

# Four-State Virtual Research Peer Exchange 2015

## Final Report

Idaho Transportation Department  
Nevada Department of Transportation  
South Dakota Department of Transportation  
Wyoming Department of Transportation



PREPARED BY THE TEXAS A&M TRANSPORTATION INSTITUTE

---



## TABLE OF CONTENTS

<b>INTRODUCTION</b> .....	<b>1</b>
<b>WEBINAR RECORDINGS</b> .....	<b>2</b>
<b>PEER EXCHANGE PARTICIPANTS</b> .....	<b>2</b>
STATE TRANSPORTATION RESEARCH PROGRAM REPRESENTATIVES .....	3
GUEST PRESENTERS.....	4
FEDERAL HIGHWAY ADMINISTRATION REPRESENTATIVES.....	4
GUEST PARTICIPANTS .....	4
FACILITATORS .....	4
<b>STATE RESEARCH PROGRAM OVERVIEW</b> .....	<b>4</b>
IDAHO TRANSPORTATION DEPARTMENT.....	4
NEVADA DEPARTMENT OF TRANSPORTATION.....	5
SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION.....	5
WYOMING DEPARTMENT OF TRANSPORTATION.....	5
<b>PEER EXCHANGE BACKGROUND</b> .....	<b>5</b>
<b>PEER EXCHANGE SESSION SUMMARIES</b> .....	<b>6</b>
SESSION 1: RESEARCH QUALITY.....	6
SESSION 2: COMMUNICATING RESEARCH RESULTS.....	10
SESSION 3: INTELLECTUAL PROPERTY AND CONTRACT CLAUSES .....	12
SESSION 4: RESEARCH RESULTS IMPLEMENTATION AND DEPLOYMENT .....	14
<b>NEXT STEPS</b> .....	<b>18</b>
IDAHO: WHAT WE INTEND TO DO .....	18
NEVADA: WHAT WE INTEND TO DO .....	20
SOUTH DAKOTA: WHAT WE INTEND TO DO .....	20
WYOMING: WHAT WE INTEND TO DO .....	22
<b>THE WEBINAR-BASED PEER EXCHANGE EXPERIENCE</b> .....	<b>23</b>
<b>APPENDIX A: PEER EXCHANGE AGENDAS</b> .....	<b>25</b>
WEBINAR 1: RESEARCH QUALITY .....	25
WEBINAR 2: COMMUNICATING RESEARCH RESULTS.....	26
WEBINAR 3: INTELLECTUAL PROPERTY AND CONTRACT CLAUSES .....	27
WEBINAR 4: RESEARCH RESULTS IMPLEMENTATION AND DEPLOYMENT .....	28
<b>APPENDIX B: CONTACT INFORMATION</b> .....	<b>29</b>
IDAHO .....	29
NEVADA .....	29
SOUTH DAKOTA .....	29
WYOMING .....	29
<b>APPENDIX C. BIBLIOGRAPHY</b> .....	<b>30</b>



## INTRODUCTION

The transportation research programs in Idaho, Nevada, South Dakota, and Wyoming each hosted a multi-state online webinar-based peer exchange consisting of a series of four webinars addressing four topics:

- **Research Quality:** optimizing the value and quality of research, held on November 24, 2015.
- **Communicating Research Results:** improving and enhancing communication of research results, held on December 15, 2015.
- **Intellectual Property and Contract Clauses:** improving contract language and processes regarding intellectual property, held on December 16, 2015.
- **Research Results Implementation and Deployment:** implementation and deployment of research results, held on December 17, 2015.

This report documents the discussions, outcomes, and recommendations of the peer exchange panel members. It includes brief summaries of each agency's research program along with the agency's best practices and challenges with research report implementation. Key outcomes resulting from brainstorming sessions during the peer exchange, along with agency takeaways, are also presented.

This peer exchange was unique because online video conferencing technology was used to conduct webinars for each of the peer exchange topics. All four days were conducted through live webinars with participation from all four state research departments and outside experts from other state departments of transportation (DOTs), research institutions, and federal agencies. This method provided a convenient and cost-effective approach for the peer exchange platform.

Each state contributed to the funding of the Support Services for Peer Exchange Pooled Fund (TPF-5[301]) to engage the Texas A&M Transportation Institute (TTI) to assist with peer exchange planning, facilitate meetings, take notes of the discussion at each session, and prepare the peer exchange final report with involvement from peer exchange participants. Each of the host states took the lead in planning the sessions pertaining to one of the topics. At the conclusion of the peer exchange, research staff from each of the host agencies shared this information with their agency leadership.

## WEBINAR RECORDINGS



### Webinar Screen Shot

The webinars were recorded and are available for viewing at the following links:

- November 24, 2015: Research Quality:
  - <https://tti.adobeconnect.com/p2y1cwha05z/>
  - <https://tti.adobeconnect.com/p2gbb81fule/>
- December 15, 2015: Communicating Research Results:
  - <https://tti.adobeconnect.com/p91gdylqnm7/>
- December 16, 2015: Intellectual Property and Contract Clauses:
  - <https://tti.adobeconnect.com/p1b71z3lxv6/>
- December 17, 2015: Research Results Implementation and Deployment:
  - <https://tti.adobeconnect.com/p589wkt76i5/>

## PEER EXCHANGE PARTICIPANTS

The peer exchange participants included staff members from research programs in the DOTs of Idaho, Nevada, South Dakota, and Wyoming. Other guest participants included members of the U.S. Department of Transportation (USDOT) Federal Highway Administration (FHWA), CTC & Associates, South Dakota State University, the South Dakota School of Mines and Technology, TTI, the Virginia Transportation Research Council, the University of Idaho, the Montana Department of Transportation, and the Pennsylvania Department of Transportation. Contact information for participants is included in Appendix B.

STATE TRANSPORTATION RESEARCH PROGRAM REPRESENTATIVES

IDAHO TRANSPORTATION DEPARTMENT: NED PARRISH



NEVADA DEPARTMENT OF TRANSPORTATION: KEN CHAMBERS, MITCH ISON, AND MANJU KUMAR



SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION: DAVE HUFT



WYOMING DEPARTMENT OF TRANSPORTATION: TIM MCDOWELL AND ENID WHITE



## GUEST PRESENTERS

- Kim Linsenmayer, CTC & Associates
- Francis Ting, South Dakota State University
- Johanna Zmud, TTI
- Jimmy White, Virginia Transportation Research Council

## FEDERAL HIGHWAY ADMINISTRATION REPRESENTATIVES

- John Moulden, Office of Corporate Research, Technology, and Innovation Management
- Lori Porreca, Idaho Division
- Bruce Hunt, South Dakota Division
- Virginia Tsu, South Dakota Division
- Jeff Purdy, Wyoming Division

## GUEST PARTICIPANTS

- Barbara Harder, principal, B. T. Harder, Inc.
- Rick Hart, deputy attorney general, Idaho Office of the Attorney General
- Sue Sillick, research program manager, Montana Department of Transportation
- Dustin DeBoer, special assistant attorney general, South Dakota Department of Transportation
- Nathan Lukkes, system assistant vice president for research and economic development, South Dakota Board of Regents
- Ahmed Abdel-Rahim, director, National Institute for Advanced Transportation Technology, University of Idaho

## FACILITATORS



John Overman, Debbie Murillo, and James Cardenas, TTI

## STATE RESEARCH PROGRAM OVERVIEW

During the first webinar, representatives from the research programs of Idaho, Nevada, South Dakota, and Wyoming provided overviews of their respective research programs, including annual budgets and the number of projects per year. As a group, the span of projects per year varied but generally ranged between 4 and 15 projects, with budgets ranging from \$1.2 million to \$2.5 million. Research performers at all research programs consisted of research universities and consulting firms. This section highlights key overview insights from each research program.

