

ABJ50 AND RELATED SUB- COMMITTEE'S 2018-2020 ACTION PLAN

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ABJ50 Information Systems and Technology Committee and Related Sub-Committee's 2018 Action Plan

Planned Actions

Committee and sub-committees planned actions are organized below under the six goals established for the committee in our 2018-2020 Triennial Strategic Plan. Highest priority items will be marked with an asterisk (*)

1.1. Research Goal

Engage a diverse mix of researchers and transportation agency staff to identify critical research questions, develop research agendas, issue calls for papers and pursue avenues for advancing research projects.

Call for Papers and Paper Review Process

ABJ50 Information Systems and Technology Committee – Guohui Zhang

- *Conduct paper review and provide relevant results at the 2019 TRB Annual Meeting
- Utilize research papers in the ABJ50 TRB Annual Meeting sessions.
- Nominate worthy papers for the Wooten Award

ABJ50 Subcommittees - Colin Brooks and Nora El-Gohary

- Conduct call for papers – topics pending
- Conduct paper review and provide relevant results at the 2019 TRB Annual Meeting

ABJ50 Planned Synthesis Statements

AFH10 (1) Information Systems in Construction Management Subcommittee – Nora El-Gohary

- ““Pain Points in the Use of Big Data Analytics for Transportation Project Delivery”

2018 - 2019 Planned Research Needs Statements (RNS)

ABJ50 (1) Sensing Subcommittee - Colin Brooks

- Seek funding for 2016 RNS on “Increasing Understanding of Unmanned Aerial System (UAS) Capabilities to Address Transportation Infrastructure Issues”
- RFP. Need buy-in from one or more transportation agencies!
 - ✓ RNS – “Guidelines for non-destructive sensing for traffic management” - Richard Li (U.Louisville) – comparison of different available technologies – Bluetooth, Wifi, radar, LiDAR, video, CAV – which one(s) are most appropriate
 - ✓ Update the 2016 UAS one with input & buy-in from transportation agencies – “Increasing Understanding of Unmanned Aerial System (UAS) Capabilities to Address

Transportation Infrastructure Issues” at <https://rns.trb.org/dproject.asp?n=40981>
(C.Brooks – MTU)

AFH10 (1) Information Systems in Construction Management Subcommittee – Nora El-Gohary

- ✓ RNS-3 A Guide to Automate Project Progress Control by Leveraging LiDAR and 3D/4D Information Models
- ✓ RNS-4 How to Integrate and Enhance Existing Project Management Systems in Managing Construction Field Data for Different Project Delivery Methods
- ✓ RNS-5 Material Tracking in the Transportation Construction Industry
- ✓ RNS-6 Alignment and Cost Benefit Analysis of the Standardization of Data Interoperability
- ✓ RNS-7 A Standardized Information Model to Accurately Represent the Majority of Construction Management Tasks
- ✓ RNS-8 Big Data Analytics: How to Turn the Collected Data into Insights
- ✓ RNS-9 Decision Support System to Prioritize Investments for Effective CIM Implementation
- ✓ RNS-10 Creating Collaboration between Public and Private Sectors on Requirements for Digital Project Delivery Products (Ron Perkins and David Unkefer)
- ✓ RNS-11 Preparing our roads for the future (impacts of connected and autonomous vehicles on highway and street design and construction) (Murali Rao and Nora El-Gohary)

1.2. Collaboration Goal

Work with other TRB committees and Task Forces on cross-cutting issues to provide a broad perspective, avoid duplicative efforts and maximize involvement of interested parties.

ABJ50 Information Systems and Technology Committee –Shannon Barnes

- Increase collaboration and information sharing with relevant TRB committees:
 - ✓ Define and update committee liaisons
 - Cyber Security – Doug Couto
 - Critical Infrastructure – Doug Couto
 - ABJ70 – Standing Committee on Artificial Intelligence and Advanced Computing Applications – Colin Brooks
 - ABJ60 - Graphic Information Systems and Applications- Shawn Blaesing
 - AHB15- Intelligent Transportation Systems – Shannon Barnes
 - Data Privacy, Security, and Protection Policy –Doug Couto
 - Task Force on Knowledge Management – Frances Harrison
 - ✓ Establish information sharing and pursue opportunities for joint sponsorship of sessions, paper review, and workshops.

