ACS20 User Liaison Subcommittee –
Brief History and Current Vision, Mission, and Scope

December 2020

Overview

This document is intended to present:

1. The history of the former Highway Safety Performance Committee (ANB25) User Liaison/ User Liaison and Technology Facilitation Subcommittee, former ANB25 International Safety Performance Research Subcommittee, and former ANB25 Policy and Legal Aspects Subcommittee who form today the ACS20 User Liaison Subcommittee.
2. The ACS20 User Liaison Subcommittee vision, mission, scope, and structure.

History of the ANB25 User Liaison/User Liaison and Technology Facilitation Subcommittee, ANB25 International Safety Performance Research Subcommittee, and ANB25 Policy and Legal Aspects Subcommittee

User Liaison/User Liaison and Technology Facilitation Subcommittee

The User Liaison Subcommittee began as the **User Liaison and Technology Facilitation Subcommittee,** which was formed in 2000 and has stayed as an active subcommittee of the HSM JSC (2000-03), the HSM Task Force (2003-10), and ANB25 (2011-20). In 2019, the ANB25 International Safety Performance Research Subcommittee was incorporated into the Subcommittee and the name was changed to User Liaison. In 2020, the ANB25 Policy and Legal Aspect Subcommittee was also incorporated into the User Liaison Subcommittee.

The User Liaison Subcommittee has connected TRB with AASHTO, FHWA, LTAP, and other organizations; and connects its parent Committee with other TRB committees and subcommittees. In addition, the User Liaison Subcommittee has had direct contact with many HSM users and other safety practitioners, representing a wide range of organizations (Federal, State, and Local governments; consultants; universities; international; etc.) via our volunteers' training and outreach efforts. Many have joined the User Liaison Subcommittee and participated actively during the subcommittee meetings at the Annual Meetings, Mid-year Committee meetings, and the in-between conference calls.

The User Liaison Subcommittee membership has been broader than the committee itself and provides an avenue for participation in the committee when the committee membership is limited in size. The User Liaison Subcommittee has provided a natural forum for discussion by stakeholders to discuss the needs of the users, gaps in resources, and ideas and potential future efforts. The User Liaison Subcommittee meetings and calls engage the practitioners and give them a voice.

Some Past Activities of the User Liaison Subcommittee

Outreach to other TRB committees

The Subcommittee has outreached to and collaborated with several TRB committees. For example:

- Delivered HSM presentations to several TRB safety-related committees, invited and set liaisons and to encouraged collaboration on future activities (2009-2012)

- For many years, have led ANB25's co-sponsorship of "Case Studies in Performance-Based Analysis of Geometric Design" sessions at TRB Annual Meeting with former AHB65 (Operational Effects of Geometrics Committee)
- Solicited co-sponsors from the former ANB20, AHB65, and AFB10 committees to collaborate on a TRB 2020 Workshop (and currently in the planning stages for another joint Workshop in January 2021) on "Use of Safety Performance in Day-to-Day Transportation Decision Making."

Local Technical Assistance

From 2011 to 2013, the ANB25 User Liaison Subcommittee embarked on a major initiative intended to provide technical assistance to local agencies. After the HSM 1st Edition was published in 2010, many local agencies were overwhelmed by the task of attempting to implement HSM methods. In particular, locals often have limited access to the type of detailed data used in the methods.

To address their concerns and unique needs, the User Liaison Subcommittee conducted an extensive outreach to understand the limitations and challenges faced by local agencies. This included a joint meeting at TRB 2012 with a National LTAP group, to gather input and to invite LTAP representatives to work with the Subcommittee throughout the process. The Subcommittee has several members from local agencies/LTAP, including Tim Colling – Director, Center for Technology & Training at Michigan Tech University, who greatly helped to connect the User Liaison Subcommittee with LTAP activities.

One resulting product of this collaboration was a "Safety Analysis in a Data-Limited, Local Agency Environment" workshop. The User Liaison Subcommittee coordinated the effort, bringing together LTAP/local representatives and members of the research community to develop and deliver the new material. The workshop was developed and facilitated by a group of 20 dedicated volunteers, including members of TRB Highway Safety Performance Committee (ANB25), ANB25 User Liaison and Roadway Safety Management Subcommittees, LTAP, FHWA, and AASHTO. In July 2013, a very successful pilot "train the trainer" workshop was conducted in Boise, ID at the NLTAPA annual meeting. Key benefits of the workshop at LTAP were:

- Provided training and presentation materials for use by any LTAP centers hosting similar training events
- Provided contacts for LTAP centers who may need a subject matter expert to deliver the program

This effort involved many stakeholders and jump-started safety analysis efforts at the local level - and subsequent FHWA's efforts - with providing HSM training to locals. This initiative is illustrative of the User Liaison Subcommittee's role in helping to move beyond just state transportation agencies with implementing research.

HSM Case Study Development - Practical Application of the HSM

Initiated by current ACS20 co-chair Karen Dixon, the User Liaison Subcommittee took the lead a few years ago (2017) in identifying sample problem and case study needs. Several mini workshops support this development. It resulted in recommendations on sample problem needs, both as input to the NCHRP 17-71 research team, and what should be done beyond the HSM2 (i.e., beyond scope of NCHRP 17-71).