## IDAHO TRANSPORTATION DEPARTMENT

The Idaho Transportation Department's (ITD's) research program has one full-time employee and an annual budget of approximately \$1.45 million. The program is housed under the Contracting Services section of ITD. Research is conducted in a wide range of areas including highway safety and traffic, materials and bridges, maintenance and operations, environmental, leadership development, and customer satisfaction. Performing

researchers are from public universities and consulting firms. The research program is responsible for overseeing all State Planning and Research (SPR) funds, including developing and amending the annual work program and coordinating development of the annual SPR accomplishments report.

## NEVADA DEPARTMENT OF TRANSPORTATION

The research program at the Nevada Department of Transportation (NDOT) has an annual budget of \$1.73 million and sponsors 6 to 11 projects per year. The staff includes five total full-time employees. Researcher performers include research universities and consulting firms. NDOT focuses on a wide range of transportation topics for research.

## SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION

The research program at the South Dakota Department of Transportation (SDDOT) is the largest of the four state groups, with eight full-time employees, including six engineers. SDDOT has an annual budget of approximately \$2.5 million and around 15 projects per year. The Division of Planning and Engineering was the organizational home for the research program at the time of the peer exchange but since then has relocated within the Division of the Secretariat. Topics of interest span the business functions of SDDOT but more frequently concern materials, structures, and intelligent transportation system research. Research performers include university faculty and students, consulting firms, and in-house staff.

## WYOMING DEPARTMENT OF TRANSPORTATION

The Wyoming Department of Transportation's (WYDOT's) research program has an annual budget of approximately \$1.2 million and funds four to six research projects per year. The staff includes the research manager, who also acts as the research librarian, and the state programming engineer, who supervises the research manager. The WYDOT Planning Office is the organizational home for the research program. Research performers include research universities and consulting firms.

## PEER EXCHANGE BACKGROUND

Research program staff from all four of the host states participated in each of the webinars. The FHWA Division Office research contacts in each of the states were encouraged to participate in the sessions. Other participants in the webinars varied depending on the session topic but included other staff from the host state DOTs, FHWA corporate research and technology staff, research program staff from other state DOTs, Transportation Research Board staff, and university transportation research staff.

Each state contributed funding to the support services for the Peer Exchange Pooled Fund (TPF-5[301]) to engage TTI to assist with peer exchange planning, facilitate meetings, and prepare the peer exchange final report with involvement from peer exchange participants. TTI also provided the technology for the peer exchange webinars through Adobe Connect.

Each of the host states, in conjunction with TTI staff, engaged in planning the session(s) pertaining to one of the topics:

- **Research Quality:** optimizing the value and quality of research, held on November 24, 2015.

- **Communicating Research Results:** improving and enhancing communication of research results, held on December 15, 2015.
- **Intellectual Property and Contract Clauses:** improving contract language and processes regarding intellectual property, held on December 16, 2015.
- **Research Results Implementation and Deployment:** implementation and deployment of research results, held on December 17, 2015.

A kickoff session was held to share information about the different programs, discuss the previous peer exchanges and subsequent actions, acquaint participants with the webinar technology, and review goals for this peer exchange. At the conclusion of the peer exchange, research staff from each of the host agencies met to share key takeaways and planned actions. In addition, the research program managers and staff from each of the host states shared this information with their respective agency leadership.

## PEER EXCHANGE SESSION SUMMARIES

This section summarizes and reviews the best practices presented to the peer exchange group by topic. The topics are presented in chronological order by webinar date.

### SESSION 1: RESEARCH QUALITY

The peer exchange webinar on research quality was held on November 24, 2015. Each state research program presented a series of slides with information regarding their respective research programs and best practices. The following paragraphs summarize the information shared by all four state research programs and information shared by South Dakota State University. The South Dakota School of Mines and Technology did not present but did actively participate in the breakout group discussion in South Dakota.

### IDAHO'S RESEARCH PROCESS

The research process for ITD is an annual process. Project ideas must come from ITD staff and are reviewed by the ITD Research Advisory Council. A champion at the section level or above must sponsor a project proposal. The ITD Research Advisory Council is composed of a broad-based group including high-level managers across ITD and includes a representative from FHWA.

The project scopes are developed collaboratively by the ITD project sponsor, project manager, Technical Advisory Committee (TAC) members, and the researchers. A standardized task order form is used, but on occasion, the project manager (PM) and/or TAC may develop solicitation for a request for proposals (RFP). The ITD PM and TAC are responsible for overseeing projects. The PM reviews monthly invoices, which require a standardized ITD progress report, a summary of work performed, and the issues/needs for the project. ITD will be transitioning to payments based on deliverables accepted.

The PM and TAC maintain ongoing communication with the researchers throughout the process (the kickoff meeting, quarterly progress reports, and meeting at the conclusion of the project). The PM and TAC are also responsible for reviewing deliverables. Research reports are peer reviewed, and technical editors enhance the readability of the research product and ensure the reports are properly formatted. No formal implementation or tracking process is in place. Implementation is currently the responsibility of the section or district requesting the project.

Important elements of research quality for ITD include:

- Research addresses problems/issues important to ITD.
- Clear and achievable project objectives are defined.
- Capable researchers (principal investigators [PIs] who have a relationship with ITD staff) are assigned.
- The PM and TAC are actively engaged in the project.
- Ongoing communication between researchers and ITD staff provides clarity on ITD practices and needs and ensures that researchers are addressing project objectives.
- Guidance on report requirements are included in a:
  - Report template.
  - Style guide.
- ITD uses peer reviewers and technical editors.

---

## NEVADA'S RESEARCH PROCESS

NDOT team members and external stakeholders such as university partners, consultants, and other members of the public propose project ideas. External project submissions require an NDOT champion. The process is twofold and consists of a problem statement and a full proposal. Topic expert task groups review proposals. The Research Management Committee then approves the expert task group's recommendations. This committee includes deputy directors and assistant directors. A final meeting is held with the NDOT champion to finalize the scope, budget, and schedule.

An NDOT champion, a university or consultant, and a TAC guide the research project. The research program coordinates the quarterly reports, invoices, project update meetings, budget line-item tracking, amendments, and final report publication.

Surveys are occasionally sent to the NDOT champions to evaluate the timeliness and usefulness of projects. NDOT has recently required an implementation panel convened by the PI and champion; however, no formal tracking system is currently in place.

