Presentation Detail Information

- Under the **File** tab, select **Info**
- Click on “**Properties**” and then select “**Advanced Properties**”



On the “**Summary**” tab of the pop up window, complete the following fields:

- **Title:** Enter the title of your presentation
- **Subject:** Substitute your **Project Id** into the subject
- **Author:** Enter the **PI Name** and **Company**

draft R&D 2020-oral-presentation-instructions.ppt...

General Summary Statistics Contents Custom

Title: Oral Presentation Guidelines and Examples

Subject: Project ID, 2020 VTO Annual Merit Review

Author: Principal Investigator Name, Company

Manager:

Company:

Category:

Keywords:

Comments:

Hyperlink base:

Template:

Save preview picture

OK Cancel

- **Save preview picture:** Make sure this box is checked
- Press **OK**

Creating Final Version of Your Presentation

- ❑ Once your PowerPoint presentation is final, you must minimize your PowerPoint's file size.
- ❑ Do this by using the “**Save As**” option to save the final version of your file as a PowerPoint presentation.
- ❑ Doing a simple “Save” command will not minimize file size.
- ❑ You can “Save As” an existing PowerPoint filename if needed.

Creating PDF Version of Your Presentation

- ❑ You are also required to submit a PDF version of your presentation.
- ❑ After saving your PowerPoint file using the “Save As” option, save the file as a PDF using the same naming conventions as your PowerPoint file.
 - If you have Adobe Acrobat Pro software, you can use the Acrobat PowerPoint plug-in or select “Save As Adobe PDF” to create your PDF
 - If you do not have Acrobat Pro, click “Save As” and select “PDF” from the Save As type menu.
- ❑ Click the “Options” button in the Save As window and make sure to check the box to enable accessibility tags. Look for text that says “Document structure tags for accessibility” or “Enable accessibility and reflow with tagged Adobe PDF.”
- ❑ Click “Save”.
- ❑ Select “NO” if asked if you would like to convert the presentation’s speaker notes to text annotations in the PDF.

Verifying PDF File

After you created the PDF,

- ❑ Scroll through the document and look at every page to ensure the PDF matches the PowerPoint file
- ❑ Look for missing items from charts, such as legends and axis titles, which sometimes disappear due to incorrect object reordering that can result from the tagging process for accessibility.
- ❑ If you do find issues that you're not able to fix, a communications or publishing specialist at your organization may be able to help. Or, you can contact VTAMR@ORAU.org to help troubleshoot the PDF conversion.

Submitting Your Presentation

- ❑ You must submit your presentation files to ORISE no later than **May 14, 2021.**

- ❑ Submit your presentation to ORISE by sending an email with the following items to VTAMR@ORAU.org:
 - Your PowerPoint presentation file (.ppt or .pptx)
 - The PDF version of your PowerPoint presentation (.pdf)
 - Information as to whether your presentation was created using a PC or a Mac
 - Information as to which slide numbers contain videos
 - Any changes to title or presenter. Title changes must be approved in advance by your VTO Technology Manager.

- ❑ If your presentation files are too large to submit through email, request an alternate delivery method by emailing VTAMR@ORAU.org

Oral Presentations

- Plan to present virtually via Zoom.
- Each session will have a moderator to enforce time limits and facilitate Q&A. Your mic will be muted once you have reached your time limit.

Presentation Time Limits

- Your oral presentation will be 30 minutes in length as indicated on your invitation-to-present email from ORAU.
 - Oral presenters will be allowed 20 minutes for the prepared presentation and updates and 10 minutes for questions
 - Oral presentations should contain a **maximum of 15-20 presented slides**.
- **Time limits will be strictly enforced.**

Additional Information

- A PDF version of the presentation slides will be available for attendees to download from the VTO AMR website just before the meeting. This PDF will not include PowerPoint animations, videos, or Reviewer-Only slides.

Late Information Addition

- Information and research updates that become available following the submission of the presentation but before the AMR may be supplied verbally at the time of the oral or poster presentation.
- **No extensions will be granted for presentation submission.**
- Any additional information must still adhere to the time limitations.

TI Review Criteria

All TI presentations follow the same content and design guidelines for reviewer scoring.

- **Project Objectives** **20%**
- **Project Approach** **20%**
- **Project Accomplishments and Progress** **40%**
- **Collaboration and Coordination among Project Teams** **10%**
- **Market Impact and Sustainability** **10%**

Resources: Reviewers will provide a qualitative evaluation of the project's use of funds.

Consider these criteria and weights when creating your presentation!