Further, the User Liaison Subcommittee coordinated with the HSM Pooled Fund, for potential funding of case studies to assist practitioners in performing data-driven safety analysis. The primary purpose of HSM case studies is to focus on the challenges faced by users and their resolutions (i.e., the decisions made to overcome the challenges). The case studies would serve as a source of "lessons learned" and best practices for situations where we do not have the science (HSM methods/models) and/or the available data to apply the HSM methods in a straight-forward manner. The Subcommittee also developed an outline for the HSM case studies, which could be used to develop a case study "template." Currently, a funded project for the development of at least 10 case studies is under way (2020).

Research Needs – Practical Applications of the HSM

The mini workshops also provided recognition that the issues brought forward were broader than just sample problems/case studies. The collated information was reported in a tabular format named "Issues to resolve for practical application of the HSM". The tables in the document contain a listing of identified issues for practical implementation of the HSM, organized into several main topics, identified knowledge gaps, topics for which case studies and/or guidance could be developed, and topics for which additional research is needed.

Twenty research needs were identified, and 15 of those were transferred to the ANB25 Research Subcommittee to consider development of research statements. The top 5 research needs, as identified in a survey carried out during the TRB 2019 ANB25 meeting, were further discussed in breakouts sessions in the 2019 midyear ANB25 meetings. Each group identified key challenges/barriers; potential solutions to unexpected results; how to explain unexpected results to decision makers; and research/ actions needed to provide initial guidelines to users prior to a full research project. These were summarized in tabular form, and a working group was created in May 2020 to move the ideas forward. The primary goal of the working group is to identify actionable items in the near and longer term.

TRB Workshops

A workshop was conducted at TRB 2020 ("Use of Safety Performance in Day-to-Day Transportation Decision Making"), focused on freeways and intersections. Another has been planned for TRB 2021 ("Safety Performance Decision-Making: Advancing Research Through Implementation"), which will focus on suburban arterials. The vision is to continue this as a yearly series, focused on a different facility type each year.

AASHTO HSM website

The User Liaison Subcommittee has long assisted AASHTO with structure and content of the HSM website originally created by the User Liaison Subcommittee and then handed to AASHTO in 2010. The User Liaison Subcommittee continued to enrich the website with tools and links to assist HSM users. In the past three years, the working group submitted ideas for short-, medium-, and long-term enhancements to the website (2018), and is currently identifying longer-term enhancements working closely with the Chair of the AASHTO Committee on Safety's Technical Publications Subcommittee.

HSM Frequently-Asked-Questions (FAQs)

A major effort was completed to pull together initial HSM FAQs in 2012 and 2015, and a follow-up major update was carried out and posted on the website in 2018.

HSM Part C spreadsheets

A new working group was created in 2020 to conduct a gap analysis of the HSM spreadsheets, for use by AASHTO as input to the RFP for NCHRP 17-71A (HSM2 Development); and to create a catalog of spreadsheets developed/enhanced by agencies.

TRB Poster Sessions in Annual Meetings

TRB "Case Studies in the Performance-Based Analysis of Geometric Design" poster sessions have been co-sponsored by the ANB25 User Liaison Subcommittee and the AHB65 (Operational Effects of Geometrics), now in its 14th year, and is currently planning for January 2021.

ANB 25 International Safety Performance Subcommittee - International Collaboration

The **ANB25 International Safety Performance Research Subcommittee** (ISPRS) was approved in 2014. Typical activities and focus revolved around:

- Transferring safety performance methods (SPFs, CMFs, etc) – between countries, states, regions
- Developing materials/training to transfer safety methods to LMICs
- Learning from international partners
- Advocating for international coordination/funding of research in safety
- Maintaining a source of information on safety data/methods repositories internationally
- Advancing international research for future safety analysis methods

The former ANB25 ISPRS held the first session (2014 TRB Session 788) which was co-sponsored by ANB25 and ANB20 entitled, "Overview of Road Safety Performance Initiatives Around the Globe." Presenters represented safety in Italy, Australia, Greece, and the US. In April 2014, the ISPRS co-sponsored a workshop at TRA in France on "Sharing CMFs: An OECD Report Offers a World of Possibilities." The activities were built around the 3 recommendations in the report:

1. Provide guidance on development and reporting of CMFs
2. Compose an international group under an existing organization to foster dialog among researchers and practitioners on CMF research with the aim of increasing transferability of CMFs
3. Coordinate research across countries on top priority countermeasures

The subcommittee also held a workshop at the International Symposium on Highway Geometric Design in Vancouver on June 22, 2015 entitled, "Crash Modification Factors: International Transferability and Applications in Planning, Design, and Operations." This workshop incorporated presentations from Haiti, China, Egypt, Australia, and the US. A white paper referenced many of the roadblocks identified in the transfer process. In 2017, ISPRS held TRB Workshop 183: Framework for Assessing and Transferring Highway Safety Performance Measurement showcasing projects from Qatar and China as well as the development and application of the SafetyCube, PIARC International Road Safety Manual, iRAP, and HSM.