Important elements of research quality for NDOT include:

- Rigor in review and selection of new research projects.
- Additional weight given to implementable research using five stages of research deployment.
- Open competition to select the best research team for a given topic.
- Involvement of champions from the problem statement stage through implementation.
- Strong champions that are very interested in implementing research results.

---

## SOUTH DAKOTA'S RESEARCH PROCESS

### SDDOT

SDDOT selects research topics from internal and external suggestions. The Research Review Board (RRB) holds research needs meetings and authorizes topics for research. The project's technical panel then defines the detailed project scope. Some RFPs are open to the public, while others are designated to South Dakota universities; the proposals are developed by the prospective research team(s).

The work is performed by the research team and monitored by a project technical panel. Quarterly or monthly progress reports are required in addition to technical memoranda and panel meetings. Projects are evaluated at the conclusion. SDDOT has recently implemented tracking and evaluation after the project conclusion. There is no routine formal value estimation in place.

Researchers must recommend implementation actions in the final report. The recommendations are evaluated by the project's technical panel, which then submits its own recommendations to the RRB for final decision. For expensive or complex implementation, development of a formal implementation plan may follow.

Important elements of research quality for SDDOT include:

- Good scope definition.
- Sound research methodology.
- Report clarity and accuracy.
- Valid findings.
- Specific, useful implementation recommendations.
- Timeliness.

## SOUTH DAKOTA STATE UNIVERSITY (FRANCIS TING)

South Dakota State University (SDSU) develops research proposals based on state research needs and national research interests. Ideas are proposed by SDSU or SDDOT. The university can respond to an RFP through a letter of interest. PIs, co-PIs, and graduate students perform the work. All work is monitored by the PI or co-PI. Research team meetings are scheduled weekly in addition to other communication methods and meetings as necessary. The project is evaluated at the conclusion of project milestones or tasks such as a literature review or data collection.

SDSU indicated these important elements of research quality:

- Clear project definition.
- Thorough investigation.
- Adequate staffing.
- Advancing the state of the art.
- Peer-reviewed publications.
- Workforce development.

---

## WYOMING'S RESEARCH PROCESS

WYDOT accepts project proposals from WYDOT departments and outside contractors. The scope of the project is defined by collaboration with the researcher, the research staff, and the project champion. The work is usually performed by a consultant with guidance from the champion. Quarterly progress reports are required, and payments are based on invoices and work completed. Payments may be withheld if work has not been completed pursuant to the requirements in the contract.

Projects are continuously evaluated throughout the process and tracked at the nine-month mark and three-year mark after the project is completed. WYDOT is currently considering a performance evaluation form at the completion of work.

The PI makes recommendations during the project and in the final report. The project champion and his or her specific department make determinations on implementation. The Research Center can make suggestions for implementation but does not, in most cases, fund implementation.

Important elements of research quality for WYDOT include:

- A competent PI and PM.
- Sound research methodology.
- Report clarity and accuracy.
- Valid findings.
- Specific, useful implementation recommendations.
- Timeliness.
- A clear tie to WYDOT goals.

---

## SESSION TAKEAWAYS ON RESEARCH QUALITY

State research programs prepared takeaway slides and commented on takeaways and best practices learned during the session.

### IDAHO

Ned Parrish commented that ensuring research quality is a challenge for all. Several bullets were displayed for each state regarding their best practices. The best practices included:

- Idaho: deliverable-based payments, ongoing communications with researchers throughout projects, use of peer reviewers, and guidance on report formatting.
- Nevada: deliverable-based payments and recent effort in implementation planning.
- South Dakota: project scoping and ideas for surveying DOT staff and researchers to evaluate projects.
- Wyoming: implementation tracking (at nine months and three years).

Parrish concluded that project evaluation is an area of interest that all of the participating state research programs can improve on.

### NEVADA

Ken Chambers discussed the new proposal evaluation form, stating that it is still under development. The NDOT research program, similar to Idaho and Wyoming's model, has developed a deliverable-based payment mechanism. This method includes time and effort plus deliverable bonus payments. Chambers discussed other key takeaways such as the use of a tracking system for data and intellectual property (IP), research needs meetings, and feedback mechanisms for research performance.

### SOUTH DAKOTA

Dave Huft explained the key takeaways that his program obtained from the presentation. The value of the project champion is a key thing to note. Good project management includes having well-targeted interim deliverables, integrated payment based on deliverables, peer review by research organizations, and a documented evaluation. Huft also noted that quality is not easy to define, especially for technical aspects.

## WYOMING

Tim McDowell noted the key takeaways from each state's research program that WYDOT may use:

- Idaho: The peer review process ITD uses will be explored for ways WYDOT could use it.
- Nevada: NDOT requires an implementation form be filled out for each project at the close of the research. NDOT works with the project champion and the researcher to come up with a plan.
- South Dakota: McDowell is intrigued by the sessions SDDOT has each year with executives and industry where they brainstorm about where research should be focused for their state. NDOT is also doing this. This is a good idea that could definitely enhance the quality of the research.

## SESSION 2: COMMUNICATING RESEARCH RESULTS

The virtual peer exchange for the topic of communicating research results took place on December 15, 2015. The morning session had two presenters, Johanna Zmud from TTI and Kim Linsenmayer from CTC & Associates. The afternoon session concluded with best practices, comments, and takeaways from the presentations.

---

### COMMUNICATION MATTERS

Johanna Zmud, TTI senior research scientist, presented results from *NCHRP Report 610: Communication Matters: Communicating the Value of Transportation Research*. In this report, researchers analyzed seven case studies and found the following characteristics to be important for each research project:

- **Context:** What is happening in the country, state, or issue that is being researched? It is very important to do the work up front. How is the issue affecting society and decision making?
- **Strategy:** Who are you communicating with (technical staff, the public, or management and government leaders)? The strategy must be tailored to the audience.
- **Content:** The content is important and depends on context and strategy. The content should be accurate and appropriate but not too complex.
- **Channels:** ways to communicate.
- **Style:** brand and perception, layout, colors, etc.

The results of analyzing the case studies showed seven general best practice techniques:

- Understand the audience. Tailor messages to the audience; everything has to work together.
- Demonstrate a tangible benefit to the audience or general public.
- Recognize that timing is relevant.
- Build coalitions. Get helpful champions and allies, and build a network.
- Foster a two-way relationship. Coalitions can work to give and get information.
- Tailor packaging to the audience. Attractive packaging is very important.
- Involve communications professionals. It is important to have communications professionals on the research team and to build the communication skills of researchers.

