

# The Landscape for Transportation Information Professionals, 2012

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*FOREWORD: Every standing committee of the Transportation Research Board (TRB) critically evaluates itself every three years with a written report known as the Triennial Strategic Plan (TSP). The TSP helps committees set a course for the next 3-7 years by identifying successes and areas where the committee can improve, and tasks that will advance the committee toward positive change and away from non-productive or duplicative activities. The process also provides Group and Section Chairs at TRB an overview of the health, relevancy, and key issues facing its committees, as well as an opportunity to review committee scopes in light of emerging issues and cross-cutting topics.*

*As ABG40 completed its 2012-2015 TSP, members recommended that the first section of the TSP “Future Outlook Statement” be shared with the greater transportation library and information community. The following text was excerpted (mostly verbatim) from the 2012 TSP, which was submitted to TRB on March 30, 2012. What follows is the committee’s opinion based on the experience and perspective of committee members who vetted the TSP, though it was authored by Ken Winter, Chair of the committee at the time.*

*Special thanks to friends and colleagues for their support and encouragement to publish this white paper with LIST, including: Rita Evans from the Harmer E. Davis Transportation Library at the University of California, Berkeley (who first recommended the committee publish TSP excerpts as a white paper), Roberto Sarmiento from the Northwestern University Transportation Library (for his insightful comments and editorial recommendations), Sandy Tucker from Texas A&M University Libraries (for the idea to utilize Creative Commons licensing), and Sheila Hatchell from the Minnesota DOT Library (for her encouragement and support along the way).*

*-Ken Winter, Outgoing Chair, ABG40, April 24, 2012*

### **Committee Future Outlook Statement**

TRB Standing Committee ABG40 (Library and Information Science for Transportation) serves as a forum for transportation librarians and the transportation research community on developments in information science and their applicability to transportation. The committee facilitates diffusion of library and information science innovations throughout the transportation community by monitoring the use of new resources and tools in the transportation arena, defining critical research and training issues relating to their implementation, and promoting the benefits of these capabilities.

### **Factors and Influences That Will Shape the Committee's Activities**

Access to the right information at the right time in the right format is vital to promoting advancements in transportation technology and improvements in policy. Information access is an issue with the potential to cut across all TRB committees. When properly applied, the principles of library and information science can save time, save money, reduce duplicated effort, speed implementation of research, and advance innovation.

### **The Landscape for Transportation Information Professionals**

The top three cross-cutting issues the Committee on Library and Information Science for Transportation faces and which are within the scope of the committee over the short (1-3 years) and long-term (4-7 years) are Workforce Changes, Technology Development and Increased Interest In Data. These three cross-cutting issues and specific goals and proposed projects tied to those goals, can serve to focus the committee's planned activities and may be addressed through liaison or collaborative efforts. Key collaborators could include other TRB committees—especially these committees within the Policy and Organization Group: Transportation History (ABG50), Technology Transfer (ABG30), Conduct of Research (ABG10), and others in the group, as well as the Information Systems and Technology Committee (ABJ50). Collaborative opportunities may exist with other groups as well (especially the Transportation Division of the Special Libraries Association and the Eastern, Midwestern and Western Transportation Knowledge Networks). The three key cross-cutting issues faced by ABG40 are reviewed as follows:

#### **Workforce Changes**

Workforce changes noted in TRB's Critical Issues in Transportation are sweeping the sector.<sup>i</sup> As noted in the 2006 edition of this publication and the 2009 update, there continues to be a decline of human and intellectual capital throughout transportation. Retirements, downsizing and outsourcing are changing the workforce and the "library user" demographic while a new generation of knowledge workers with higher expectations and less access to the institutional knowledge than their predecessors enters the workforce.

These professionals will be more connected, will have more computing power, will be more mobile, and will expect rapid, seamless access to information. They seem confident in their ability to use discovery tools but may not be aware of downstream barriers to information delivery, including: copyright restrictions, IT constraints (filtering software, policy restrictions,

authentication, etc.), and licensing costs. They will value speed and convenience first, and will want online access to information previously accessible only in print. The best information, if not accessible, may be marginalized in favor of lower quality information that is more accessible. Without instruction or an awareness of quality issues, transportation professionals may not be able to differentiate “quality” information from “accessible” information.

Library professionals are being affected by workforce changes as well, and there is evidence that both library collections and staffing levels are undergoing negative changes. Heavier workloads, flat or reduced staffing levels and increased accountability for results may mean ABG40 volunteers have less time to spend on TRB activities, and that they need to see more immediate benefits from the time they invest in TRB activities to justify their ongoing involvement.

