

TRB Task Force on Knowledge Management (AB010T)

Meeting Notes

Wednesday, January 10th 8:00 AM- 12:00 PM

Marriott Marquis, Liberty N (M4)

Welcome and Introductions

Introductions

- Those in attendance briefly introduced themselves and their titles (see Appendix A).

Review of Task Force Scope and Objectives

- Frances reviewed mission of the Knowledge Management Task Force (KMTF) with an emphasis on research and sharing best practices from organizations who are doing KM well.

2017 Task Force Activities Review

Website Update – Glenn McRae/Omid Sarmad

- Glen introduced his the UVM UTC, related workforce management activities, and described workforce management connections to KM.
- This year the Task Force overhauled the website, <http://trbkm.org/>.
- The Twitter account (@TRBKMTF) hasn't been used in a while.
- Frances is in the process of retrieving the credentials for the LinkedIn account.

Webinar Series – Glenn McRae

- The recording of the successful Brass Tacks webinar is available via the website.
- These materials are a great starting point for organizations beginning KM.
- The webinar was not an official TRB webinar.

TRB Update from Jack Stickel, Data Section Chair

- ROSA-P is a new data portal replacing the NTL's Digital Repository.
- AASHTO has a new committee on Knowledge Management (which we'll hear about later in the meeting).
- Many committees have Action Plans, which are tactical plans developed on an annual basis. They are specific, identify leads for activities, provide schedules, and identify what resources are needed to accomplish activities.
- Jack will send an Action Plan white paper to Frances and Alex.

TRB Update from Tom Palmerlee

- Currently, there is a moratorium on new TRB committees, so the KM TF is likely to remain a TF for the time being
- Committees do triennial strategic plans; recommend that the Task Force does a TSP. Frances noted that was the next item on our agenda.
- Diversity and inclusion is a high priority for TRB.

Update from Jeff Western

- Jeff gave a plug for the cross-committee 2018 Resilience Innovations Summit and Exchange (RISE) and the CCCC's related outreach efforts.

TRB Workshops and Sessions

- The program of KMTF-led sessions is in Appendix B.
- There were also other sessions related to KM that were not sponsored by the KMTF.
- Later in the meeting the group discussed that several of the sessions not sponsored by the KMTF that used the language of knowledge management were actually about other topics.
- Also later in the meeting Ben offered that the workshop was useful and suggested the task force conduct another hands-on workshop at the next Annual Meeting.

Liaisons with Other TRB Committees

- Alex Linthicum gave a brief overview of liaisons and said the KMTF would be managing the liaison list as a knowledge asset.
- Jessica suggested adding a liaison for ABC30.

TRB Committee Collaboration and Coordination – Sue Sillick

- Frances asked Sue Sillick, Chair of CRCC, to provide her thoughts as to TRB collaboration-related gaps that aren't being addressed through other mechanisms
- Sue provided an update from the CRCC:
 - o CRCC is encouraging partnering across committees
 - o The council finds that research needs are not necessarily being communicated among all committees and that there is some overlap.
 - o CRCC encourages research coordinators to work with communication coordinators.
 - o Sue noted that committees need to track their own history of activities, documents, research products. Websites are one repository for these items.
 - o Sue has been working with others to connect AASHTO and TRB Committees. She developed a draft crosswalk spreadsheet that maps TRB Committees to the new AASHTO Committee structure to assist with coordination.
 - o CRCC developed an E-Circular with the Library and Information Science for Transportation (LIST) Committee on research resources.
 - o A significant gap within TRB seems to be tools for collaboration. Sue said the CRCC piloted TRB eGroups and got mixed results. This may be something with which the KMTF can assist.
 - o Communicating value of research also seems to be a gap
 - o Committees should be staying on top of what's (sessions, webinars, papers, etc.) been done and what's actively underway.
 - o There are opportunities to improve coordination on paper calls, sessions, but finding committees that have common interests is an ongoing challenge.

- Leni suggested that the AASHTO/TRB crosswalk spreadsheet could be augmented with affinities and that a Google custom search of research activities, focused on committee website domains, could be established.