---

## COMMUNICATION METHODS

Kim Linsenmayer with CTC & Associates presented the second topic of the morning session. The presentation emphasized that presenting research results has three primary objectives:

- **Promote implementation:** Promoting the completion and implementation of projects can be aimed at a range of potential end users such as DOT staff, senior managers, industry, and policy makers. Project summaries and reports are traditional methods of communicating implementation plans. Implementation can also be promoted through videos, webinars, online and print newsletters, articles in industry publications, and email announcements. Additional methods include website content and social media content.
- **Demonstrate value to the agency/state:** It is important to communicate goals, activities, and outcomes within the agency. Creating annual program reports is one way to communicate results. Providing the value of investment through success story highlights is also useful. One example includes the Ohio DOT. Ohio maintains a spreadsheet of each project on its website (for accountability and performance). The Ohio DOT also produces a retrospective report that reviews what came out of the research and sums up what the state got out of the research investment, evaluated by performance measures.
- **Involve stakeholders in the research process:** It is important to raise awareness to contribute to research or request feedback from stakeholders in the research process. A printed or online newsletter is one approach to tie in stakeholders.

Additionally, research programs can face challenges regarding marketing, most notably a lack of staff support, a lack of expertise, and problems identifying newsworthy projects.

---

## SESSION TAKEAWAYS ON COMMUNNICATING RESEARCH RESULTS

### IDAHO

Idaho had the following takeaways:

- Communication is critical throughout the research and implementation process.
- Each state has some good practices:
  - Nevada has a blog of ongoing two-way communication.
  - South Dakota has a research and technology summary and a presentation of research to the RRB and executive leadership.
  - Wyoming has a self-assessment of program and performance tracking.
  - Idaho has an annual presentation to the board/executive leadership.
- DOTs should identify ways to incorporate communications planning into the research process.
- Project champions, PMs, and TAC members involved in communications efforts are valuable.
- DOTs need to expand efforts to communicate program information to department staff and leadership.
- DOTs need to improve efforts to share program performance information.

### NEVADA

Nevada had the following takeaways:

- There are many similarities among states.
- South Dakota’s short project summaries are a good idea.
- The Wyoming Local Technical Assistant Program (LTAP) Center reviewed the Research Center.
- Idaho includes tasks for technical editing of final reports.
- Information technology (IT) can be an obstacle to communication.
- Reliance on departmental newsletters.
- Research dashboard.

## SOUTH DAKOTA

South Dakota had the following takeaways:

- Communication is a common challenge but is important.
- Researchers may not be the best ones to create communication pieces.
- DOTs need data, photos, and video to tell the research story.
- Research should be relevant; methods depend on the subject.
- Communication can be an opportunity to highlight the DOT’s accomplishments.
- DOTs can use social media to point to more complete information.
- A communication plan would help DOTs be more strategic.

## WYOMING

Wyoming had the following takeaways:

- DOTs should know their audience.
- DOTs should know why they are doing the research.
- NCHRP Report 610 points to the need to develop a template for Wyoming.
- DOTs should consider what the message really is as they are doing the research.
- DOTs need to have some kind of media expert involved up front.
- Using outside publications specific to the field of research is interesting (NCHRP Report 610).

## SESSION 3: INTELLECTUAL PROPERTY AND CONTRACT CLAUSES

The webinar peer exchange on IP and contract clauses was held on December 16, 2015. Enid White from WYDOT presented both topics during a morning and afternoon session. The morning session included a presentation related to IP, and the afternoon session concluded with a presentation on contract clauses and takeaways from each group on the two topics.

### INTELLECTUAL PROPERTY

*NCHRP Report 799: Management Guide to Intellectual Property for State Departments of Transportation* defines IP as “a broad category of intangible rights protecting valuable products of the human intellect.” These rights protect products such as inventions, literary and artistic works, designs, symbols, and images. The presentation emphasized that learning and understanding procedures related to IP are more straightforward than current perceptions involving the process. The top priorities regarding IP rights are as follows:

1. IP needs and considerations must be evaluated at the time of the proposal.
2. IP should be evaluated on a case-by-case basis.
3. IP needs should be reevaluated periodically.
4. It is important to keep IT staff informed and up to date on IP information.
5. There are differences and similarities for various types of IP.
6. DOTs should stay informed, and know all parties that have claims to IP.
7. DOTs should cover the DOT's IP rights immediately—this process can start when a proposal is submitted.
8. DOTs should not rely on other entities to ensure that IP rights are covered.

In 2013, the White House Office of Science and Technology Policy released a memorandum titled *Increasing Access to the Results of Federally Funded Scientific Research*. The memorandum announces new requirements for “providing the public access to the publications and digital data sets resulting from federally funded scientific research.” The USDOT’s Public Access Plan provides a framework to ensure the requirements of the memorandum are met. Smaller state research programs may not have adequate staffing or expertise in IP, but several resources are available to help, including NCHRP Report 799 and the Pennsylvania Department of Transportation primers.

---

## CONTRACT CLAUSES

It is important for state research programs to continually review and update contract clauses. White shared WYDOT’s guidebook regarding data maintenance, archiving, and sharing. Some of the key points include:

- WYDOT cooperates with contractors and does not publish data until a later date after completion. A reasonable amount of time is usually 12 months.
- WYDOT contracts have general copyright and patent language but are sometimes customized depending on the type of research, such as developing software.

---

## SESSION TAKEAWAYS ON INTELLECTUAL PROPERTY AND CONTRACT CLAUSES

### IDAHO

Idaho had the following takeaways:

- IP is an important issue.
- IP policies and regulations may be unfamiliar to some DOTs. Some resources are available to help:
  - NCHRP Report 799.
  - Pennsylvania primers.
  - Links provided by White.
- DOTs need to look at how they can improve their contract language and process.
- DOTs need to become familiar with the new USDOT Public Access Plan. It does not currently apply to SPR-funded projects, but it would be beneficial to address this for the future.

## NEVADA

Nevada had the following takeaways:

- Disparity among states' ownership laws and murkiness at the federal level make these discussions for blanket procedures difficult.
- Nevada's limited exposure to IP issues lies with the Maintenance Decision Support System project.
- The form in Appendix D of NCHRP Report 799 is very helpful.
- Looking to the future, tentativeness toward implementation may come from apprehension about IP.

## SOUTH DAKOTA

South Dakota had the following takeaways:

- IP is a real, emerging concern.
- Few state DOTs are professionally equipped to deal with it.
- Retention of IP counsel is prudent.
- IP needs to be contemplated at project inception and continually afterward.
- Decisions to protect IP must address:
  - Agency objectives.
  - Balance between cost and potential benefit.
  - Willingness to assert and to go to court.

## WYOMING

Wyoming had the following takeaways:

- IP is an important issue to consider for all contracts.
- WYDOT should use resources that are available and come up with templates for Wyoming.
- WYDOT should continue to improve its contracts and proposal guidelines.
- WYDOT needs to become more familiar with the new USDOT Public Access Plan and other federal requirements.
- WYDOT needs to figure out how to develop a process and policy for WYDOT and the state of Wyoming on IP.

## SESSION 4: RESEARCH RESULTS IMPLEMENTATION AND DEPLOYMENT

Research results implementation and deployment are the final topics presented in this peer exchange program. Manju Kumar, NDOT research program coordinator, led the topic on December 17, 2015. This section summarizes the key points and takeaways for this topic.

---

## NATIONAL DISCUSSION ON IMPLEMENTATION

The Second European Union-U.S. Transportation Research Symposium, held in 2014, developed four key systems-level factors for better research implementation:

- Sufficient funding for research implementation.
- Organizational centralization and coordination.
- Comprehensive data collection and analysis.
- Effective use of IP tools.

