

ADC20 TRB 2018 SWOT Analysis Report

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Purpose: The ADC20 Committee Leadership wanted to use the annual meeting as an opportunity to engage in some Strategic Planning. Using the Strengths, Weaknesses, Opportunities, and Threats (SWOT) analysis technique as a tool to better understand what the committee members, friends of the committee and other attendees thought about how the committee works best and where we can look for meaningful changes to make a better committee.

Organization: During the strategic planning breakout at the ADC20 committee meeting on January 10, 2018, the room was broken into three breakout groups: Environmental Agencies, Transportation Agencies, and Non-governmental Organizations (NGOs). Each group was given a leader, a note taker and



a flip chart, and asked to think about the ADC20 Committee through the “SWOT” lens to discuss our *Strengths*: what does ADC20 do really well? Our *Weaknesses*: where can ADC20 improve? *Opportunities*: where should ADC20 lead on topics, partnerships, other things? And *Threats*: what can reduce ADC20’s effectiveness and how should we respond? These three groups were composed of attendees from EPA, FHWA, state DOTs, MPOs, Universities, NGOs, and consultants. A special thanks goes to the voluntary facilitators:

Bob Chamberlin (RSG), Reza Farzaneh (TTI), Karin Landsberg (WSDOT), Ray Minjares (ICCT), Greg Rowangould (U.NM), and Song Bai (STI).



Strengths: What does ADC20 do really well?

The committee offers an opportunity to learn from others and exchange ideas, and people like that it attracts a strong, diverse representation (e.g. government, academic, private, international) with multidisciplinary expertise, with a focus on modeling and technical analysis. The committee’s paper review organization and selection process leads to some of the best presentations and/or papers in the annual meeting. Additionally, the committee’s ability to generate research ideas from statement submissions, and to attract funding, are seen as what the committee does well.

Weaknesses: Where can ADC20 improve?

The committee could be improved and strengthened by including more transportation modes and increasing interactions with other committees. Participants saw that other weaknesses were the disconnect between paper topics (e.g., focus of papers on emission modeling) and what practitioners can apply, and researchers’ limited understanding of agency research needs.



Also viewed as an area of weakness by these groups was the alignment of important research topics from the annual meeting, and the transparency and connection between those topics and RFPs that later emerge (e.g., through the NCHRP process). There was feedback that the committee could increase the diversity of topics it addressed (and funded) if other travel modes were addressed and ADC20 was better connected to other committees.

Communications outside of meetings, the website, and too few opportunities to contribute or brainstorm during the TRB annual meetings and committee meetings, as well as the limited international perspective was also discussed.

Opportunities: Where should ADC20 lead on topics, partnerships, other things?

To make the most of the committee and accompanying expertise, we need to recognize that the source profiling is changing (e.g., ultra-fines) and non-exhaust tire/break wear/dust and nonroad sources are projected to become more important. It was suggested that a Taskforce on non-road emissions be



formed. These changes may require us to change models, policies, and how we interact with other committees.

We should be looking to better link research with policy goals, strategic planning and application, so we can better guide theory into practice. We should be promoting research topics that meet the DOT needs with an emphasis on interdisciplinary collaborations and cross-cutting research, including collaborations with other air quality and health

communities' scientists with use of data on electric vehicles and other emerging technologies.

The makeup of the committee, and the ability to sustain it in the years to come, might benefit by attracting more health/exposure papers/research and health professionals, young professionals, graduate students, and international participants.

Communicating and disseminating information and research would be more effective if we utilized our website to periodically produce newsletters, blogs, and used social media better. It was also recommended that we blog to share ideas, archive communications, and preserve historical information for new members and friends.

Partnering with committees outside the environment arena (e.g. planning) and more involvement in joint subcommittees such as energy, travel demand, operations, and intelligent technologies, may support many of these opportunities. Liaisons to other related committees was one suggested option.

Threats: What can reduce ADC20's effectiveness and how should we respond?

While there was an increase in paper submissions, it was at the expense of topic diversity and rigor. Paper quality is an issue for the committee. We cannot be too focused on one area (e.g. modeling); yet, we continue to see a small number of specific, predictable research themes. The declining participation of key Air Quality (AQ) researchers, through retirement or migration to other topics, may be contributing to this threat.

The AQ committee needs to be poised to help our community understand upcoming AQ impacts. The committee needs to recognize and address:

- With technology advances, more information and “big data” are coming on line rapidly
- Funding availability from a more diverse selection of funders
- The need for better coordination/collaboration among stakeholders to help the community access funds efficiently
- Shifts and updates to the substance and quality of guidance and regulation
- Rapid and on-going changes in how we assess progress, such as through regulatory or statutory performance measures
- Shifts to increasingly multi-modal transportation, facilitated by technology.

Since air quality is an issue for many communities (such as energy, sustainability, environment, and transportation planning), our work may be overlapping with other committees. All of this is against a backdrop of improved air quality.

Common Themes:

Summary of Top Three in Each Category of the SWOT

STRENGTHS	WEAKNESSES	OPPORTUNITIES	THREATS
Active/Diverse Membership	Interaction with other Committees	Collaboration with other Committees and AQ community	Relevancy due to changes in AQ, technology, other committees
Paper Review	Communication	Communication/Social Media	Paper Quality/Weak Diversity/Rigor
Research Ideas and Funding	Applicability of Research to Practice	Link Research to Practitioner’s Needs	Focus on Emissions Modeling

The three most common themes overall were:

- Too narrowly focused on on-road emissions modeling.
- Research funding and transparency need to be considered, so that we are getting research that is less theoretical and more applicable to what practitioners need.
- Communication and collaboration within the committee, with other TRB committees and other AQ groups needs to expand.

Recommendations:

- Be more specific in research proposals and calls for papers, to expand beyond emissions modeling and to support practitioners.
- Establish a liaison to improve outreach and communication with other TRB committees and AQ communities.
- Consider ways to improve dissemination of research and improve internal communication.