Committee 3 Year Plan

- Alex Linthicum gave a brief overview of the structure of the paper, the process for reviewing and commenting, and asked for volunteers.
- Becky and Turo volunteered.

2017 Notable Research, Practice and Other Developments

New AASHTO KM Committee

- King Gee gave an in-depth presentation on the new AASHTO KM Committee. Some notes from the presentation follow.
- The federal / state relationship is strong and important, and a joint AASHTO and TRB forum is ‘genius.’
- The TRB Task Force, grounded in research, is of keen interest to AASHTO. KMTF materials have been really vital for King.
- The AASHTO committee structure hadn’t been updated since the 1950s
- The previous structure had 5 modal committees, 6 functional committees, and was largely highway-centric.
- 2017 was a milestone year during which the last of the DOTs adopted a ‘transportation’ as opposed to ‘highway’ name. Restructuring of AASHTO committees was specifically multimodal. Although 75-90% of money goes to highways, transportation is a multimodal system and needs to be thought of as such.
- Last year the AASHTO Board of Directors adopted recommendations for committee update.
- There is a new Strategic Management Committee. Historically AASHTO has been bottoms-up from technical disciplines; what was missing was top down direction.
- There is a new ‘Active Transportation’ policy committee, joining several other existing policy committees. These committees exist to discuss the range of positions on policy issues. AASHTO also works continually on reauthorization. Although it cannot achieve consensus on all policy issues (e.g. gas tax), it can provide forums for discussing difficult issues.
- There are new groups on ‘Data Management and Analytics’ and ‘Knowledge Management’. KM has come to forefront due to “unrelenting” retirements, loss of knowledge, shrinking FTEs/budgets, and proliferation of contractors (who often take knowledge with them when projects end).
- A KM Working Group consisting of KMTF members (Leni Oman, Amanda Holland, Becky Burk, Kent Marquardt, Ben Anyacho, Lorri Economy, Michelle Tucker, and Victoria Beale) assisted with the planning of the AASHTO Knowledge Management Committee.
- The working group produced 3 documents: Purpose Statement, Briefing Document, and Draft Charter. 29 states have responded and have designated representatives.
- Chair of the committee is identified but not yet announced. We know it is a state DOT CEO.

- The first meeting will be in May.
- The KMTF can suggest research to AASHTO committee and can also vet/review results of AASHTO research.
- Similar to how Asset Management was introduced in the 90s, KM can be introduced in 3 phases now: Education, Best Practices, Advance and Mature
- Leni shared noted that there are varied opinions among DOTs on what “KM” is, and she suggested “softening the edges” of how “knowledge” is defined.
- Leni, Ben and Becky will be on the new committee

MnDOT Knowledge Books

- Michael Leegard gave a presentation via phone on how MnDOT developed a Knowledge Book on Concrete Pavement Rehab. A seasoned expert, Gordon “Gordy” Bruhn, provided his knowledge and expertise for the development of the book.
- The effort was inspired by Kraft Foods’ work on knowledge books.
- The hardest part was the contracting because the contractor was international.
- The target audience for the knowledge book is technical experts. The material is very detailed.
- The development process began with a 4-hour interview - Gordy’s “brain hurt” after the interview.
- The consultant followed up with several interviews on Skype.
- The final deliverable is a 249 page interactive Powerpoint file, which will be relatively easy to provide to field staff on tablets.
- The knowledge book is now on draft version 3 and will be finalized soon.
- The expert is planning to retire in a few years. Now he is beginning a roadshow to raise awareness of the resource.
- The contractor recommends that a single person be responsible for collecting feedback and managing updates to the document.
- MnDOT has a second book underway on Bituminous Fix Designs. For this effort, the expert has already retired and has returned as a contractor to provide his knowledge.

Other Agency Activities (TxDOT, WSDOT, FHWA, Volpe, others...)