Several myths exist at the state and national government levels that can impede the effectiveness of research implementation:

- The idea that funding should decrease as research approaches commercialization.
- A belief structure that IP is contrary to the proper role of government.
- A perception that since transport research problems are modal, the research implementation should therefore be left to the modes.

Definitions of research and implementation are not exact. Successful implementation includes consistent communication, smooth governance, and financial capacity assured throughout the process.

The lessons learned from national discussion include the importance of:

- Early and continuous involvement of stakeholders.
- Resources for implementation, such as the Strategic Highway Research Program 2.
- Post-research development: two to three times the funding for research.
- Early adopters and champions.
- Overcoming institutional barriers.
- Government leadership.
- Communication.
- Market readiness.

It is important to collect the right data for tracking implementation in the long term. The duration of research should match the duration of implementation and the life span of the project. Staff should assess and analyze the research process return on investment (ROI), rather than the research project ROI.

---

## IDAHO'S CONSIDERATIONS ON IMPLEMENTATION

Important factors in successful implementation include:

- The project addresses a clear problem/department need.
- The project champion and project manager are committed to the project and implementing study results.
- The project scope is clearly defined to address the problem and provide the implementation/deliverables needed for implementation.
- Key stakeholders/end users involved throughout the project. They should:
  - Help define the problem/needs.
  - Monitor progress to make sure the research stays on track.

- Review the deliverables.
- Focus on implementation throughout the research process.

---

## NEVADA'S CONSIDERATIONS ON IMPLEMENTATION

Important factors in successful implementation include:

- Involvement of diverse stakeholders from the DOT.
- Co-PIs from non-engineering disciplines.
- Funding set aside for implementation, such as a pooled-fund mechanism.

---

## SOUTH DAKOTA'S CONSIDERATIONS ON IMPLEMENTATION

Important factors in successful implementation include:

- A legitimate research need.
- A receptive customer.
- A common understanding of research goals and expectations.
- Sound research.
- Appropriate handoff (training, documentation, etc.).
- Organizational commitment.
- Resources for implementation.
  - People.
  - Time.
  - Money.

---

## WYOMING'S CONSIDERATIONS ON IMPLEMENTATION

Successful implementation addresses the following questions:

- Does it tie to DOT goals?
- Is it realistic?
- Is there support within the DOT to back the plan?
- Can it actually be tracked (i.e., is it measureable)?

---

## VIRGINIA TRANSPORTATION RESEARCH COUNCIL

Jimmy White, senior research scientist from the Virginia Transportation Research Council, presented on project implementation from his state's perspective. The presentation included examples of implementation projects, challenges, and successes. Important points include the following:

- Implementation is a matter of "taking what people know in one place and combining it with what people know in another." In other words, implementation is the activity of taking new knowledge developed through scientific research and successfully integrating it into what people already know about doing their work, which they have developed over years of practice.

- When are we finished? When the project becomes:
  - The standard operating practice for the agency.
  - Generally accepted as the way to accomplish the task.
  - Integrated into the fabric of daily work.

---

## SESSION TAKEAWAYS ON RESEARCH RESULTS IMPLEMENTATION AND DEPLOYMENT

### IDAHO

Idaho had the following takeaways:

- Implementation is challenging in all states, particularly when statewide operational changes are needed.
- Each of the states has adopted some good practices:
  - Most states consider implementation in the proposal process and project scoping.
  - Idaho projects often include deliverables to support implementation (draft specifications, training, etc.).
  - Nevada now requires an implementation plan at the end of projects.
  - The South Dakota panel makes implementation recommendations, and RRB acts on the recommendations of key managers for implementation.
  - Wyoming tracks implementation at nine months and three years following project completion.
  - Montana uses an implementation report drafted by the researchers. An implementation meeting is also held.
- DOTS need to focus on implementation throughout the process and establish practices to increase the likelihood of implementation.
- It is helpful to think of implementation as an identifiable phase of the process.
- It is important to track implementation—what gets measured gets done.

### NEVADA

Nevada had the following takeaways:

- Deliverables vary and affect the definition of successful implementation.
- Champions are critical, and their involvement varies widely.
- South Dakota has a more detailed plan for post-completion activities.
- Training can be a deliverable, and proposals focused on training can benefit implementation.
- Research oversight committees should meet more frequently than once or twice a year.
- Showcasing non-monetary benefits helps implementation and justifies investment in research.

### SOUTH DAKOTA

South Dakota had the following takeaways:

- Implementation is vital to DOTs.
- Research quality and timeliness are essential.
- The meaning of implementation may be project specific and needs to be articulated as to its extent and impact.

- Resistance to change is natural:
  - It is easier to “do what we’ve always done.”
  - Change requires effort and commitment.
  - Many factors, internal and external, may inhibit change.
- Institutionalization is needed.

## WYOMING

Wyoming had the following takeaways:

- All states have some level of difficulty in tracking implementation of research results.
- Three keys to implementation success are:
  - Funding availability.
  - Institutional support (sponsor, TAC, etc.).
  - Implementation plans (clear and concise).
- Consider implementation at the proposal stage and throughout the research. Start with the end in mind.
- Implementation should be considered on a case-by-case basis.

## NEXT STEPS

Research program representatives exchanged next steps for each of their respective programs at the end of each peer exchange session under the heading “What We Intend to Do.” This section summarizes the next steps by state and session topic.

## IDAHO: WHAT WE INTEND TO DO

### SESSION 1: RESEARCH QUALITY

Idaho intends to do the following concerning research quality:

- PM/TAC oversight:
  - Identify options to strengthen project management/oversight.
  - Develop a document outlining expectations for/responsibilities of PM and TAC members.
- Project evaluation:
  - Get more information on best practices.
  - Talk to partners about the process/forms.
  - Share it with TAC members to make sure it makes sense.
  - Try it out/get feedback.
- Implementation:
  - Look at how states do implementation planning.
  - Investigate implementation-monitoring best practices.
  - Consider how IDT could use its Research Advisory Council (RAC) to facilitate implementation.
- Technical editing:
  - Investigate use of contract technical editing services to improve report quality/consistency.

---

## SESSION 2: COMMUNICATING RESEARCH RESULTS

Idaho intends to do the following concerning communicating research results:

- Communication planning:
  - Investigate communication-planning best practices for IDT research programs.
  - Identify ways to incorporate communications planning into the research process.
- Engage project champions, PMs, and TAC members in communications efforts:
  - Include champions, PMs, and TAC members in communications planning from the beginning of projects.
  - Consider involving them in communicating/presenting project results, possibly to the RAC or through a brown bag lunch/webinar series.
- Expand communication with ITD leadership:
  - Look into having more frequent RAC meetings to share project results and program performance information.
- Program performance reporting:
  - Research performance-reporting best practices.
  - Consider conducting periodic self-assessments similar to what Wyoming has done.

