

## SOCIAL NETWORK ANALYSIS OF TRB STANDING COMMITTEES

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### Approach

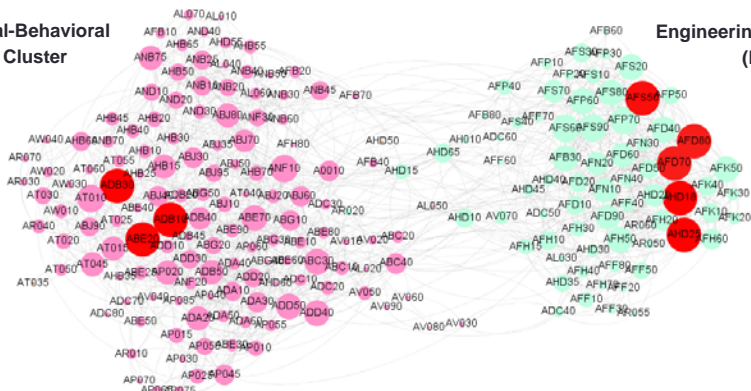
- TRB member database was used to analyze committee co-membership across the 210 standing committees
- The members serving on multiple committees created the network ties
- Analyzing committee co-membership indicates the degree to which committees have the potential to collaborate and share information
- Results were applied in a case study focusing on ADD40



## High Degree Centrality

Social-Behavioral (S-B) Cluster

Engineering-Technical (E-T) Cluster

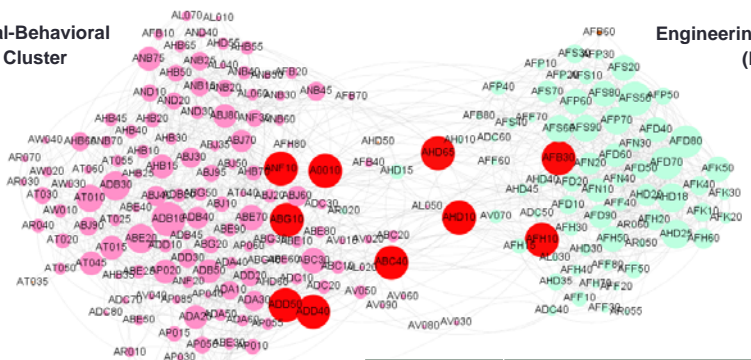


Committee	Name	Degree	Cluster
ADB10	Traveler Behavior and Values	42	S-B
ABE20	Transportation Economics	36	S-B
ADB30	Transportation Network Modeling	36	S-B
AFS50	Modeling for the Design, Construction, and Management of Geosystems	42	E-T
AFD70	Pavement Rehabilitation	40	E-T
AFD80	Strength and Deformation Characteristics of Pavement Sections	40	E-T
AHD18	Pavement Preservation	36	E-T
AHD25	Sealants and Fillers for Joints and Cracks	36	E-T

## Betweenness

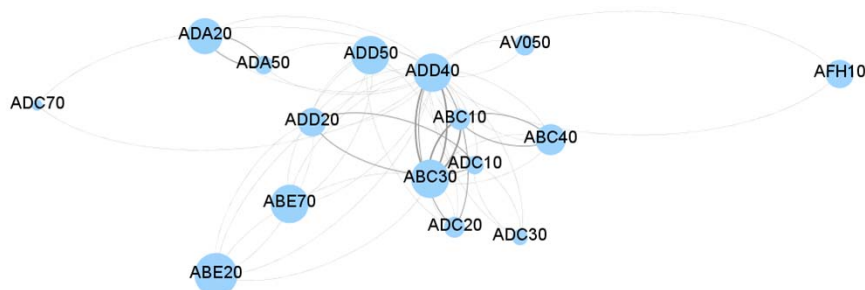
Social-Behavioral (S-B) Cluster

Engineering-Technical (E-T) Cluster



Top Ten Committees	Name	Betweenness
ANF10	Pedestrians	1458
A0010	International Activities	1088
ABC40	Transportation Asset Management	945
ADD40	<b>Transportation and Sustainability</b>	<b>875</b>
AFH10	Construction Management	858
AFB30	Low-Volume Roads	849
ABG10	Conduct of Research	813
AHD65	Winter Maintenance	805
ADD50	Environmental Justice in Transportation	787
AHD10	Maintenance and Operations Management	769

## ADD40's Network



Committee	Name	Committee	Name
ABC10	Strategic Management	ADC20	Transportation and Air Quality
ABC30	Performance Measurement	ADC30	Ecology and Transportation
ABC40	Transportation Asset Management	ADC70	Transportation Energy
ABE20	Transportation Economics	ADD20	Social and Economic Factors of Transportation
ABE70	Women's Issues in Transportation	ADD40	Transportation and Sustainability
ADA20	Metropolitan Policy, Planning, and Processes	ADD50	Environmental Justice in Transportation
ADA50	Transportation Programming and Investment Decision-Making	AFH10	Construction Management
ADC10	Environmental Analysis in Transportation	AV050	Airport Terminals and Ground Access

## Membership of TRB Committees by ADD40 Committee Members

ID	TRB Committee Name	Number of ADD40 Members on TRB Committee	Position of ADD40 Member: Government (Federal or State) / Private Sector / NGO / Academic
ADC20	Transportation and Air Quality	2	Academic <sup>a</sup> / Government (Federal)
ABC30	Performance Measurement	3	Academic <sup>a</sup> / Academic / Academic
ABE20	Transportation Economics	1	Private Sector <sup>b</sup>
ADD20	Social and Economic Factors of Transportation	1	Government (State) <sup>c</sup>
ADC30	Ecology and Transportation	1	Government (State) <sup>c</sup>
ADC10	Environmental Analysis in Transportation	1	Government (State) <sup>c</sup>
ABC10	Strategic Management	1	Private Sector
ABC40	Transportation Asset Management	1	Academic
ABE70	Women's Issues in Transportation	1	Academic
ADA20	Metropolitan Policy, Planning, and Processes	1	Academic
ADA50	Transportation Programming and Investment Decision-Making	1	NGO
ADC70	Transportation Energy	1	Private Sector
ADD50	Environmental Justice in Transportation	1	NGO
AFH10	Construction Management	1	Academic
AV050	Airport Terminals and Ground Access	1	Academic

a, b, and c Indicate that three different ADD40 committee members are also members of two other TRB committees

## ADD40

- ADD40 is in an interesting position in that its subject area cuts across environmental, social, and economic issues that can have a technical, managerial, planning, financial, political, and/or regulatory dimension
- Committee productivity is somewhat limited, but stable
- Committee has a desire advance a more strategic and comprehensive research agenda through a *collaborative outreach* process to other TRB committees
- Committee made strategic decision to focus on promoting transportation research that integrates all three dimensions of sustainability

## The Value of the Social Network Analysis

The social network analysis revealed:

- that ADD40 is already positioned well with in the TRB system – i.e., the committee bridges the two clusters
- that adopting a collaborative research stance is a realistic strategy
- that strengthening existing relationships would be a useful first step
- where relationships between committees could be developed
- which individuals could be tasked with reviewing RNS statements of interest to ADD40