

TRB 103rd

ANNUAL MEETING

January 7–11, 2024 • Washington, D.C.



Transportation Research Board

International Trade and Transportation Committee (AT020)

January 9th, 2024

Meeting Agenda

- **Introductions and Announcements**
 - Update from TRB: Scott Babcock
 - Update from Group Chair: Bill Eisele
- *Introduction to the new Multimodal Freight Office*
 - Allison Dane Camden, Deputy Assistant Secretary for Multimodal Freight Infrastructure and Policy, DOT
- **Committee Business**
 - Update from Secretary: Chris Bachmann
 - Update from CRC: Daniel Covarrubias
 - Update from Paper Chair: Isabel Victoria-Jaramillo
 - Update from CCC: Irina Benedyk
 - Young Member Council briefing: Johnny Arellano
 - Supply Chain Subcommittee briefing: Walter Kemmsies

Meeting Agenda, continued

- Discussion on research focus areas
- Discussion on Committee activities
- *Panama Canal: Now and in the Future*
 - Kevin Keller, National Director Intermodal Transportation Planning, HDR Engineering, inc

Introductions

- Name
- Employer/Affiliation
- Committee Membership(s) if any?
- A few words about your work/study focus area
- Young members: tell us about your past/ongoing research

Announcements

Update from TRB

Scott Babcock

Senior Program Officer, Rail and Freight

Update from Freight Group

Dr. Bill Eisele

Chair of the Urban Freight Transportation Committee

Presentation 1

Introduction to the new Multimodal Freight Office

Allison Dane Camden

**Deputy Assistant Secretary for Multimodal Freight
Infrastructure and Policy, DOT**

TRB Business

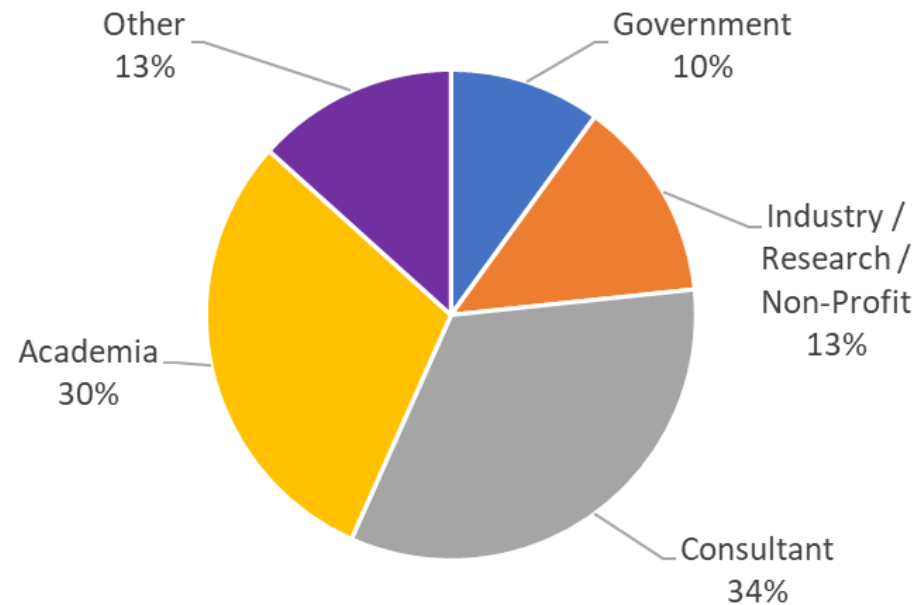
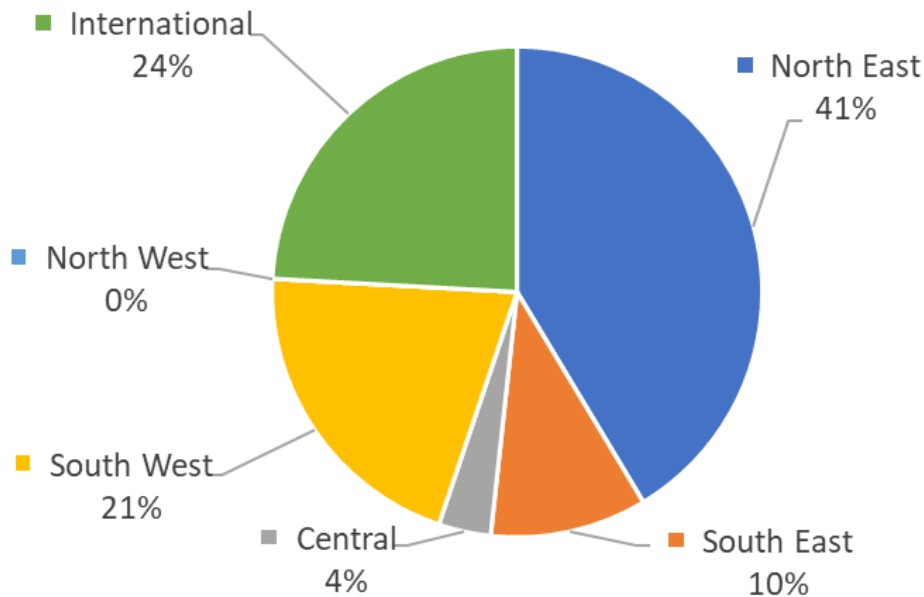
- Upcoming Dates