---

## SESSION 3: INTELLECTUAL PROPERTY AND CONTRACT CLAUSES

Idaho intends to do the following concerning IP and contract clauses:

- Develop a better understanding of copyright and patent requirements.
- Review IDT contract language regarding copyrights and patents.
- Discuss the issue with university partners and attorney general staff.
- Work to make improvements to language and processes outlined in IDT's master agreements and contracts.
- Develop form(s) that universities and contractors can use to disclose inventions and claim title to the inventions.
- Allow public access to data:
  - Review the new USDOT Public Access Plan.
  - Consider how IDT can address this in its program.

---

## SESSION 4: RESEARCH RESULTS IMPLEMENTATION AND DEPLOYMENT

Idaho intends to do the following concerning research results implementation and deployment:

- Investigate how to strengthen discussion of implementation in the project request/scope development stages.
- Develop guidance on responsibilities of sponsors, PMs, and TAC members for project oversight and implementation.
- Investigate developing implementation plans for selected projects. Plans would be developed collaboratively by researchers and sponsors/PMs/TACs. Consider timing for plan development.
- Consider establishing a process for developing an implementation report similar to the Montana Department of Transportation's process.

- Investigate ways IDT can begin tracking implementation efforts.

## NEVADA: WHAT WE INTEND TO DO

### SESSION 1: RESEARCH QUALITY

Nevada intends to do the following concerning research quality:

- Explore a deliverables-based payment system, including:
  - Contract language.
  - Enforcement mechanisms.
- Look for ways to expedite publication of final reports, and create report guidelines.
- Incorporate communication strategies in supporting champions.
- Reevaluate methods to facilitate needs identification.
- Identify ways to track research performance and incorporate it in future project selection.

### SESSION 2: COMMUNICATING RESEARCH RESULTS

Nevada intends to do the following concerning communicating research results:

- Encourage the production of project summaries.
- Consider including a technical editing task.
- Pursue using interns for communication and support.
- Reconnect with the NDOT newsletter and social media.
- Determine how much marketing is appropriate.
- Explore a dashboard or visual performance tool.

### SESSION 4: RESEARCH RESULTS IMPLEMENTATION AND DEPLOYMENT

Nevada intends to do the following concerning research results implementation and deployment:

- Explore more frequent meetings with the executive board.
- Explore developing tech briefs for existing research projects.
- Include development of an implementation definition/goal for projects being initiated.
- Explore a formal process for post-completion follow-up.
- Explore ways to showcase accomplishments and non-monetary benefits, such as:
  - Tech briefs.
  - A research summit.

## SOUTH DAKOTA: WHAT WE INTEND TO DO

### SESSION 1 RESEARCH QUALITY

South Dakota intends to do the following concerning research quality:

- Review the research process in light of the discussion.
- Consider requiring a technical editor and peer review.
- Review thesis documents related to research.
- Define more interim deliverables.
- Investigate tying payments to deliverables.
- Require data storage on SDDOT servers.
- Create and use end-project survey instruments for the technical panel and research organizations.
- Emphasize the research process and expectations at the kickoff meeting.
- Evaluate shared review software for technical panels.
- Enhance training for technical panel members.

---

## SESSION 2: COMMUNICATING RESEARCH RESULTS

South Dakota intends to do the following concerning communicating research results:

- Develop a research communication plan considering:
  - Audiences.
  - Messages.
  - Media.
- Create a better user interface to the research database, which feeds the research website.
- Improve final report quality.
- Create a progress report template, and enforce submission and distribution.
- Require meeting notes from technical panel meetings.
- Investigate annual presentation to the Transportation Commission.
- Publicize projects in the SDDOT newsletter.
- Attend and present at SDDOT and external association meetings.
- Report progress to RRB.

---

## SESSION 3: INTELLECTUAL PROPERTY AND CONTRACT CLAUSES

South Dakota intends to do the following concerning IP and contract clauses:

- Review contract language regarding:
  - Publications.
  - Data stewardships.
  - Patents (inventions).
- Establish procedures requiring researchers to:
  - Identify all data sets.
  - Supply copies of data sets.
  - Supply metadata.
- Seek clarification of federal requirements on pass-through funding.

---

## SESSION 4: RESEARCH RESULTS IMPLEMENTATION AND DEPLOYMENT

South Dakota intends to do the following concerning research results implementation and deployment:

- Compile and report the status of implementation to RRB.
- Improve research report quality and timeliness.
- Stress active panel member engagement.
- More effectively communicate research results.
- Clarify the meaning of sign-off for the implementation plan.
- Clarify long-term research responsibility in implementation.
- Expand the menu of possible implementation tasks, such as:
  - Training.
  - Development.
  - Incorporation in job position duties.
  - Operating procedures.
- Pilot valuation of research benefits.

## WYOMING: WHAT WE INTEND TO DO

### SESSION 1: RESEARCH QUALITY

Wyoming intends to do the following concerning research quality:

- Explore the use of peer reviews on select projects, both during the research process and at the time of the final report. A lot of the research from universities has built-in peer reviews, such as master and Ph.D. panels.
- Review the Nevada implementation form, compare it to what is already in use, and see where enhancements can be made.
- Look at how Wyoming can form a high-level research focus panel to assist in defining the direction of research for WYDOT. This could be based on the wants and needs of WYDOT’s executive staff and other high-level officials.

### SESSION 2: COMMUNICATING RESEARCH RESULTS

Wyoming intends to do the following concerning communicating research results:

- Meet with public affairs media specialists and formulate a plan of action, which includes:
  - Newsletters.
  - Publications.
  - Video.
- Ask the WYDOT training center to assist in webinars where applicable.
- Compare Michigan’s “At a Glance” publication with WYDOT’s self-evaluation and work plan.
- Review NCHRP Report 610 and tailor it to Wyoming.
- Investigate putting a media release piece in the contract.

### SESSION 3: INTELLECTUAL PROPERTY AND CONTRACT CLAUSES

Wyoming intends to do the following concerning IP and contract clauses:

- Include IP language in all contracts.
- Discuss the issue with university partners, the IT division, WYDOT divisions, and attorney general staff.
- Develop form(s) for contractors that disclose inventions and/or copyright and provide title to the inventions and/or copyright. These will be used at kickoff and proposal stages.
- Determine where to archive data from research projects.

---

## SESSION 4: RESEARCH RESULTS IMPLEMENTATION AND DEPLOYMENT

Wyoming intends to do the following concerning research results implementation and deployment:

- As part of the research plan, put in a formalized implementation process. Use Nevada’s research results implementation plan as a guide.
- Work on defining what implementation means in Wyoming—full, partial, and none. What is success in implementation?
- Investigate how Wyoming can involve its LTAP center in the implementation arena.

### THE WEBINAR-BASED PEER EXCHANGE EXPERIENCE

The webinar-based multi-state peer exchange was a first of its kind. Participants were asked to share their experiences and evaluate the format for its effectiveness and appropriateness for conducting future peer exchanges. Overall, the webinar-based peer exchange was viewed as a success by the participating state DOTs and other participants.

