

Standing Committee on Logistics of Disaster Response and Business Continuity (ABR20) 2018-2021 TRIENNIAL STRATEGIC PLAN (TSP)

Approved by Section: April 2018

PART 1: Committee Name and Scope

The Standing Committee on Logistic of Disaster Response and Business Continuity (ABR20) is a committee of TRB's Section on Transportation System Resilience (ABR00). Its current scope is:

The purpose of this committee is to consider issues related to the processes for managing and executing transportation and logistical efforts associated with response to and recovery from disasters. Areas of specific attention include operations management, analytical methods, research techniques, decision processes, and knowledge concepts to achieve highest levels of efficiency and preparedness to plan for, respond to and recover from catastrophic events. This committee serves as a forum to initiate, facilitate and advance discussion, feedback and exchange among the parties involved in various aspects of disaster relief, supply chain resiliency, and humanitarian aid logistics—from academia, industry, government, military, research, NGOs, and U.S. and international relief agencies. This forum is intended to share practices, provide a setting for gap analysis, identify new research needs, and advance research in resilience as a key pre-emptive strategy to disaster response and business continuity.

In response to a Section evaluation of how TRB addresses the full spectrum of Transportation System Resilience, ABR20 proposes to amend its title and scope as follows:

Proposed Title: Standing Committee on Logistics of Disaster Response, Business Continuity, and Humanitarian Relief

Proposed Committee Scope: This committee addresses practices related to managing and executing transportation, mobility, and logistical efforts associated with preparation for, response to, and recovery from disasters. It is a forum to initiate, facilitate, exchange, and advance discussion among the parties involved in various aspects of disaster efforts, supply chain resiliency, business continuity and humanitarian aid logistics—from academia, industry, government, military, research, NGOs, and domestic and international relief agencies. Areas of specific attention include operations management, analytical methods, research techniques, decision processes, policies, and knowledge concepts to achieve efficiencies, effectiveness, sustainability, resilience, and preparedness to plan for, respond to and recover from disruptive events. This forum shares practices, provide a setting for gap analysis, identify new research needs, and advance research in resilience as a key pre-emptive strategy to disaster response and business continuity.

PART 2: Committee Future Outlook Statement and Committee Three-Year Plan

Committee Future Outlook Statement

Disasters and disruptions have unfortunately been continuing and growing in number, complexity, impact, economic cost, and diversity of locations and types. TRB has responded, along with multiple partner agencies, by building awareness, encouraging and convening discussions, and disseminating good practices for implementation. ABR20 has been among the TRB Committees front and center to advance thinking, sharing, and research coordination.

This Committee anticipates continuing these initiatives, as well as seeking new means to engage broader demographics, stakeholders, audiences, and organizations in the emergency and resilience management and operations subjects pertinent to our scope.

Keeping this in mind, ABR20's principal objectives are to:

- Continuously foster and contribute to the research, development, and implementation of good practices in the transportation sector through disaster planning and response, business continuity, humanitarian relief, and community recovery;
- Contribute significantly to improved communications and dissemination of research findings and good practices (including international developments) that are applicable to the subject through a full range of mechanisms including but not limited to panels, tabletop exercises, presentations, webinars and Internet-based meetings;
- Enhance the understanding and skills of transportation leaders and professionals including engaging young professionals and those with an interest in the Committee's subject areas; and
- Demonstrate how the logistics of disaster response, business continuity, and humanitarian relief are integral components of effective local, regional, national, and international strategies, contribute to our national economic vitality and security, and help address critical issues.