- August 1st: due date for all papers to be considered for the Annual Meeting and for publication. Paper review process follows!
- September 15th: due date for committee recommendations for papers to be presented, speakers to be invited, and sessions to be conducted at the TRB Annual Meeting
- Webinars: accepted proposals:
 - submitted July 2 - November 1 are scheduled from January 1 to April 30
 - submitted November 2 – March 1 are scheduled from May 1 to August 30
 - submitted March 2 – July 1 are scheduled from September 1 to December 30
- 2025 Annual Meeting scheduled for January 5th - 9th , 2025

Committee Membership

- Russell Adise
- Johnny Arellano
- Mohammad Hashem Askariyeh
- Chris Bachmann
- Maximilian Bauernfeind
- Irina Benedyk
- Mary Brooks
- Joseph Bryan
- Agustina Calatayud
- Daniel Covarrubias
- Maxim Dulebenets
- Jagoda Egeland
- Zeinab Elmi
- Jonathan Gold
- Ruiyue Guo
- Daniel Hackett
- Emily Hashimoto
- Mitch Kostoulakos
- Claudia Lagos Galindo
- Vicente Mantero
- Jose Marquez
- Shannon McLeod
- Melisa Montemayor
- Jean-Paul Rodrigue
- Martin Rojas
- Claudia Paloma Salas Esparza
- Eleftherios Sdoukopoulos
- Rohan Shah
- Isabel Victoria-Jaramillo

Committee Membership, continued



5 International (5)
2 Young Member (4)
1 State DOT (2)

Committee Business

Update from Committee Secretary

Chris Bachmann

Committee Business, continued

Update from the CRC

Daniel Covarrubias

Current Research Needs in International Trade and Transportation

1. Intermodal Container Availability and Construction

1. **Date Range:** 12/07/2022 (posted) - 12/08/2022 (modified)
2. **Focus:** Exploring the intermodal container landscape through research focused on developing metrics for supply and demand, analyzing the manufacturing process and supply chain vulnerabilities, and assessing the effectiveness of repositioning strategies during global supply chain fluctuations.

2. Logistics Infrastructure Measurement and Prioritization Protocol: Ensuring Trade Drives Economic Growth

1. **Date Range:** 01/10/2019 (posted) - 11/22/2022 (modified)
2. **Focus:** Establishing an objective framework for logistics infrastructure efficiency through developing a measurement and prioritization protocol, encompassing feasibility analysis, operational requirements, baseline compatibility assessment, detailed protocol design, and integration of databases and libraries for strategic alignment in enhancing economic growth through trade.