### **Technology Development**

The nature of publishing and the library profession are undergoing radical changes as well. Successful information professionals have adapted to develop competencies in database design and use, metadata use and standards, online access/authentication, bibliographic instruction and instructional technology, negotiating licenses, digitization, accessibility and copyright issues, use of social media tools and skills related to information standards and technology. Many transportation libraries have not had access to the tools, competencies, resources and guidance needed to adapt to these changes, however. Cooperative cataloging and interlibrary lending efforts often have not always utilized established standards, known technologies or proven best practices, compared to other sectors such as medicine. Documents that are indexed or cataloged by transportation libraries tend to be accessible primarily through silos (online tools) that must be searched individually—something overburdened researchers and busy policy makers will be less inclined to do in the future than they have in the past. While technology exists for cross-database searching (both federated search tool and more complex “discovery and delivery” systems), few transportation libraries have found ways to integrate access to information silos (including the holdings of peer libraries) much less crosswalk searches to reveal alternative information such as: images, blog postings, videos and social media content. Existing commercial products in this class (from vendors like Serials Solutions and Ex Libris, among others), require a well-entrenched library technology infrastructure, are expensive, and in some cases still cannot be implemented due to IT and other issues. Thus the barrier to entry for these premium resources is typically too high for transportation libraries.

Meanwhile, library collections are growing slowly and transportation librarians still spend an unusually large percentage of their budget and human resources on activities related to physical collections. Little progress has been made in identifying unique items in transportation library collections to prioritize them for retention, digitization or archiving. In short, too much time and energy is being spent on ubiquitous print materials that are easily accessible online, print copies of which saturate the transportation sector. Lack of funding for materials acquisitions that adequately support the mission of library parent organizations is another longstanding problem. Meanwhile, evidence indicates that the advantages of content “ownership” are diminishing while the benefits of “access” to online content in an always-

there-always-on world are increasing. State DOT research reports and similar documents are now born digital and are typically posted to agency Web sites. Indexing to them is routinely entered into TRID and OCLC's WorldCat database of library holdings, and more frequently into the National Transportation Library's integrated search tool, and that indexing includes links to online documents. But there remains no mechanism to ensure that those links won't break if copies of reports are moved from agency servers. There remains no single location for these documents and no institutional or discipline specific repository for archiving state DOT research reports or other transportation research documents.

In addition, few transportation libraries have developed the capacity or guidelines for digitization initiatives, including those for their own agency's reports, despite a clear preference for patron access to online digital content. Most do not have the capacity for retrospective digital conversion of older (2000 and earlier) documents.

### **Increased Interest in Data**

Research published by the OCLC, the Research Information Network (RIN) and other library and information research centers has shown that most researchers today start their research online, but do not start in a library catalog. They conclude that catalogs and other library systems need to look and function more like search engines (i.e., Google and Yahoo) and Web services (i.e., Amazon.com), since these are familiar to users who are comfortable and confident in using them.<sup>ii</sup> Due to these factors, high-quality metadata is becoming more important for discovery of appropriate resources. Meanwhile, improved desktop and handheld computing technology, enhancements in search technology, the rise of social media, and increased use of technologies that automate alerts and syndicate information in other ways have made it even easier for researchers to discover relevant new documents.

Not enough, however, has been done to make it easier for transportation knowledge workers to acquire documents once they discover they exist. While increased access to digital content of all kinds and in all formats is almost uniformly seen as better by library users, not enough infrastructure exists to adequately support the entire discovery-to-document-delivery process for core transportation research documents. Such core documents include: federal and state government agency reports, licensed content through transportation publishers (aside from TRB), current journals and journal backfiles, technical papers and standards and specifications. Some of those documents are produced with public funds, and the majority of those documents do not fall within the purview of TRB.

Transportation libraries have a long history of creating, preserving and providing access to bibliographic data, but on the horizon it seems likely they will be asked to help manage other kinds of data as well. That future is already here for some of the country's leading transportation libraries. Overall, the transportation sector seems keen on the notion of utilizing library and information professionals as part of the equation for effective data management or for managing non-bibliographic data and data sets. Some of the less well developed libraries in the sector are still working to implement their first library automation system and to justify participation in OCLC for cooperative cataloging and interlibrary lending purposes. Other

transportation libraries have online bibliographic systems that are not MARC-based and are working to justify migration into more standardized systems. Does the average transportation library have the tools, standards, background and competencies to move from information to data and from bibliographic data to other kinds of data?

Other Issues ABG40 Faces Include:

**Image and Branding**

In addition, the information profession is dealing with an outdated image. Transportation librarians have struggled to adapt in ways that advance the perceived relevancy of their brand in the Internet era. Libraries in general are still perceived as “collections of books” and librarians in general are still perceived as “people who love books.” While that image has value, it does not take into account the vast changes in technology that have occurred and accelerated in recent years. In reality library and information centers are increasingly being required to collect more formats of hard-copy (not just books) and vastly more digital content in formats of all types. Meanwhile, staff time, funding, shelf space and other resources will continue to be scarce for transportation libraries, which means that promoting coordination among transportation libraries for digital access and similar issues will remain a priority.