ABR20 anticipates continued collaborations with and sharing discussions, TRB sessions and research efforts with the multiple committees and outside organizations that must also consider supply chain resiliency, disaster response and business continuity. The TRB committees include but are not limited to:

- Critical Transportation Infrastructure (ABR10)
- Emergency Evacuations (ABR30)
- Transportation Network Modeling (ADB30)
- Social and Economic Factors (ADD20)
- Ferry Transportation (AP085)
- Freight Rail Transportation (AR040)
- Freight Transportation Planning and Logistics (AT015)
- International Trade and Transportation (AT020)
- Agriculture Transportation (AT030)
- Military Transportation (AT035)
- Transportation of Hazardous Materials (AT040)
- Intermodal Freight Transportation (AT045)
- Trucking Industry Research (AT060)
- Aviation Security and Emergency Management (AV090)

- Ports and Channels (AW010)
- Inland Water Transportation (AW020)
- TRB's Young Professionals

This Committee will continue to seek to have key members of these organizations join the Committee as friends and eventually members, as well as present at Committee meetings and sponsored sessions. For example, several universities have supply chain resiliency, business continuity, and disaster response research labs and centers. The Committee has already reached out to and engaged the programs at the University of Hawaii, RPI, Stevens and Rutgers Center for Supply Chain Management.

Additional actions include:

- Organize workshops and sessions. The Committee will continue to elevate discussions of the subject, with a goal of furthering research and practical applications.
- Identify areas for further research. The Committee will develop RNS and pursue available avenues for expanding knowledge of the subject.
- Recognize participation and contributions. For example, at the 2018 Committee meeting, ABR20 recognized the work of Jon Meyer in the successful *TRNews* special edition and Diana Herriman and Steve White of FEMA for their outstanding session (particularly with them being deployed during 2017 with the multiple disruptions that occurred).

Committee Three-Year Plan

Moving ahead as a Committee during the next three years, we will undertake the following strategies and actions to address the emerging, critical, and cross-cutting issues identified above:

Strategy 1- Increase understanding of the logistics of disaster response, business continuity and humanitarian relief.

- 1.1 Organize and co-sponsor sessions and an interactive tabletop exercise (workshop) at the TRB Annual Meeting;
- 1.2 Organize and co-sponsor summer sessions and workshops with other TRB committees;
- 1.3 Collaborate on sessions and workshops involving other organizations;
- 1.4 Broaden membership and friends of the committee and encourage their active participation in committee activities to recruit young members and achieve a diverse representation from all regions of the United States and abroad. This includes reaching out in-depth to private sector companies, NGOs, the US Department of Defense, FEMA, related outside professional organizations and academic institutions; and
- 1.5 Encourage research, panel sessions and papers on collaborative processes involving the public and private sectors, along with academic institutions.

Strategy 2 - Provide a forum for state-of-the-art initiatives, "good practices" and research results for areas and forums noted under Strategy 1.

- 2.1 Solicit papers for publication through the Call for Papers subcommittee;

- 2.2 Hold or support the holding of special conferences and workshops every two to three years;
- 2.3 Create and publicize a committee website to showcase our activities; and
- 2.4 Highlight annual awards of excellence as well as Committee members who exemplify the volunteer work and contributions to the subject that we seek from all of members.

Strategy 3 - Promote research and adoptable good practices.

- 3.1 Develop and submit research problem statements for consideration under the various TRB cooperative research programs;
- 3.2 Issue a "Call for Papers" highlighting research interest areas;
- 3.3 Co-sponsor paper and poster sessions at TRB Annual Meeting;
- 3.4 Solicit and review research papers in conjunction with the Annual Meeting;
- 3.5 Provide presentation opportunity for selected papers and non-published research efforts at the Committee during the Annual Meeting, along with as part of our midyear meetings and teleconferences;
- 3.6 Post published papers and available research links on committee website for member and friends of the Committee use and reference;
- 3.7 Support establishment of subcommittees/task forces as appropriate to focus on areas of critical interest/concern to the supply chain resiliency, business continuity and disaster response communities; and
- 3.8 Coordinate research activities with associations and other organizations previously noted.

The Committee will strive to identify and assist members who are willing to undertake the tasks and efforts as noted above. To that end, once a task is accepted, a time line for action will be developed and shared with Section and TRB staff. ABR20 will also continue to seek to involve the broader community, as well as work and support resiliency efforts.