Slide Titles

Except for the mandatory Title, Overview, and Summary slides, **all slide titles and headings should relate directly to the evaluation criteria!**

Key Results

The key take-home message for each results slide should be communicated as a banner, header, or bullet.

Instructions for Specific Slides

- The following guidelines provide specific information on mandatory slides and the type of information expected within the criteria guidelines. These instructions apply to both poster and oral presentations.
- **Your presentation should include:**
 - **Title Slide** (mandatory)
 - **Overview Slide** (mandatory)
 - **Review Criterion Slides** (mandatory, one or more slides as appropriate for each review criterion)
 - **Summary Slide** (mandatory)
 - **Technical Back-Up slides** (optional)
 - **Reviewer-Only slides** (optional).
- **The following slides include:**

Instruction

(Guidance for constructing the specific slides and sections)

Example Slide

(Examples are from high-scoring previous AMR presentations)

Title Slide

□ Include:

- project title
- name of the principal investigator
- name of the presenter if different from the principal investigator
- organization
- project ID# (which ORAU will provide to you)
- Statement: “This presentation does not contain any proprietary, confidential, or otherwise restricted information.”

Instruction for all oral
and poster
presentations, unless
otherwise noted

2021 DOE Vehicle Technologies Office Annual Merit Review Presentation (replace with your title)

P. I. Name (always include)

Presenter Name (if not the P.I.)

Organization

Date

Project ID #
(this will be
provided to you)

Electric Last-Mile Project

Principal Investigator: Grant Fisher
Presenter: Grant Fisher
Organization: Pecan Street Inc
Presentation Date: June 11, 2019
Project ID: TI087

This presentation does not contain any proprietary, confidential, or otherwise restricted information.

ACCELERATING ALTERNATIVE FUEL ADOPTIONS IN MID-AMERICA



2019 DOE VEHICLE TECHNOLOGIES OFFICE
Annual Merit Review and Peer Evaluation Meeting

June 11, 2019



Kelly Gilbert, Principal Investigator
Metropolitan Energy Center

Project ID: TI089

This presentation does not contain any proprietary, confidential, or otherwise restricted information.

Mandatory Overview Slide

- ❑ Please prepare an Overview slide formatted and containing the information per the following slide:
 - Timeline (please confirm dates with your DOE HQ/NETL manager(s))
 - Budget (please confirm values with your DOE HQ/NETL manager(s))
 - Barriers (please list up to three Technology Integration barriers and targets that this project will address)
 - Partners.

Overview

Timeline

- Project start date
- Project end date
- Percent complete

Budget

- Total project funding
 - DOE share
 - Contractor share
- Funding for FY 2020
- Funding for FY 2021 (if available)

Barriers and Technical Targets

- Barriers addressed
 - List up to three Technology Integration barriers and targets that this project will address

Partners

- Interactions/collaborations
- Project lead

Overview

Overview Slide Examples

Timeline

Start: October 1, 2017
End: September 30, 2019
~ 90% Complete

Budget

Total Funding: \$2,000,000
DOE share: \$1,000,000
Cost share: \$1,000,000
Budget Period 1: \$1,762,964
Expended: \$1,762,964
Budget Period 2: \$237,036
Expended*: \$13,025

* as of 2/28/2019

Partners

Capital Metropolitan Transportation Authority
Electric Cab of North America
Endeavor Real Estate Group
Catellus Real Estate
Overture Apartment
City of Austin
Autonomous Vehicle Vendor (TBD)

Barriers

Difficult to access transit
Limited technology solutions and understandings of new solutions

Any proposed future work is subject to change based on funding levels



Overview

Overall Goal

- Increase EV adoption in the Intermountain West

Timeline

- Start: January 19, 2017
- End: January 18, 2020
- 33% Complete

Budget

| | |
|-----------------------|-----------------------------|
| Total project funding | \$11,168,873 |
| DOE share | \$3,532,330 (PacifiCorp) |
| | \$450,000 (INL) |
| Cost share | \$7,186,543 |
| Budget period 1 | \$559,250 |
| Budget period 2 | \$1,598,975 |
| Budget period 3 | \$1,374,105 |

Any proposed future work is subject to change based on funding levels.