ANB25 Policy and Legal Aspects Subcommittee –Terminology, Applications, and Highway Safety Institutionalization

The **Policy and Legal Aspects Subcommittee** was established in 2011 as part of ANB25. During the development of the HSM, it was critical to ensure the publication did not have any verbiage that would increase the tort liability or risk to transportation agencies through its use. The HSM Task Force provided that support. Recognizing the value and role that policy plays in advancing the implementation of the HSM and other scientific research, the ANB25 formalized the Policy and Legal Aspects Subcommittee. The subcommittee's objective has been to provide support to the Committee and stakeholders to develop policies and address risk management issues, ultimately increasing the application and institutionalization of the quantification of highway safety performance.

TRB has not had individuals in other technical committees dealing with technical manuals (e.g., the Roadside Design Guide) that would discuss the policy and legal implications of terminology in technical documents. The Policy and Legal Aspects Subcommittee is unique in that it did provide that avenue and engaged FHWA, AASHTO, and stakeholders as part of those discussions. Further, the subcommittee has worked with policy-making groups to identify and develop research to address emerging policy, legal, and risk management issues and provided outreach to stakeholders on issues arising out of the use of quantitative safety assessments and information.

ACS20 User Liaison Subcommittee: Vision, Mission, Scope, and Structure

Vision

The actions of the User Liaison Subcommittee aim to achieve the institutionalization of the state of the art of quantitative highway safety information into professional practice; to be demonstrated by the widespread understanding and effective application of the fundamentals of highway safety.

Mission

Institutionalization of HSM practice, procedures, and future advances in quantitative highway safety performance by users, including:

- AASHTO
- FHWA
- TRB Committees
- ITE
- Local agencies
- Consultants
- Universities, Educators and Trainers
- International users
- Researchers

Scope

The User Liaison Subcommittee coordinates the activities of the Safety Performance and Analysis Committee related to the implementation (in terms of understanding and application) of the HSM and other future quantitative analysis methods and procedures approved by the Committee, gathering and

disseminating of user feedback, and encouraging policy change to support the institutionalization of safety procedures. The Subcommittee will coordinate our efforts with other subcommittees, with the ACS20 Communication Coordinator, with other TRB Committees, with HSM users, and with the international safety research community.

The scope of the User Liaison Subcommittee includes:

1. Facilitate understanding and application of HSM procedures and other quantitative analysis methods
2. Facilitate
    - Training (existing workforce)
    - Education (future workforce)
    - Technical support
    - To promote the use / adoption of quantitative safety information practices and procedures
    - To encourage modification of policies and guidance documents to reflect quantitative highway safety information.
3. Gather User Feedback
    - To identify user needs
    - To translate needs into:
        - Research priorities
        - Tools/software
        - Technical facilitation products
    - To establish a link and a review/response process with AASHTO and our Committee for external generated HSM2 errata

Structure

At this time, the User Liaison Subcommittee will include two "permanent" working groups, as well as "temporary" working (task) groups to address certain issues, as needed. Each working group will have a chair(s), who will coordinate with other groups, as appropriate, and report back to the subcommittee chair(s).

The subcommittee chair(s) will coordinate all working groups and activities, including connections between working groups, with other ACS20 subcommittees, with other TRB committees, with external groups, etc., as appropriate.

Permanent Working Groups

International Safety Research

In 2019, the ANB25 International Safety Performance Research Subcommittee merged with the User Liaison Subcommittee. The merger was in recognition that international partners are an important group that the User Liaison Subcommittee should liaise with, and of the opportunities that such a merger presents, including:

- Support of potential international users of the HSM and other US-based safety performance tools.
- Technology transfer (both directions from US to international and from international to US) – significant research is being conducted world-wide, and as much as possible should be captured,

shared, and utilized for maximum benefit. This working group will monitor and ensure representation of international research initiatives of potential interest.

- Assistance for low- and middle-income countries (LMICs) – TRB and other international partners such as PIARC and OECD have developed numerous resources on safety data, analysis, and performance. A significant component of future effort should enable LMICs to take advantage of this information to improve their own transportation safety.

While international safety research issues would be inherently incorporated into the User Liaison Subcommittee mission and scope, a working group ensures that a formal structure exists to collaborate with international partners. Informal relationships already exist between committee members and friends with partners including: PIARC, ITF, OECD, IRTAD, CEDR, TRA, iRAP, etc. Particular interest exists in relation to the AASHTO HSM and the PIARC RSM. Maintaining these relationships and flow of information on safety research will foster international best practices for transportation safety.

Policy and Legal Aspects

The working group will provide guidance related to legal issues including those related to providing guidance/opinions/best practices; and how to appropriately convey such guidance/opinions/etc.

Temporary (Task) Working Groups

Temporary (task) working groups will be established to address specific topics of interest. For example, current working groups focus on:

- AASHTO HSM website
- HSM Part C tools (e.g., SafetyAnalyst, IHSDM, Part C spreadsheets)
- HSM FAQs
- Development of research needs statements
- Development, coordination, and facilitation of TRB 2021 workshop on “Use of Safety Performance in Day-to-Day Transportation Decision Making”