- Mississippi DOT – MDOT KM improvements – Cindy Smith
 - o Cindy’s office has been conducting interviews with engineers in the Districts to identify all the stuff that’s “not in the redbooks, not in the SoPs” and documenting that knowledge.
 - o The Chief Engineer has recognized the value of this effort, thanks in part to Cindy’s influence and persistence.
 - o
- FHWA KM Unit – Carin Michael
 - o Focusing internally within FHWA
 - o Starting with Discipline Support System (DSS)
 - o Looking at new collaboration techniques
 - o Introduced Gabby Holdcroft, Specialist in KM Unit
- WSDOT – Leni

- WSDOT received an FHWA grant through Accelerating Innovative Deployment Program and is getting close to end of project
- Working to bridge communications/knowledge gaps among ‘Silos of Excellence’
☺
- Michelle Tucker – CalTrans
 - 3rd round of formal mentorship program
 - Next year – Communities of Practice
 - Want to develop team on KM
 - Considering adopting Yammer
- TxDOT - Ben
 - Lessons learned
 - Communities of Practice
 - Wikipedia Knowledge – evolve maturity of entries from level 1 to 2
- Volpe - Alex
 - Formal Slack pilot at TRB including 80 staff from throughout Volpe
 - Offer to share experiences with others considering similar tools (including CalTrans and FHWA, see above)

Research Projects

NCHRP 20-109 – Enhancement of the Transportation Research Thesaurus – Andy Lemer/Lisa Lloyo

- TRT is a controlled vocabulary used to catalog artifacts that are produced by and in association with TRB.
- It is a hierarchical data structure now governed by international standards
- The amount of information has been growing exponentially
- TRT helps to make search more powerful – beyond literal full text searching.
- This effort is just finishing its first phase to review capabilities of TRT.
- It has made recommendations for improving TRT, including shifting to an ISO-compliant standard and a new management platform.
- International materials are in TRID. Everything in ROSA-P is in TRID, working with NTL to update all the links

NCHRP 20-97 – Improving Findability and Relevance of Transportation Information – Frances Harrison

- Phase I is a guide for DOTs.
- Phase II constitutes an implementation project. The team is actively recruiting pilot DOTs to participate.

NCHRP 20-104 – Keeping What You Paid For: Retaining Essential Consultant-Developed Knowledge within DOTs – Frances Harrison

- This is a recently completed NCHRP project, published as NCHRP Report 867. Overview slides will be available from TRB session 661.

NCHRP 20-103 – Guidance for Development and Management of Sustainable Information Portals – Ben Pecheux

- Brief overview of presentation
- Leni noted that a motivation for this project was that requests for new portal development was one of the most common requests for research funds. The next step is to see how the findings of this study might be moved forward to support a more unified approach to information portals.

TCRP F-23 - Knowledge Management Resource to Support Strategic Workforce Development for Transit Agencies – Dianne Schwager

- The practical resource was compiled by ICF.
- It is a highly structured document, which makes it easy to understand.
- It provides a brief overview of KM, defines elements (culture, planning, knowledge culture, knowledge culture, retention), and for each element, defines strategies.
- It also contains case studies.
- An appendix identifies types of KM tools (a previous version identifies commercial products – call Candice Cronin at ICF if you want the original list).
- A ‘Pre-publication’ version of TCRP Report 194 is currently available via download only. The final version has not yet been posted.

Identifying Research and Dissemination Activities for 2018

Research Statement Development Overview – Leni Oman

- Two people can be authorized to enter problem statements in to the Research Needs Statements Database.
- Leni provided an overview of fields for Research Needs Statements and showed existing research needs statements that included the term “knowledge management.” There may be opportunities to partner with other committees.
- Leni is familiar with process for submitting needs and worked with Andy Lemer at TRB to create “A Framework for Research and Development to Improve Transportation Information and Knowledge Management.”
- Frances reminded us that a review of the brainstorming list from last year is on the last page of the Draft Triennial Strategic Plan she emailed out.
- Denise suggested categorizing research into three types: survey, applied, and exploratory. This will help researchers to better assess whether to pursue projects and could help to attract more high-quality proposals. Suggestions for research topics are below. The Research Subgroup should explore the literature related to any research topic it pursues.