PART 3: Committee History

ABR20 Achievements by the Number

Year	2015	2016	2017	2018
Number of Members in Attendance at Annual Meeting			7	11
Number of Visitors in Attendance at Annual Meeting			13	9
Number of Papers Reviewed				15
Total Number in Attendance at Mid-Year Meeting		25	25	25
<i>Note that the Committee attracts many young professionals</i>				

ABR20 is a new Committee, yet evolving quickly to engage its members, friends and others in this critical field. To that end, several subcommittees have been formed:

- Communications and website – Steven Polunsky (supported by Ted Dahlburg).
- Call for Papers (with a focus on involving our young professionals – Felipe Aros-Vera

ABR20 was awarded a **TRB Blue Ribbon Committee in 2018 in the Community Building and Mentoring Category** for utilizing interactive tabletop exercises for educating and communicating best practices in resilience.

Special TRB Efforts and Publications:

TRNews, special edition and an E-Circular on Transportation Systems Resilience, September-October 2017.

- Jon Meyer, a committee member, served as Section Coordinator for the full issue.
- Anne Strauss-Wieder, contributed the article, “Supply Chain Business Continuity: A Framework for Proactive Resiliency Planning and Operations.”

Collaborated with other research/professional organizations: During recent TRB Annual Meetings and specialty conferences, ABR20 has been actively involved with planning, organizing and moderating sessions focused on some of the major disasters that have occurred over the past decade, including Superstorm Sandy, the tsunami and nuclear disaster in Japan, and relief aid efforts, among others. ABR20 joined efforts with and encouraged the involvement in TRB of international, federal and local agencies (most notably Department of Homeland Security, Federal Emergency Management Administration, Department of Transportation, Department of Defense, Department of Commerce, and State Department) and groups such as ALANAID, AASHTO, ASCE, TISP, PIANC, PIARC, World Bank, and international relief organizations on various activities. FEMA organized a session for ABR20 as part of the 2018 Annual Meeting and has presented at two of the Committee’s meetings in 2017 and 2018.

ABR20 Mid-Year Meetings

2015 Mid-Year Meeting (in-person and Webinar)

Location of mid-year: Washington, DC

Meeting: September International Conference on Surface Transportation System Resilience to Climate Change and Extreme Weather Events

Committee Meeting Presentation: *Effectiveness of Business Continuity Programs on Managing Large Supply Chain Disruptions*, Arash Azadegan, Rutgers (led to the planning for the first ever TRB Annual Meeting Tabletop)

Approximate number of participants: 25

2016 Mid-Year Meeting (WebEx conference call)

Presentation: *Preliminary Findings from the Research Field Work in Ecuador and Nepal -- RPI*

Approximate number of participants: 25

2017 Mid-Year Meeting (WebEx conference call)

Presentation: None. The focus of the mid-year conference call was on formulating the 2018 Annual Meeting sessions. As a result of this call, the Committee proceeded with two sessions and the Tabletop Exercise workshop.

Approximate number of participants: 25

ABR20 Annual Meeting Activities

Annual Meeting Activities	
2018	
Session Number & Name	Number of Podium Sessions: 2 Number of Poster Sessions: 1 Workshops: 1
Session 666 (Lectern)	With a Little Help from My Friends: Interagency Coordination in Disaster Response
Session 472* (Lectern)	Transportation System Resilience: Preparation, Recovery, and Adaptation
Session 108 (Workshop)	Resiliency and Supply Chain Disruption Tabletop Exercise: Leadership and Organization During Disruptions
Session 861 (Poster)	Logistics for Disasters and Continuity of Operations
2017	
Session Number & Name	Number of Podium Sessions: 2 Number of Poster Sessions: 1 Workshops: 1
Session 289* (Lectern)	Logistics of Disaster Response
Session 500 (Poster)	Logistics for Disasters
Session 867* (Lectern)	Training and Prepping for Community Disasters
Workshop*	ALAN AID Disruption Response Interactive Tabletop
2016	
Session Number & Name	Number of Podium Sessions: 2 Number of Poster Sessions: 1 Workshops: 1
Session 202 (Lectern)	Commonsense Solutions for Cost-Effectively Combining Resilience and Port Operational Needs: Lessons from Katrina, Ike, and Sandy Applicable to All Ports and Inland Waterways
Session 803* (Lectern)	Logistics of International Humanitarian Relief Efforts in Africa and Nepal
Session 307 (Poster)	Logistics of Disaster Response and Business Continuity
Workshop*	Resiliency and Supply Chain Disruption Tabletop Exercise: Leadership and Organization During Disruptions