Barriers Addressed

- Limited availability of charging infrastructure along travel corridors and places of work
- Limited options for multi-modal electric transportation at the community level
- Limited understanding of electric transportation solutions and benefits

Partners

- PacifiCorp
- Utah State University
- Utah Clean Cities Coalition
- University of Utah
- Idaho National Laboratory
- Forth Mobility
- Park City
- Salt Lake City
- Breathe Utah

Overview

Timeline

- ❖ Start: October 1st, 2017
- ❖ End: December 31st, 2020
- ❖ 40% complete

Barriers addressed

- ❖ Lack of tradition of cooperation among private, public and research efforts which limits innovation and prevents from addressing energy efficient goals
- ❖ Lack of comprehensive analytical models that can predict how changes in supply chain's behavior could impact energy consumption

Budget

- ❖ Total project funding: \$4,000,343
 - ❖ DOE share: \$1,999,999
 - ❖ Cost share: \$2,000,344
- ❖ Total project expended: \$1,801,253
 - ❖ DOE share: \$604,055
 - ❖ Cost share: \$1,197,198

Partners

- ❖ Leader: Rensselaer Polytechnic Institute (RPI)
- ❖ Partners:
 - ❖ Argonne National Lab (ANL)
 - ❖ George Mason University (GMU)



Project Objectives

- ❑ Project Objectives count for 20% of your total project score.
- ❑ **These slide titles should clearly link to your Project Objectives.**
- ❑ Information to include:
 - Describe the objectives of your project and what you were to achieve in the time period covered by this presentation
 - Describe how your project supports the following VTO Technology Integration goals (only note those that are applicable):
 - **National security** (fuel diversity, domestic fuel sources, alternative fuels)
 - **Economic growth** (business opportunities related to advanced vehicle technologies).

Project Objectives - Continued

- **Affordability for business and consumers** (cost savings from increased efficiency, alternative fuels, mobility advancements, smarter driving practices)
- **Reliability/resiliency** (infrastructure reliability, diverse/resilient fueling, and transportation options).
- The **impact your project has on addressing the barriers identified in the Overview slide and other specific targets and milestones.**

You may verbally elaborate on project objectives in addition to what's on your slide.

Project Objectives

Objectives Slide Examples

Objectives

Objective

Study public transit ridership in pilot neighborhoods using electric shuttles to help bridge the “last mile”

To provide a demonstration opportunity to evaluate technology solutions to transit problems

VTO TI Goals

National Security
Increase Alternative Fuel Use

Economic Growth
Allow for new technologies to be demonstrated

Reliability/Resiliency
Providing diverse transportation options

Impact

Increase connectivity to and from transit

Improve the awareness of lack of first and last mile connectivity

Provide new technology solutions to address the barriers

Any proposed future work is subject to change based on funding levels



1. **Accelerate the adoption of EVs** in shared mobility applications in four major U.S. markets.
2. **Deploy and test tools** to overcome barriers to EV adoption by shared mobility entities.
3. **Create a playbook of best practices** that can be used across the country.

This will result in:

- The development of novel operational evidence supporting EV business models in shared mobility services
- The demonstration of the use-case for EVs in shared mobility and production of valuable data that will inform existing and future shared mobility applications
- The integration of shared EVs and supportive charging technology in our target markets
- The avoidance of gasoline fuel combusted by shared mobility vehicles that electrify as a result of this project

*Any proposed future work is subject to change based on funding levels.

VTO Technology Integration Goals Addressed:

National Security: Increases alternative fuel use

Affordability for Business and Consumers: Communicates cost savings available to EV drivers

Reliability/Resiliency: Enhances transportation options and leverages investment in EVSE

Project Objectives



Objectives

- Deployment of Alternative Fuel Vehicle (AFV) Fleets and Infrastructure
- Development of Alternative Fuel Corridors
- Development of Strategic AFV Fleet Partnerships
- Analysis of CNG Stations for Future Hydrogen Infrastructure Deployment

Tech Integration Goals

- National Security
 - - Fuel Diversity/Alt Fuels
- Economic Growth
 - - Growing Alt Fuel Industry & Workforce
- Affordability for Business & Consumers
 - - Cost Savings
 - - Mobility
- Reliability/Resiliency
 - - Infrastructure/AF Corridors

Barrier Impact

- Increased adoption/awareness of AFVs (niche fleets)
- Increased availability of alt. fuel infrastructure
 - - Locally & continuous corridors in SE
- Document best practices for procurement, deployment, training, & maintenance
- Data collection to assess benefits and inform decisions

Project Approach

- ❑ Project Approach counts for 20% of your total project score.
- ❑ The title of your slides should make it clear that they count toward **Project Approach**.
- ❑ Describe overall Approach for achieving the **objectives** of national security, economic growth, affordability for businesses and consumers, and reliability/resiliency. Be sure to indicate if this project will collect/share objective data & lessons learned that can inform future research needs and provide insights to local communities and stakeholders.
 - Describe the overall approach for your project (phases of work, etc.)
 - **List specific tasks from your Statement of Project Objectives and/or Annual Operating Plan**
 - Emphasize unique aspects of your work
 - Describe how your project is linked to other R&D or technology integration projects within the VT Office and/or other federal agencies (if applicable)
 - Use simple statements so that lay-people, not experts in your area, can readily understand the explanation of your approach.
- ❑ Include the planned milestones and go/no-go decision points for FY 2021 and FY 2022 and current status toward them, as applicable. 41