3. The Relationship between Investments in U.S. Transportation Infrastructure and Competitiveness of U.S. Exports

1. **Date Range:** 01/11/2019 (posted) - 11/22/2022 (modified)
2. **Focus:** Assessing the correlation between U.S. transportation infrastructure investments and export competitiveness through global benchmarking of top airports and seaports, analysis of redevelopment frequencies and funding strategies, and evaluating the impact of various transport modes on export trends to identify optimal investment avenues for enhancing U.S. export capacity.

4. The Risks to Global Trade

1. **Date Range:** 01/11/2019 (posted) - 11/22/2022 (modified)
2. **Focus:** Conducting comprehensive research to identify and quantify risk factors affecting global trade, including impacts on international shipping costs across maritime and air modes, cargo value and volume fluctuations, financial repercussions at both port and gateway levels, and the duration of these impacts.

Future Research Directions: Addressing Emerging Challenges in International Trade and Transportation

1. Nearshoring and U.S. Cross-Border Trade

1. **Objective:** Investigate the effects of nearshoring on U.S. cross-border trade and infrastructure requirements.

2. Dwindling Water Resources and International Trade: The Case of the Panama Canal

1. **Objective:** Assess the impacts of water scarcity in the Panama Canal on global trade dynamics.

3. Geopolitical Dynamics in the Middle East: Consequences for International Trade

1. **Objective:** Explore how geopolitical shifts in the Middle East affect international trade patterns.

4. Exponential Technologies (Logistechs) and Their Impact on International Trade and Transportation

1. **Objective:** Evaluate the influence of exponential technologies on international trade and transportation systems.

Collaboration and Funding Opportunities

- **Invitation for Collaboration:** Seeking participants to contribute to elaborating the Research Needs Statements (RNS).
- **Funding Exploration:** Suggestions and discussions on potential funding avenues for our research endeavors.

What does a RNS Require?

* Title

The research statement title should briefly and immediately convey to the reader what the proposed study is about.

* Background / Description

The background statement is an opportunity to convince the reviewer that the research statement addresses a serious issue and merits funding. It should set the context and relate the particular issue to larger national or regional goals and objectives.

* Objective

A short, concise, and accurate description of what the expected product of this research will be.

Potential Benefits

A justification of the funding of the research statement. Be specific and provide as much detail as possible on the potential benefits of the project.

Related Research

An explanation of how this research is different from other work on the same or similar topics.

Proposed Tasks

Specific tasks that absolutely have to be part of the research statement.

Implementation

Follow-on research and implementation that demonstrates the scale and scope of the research, the potential barriers and impediments to implementation, and the activities and champions needed to support the end work.

Funding

Identification of the funds needed.

Research Period

Length of time to complete the research.

Research Priority

Indication of the importance of this research.

Target Audience

Potential users of the research results.

RNS Developer(s)

Individual(s) responsible for developing this statement.

* Sponsoring Committee

Primary committee responsible for developing this statement.

Co-Sponsoring Committees

Additional committees involved in the development of this statement.

* Subject Categories

Select at least one or up to five categories.

Committee Business, continued

Update from the Paper Chair

Isabel Victoria-Jaramillo

Paper Review Process

Brief Overview

- Paper reviews are one of the core responsibilities of Committee Members
- Papers are assigned based on the areas of expertise available in the TRB system
- Committee typically handles 4-7 papers per year
- Each paper is assigned to +4 reviewers
- Each paper is reviewed by at least 3 people

Thanks to everyone on the Committee who participated in the review process

2024 Annual Meeting Papers Timeline

- **May 26, 2023** - Calls for papers due.
- **June 1, 2023** - Paper submission site opens.
- **August 1, 2023** - Deadline for Paper Submission.
- **October 15–30, 2023** - Paper decisions (paper accepted for presentation, publication or rejected) sent.