1.3. Information Sharing Goal

Provide opportunities – in person, by phone and online - for exchange of best practices, research findings and ideas among researchers and practitioners.

ABJ50 Information Systems and Technology Committee –Shannon Barnes

- *Plan the flagship session for TRB 2019 Annual (TBD)
- Maintain and update ABJ50 website- Shawn Blaesing
- *Sponsor the ABJ50 Committee meeting at the 2019 TRB Annual Meeting
- *Plan mid-year ABJ50 Committee meeting
 - ✓ Joint ABJ50 and State DOT CIO meeting at AASHTO spring meeting (tentative)

Sensing Technologies Subcommittee ABJ50 (1) – Colin Brooks

- Sponsor a UAS-focused workshop on UAS applications & regulations
- Sponsor a webinar “*How to integrate & synthesize data from different sensing technologies?*”- J.Corey
- Host sub-committee meeting at the 2019 TRB Annual Meeting – Colin Brooks

AFH10 (1) Information Systems in Construction Management Subcommittee - Nora El-Gohary

- *Sponsor the subcommittee’s 4th Webinar titled “Pain Points in the Use of Big Data Analytics for Transportation Project Delivery” in Transportation Project Delivery and Management”
- Sponsor the 16th Annual Workshop during the 2019 TRB Annual Meeting - Analyzing Graphical and Non-graphical Construction Data” (David Jeong, David Brown, Nora El-Gohary)
- Tentative title of the workshop: “eConstruction (eProject Delivery): Analyzing Graphical and Non-graphical Construction Data” (David Jeong, David Brown, Nora El-Gohary)
- Turkan, Aron Costin, David Unkefer, Janice Zahn
- *Host an on-line mid-year sub-committee meeting in June 2018
- *Host sub-committee meeting at the 2018 TRB Annual Meeting
- Create a report on the “Grand Challenges for Data Management and Information Systems in Construction”.
 - ✓ Develop a report/publication similar to the Engineering Grand Challenges by NAE.
 - ✓ Conduct a survey of DOTs, identify the top grand challenges and pain points

1.4. Agency and Industry Liaison Goal

Maintain strong liaisons with both transportation agency information technology executives and information technology industry leaders to ensure that the committee stays current on key issues of concern and to maximize opportunities for technology transfer across agencies, and from research into practice.

ABJ50 Information Systems and Technology Committee –Shannon Barnes

- *Co-sponsor the ABJ50 mid-year committee meeting with the State DOT CIOs meeting. – Mike Bousliman and Shannon Barnes
- Extend invitation to USDOT CIO for the ABJ50 meeting at the 2019 TRB Annual Meeting - Shannon Barnes
- *Organize the 4rd annual CIO roundtable for the ABJ50 meeting at the 2019 TRB Annual Meeting – Kevin Green

1.5. Communication Goal

Keep committee members and friends informed about committee activities and opportunities for participation.

ABJ50 Information Systems and Technology Committee –Shawn Blaesing- Thompson

- Continue development and improve content on the ABJ50 website
- Continue to use LinkedIn to communicate with committee and friends of the committee
- Include Friends of the committee in correspondence

AFH10 (1) Information Systems in Construction Management Subcommittee - Nora El-Gohary

- Improve website, LinkedIn Group, etc.
- Continue to communicate with the members and friends of the subcommittee

1.6. Member Involvement Goal

Attract a diverse and active membership representing key areas of interest and provide opportunities for committee members to take on leadership roles to strengthen the capabilities and reach of the committee.

ABJ50 Information Systems and Technology Committee –Shannon Barnes

- Update ABJ50 Triennial Strategic Plan at mid-year meeting- Shannon
- Update committee membership and recruit additional members as needed – Shannon Barnes
- Increase participation and communication with the Friends of ABJ50 –Shannon Barnes

1.7. Obstacles to Success and Ways to Address Them

- Build more member engagement – utilize website and LinkedIn to improve communication
- Limited participation of membership in committee activities. - Publish opportunities and be specific about what is needed and the time commitment