Topic 1: KM Techniques within Agencies – Turo Dexter

- Turo Dexter led a brainstorming session related to KM techniques. Leni and the Research Subgroup may use these ideas to develop Research Needs Statements.
 - o Gap analysis of KM Capabilities: What do we have? What are we lacking? – Cindy
 - o Transportation-specific maturity model for KM. Account for decentralized agencies with semi-autonomous field staff – Jessica

- Transparency / Sharing / Open Government versus Privacy / Security / Risk Aversion - guidance for finding the “sweet spot” - Leni
- Documentation projects; agile documentation projects – Ben A.
- How to transfer knowledge up to new leaders without reinventing the wheel – Becky
- Examine the inclinations to avoid lessons learned (“KM not relevant in time and space”) - Chris Young
- Impact of physical space on collaboration, innovation – Leni
- Examining peoples discomfort with admitting they failed – Cindy
- How KM informs risk management – Turo
- How to manage tacit knowledge that is inappropriate to make explicit (“Too Hot to Handle” - FOIA considerations, risk of litigation, sensitive HR issues, workplace sensitivity/decency) – Alex
- Physical challenges to KM including geographic size, number of employees – Michelle
- Economic Case for KM, costs of limiting your interactions to people you know – Ben
- Metrics for KM – Becky
- How, in new positions, past experiences may be undervalued – Leni
- How does agency governance tie (or not tie) into KM – Ben
- KM is not ‘yet another initiative’ – Becky
- Pros/cons/barriers to use of chat communications platforms – Glenn
- Pilot implementation of anticipatory knowledge – Leni
- KM integration with learning and development – Jessica
- Balance between top down and organic approaches to KM – Ben
- Frances suggest aligning these with the categories Denise suggested earlier

Topic 2: KM Techniques for the TRB Community – Frances Harrison

- Frances led a brainstorming session to identify research topics to benefit KM within TRB itself.
- TRB has many committees with overlapping interest areas, and there is a need to facilitate collaboration, reduce duplication, inform efforts to re-align committee structures, and inform scheduling to reduce conflicts. KM approaches could be used to accomplish these ends.
- Leni and the Research Subgroup may use these ideas to develop Research Needs Statements.
 - Changes to rooms, time slots to avoid year-on-year repeated overlap of same meetings – Alex
 - Scan of how other large professional organizations (which are voluntary, secondary, and siloed) manage knowledge across diverse committee structures – Alex
 - Perhaps as a pilot, examine how resilience as a topic area is represented across all TRB committees; include AASHTO committees as well – Jeff

- Define what KM is and share that definition formally and informally among other TRB committees. This year there were several sessions that were titled KM but were really data management – Vanessa
- Perform semantic analysis across TRB structured data (session titles, presentation/poster titles, webinars, article/report titles) and create a topic map. Perhaps this could be a collaboration with the visualization committee – Turo/Leni

Action Items – Volunteers for specific tasks

- Send Notes from Annual Meeting – Frances
- Solicit help for Task Force roles, responsibilities – Alex
- Organize Subgroup to Finalize 3-Year Strategic Plan by Mid-March – Alex Linthicum (volunteers currently include Turo, Becky)
- Keep the committee informed about the May AASHTO KM meeting – Leni (If appropriate, we might plan a joint in-person meeting with that group)
- Organize Subgroup to draft Research Needs Statements – Leni Oman (volunteers currently include Cindy, Michelle, and Ben)
- Plan 2018 Webinars, both Official TRB and Non-Official – Glen McRae
 - Anticipatory Knowledge
 - MnDOT Knowledge Book
- Conduct outreach to other committees about what KM is and what resources are available