Objective 2: Development of Alternative Fuel Corridors

- Task 1: Southeast AF Corridor Mapping
- Task 2: Identification of Gaps in Existing NG and EVSE Corridors
- Task 3: Identification of Potential Fleet Partners in Priority Locations
- Task 4: Identification of Potential Fueling Station Partners in Priority Locations
- Task 5: Alternative Fuel Corridor Signage Development

Objective 3: Development of Strategic AFV Fleet Partnerships

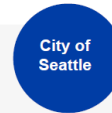
- Task 1: Evaluate Supply Chain Partnerships to Identify & Alleviate Barriers for AFV Adoption
- Task 2: Conduct Surveys of AFV Fleet Owners to Identify and Document Obstacles and Solutions
- Task 3: Develop & Publish Case Study on SE AFV Fleet Procurement/Deployment Lessons Learned & Best Practices

8

Project Approach

By piloting a series of programs in several widely varied urban environments, the project will develop, test, and prove market-viable techniques for EV adoption in shared mobility applications.

Atlas Public Policy is the Project Management Oversight Consultant.



Seattle, Washington

Strategy: Increase EV charging access and awareness at or near Shared Mobility Hubs

Key Partners: Seattle City Light (municipal utility), Western Washington Clean Cities Coalition



New York, New York

Strategy: Provide EVs and supporting charging infrastructure to ride-hailing vehicle fleets

Key Partners: EVgo, Maven, NYC Taxi & Limousine Commission, Empire Clean Cities Coalition



Denver, Colorado

Strategy: Provide EVs directly to ride-hailing drivers and supply charging infrastructure

Key Partners: Maven, EVgo, American Lung Association in Colorado



Portland, Oregon

Strategy: Promote EV use to transportation network company (TNC) drivers coupled with access to free, unlimited charging.

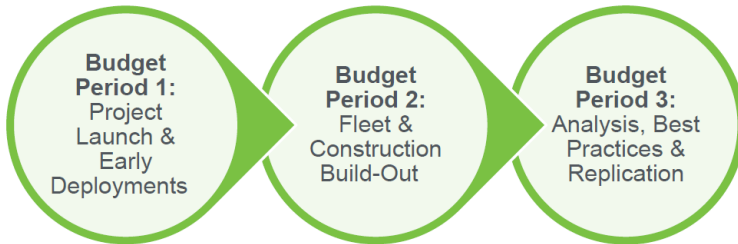
Key Partners: Uber, Brink, Portland General Electric

*Any proposed future work is subject to change based on funding levels.

Department of Transportation



Approach



- Prepare Community Outreach and Engagement
- Activity: Create Media Packet
- Activity: Host Community Workshops
- Begin Infrastructure Development
- Begin Vehicle Procurement

- Infrastructure Development (continued)
- Vehicle Procurement (continued)
- Community Outreach and Engagement – Execution
- Hydrogen Infrastructure Integration Study

- Infrastructure Development (continued)
- Vehicle Procurement (continued)
- Community Outreach and Engagement – Execution (continued)
- Data Management and Analysis

Milestones

- ❑ Milestones may be presented in a separate slide directly after the Approach section or included as part of the Approach section.
- ❑ Include milestones and go/no-go decision points for FY 2021 and FY 2022.

Milestones

| Pilot Phase Milestones | Type | Progress |
|--|-----------|----------|
| Pilot partner proposals received from desired locations | Technical | Achieved |
| Pilot corridor chargers operating, lessons learned/best practices (LL/BP) positive for expansion | Technical | Achieved |
| Workplace charging at team sites, data collection proceeding | Technical | Achieved |
| Pilot workplace charging operating, LL/BP positive for expansion | Technical | Achieved |
| Pilot EV deployment operating, LL/BP positive for expansion | Technical | Achieved |
| Pilots in SLC/Park City demonstrate smart mobility approach viability | Technical | Achieved |
| Adoption models validated, pilot data indicates meeting impact goals | Go/No Go | Achieved |

| Expansion Phase Milestones | Type | Progress |
|---|-----------|-------------|
| Corridor chargers expanding, LL/BP positive for full rollout | Technical | In Progress |
| Workplace charging expanding, LL/BP positive for full rollout | Technical | In Progress |
| EV adoption numbers expanding, LL/BP positive for full rollout | Technical | In Progress |
| Mobility services expanding, LL/BP positive for full rollout | Technical | In Progress |
| Smart mobility expansions based on pilot LL/BP validate models and indicate positive plan for rollout | Go/No Go | In Progress |