The peer exchange sessions were scheduled based on participant availability within a two-month window from November through December 2015. The webinars occurred on November 24 and December 15–17. Planning for the peer exchanges began in August 2015 with a draft proposal that was discussed at the September 2015 RAC Leadership Meeting and approved by FHWA. The benefits cited in the proposal included:

- Avoiding unnecessary travel costs.
- Redirecting limited resources from travel to planning and conducting the peer exchange.
- Engaging FHWA division research contacts in the peer exchange.
- Allowing for greater and more varied participation from other agencies.

The agendas for the webinar-based peer exchanges (see Appendix A) generally consisted of:

- A two-hour online morning session for introduction of the peer exchange topic and agency presentations of status and concerns.
- A two-hour offline breakout session within individual states for discussion of possible improvements.
- A two-hour online afternoon session for presentation and discussions of planned actions.

The agenda and session times were generally viewed as appropriate for the peer exchanges. In particular, the midday breakout session was noted as beneficial for participants to discuss and reflect on the morning topics and then prepare the takeaways that could be shared with all of the participating states. Additionally, the format and structure of the PowerPoint slides were noted as being especially effective in guiding discussion in a meaningful way. The standardized slide format and schedule were initially prepared by SDDOT for use in the first peer exchange session and then were also used by successive state presenters. All of the participants agreed that the standard slide format and schedule contributed greatly to peer exchange success.

State participants evaluated the frequency of the webinars being scheduled on either a single day per week or consecutive days. Overall, participants indicated that two sessions per week with a day in between was preferred over consecutive days or one session per week. Devoting an entire day to a single topic with a midday breakout session was viewed as positive because it forced the participants to stay focused on the topic for the day. The use of facilitators was viewed as beneficial in that it allowed participants to stay focused on the topics and not be distracted by logistics and maximizing the advantages of the webinar format. Additionally, facilitators conducted a practice session in advance of the peer exchange that allowed presenters to walk through the mechanics of a webinar, which was noted as being beneficial to the success of the exchanges.

How did the multi-state webinar-based peer exchange compare to a traditional in-person exchange? Overall, the participating states liked the format and would repeat this type of exchange. The states recognized that the format met the expectations, obligations, and intent of peer exchange. The states also recognized the following strengths and weaknesses of this format:

- Strengths:
  - A format that required participants to pay attention, listen closely, and have fewer distractions.
  - Quick turnaround time to schedule and deliver an exchange.
  - Schedule flexibility and being able to schedule over days or weeks.
  - Requirement for actual study time and preparation versus showing up.
  - Being able to consider the content and then come back to share.
  - Requirement for attentive and close listening.
  - Encouragement of greater and more varied participation from other agencies.
  - A single subject per state, which worked better than multiple topics per state.
- Weaknesses:
  - A format that lacked informal time and social time to share experiences.
  - A need for more preparation and rehearsal time.
  - A need for more materials and visual support.
  - A lack of wider participation.
  - A need for improved attendance, which may have come from more frequent and wider invitations and separate invitations for each session.

## APPENDIX A: PEER EXCHANGE AGENDAS

### WEBINAR 1: RESEARCH QUALITY

Agenda: November 24, 2015

November 2015			Time Zone							
Date	Lead	Topic	Pacific		Mountain		Central		Eastern	
			AM	PM	AM	PM	AM	PM	AM	PM
<b>Tues., Nov. 24</b>	<b>South Dakota</b>	<b>Webinar 1 Research Quality</b>	8-10	1-3	9-11	2-4	10-12	3-5	11-1	4-6

Mountain Time Zone 9:00-9:15	<b>Welcome and Introductions</b> <b>Moderators:</b> Coordinate introductions Describe peer exchange webinar format Review agenda, schedule, roles, and expectations Introduce list/topics to be discussed	15 min.
9:15-9:55	<b>Topic Introduction:</b> <b>Optimizing the Value and Quality of Research</b> <b>Moderator:</b> Introduce topic and South Dakota participants <b>South Dakota:</b> Define topic and issues Participant presentations Discussion/Q&A	40 min.
9:55-10:00	<b>Summary with final Q&amp;A</b>	5 min.
10:00-10:15	<b>Break</b>	15 min.
10:15-10:50	<b>Optimizing the Value and Quality of Research (Continued)</b> <b>Moderator:</b> Announce continuation <b>South Dakota:</b> <ul style="list-style-type: none"> <li>• Ask peers what are the most important issues and concerns</li> <li>• Use to feed breakout session</li> <li>• How can we do it better (feed breakout session)</li> </ul>	35 min.
10:50-11:00	<b>Summary for Breakout Session</b>	10 min.
11:00-12:00	<b>Lunch</b>	60 min.
12:00-1:00	<b>Offline Breakout Session</b> Opportunity for state staff to discuss offline about what was learned in the morning session and bring back to the afternoon session. What are the takeaways and opportunities?	60 min.
1:00-2:15	<b>Participant Discussions</b>	75 min.
2:15-2:30	<b>Break</b>	15 min.
2:30-3:30	<b>Participant Discussion</b> Summary	60 min.
3:30-4:00	<b>Webinar 1 Summary, Review and Takeaways</b>	30 min.
4:00	<b>Adjourn</b>	

## WEBINAR 2: COMMUNICATING RESEARCH RESULTS

### Agenda: December 15, 2016

December			Time Zone							
Date	Lead	Topic	Pacific		Mountain		Central		Eastern	
Tues., Dec. 15	Idaho	Webinar 2 Communicating Research Results	AM	PM	AM	PM	AM	PM	AM	PM
			8-10	1-3	9-11	2-4	10-12	3-5	11-1	4-6

Mountain Time Zone 9:00-9:10	<p><b>Welcome and Introductions</b></p> <p><b>Moderators:</b> Coordinate introductions Describe peer exchange webinar format Review agenda, schedule, roles, and expectations Introduce list/topics to be discussed</p>	10 min.
9:10-9:20	<p><b>Topic Introduction:</b> <b>Communicating Research Results</b></p> <p><b>Moderator:</b> Introduce topic and Idaho DOT participant</p> <ul style="list-style-type: none"> <li>Idaho: Define topic and issues</li> <li>Make host presentations</li> <li>Discussion/Q&amp;A</li> <li>Opportunities for each state to discuss</li> </ul>	10 min.
9:20-10:20	<p><b>Communications Best Practices Presentations</b></p> <ul style="list-style-type: none"> <li>Johanna Zmud (confirmed), <i>NCHRP Report 610: Communication Matters: Communicating the Value of Transportation Research</i> (10-15-minute presentation with 15-minute discussion)</li> <li>Kim Linsenmayer, CTC &amp; Associates, <i>Communication Methods</i> (10-15-minute presentation with 15-minute discussion)</li> </ul>	60 min.
10:20-11:30	<p><b>State Presentations</b></p> <ul style="list-style-type: none"> <li>Individual state presentations on current communications practices, strengths and weaknesses, and goals for the exchange (10-15 minutes per state)</li> <li>Group discussion/questions and answers (20-30 minutes)</li> </ul>	70 min.
11:30-2:00	<b>Breakout Session and Lunch</b>	150 min.
2:00-3:30	<p><b>Presentations and Participant Discussion (Q&amp;A)</b></p> <ul style="list-style-type: none"> <li>State presentations on lessons learned/key takeaways and planned actions (10 minutes per state)</li> <li>Group discussion of best practices for communicating research information/results (50 minutes)</li> </ul>	90 min.
3:30-3:45	<p><b>Topic Summary and Overview of December 16 and 17 Sessions</b></p> <p>Review takeaways</p>	15 min.
3:45-4:00	<b>Evaluation of Today's Sessions/Webinars</b>	15 min.
<b>4:00</b>	<b>Adjourn</b>	