*Co-sponsored sessions

Presentations made at Annual Meeting and Mid-Year ABR20 Committee Meetings

- **2015 Annual Meeting:** *Using Unmanned Aircraft for Disaster Management*, Karl Kim, University of Hawaii
- **2015 Mid-Year Meeting:** *Effectiveness of Business Continuity Programs on Managing Large Supply Chain Disruptions*, Arash Azadegan, Rutgers
- **2016 Mid-Year Meeting:** *Preliminary Findings from the Research Field Work in Ecuador and Nepal* -- RPI

- **2016 Annual Meeting:** Because of when the Committee meeting was scheduled (after most of the Committee members had already departed the conference), this meeting was abbreviated.
- **2017 Annual Meeting Committee Presentation:** FEMA Cascadia Rising Multi-State, Multi-Agency Exercise
- **2018 Annual Meeting Committee Presentation:** FEMA Response Coordination WebEx Dashboard

ABR20 Research Needs Statement Submissions

In 2015, the committee submitted a research problem statement, *Identifying the Alternatives for Dealing with Major Cargo Traffic Diversions*, for consideration for the remaining NCFRP funds. The proposal received the endorsement of the Freight Section. This problem statement became the basis for NCFRP 50, Improving Freight Transportation Resilience in Response to Supply Chain Disruptions, which is currently underway.

ABR20 Committee Demographics and Membership

As of November 2017, ABR20 consisted of 23 members.

MEMBERSHIP TYPES	
Regular Member	20
State Department of Transportation Member	1
International Member	1
Young Member	1
GENDER	
Male	15
Female	8
DIVERSITY	
White	16
Black	1
Hispanic	3
Asian or Pacific Islander	1
American Indian	0
Two or More Races	0
Unknown	2
MEMBER AFFILIATION	
Public-Sector	3
Private-Sector	11
Academia	9
Nonprofit/Other	0

TRB’s committee rules allow for a total of 25 Regular Members, 2 State Department of Transportation Members, 5 International Members, and 4 Young Members (younger than 35 years old) for a total committee membership of 36 persons.

As of November 2017, ABR20 could add 13 Regular Member, but needed to drop or rotate off 6 of its current members. The committee membership’s next rotation will occur in April 2018.

As background information, the January 2015 Membership Statistics (when the Committee was first formed) were:

# Members:	18
# Int’l Members:	1
# Young Members:	1
# Emeritus Members:	0
Counted Membership:	20

Gender Breakdown

# of Male:	13
# of Female:	7
Total:	20

Industry Breakdown

# in Public:	1 (state government)
# in Private:	10
# in Academic:	6
# in Non-Profits:	3
Total:	20

POLICY AND ORGANIZATION GROUP

Committee Triennial Strategic Plan (TSP)

Committee Name and Number: ABR30, Emergency Evacuations

Committee Chairperson: Brian Wolshon, Louisiana State University (January 2001 – April 2018)

Mike Robinson, Old Dominion University (April 2018 -)

TSP Three-Year Period: April 2018 to April 2021

Date Prepared: February 2018

Current Committee Scope

The Committee (ABR30) fosters research to increase understanding of the technological, operational, and human dimensions of evacuation during emergencies and disasters. It provides a forum to identify emergency evacuation research needs, encourage and facilitate individual and joint research efforts, and disseminate research findings aimed at enhancing the effectiveness and efficiency of operations and increasing safety, efficiency, convenience, and comfort of those involved in emergency evacuation. The Committee is concerned with emergency preparedness for, and operational issues of, evacuations resulting from natural and human-made hazards, considering those with notice and with little or no notice, evacuations affecting buildings, facilities, roadways, and transit, at neighborhood, city, regional, and national scales.