Milestones

| Task # | Description | Milestones |
|-----------------------------|---|--|
| 0 | Project Management | N/A |
| 1 | EV Shared Mobility Playbook | # 1.04- Literature review and resource library published ✓ |
| | | # 1.05- Publish case studies ✓ |
| | | # 1.07- Draft Strategic Deployment Plan ✓ |
| | | # 1.08 EV Shared Mobility Analysis Tool (September 2019, draft currently) |
| Go/No-Go, (October 1, 2018) | | # 1.09- Publish analysis report (September 2020) |
| | | 80% of Phase 1 deployment sites identified ✓ |
| 2 | Initial Charging Station Deployment Phase 1 | # 2.06- Initial EV infrastructure installed (September 2019) |
| 3 | Launch Operations for Initial EV Deployment | # 3.01- Initial EVs in service (September 2019) |
| 4 | Reserved | N/A |
| Go/No-Go, (August 1, 2019) | | 80% of Phase 1 deployment sites identified |
| | | #5.06- Charging infrastructure at additional sites to support expansion installed (December 1, 2019) |
| 5 | Infrastructure Deployment Phase 2 | # 6.01- Second tranche of EVs placed into service (December 1, 2019) |
| 6 | EV Deployment Phase 2 | N/A |
| 7 | Project Evaluation Phase 2 | N/A |
| 8 | Infrastructure Deployment Phase 3 | # 8.06- All charging infrastructure deployed (September 2020) |
| 9 | EV Deployment Phase 3 | # 9.01- Third and final tranche of EVs deployed (August 2020) |

*Any proposed future work is subject to change based on funding levels.

Department of Transportation



Milestones

| | Milestone | Type | Description |
|-----------------|--|-----------|--|
| Budget Period 1 | Macro and Micro Events | Technical | Hold approximately 10% of events |
| | EV Dealer Training, Workplace Charging Challenge Showcase Events | Technical | Develop initial EV Dealership Training Event materials and Workplace Charging Challenge Showcase Event materials |
| | Extended Test Drive and Electric Vehicle Forum Events | Technical | Extended Test Drive membership established and EV Forum materials development complete |
| | Public Relations and Communications | Technical | Key message developed; Establish project specific website |
| | Project Initiation | Go/No Go | All contracts secured |

| | Milestone | Type | Description |
|-----------------|--|-----------|---|
| Budget Period 1 | Macro and Micro Events | Technical | Hold approximately 50% of events |
| | EV Dealership Training, Workplace Charging Challenge Showcase Events | Technical | Complete EV Dealership Training; Hold 50% of Workplace Charging Challenge Showcase events |
| | Extended Test Drive & EV Forum Events | Technical | Hold approximately 50% of events/forums |
| | Public Relations and Communications | Technical | Complete approximately 50% event communications |
| | Project Events | Go/No Go | Approximately 50% of all events completed |

Project Accomplishments and Progress

- ❑ Project Accomplishments and Progress count for 40% of your total project score.
- ❑ The title of these slides should make it clear that they address **Project Accomplishments and Progress**.
- ❑ Each slide should include a summary “take-away” message, especially those that contain data.
- ❑ **Describe the most important accomplishments achieved during this reporting period and their significance** (from the project’s last review to date for existing projects or progress to date for new projects).
- ❑ Include relevant data to support your accomplishments.
- ❑ Relate the accomplishments to project milestones, barriers, objectives, and Technology Integration targets!

Project Accomplishments and Progress - Continued

- ❑ Indicate no more than one slide on previous accomplishments and **CLEARLY indicate work presented at previous AMRs versus new work (n/a if first-time project is being presented)!**
- ❑ To assist the reviewers evaluating your work, please include bullet comments of the key points on each slide.
- ❑ Include sufficient slides to explain what was done leading to the accomplishments.
 - Limit your slides to the time you have available - **the 20-minute presentation time will be STRICTLY enforced!**
- ❑ Though your presentation will be in color, it is best to choose colors and data symbols that can be easily distinguished in black and white for those reviewers using hardcopies.