WEBINAR 3: INTELLECTUAL PROPERTY AND CONTRACT CLAUSES

Agenda: December 16, 2015

December			Time Zone							
Date	Lead	Topic	Pacific		Mountain		Central		Eastern	
			AM	PM	AM	PM	AM	PM	AM	PM
Wed., Dec. 16	Wyoming	Webinar 3 Intellectual Property and Contract Clauses	8-10	1-3	9-11	2-4	10-12	3-5	11-1	4-6

Mountain Time Zone 9:00-9:20	<b>Welcome and Introductions</b> <b>Moderators:</b> Coordinate introductions Describe peer exchange webinar format Review agenda, schedule, roles, and expectations Introduce list/topics to be discussed	20 min.
9:20-10:00	<b>Topic Introduction:</b> <b>Intellectual Property and Contract Clauses</b> <b>Moderator:</b> Introduce topic and Idaho DOT participant <ul style="list-style-type: none"> <li>Wyoming: Define topic and issues</li> <li>Host presentations</li> <li>Discussion/Q&amp;A</li> </ul>	40 min.
10:00-10:15	<b>Break</b>	15 min.
10:15-11:00	<b>Intellectual Property and Contract Clauses (Continued)</b> <b>Wyoming Presentations</b> <b>Presentations and Participant Discussion (Q&amp;A) Peer input</b> What is intellectual property—key definitions	45 min.
11:00-12:00	<b>Breakout Session and Lunch</b>	60 min.
12:00-1:00	<b>Offline Breakout Session</b>	60 min.
1:00-2:15	<b>Presentations and Participant Discussion (Q&amp;A)</b> <ul style="list-style-type: none"> <li>What is copyright?</li> <li>What is patent?</li> </ul> <b>Presentations and Participant Discussion (Q&amp;A)</b> Contract language	45 min.  30 min.
2:15-2:30	<b>Break</b>	15 min.
2:30-3:30	<b>Participant Discussion (Q&amp;A) Peer input</b>	60 min.
3:30-4:00	<b>Moderator Leads Review and Summary</b> Review takeaways	30 min.
<b>4:00</b>	<b>Adjourn</b>	

## WEBINAR 4: RESEARCH RESULTS IMPLEMENTATION AND DEPLOYMENT

Agenda: December 17, 2015

December			Time Zone							
Date	Lead	Topic	Pacific		Mountain		Central		Eastern	
			AM	PM	AM	PM	AM	PM	AM	PM
Thurs., Dec. 17	Nevada	<b>Webinar 4</b> <b>Research Results Implementation and Deployment</b>	8-10	1-3	9-11	2-4	10-12	3-5	11-1	4-6

Mountain Time Zone 9:00-9:20	<b>Welcome and Introductions</b> <b>Moderators:</b> Coordinate introductions Describe peer exchange webinar format Review agenda, schedule, roles, and expectations Introduce list/topics to be discussed	20 min.
9:20-10:00	<b>Topic Introduction:</b> <b>Research Results Implementation and Deployment</b> <b>Moderator:</b> Introduce topic and Nevada DOT participants <ul style="list-style-type: none"> <li>• Nevada: Define topic and issues</li> <li>• Host presentations</li> <li>• Discussion/Q&amp;A</li> </ul> <b>Notes From Nevada</b> <i>Introductions, expectations, and objectives for this session</i> <i>Introduction to Nevada DOT research program</i> <i>Summary of Nevada DOT efforts to integrate implementation with research program development</i>	40 min.
10:00-10:15	<b>Break</b>	15 min.
10:15-11:00	<b>Nevada Presentations</b> Other states' experiences on improvements efforts to better implementation of research results <b>Virginia Presentation</b> More rigorous plan for implementation of research results <b>Wisconsin Presentation</b>	45 min.
11:00-12:00	<b>Breakout Session and Lunch</b>	60 min.
12:00-1:00	<b>Offline Breakout Session</b>	60 min.
1:00-2:15	<b>Presentations and Participant Discussion (Q&amp;A)</b>	75 min.
2:15-2:30	<b>Break</b>	15 min.
2:30-3:30	<b>Participant Discussion</b> Incorporating implementation in research project selection Implementation focus during the research project Post-project implementation integration Funding implementation efforts Implementation metrics	60 min.
3:30-4:00	<b>Moderator Leads Review and Summary</b> Review takeaways	30 min.
4:00	<b>Adjourn</b>	

## APPENDIX B: CONTACT INFORMATION

### IDAHO

Idaho Transportation Department  
ITD Engineering Services Division—Research Program  
3311 W. State Street • P.O. Box 7129, Boise, ID 83707

**Ned Parrish**

Research Program Manager  
(208) 334-8296  
[ned.parrish@itd.idaho.gov](mailto:ned.parrish@itd.idaho.gov)

### NEVADA

Nevada Department of Transportation  
Research Section  
1263 South Stewart Street, Carson City, NV 89712

**Ken Chambers**

Research Chief  
(775) 888-7220  
[kchambers@dot.state.nv.us](mailto:kchambers@dot.state.nv.us)

### SOUTH DAKOTA

South Dakota Department of Transportation  
Office of Research, Room 164  
700 East Broadway Avenue, Pierre, SD 57501

**Dave Huft**

Program Manager  
(605) 773-3292  
[dave.huft@state.sd.us](mailto:dave.huft@state.sd.us)

### WYOMING

Wyoming Department of Transportation  
Research Center  
5300 Bishop Blvd., Cheyenne, WY 82001

**Timothy McDowell**

State Program Manager  
(307) 777-4412  
[tim.mcdowell@wyo.gov](mailto:tim.mcdowell@wyo.gov)

## APPENDIX C. BIBLIOGRAPHY

Bradley, J., J. Mallela, K. Chesnik, and T. Wyatt. *NCHRP Report 799: Management Guide to Intellectual Property for State Departments of Transportation*. National Cooperative Highway Research Program, Transportation Research Board of the National Academies, 2015. [http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp\\_rpt\\_799.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_799.pdf).

Holden, J. P. *Increasing Access to the Results of Federally Funded Scientific Research*. Executive Office of the President, Office of Science and Technology Policy, February 2013.

Zmud, J. P., J. L. Paasche, M. Zmud, T. J. Lomax, J. Schofer, and J. Meyer. *NCHRP Report 610: Communication Matters: Communicating the Value of Transportation Research*. National Cooperative Highway Research Program, Transportation Research Board of the National Academies, 2009. [http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp\\_rpt\\_610.pdf](http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_610.pdf).