Interest in the activities of the committee has grown enormously since its inception (as a task force). Though not done intentionally, after Hurricane Katrina in 2005, most evacuation research was hurricane related and most founding members of ABR30 came from this study area. In the past decade, terrorist attacks, wildfires, tsunamis and earthquakes have broadened our understanding of evacuations, the unique considerations of different evacuation types, and revealed how much remains to be learned. Increasingly, the conferences, workshops and studies in which ABR30 members participate address multiple evacuation causes, environments, and types including increased attention to evacuation of specific population groups (e.g., vulnerable populations) and modes (public transit, pedestrian, etc.).

Continued growth of urbanized areas in areas prone to hazards and increasing natural and human-made threats for which evacuation may be needed produce a critical need for greater knowledge, as well as preparedness and response capabilities. ABR30 will continue to push for increased recognition of the importance of emergency planning during transportation network design; too often plans have considered only “normal” traffic patterns and behaviors. Comprehensive planning must also consider all phases of a disaster event: mitigation, preparedness, response, and recovery. ABR30 can and should make valuable contributions to all four phases.

Committee Future Outlook

ABR30 must expand the scope of interest to include not only the response phase (the evacuation) and preparedness phase, but also mitigation and recovery phases. In other words, work from this committee needs to fit with a broader push for creating resilient communities around the country. This expansion will promote a more complete understanding of disaster events and provide for increased integration of related planning, policy, construction, and operations. ABR30 will support and disseminate the results of research and experience from actual events to enhance the effectiveness and efficiency of operations and increase life safety and convenience or comfort of those who are involved in an evacuation. The Committee will also promote the exchange of information and practices of professionals working in the field to stimulate research based on needs that will forward the understanding and practice within transportation.

In addition to its historic roles within TRB, planned themes include:

- € Evacuation planning and preparation as well as related mitigation and recovery actions. Recovery is of significant interest in terms of what it should be, how to pay for it, when does it start, and so on. Attention will also focus on Mutual Aid and support for managing response and recovery given the frameworks established by the Stafford Act as well as state and local emergency response policies. Committee members have historically played leading roles in conference and workshop planning committees and will use these positions to influence the broader range of study needed.
- € Expansion of interest topics to include special events as defined by FEMA (a nonroutine activity within a community that brings together a large number of people.)
- € Pedestrian and other non-motorized evacuations
- € Transportation and emergency management operations for response and recovery, especially recovery planning, disaster debris management, and transportation system management during disasters

- € Identifying and liaising with other TRB committees to co-sponsored sessions, events, and publication opportunities. One example that has been suggested is Energy Sector which is recognized for its work in immediate-, medium-, and long-term recovery issues.
- € Identify and work with groups OUTSIDE of the typical TRB sphere who have similar and/or overlapping agendas that would be mutually beneficial to both. One example is our involvement with the U.S. Nuclear Regulatory Commission that is very interested in the ideas, activities, and products of the Committee
- € Develop workshops, symposia, curricula, and opportunities for exchanging new technologies, methods, and research on emergency evacuation and transportation resilience.

The committee plan contains specific actions to achieve these goals.