Project Accomplishments (3/4)

Task 2: EVSE Deployment Phase 1

- Two Direct Current (DC) Fast Charging stations installed in Seattle near Beacon Hill Light Rail Station
- Operational since January 2018 under Seattle DOT's Electric Vehicle Charging in the Right-of-way permit pilot
- 18% growth in station usage over 2018
- Some frequent users charged over 20 times per month



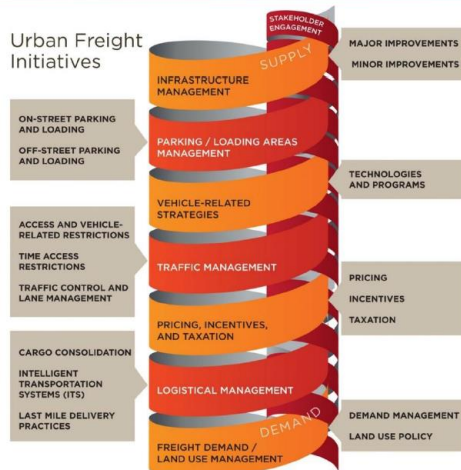
*Any proposed future work is subject to change based on funding levels.

Department of Transportation



Accomplishments: Catalog of Urban Freight Initiatives ¹⁰

- ❖ A comprehensive revision of **demand/ supply initiatives** that can reduce energy use
- ❖ Development of a **typology** to qualitatively **evaluate the benefits and costs** of the initiatives
- ❖ Establishment of an **advisory group** to gather feedback on feasibility and potential of corridor and urban initiatives
- ❖ Identification of potential sources of **energy efficiency**

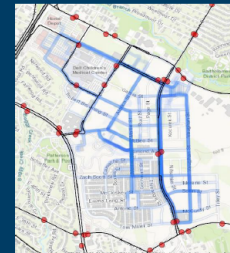


52 different initiatives were characterized



Project Accomplishments and Progress

New Shuttle Route Most Successful to Date



Over 13k Yearly Miles*

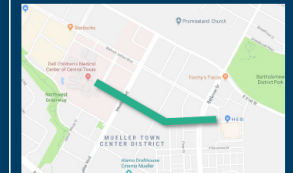
Pricing Trial Completed with Fascinating Results



Half of the pricing trial was offered rides at \$1, the other was name-your-own-price.

| Price Named | % of Riders |
|-------------|-------------|
| \$0.00 | 55% |
| \$0.50 | 6% |
| \$1.00 | 11% |
| \$1.50 | 27% |
| \$2.00 | 2% |