Papers Received and Accepted for Presentation, Publication, or both

TRB Annual Meeting	Paper Submitted to AT020 Committee	Papers Accepted for Presentation, Publication or Both	Paper Acceptance Rate
98 th (2019)	6	4	67%
99 th (2020)	5	3	60%
100 th (2021)	7	5	71%
101 st (2022)	5	2	40%
102 nd (2023)	5	4	80%
103 rd (2024)	4	3	75%

Papers Received and Accepted for Presentation, Publication, or both

TRB 103rd Annual Meeting, Jan 2024

Manuscript Number	Paper Title	Outcomes of Review Process
24-00366	Robust Optimization of Multi-Regional Truck Scheduling for China-ASEAN Cross-border Container Drayage [This was the only paper that was submitted in response to our Call for Papers]	Accepted for presentation.
24-03826	Assessing Trans-Caspian Freight Capability: Past, Present, and Future	Rejected for presentation or publication.
24-05267	Examining Transportation and International Trade Policy Dynamics Through the Advocacy Coalition Framework: A Case Study of the Lower Mississippi River Ports	Accepted for presentation only. Not recommended for publication.
24-05423	A Method for Estimating Origins and Destinations for Multimodal Multicommodity Import and Export Flows by Coupling Provincial and Interregional Input-Output Tables	Accepted for presentation.

Committee Business, continued

Update from the CCC

Irina Benedyk

Committee Business, continued

Young Member Council briefing

Johnny Arellano

Supply Chain Subcommittee briefing

Joe Bryan

Committee Business, continued

Triennial Strategic Plan

- TSP document/process being updated
- Part 3: Committee Future Outlook Statement and Committee Three-Year Plan
 - Will help guide the Committee's research activities
 - Can be used to attract new members to the Committee and attendees to our meetings

Focus session: research priority areas

- Un-Conference Ideas
- Survey Ideas
- What else do **you** think the Committee should be focused on?

Consider ways in which we address these topics!

- TSP? Webinar? Call for Posters? Call for Papers? Panel?

Focus session: research priority areas, continued

Unconference 2023

- Capacity
- Consumers Over-Consuming Transportation
- Data Sharing
- Workforce Development
- Resiliency/Sustainability
- US Flagged Ships
- National Freight Plan

Unconference 2024

- Energy & Transportation
- Environmental Impacts
- Effectiveness of Freight Plans
- Future Supply Chain Crises
- Reshoring/Near shoring
- Urban Design
- Travel Demand Modeling
- GDP as a Driver of Growth
- AI
- Increased Supply Chain Costs
- Space Freight
- Warehousing

Committee

- Evaluation of BCA process for choosing transportation projects
- user-based payments for infrastructure costs
- Nascent & upcoming technologies
- Impact of investment in foreign transportation infrastructure improvement opportunities
- Mega vessels & changing mega alliances
- Strategic regional investment decisions
- Potential impacts the third globalization peak/wave may have on US-Mexico-Canada trade
- Economic analysis methodology
- Impact of "One Belt One Road" on transport corridors
- Impact of digitalization on international transportation

Presentation 2

Panama Canal: Now and in the Future

Kevin Keller

**National Director Intermodal Transportation
Planning, HDR**

An aerial photograph of the Panama Canal locks, showing the concrete structures and the waterway. The image is overlaid with a semi-transparent blue filter. The text is centered over the image.

Beyond the Expansion and Drought: Next Steps for the Panama Canal Authority

**Kevin Keller, PG, CGWP
Vice President
HDR Engineering, Inc.
Kansas City, MO**

So What's Next?

☆ What else can ACP do to take advantage of expanded canal operations?