Appendix A – 2018 Annual Meeting Attendees

Name	Org	Email	Member / Friend / Add Me
Frances Harrison	Spy Pond Partners	fharrison@spypondpartners.com	M (Chair)
Alex Linthicum	USDOT Volpe Center	alex.linthicum@dot.gov	M (Vice Chair)
Becky Burk	MDOT (Maryland)	bburk@sha.state.md.us	M
Glenn McRae	UVM-NETWC	Glenn.mcrae@uvm.edu	M
Turo Dexter	FTA	turo.dexter@dot.gov	M
Chris Young	TXDOT	cyoung1@txdot.gov	Add Me
Brittany Meece	MassDOT/MBTA	Brittany.meece@dot.state.ma.us	
Theresa Schweithelm	MNRR	tschweithelm@mnr.org	
Jessica VanDenBogart	FDOT	Jessica.vandenbogart@dot.state.fl.us	M
Omar Camacho	LA Metro	camachoo@metro.net	Add Me
Leni Oman	WSDOT	omanl@wsdot.wa.gov	M (CRC)
Carin Michel	FHWA	Carin.michel@dot.gov	M
Gabriela Holdcroft	FHWA	Gabriela.holdcroft@gmail.com	
King Gee	AASHTO	kgee@ashto.org	
Lisa Loyo	TRB	lloyo@nas.edu	
Bryan Gibson	KTC (UoC)	Bryan.gibson@uky.edu	F
Benjamin Pecheux	AEM Corp	Ben.pecheux@aemcorp.com	
Sue Sillick	MDT	ssillick@mt.gov	F
Vanessa Braddy	MDOT SHA	vbraddy@sha.state.md.us	
Jack Stickel	AKDOT&PF (retired)	datainfo@gci.net	M
Michelle Tucker	CalTrans	Michelle.tucker@dot.ca.gov	M
Amy Lucero	FHWA	Amy.lucero@dot.gov	
Benjamin Anyacho	TXDOT	Benjamin.anyacho@txdot.gov	M
Andrew Lemer	NCHRP	alemer@nas.edu	M
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Katie Zimmerman	APTech	kzimmerman@appliedpavement.com	
Dianne Schwager	TRB	dschwager@nas.edu	
Cindy Smith	MDOT (Mississippi)	sjsmith@mdot.ms.gov	M
Pam Hutton	AASHTO	phutton@ashto.org	
Joseph Glowitz	PS-E	josephglowitz@ps-e.com	M
Jaime Young	USDOT Volpe Center	Jaime.young@dot.gov	
Jeff Western	WSP	Jeffrey.western@consultingwestern.com	F

Appendix B

Workshops/Sessions/Meetings Sponsored by the Knowledge Management Task Force

Sunday 9:00 AM-12:00 PM

Workshop 103

Identifying Knowledge Assets: A Case Approach

Alexander Linthicum, OST-R/Volpe Center, presiding

Monday 6:00 PM-7:30 PM

Lectern Session 461

The Future of Transportation and Reliance on Knowledge Sharing Among Transportation Organizations

Adam Hopps, Toxcel, LLC, presiding

Tuesday 3:45 PM - 5:30 PM

Lectern Session 661

Tools for the Zombie Apocalypse: Avoiding the Brain Drain in Transportation Organizations

Becky Burk, Maryland State Highway Administration, presiding

Wednesday 8:00 AM - 12:00 PM

Knowledge Management Task Force Meeting

Frances Harrison, Spy Pond Partners, LLC, presiding

Alexander Linthicum, OST-R/Volpe Center, presiding

Knowledge Management Related Sessions Sponsored by Other Committees

Monday 1:30 PM - 3:15 PM

Lectern Session 333

Building Our Bridge to the Future Through Knowledge Management

Susanna Hughes-Reck, Federal Highway Administration (FHWA), presiding

Gary Vansuch, presiding

Tuesday 1:30 PM-3:15 PM

Lectern Session 588

Harnessing Communities to Improve Transportation Information and Knowledge

Kendra Levine, University of California, Berkeley, presiding

Leighton Christiansen, OST-R/Bureau of Transportation Statistics, presiding

Wednesday 2:30 PM - 4:00 PM

Lectern Session 838

Modes of the Future and Workforce Development Implications

Diana Long, Rahall Transportation Institute, presiding

Emily Parkany, Vermont Agency of Transportation, presiding