AV Route Selected for Autonomous Demonstration



Working with project team for deployment

Any proposed future work is subject to change based on funding levels

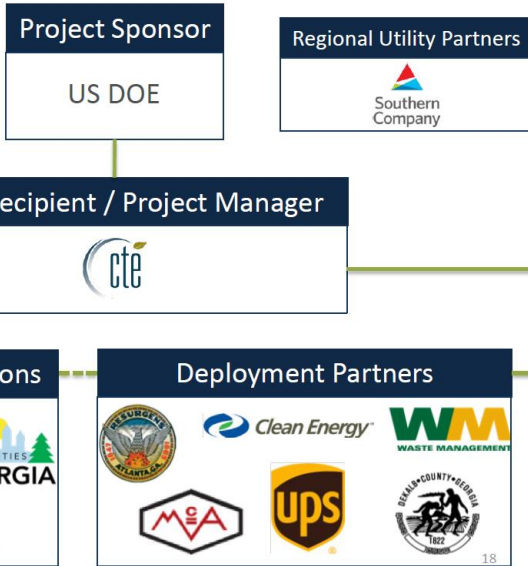


Collaboration and Coordination among Project Team

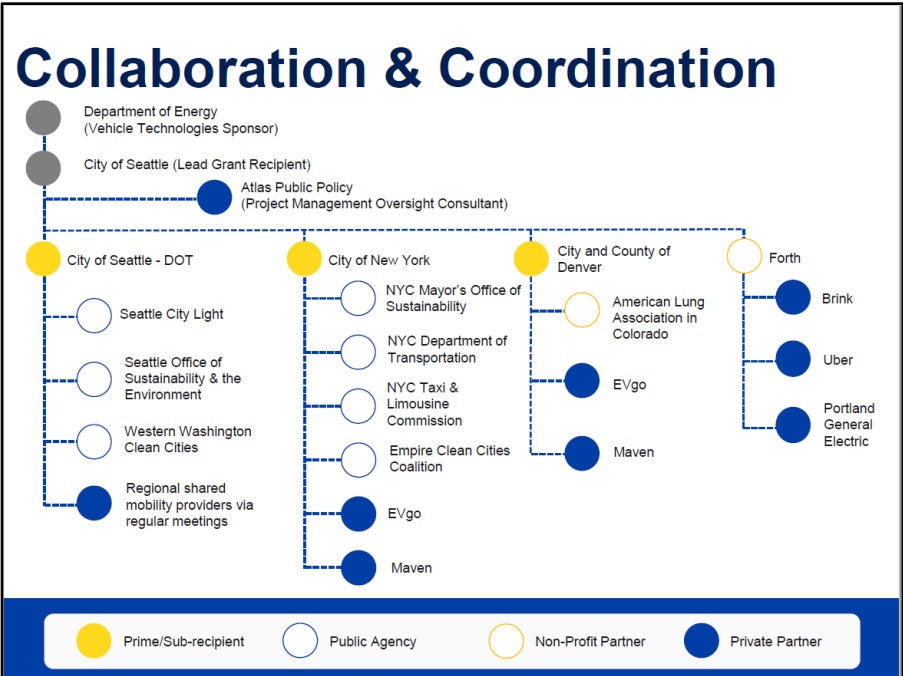
- ❑ Collaboration and Coordination with Project Team count for 10% of your total project score.
- ❑ **The title of these slides should make it clear that they count toward your Collaboration among Project Team.**
- ❑ List your project collaborators, indicating:
 - Relationship (for example, prime, sub, etc.)
 - Industry, university, National Laboratory, community stakeholder, etc.
 - Within or outside VTO
 - Extent of the collaboration.
- ❑ Describe the mix of expertise among team members and its impact on your project.
- ❑ Describe the contact, interaction, coordination, and communication among project partners.
- ❑ Describe contact, interaction, coordination, and communication with VTO.



- Biweekly Meetings
- DropBox Fileshare
- Quarterly Progress Reports



Collaboration Slide Examples



Collaboration and Coordination Among Project Team



Any proposed future work is subject to change based on funding levels

Overall Market Impact

- ❑ Overall Market Impact counts for 10% of your total project score.
- ❑ **The title of these slides should make it clear that they address **Overall Market Impact**.**
- ❑ **Highlight how the project has already contributed to the goals and objectives stated earlier, and how it may do so in the future.**
- ❑ If applicable, describe how your project will be sustainable beyond the period of performance.
- ❑ If applicable, discuss how your project idea could be replicated in other geographic areas or with other technologies.
- ❑ Explain what you plan to do during the rest of this year (FY 2021) and next year (FY 2022).
- ❑ Highlight the key remaining challenges and barriers to meeting the project objectives.
- ❑ **Be as specific as possible; avoid blanket statements.**

Overall Impact

- Directly addressing a critical barrier to alternative fuel adoption – **unnecessary costs and restrictions in garage upgrades are often the deciding factor against alternative fuel adoption**
 - Outreach
 - Wide audience: code officials, fire marshals, AHJs, fleets, decision makers, station designers, municipalities
 - Workshop and material information sent to thousands of stakeholders; over 3500 LinkedIn views
 - Disseminating materials
 - Reports, best practices, presentations, and video downloads from website
 - Workshops/Facility Tours
 - Workshops completed

Overall Impact

- ❖ Achievements in first two quarters:
 - ❖ Produced insight into **the wide range of initiatives** that are potentially applicable to the energy efficiency in logistics context
 - ❖ Secured the participation of prominent members of the **public and private** sectors and institutions for the **advisory group**
 - ❖ Produced an initial **draft of the platform** to integrate modeling tools

- ❖ Upcoming:
 - ❖ Active involvement of different stakeholders in the evaluation of the initiatives
 - ❖ Justification of which initiatives should be pilot-tested based on simulation results from cutting edge simulators
 - ❖ Pilot-testing of the most beneficial initiatives

“Any proposed future work is subject to change based on funding levels”

Overall Impact

Achievements to date

- Completed three electric shuttle deployments with over 10k trips and almost 19k passengers served
- Successfully Developed Technology Kit for vehicle data collection systems
- Published all collected data for researchers
- Created a reproducible, new form of transit service for agencies to implement (one has already!)
- Published pricing data for new forms for pricing for transit and deeper understanding of price models

Upcoming

- Demonstrating autonomous vehicle transit route



Any proposed future work is subject to change based on funding levels

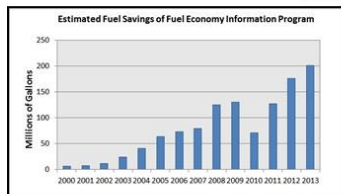
Mandatory Summary Slide

- ❑ Summarize the key points you wish the reviewers and the audience to take away from your presentation.