**Competition for Volunteers**

ABG40 was created in 1999 to help provide leadership for the transportation community in its efforts to gather, organize and disseminate information for the improvement of transportation systems. Legislation in 1998 created the National Transportation Library within U.S. DOT. NTL subsequently provided funding and support for the formation of the Midwest Transportation Knowledge Network (MTKN), a collection of 17 members from 8 Midwest states.<sup>iii</sup> In 2006, TRB Special Report 284 “Transportation Knowledge Networks: A Management Strategy for the 21<sup>st</sup> Century” was published, encouraging the formation of decentralized, managed networks linking information providers to users wherever they are located.<sup>iv</sup> Subsequently, a Western TKN (17 members from 10 Western states)<sup>v</sup> and an Eastern TKN (23 members in 14 Eastern states) formed in 2007.<sup>vi</sup> Those groups are comprised only of U.S. participants at this time, and the TKNs are further restricted to “regional” membership. With minor exceptions, MTKN and WTKN following the lines of demarcation set forth for the Midwest and Western AASHTO regions (Region 3 and Region 4, respectively) and the ETKN combines members from states in AASHTO Regions 1 and 2 (the entire Eastern United States). In 2009 a National TKN was formed by the NTL to help TKNs find ways to collaborate.<sup>vii</sup> Finally, in 2009 an AASHTO RAC TKN Task Force was formed with 15 members from all regions of the United States, to serve as a forum to develop the concept, understanding, and application of TKNs in the transportation sector and to advocate for and support the rapid and efficient exchange of information resources through development of strategies and the innovative use of technology.<sup>viii</sup>

In addition, the Transportation Division of the Special Libraries Association continues since its creation in 1948 with more than 165 librarian members from universities, corporations, professional associations and regional, state, provincial and national government agencies and organizations. Its membership includes most of the members of the previously mentioned

TKNs and other groups, however, like ABG40, the Transportation Division is “international” in scope and membership.<sup>ix</sup>

All of these groups operate exclusively through the use of volunteer labor. While most of these groups have similar mission and vision statements (i.e. most include non-specific references to collaboration and coordination), they act autonomously, often engaging in repetitive and duplicative activities, including: conference calls, in-person meetings, special projects, drafting guidelines, creating group Web sites, conducting Webinars and developing marketing, promotion and position statements.

In addition, during this era there have been two major pay-to-play initiatives that have impacted the group of potential volunteers LIST has traditionally tapped for participation.

In 2005 FHWA approved TPF 5(105) a 5-year Pooled Fund Study titled “Transportation Library Connectivity.” According to the final report of this group, membership grew from 11 members in nine states to 25 members in 22 states by its conclusion in 2010.<sup>x</sup> Participation required a funding commitment by members and governance of group activities entailed a commitment of member participation through regularly scheduled meetings and conference calls. According to the Transportation Pooled Fund Program Web site, financials for the solicitation show total financial commitments received during the 5-year program as \$1.32 million.<sup>xi</sup>

A second pooled fund study, “Transportation Library Connectivity and Development,” was initiated in 2011 with 24 members in 22 states. As of March 7, 2012 total commitments received stood at: \$885,528 with a commitment ending date of 2015.<sup>xii</sup> A.J. Million, Lead Agency Contact for the study, notes that some participants in the second pooled fund study are committing funds on a year-to-year basis, and since the study does not end until 2015, it is not possible at this time to determine a final commitment. However, he notes that by the time the study closes in 2015, if the current participants remain in the study it should have received commitments totaling more than \$1 million.<sup>xiii</sup> This second phase study included many (but not all) participants from the previous study (as well as some new members), and was similar in scope and activities. It is utilizing the paid services of a full-time consultant, however, membership also entails a significant commitment of time by members.

Although the number of initiatives and the quantity of their activities has now grown to seven groups (including ABG40 but not including the Pooled Fund Study referenced above) the overall pool of volunteer participants has not grown significantly. Due to workforce changes described earlier, demands for greater accountability, and constraints on budgets and travel, one consequence has been competition for scarce volunteer time.

ABG40 needs to compare its mission and scope to those of the other initiatives, determine what it is in a unique position to accomplish, and find ways to collaborate with the other groups toward a clearly articulated vision for the future while keeping quality high and duplication low. LIST should consider ways to take advantage of volunteer activities that do not require travel or face-to-face attendance at meetings, including Webinars, Web-based promotional programs,

collaboration through interactive Web tools, soliciting and facilitating original research and publication of that research, and working to publish that research, and shaping guidelines and best practices for transportation libraries. Since ABG40's membership as a whole has high levels of professional talent, high levels of experience in research and education, high levels of educational attainment, and is capable of being impartial, it may be in a position to provide peer review and analysis of the works and activities of other groups to help clarify opportunities and priorities.

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