- Assessment of new business areas
 - **ACP-Owned Port at Corozal**
 - **Ro-Ro Port Terminal**
 - **Container Inland Water Transportation Services by Barge**
 - Bunkering
 - Logistics Parks Services
 - Shipyard and Vessel Repair Services
 - Liquefied Natural Gas (LNG) Bunkering
 - Top-Off Operations for Coal and Iron Ore

Program Management Advisory and Related Services

- ★ Goal is to develop a series of studies to examine business opportunities through the provision of related shipping services in connection with the Panama Canal Expansion that will occur in 2016.



New Container Transshipment Terminal Port at Corozal

✦ Feasibility study for a two-phase new transshipment terminal port in the area of Corozal

- Conceptual design
- Peer review
- Capacity simulation runs
- Additional demand studies
- Findings for the alignment of the wharf

✦ Business model alternatives evaluation

- Evaluation of possible financial sources
- Analysis of the advantages of using different investment sources



Feasibility Study of Roll-On / Roll-Off Port Terminal

- ✦ Feasibility assessment of a dedicated Ro/Ro facility on the Pacific side of Panama
- ✦ Market demand study
 - Based on the existing Ro/Ro services available in Panama and the region
 - Projections of vehicle sales for the next 20 years
 - Industry knowledge related to the potential for ACP to capture a share of the region's demand for vehicles
- ✦ Estimated three market demand scenarios assuming varying levels of growth and the ability of ACP to capture the regional demand
- ✦ Conceptual design with construction costs, operations and maintenance expenses estimated
- ✦ Financial model to better understand the financial feasibility of building and/or operating a dedicated Ro/Ro facility

Pre-Feasibility Study for a Container Barge System

- ☆ Currently shipping lines use the Railroad or trucks to perform inter-oceanic transshipment (or inter-terminal transshipment) and move containers between terminal ports located in the Pacific and Atlantic entrances
- ☆ Pre-FS to determine the technical and financial conditions under which a container-on-barge system could be successfully established in Panama
 - Estimated the preliminary demand for container barge services between the terminal ports
 - Conducted a market analysis to determine the level of acceptance for a container barge transportation service in Panama
 - Identified the optimal container barge size and operational requirements for such a system to work efficiently
 - Preliminary financial analysis to determine the feasibility of a stand-alone container barge business

Pre-Feasibility Study for a Container Barge System

- ✦ **Developed a set of three integrated models (analytical tools) that allow the exploration of different scenarios**
 - **Market demand model was developed to estimate the volume of containers that will be transported using the barge system**
 - **Capacity model was built to determine the vessel type and operational schedule that would be appropriate to service the projected demand for the system**
 - **Financial model was created to calculate cash flow projections and other indicators to evaluate financial performance of different business models**



What About the Drought?

- ☆ Under normal circumstances, the Panama Canal handles about 3% of global maritime trade volumes and 46% of containers moving from Northeast Asia to the US East Coast
- ☆ Water levels languishing at six feet (1.8 meters) below normal
- ☆ Capped number of vessels that can cross
- ☆ 24 ships a day, the maximum is still well below the pre-drought daily capacity of about 38

Solutions

- ✦ Release water from Lake Alajuela, a secondary reservoir
- ✦ Dam up the Indio River and then drill a tunnel through a mountain to pipe fresh water 8 kilometers (5 miles) into Lake Gatún, the canal's main reservoir
- ✦ Will cost about \$2 billion, Córdoba estimates. He says it will take at least six years to dam up and fill the site. The US Army Corps of Engineers is conducting a feasibility study.
- ✦ Indio River reservoir would increase vessel traffic by 11 to 15 a day

Open Forum

- Are there any sessions at (or research from) the Annual Meeting that you would like to bring to the Committee's attention?
- Are there any upcoming conferences that you would like to bring to the Committee's attention?
- Anything else?

Thank You for Volunteering

Committee website

<https://www.trbtradetransportation.org/>

Join the Committee LinkedIn Page

<https://www.linkedin.com/groups/4362564/>

Daniel Hackett

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