SUMMARY



- Fulfills DOE's **statutory responsibility** to provide FE information to the public (49 USC 32908, 2006)
- >350M FE.gov users since 1999 (49.7M in MY 2014)
- >1B gallons of petroleum reduction since 1999 (168M gallons in MY 2013)
- Continue efforts with *FEG*, FE.gov, media outreach, *MotorWeek*, etc.
- Expand efforts with FE Tool Kit, PSA campaign, used car tools, "Personalized MPG," new tools for mobile devices, and updated tips for advanced technology vehicles



OAK RIDGE National Laboratory

21 DOE Annual Merit Review

Summary Slide Examples

Summary

| Objectives | Approach | Accomplishments | Up Next |
|---|---|---|---|
| <ol style="list-style-type: none"> 1. <u>Accelerate the adoption of EVs</u> in shared mobility applications in four major U.S. markets 2. <u>Deploy and test tools</u> to overcome barriers to EV adoption by shared mobility entities 3. <u>Create a playbook of best practices</u> that can be used across the country | <ul style="list-style-type: none"> • Pilot a series of programs in several widely varied urban environments • Deploy EVs and supportive EV charging infrastructure • Develop, test, and prove market-viable techniques for EV adoption in shared mobility applications • Collect data and lessons learned to project's playbook of best practices | <ul style="list-style-type: none"> • Published literature review and case studies • Developed draft strategic deployment plan • Published EVSE Roadmap for Shared Mobility Hubs (Seattle only) • First EVSE installed • #Drivergoals campaign launched | <ul style="list-style-type: none"> • Publish data dashboards (draft currently) • Publish shared mobility analysis (draft currently) • Deploy infrastructure and EVs • Grow outreach and engagement efforts • Evaluate and adjust implementation strategies |

*Any proposed future work is subject to change based on funding levels.

Department of Transportation



Summary

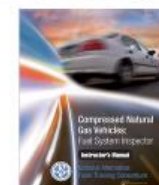
19

- Goal**
 - ❖ Foster collaboration with private/public/academia to achieve more energy efficient freight logistics
- Approach**
 - ❖ Identify initiatives that create synergies between Tech/Ops and freight demand management
 - ❖ Integrate the state-of-the-art freight and energy assessment models to test combination of energy efficient initiatives and pilot test them in the Albany-NYC corridor
- Collaborators**
 - ❖ Partners: RPI (lead), Argonne National Lab, George Mason University
 - ❖ Advisory Group comprised of public and private sectors members
- Achievements**
 - ❖ Produced a catalog of urban freight initiatives that aim to foster energy efficiency in logistics context
 - ❖ Significant progress in the development of algorithms and modeling tools
 - ❖ Secured the participation of prominent members of the private sector such as UPS, Anheuser Busch or Price Chopper



Summary

- Relevance:**
 - Addressing stakeholder technical needs by providing more frequent, cost-effective training
 - Raising awareness of AFVs with target audience, particularly first responders
 - Reducing anxiety of performing in-house maintenance
- Approach**
 - Leveraging existing curriculum
 - Building on current stakeholder relationships and creating new partnerships with colleges and training centers
 - Train-the-Trainer to deliver additional classes beyond the life of the project
- Collaborations**
 - Local governments (fire departments, code officials, fleets, etc.)
 - Community/vocational colleges
 - Training Centers
- Project Accomplishment**
 - Nearly 20 classes held with over 250 attendees
 - Future Action Plan will guide continued work and provide for replicability



Any proposed future work is subject to change based on funding levels.

16



Technical Back-Up Slides

(Note: please include a “divider” slide if you are including back-up technical slides [maximum of five]. These optional back-up technical slides will be available for your presentation and will be included in the web PDF files released to the public.)

Reviewer-Only Slides

These optional slides may be included in your submission, but will not be part of your oral presentation – they will be provided to reviewers only. **These optional slides will be removed from the presentation file and the web PDF files.**

Precede these slides with a divider slide marked “Reviewer-Only Slides”

Publications and Presentations

- List any publications and presentations that have resulted from work on this project.
- Use at least 12-point font.
- Please verify that the links in your slides are active.

Note: This slide is for the Reviewers only; it is not to be presented as part of your oral presentation. These Reviewer-Only slides will be included in the copy of your presentation that will be made available to the Reviewers.

Critical Assumptions and Issues

- ❑ Address three to five critical assumptions and/or problems affecting the outcome of your project. Briefly describe the problem as well as potential solutions, both within and beyond the scope of the project.
- ❑ Exclude funding issues.

Note: This slide is for the Reviewers only; it is not to be presented as part of your oral presentation. These Reviewer-Only slides will be included in the presentation file made available to Reviewers.

Questions?

Contact us by email:
VTAMR@ORAU.org