Committee Plan:

There are many emerging issues that are important to the Committee on Emergency Evacuation. Among the most critical transportation issues with the most direct connection to the committee's work include the following:

- Emergency traffic operations modeling and simulation, including analyses of incident impacts, the influence of traffic information on driver behavior and network performance, and staging of emergency response vehicles for recovery;
- Traffic control and enforcement in evacuation;
- Use of mass-transit and all other modes of transportation in evacuation;
- Issues associated with the emergency movement of special populations;
- Behavioral modeling in emergency departure and travel decision-making for evacuation;
- Planning and design of transportation infrastructure to facilitate evacuation;
- Application of connected and autonomous vehicles and intelligent transportation systems (ITS) in evacuation;
- Data acquisition and forecasting of travel demand conditions for evacuation;
- Emergency fleet management and dispatching during an evacuation including better coordination between traffic professionals and law-enforcement;
- Public policy issues;
- Use of social media for both communicating evacuation information and for situational awareness through crowd-sourcing;
- Use of mass assembly areas or shelters;
- Human behavior (i.e., decision-making and social interactions) in evacuation;
- Hazard literacy education and public awareness through outreach; and
- Emergency response operations during or immediately following an evacuation.

Projects and Activities

The list below will be used in the coming years to aid the expansion in scope identified by the committee.

- Evacuation Data Sources - To aid research efforts, the Emergency Evacuation Committee will house a resource page on its website. This page will provide a description of data used and gathered for evacuation studies and the contact information of the principle investigator from whom researchers may be able to obtain the data.
- Collaboration with other TRB committees - A complete list of committees with which the Committee collaborates is provided in Appendix A. ABR30 will seek sponsorship of joint sessions and research statements to identify critical issues and advance relevant research, sponsor or co-sponsor sessions and workshops at annual meetings and mid-year meetings, and organize workshops and sessions on new concepts of evacuation/emergency response in collaboration with other TRB committees. At the suggestion of the Committee for Critical Transportation Infrastructure Protection, we will hold a joint mid-year meeting in 2019 with the intent of better focusing and integrating our efforts. Results will be used to estimate the benefit of future joint gatherings.
- Involvement of regional and local planning districts and transportation planning organizations – Most evacuations are planned and/or executed at the local or regional level. ABR30 has deliberately targeted regional transportation planners as members to improve our understanding of user needs and areas of needed research.
- Identify need for and establish sub-committees to accelerate the Committees advance into new phases of disaster mitigation, preparedness, and recovery
- Collaborate on conferences, workshops, and webinars - Initiating discussions and special organizational meetings with other TRB committees/task forces and national/international associations to conduct specialty conferences, workshops, and seminars on various topics over the next 2-4 years. Seek opportunities to collaborate with other agencies and organizations in conducting webcasts/webinars devoted to the theory, practical applications and new concepts in emergency evacuation planning.
- Development of Research Problem Statements – As a committee and prior to this as a task force, ABR30 has had difficulty identifying and sharing areas of research needed. Academic researchers have been reluctant to share research ideas for fear of losing planned work to others. The Committee has deliberately revised our membership composition to include increased government and industry practitioners from different areas and will seek a research coordinator from these members to overcome this reluctance. We will also increase reporting from conference attendees on potential needs.

- Leverage FEMA courses and Lessons Learned summaries to guide the committee's entry to special events studies, research, and analysis.
- Communication – one new member has assisted with committee communications while in “Friend” status and will become the committee’s communications coordinator. As he assumes full responsibility, we will:
 - Disseminate information on upcoming events to the mailing list of Committee contacts and friends.
 - Utilize new communication tools and social media to enhance education, outreach and information exchange
 - Seek to improve collaboration between committee members on research areas of mutual interest
- Membership – A proposed membership roster provides for increased ethnic diversity (net increase of four minority (non-Caucasian) members not counting international members) and increases regional transportation organization representation. It also provides for better geographic spread with the addition of members from northeastern and western states. Continued efforts must improve the gender split among members and reduce the fraction of members from academic institutions.

Appendix A - Committee History

Available at the Standing Committee for Emergency Evacuations Website:

<https://sites.google.com/site/trbabr30evacuations/>