

Committee Triennial Strategic Plan

Committee Name and Number: AV050 Airport Terminals and Ground Access

Committee Chair: Craig Leiner, Massachusetts Port Authority

TSP Three Year Period: June 2012 to June 2015

Mission: The committee works to promote research and foster innovation to improve the passenger and employee experience and operational performance of all aspects of the terminal landside. Specifically, the scope of this committee covers the design, maintenance and operation of the airport landside. The airport landside is defined as the area bounded by the points at which passengers, employees, and cargo/freight enter the airport by all modes and the point on the apron at which the aircraft is serviced and loaded. The airport landside includes access roads and ramps, parking facilities, the terminal curbside, terminal facilities, and the aircraft apron, including the adjacent taxiway. The committee's mission covers the planning, design and operation of the areas of the airport that encompass passenger entrance at the airport boundary, transit to the airport terminal entrance, processing (of passengers and baggage) through all areas of the terminal building to the jet bridge and boarding area for the airplane as well as the terminal apron. Additionally the committee mission includes:

- Private vehicle, rail and public transportation) that facilitate the safe, secure and efficient travel of passengers to / from the airport;
- The systems that enable their travel, e.g., information systems, wayfinding, and baggage processing;
- The airport services that provide passenger amenities, such as food and beverage and retail concessions.
- Understanding the capital investments necessary to maintain efficient, effective and sustainable ground access programs.

The primary factors that will influence the transportation community within the mission of our committee over the short- and long-term include:

- Airport and airline business models and national, state and regional infrastructure investment policies
- Passenger characteristics (e.g., socioeconomic, demographic, etc.)
- Ground transportation modal shifts
- Sustainability objectives of all stakeholders
- Advanced technologies: NextGen and ITS

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Outlook and Goals:

The committee will work to position itself on the forefront of defining the critical issues related to the terminal landside and ground access operations. This will include identifying areas for innovation to shape the Aviation Group research agenda. The committee will strive to collect and disseminate Best Practices related to ground access and terminal landside planning and operations as well as encourage informed discussion, advancement of knowledge, and development of analysis techniques and other technology to enhance airport landside planning, design, maintenance and operation. This includes:

- Changes in private vehicles; i.e., increased use of electric vehicles, driverless cars integration of wayfinding/GPS systems and airport IT technologies (e.g., presenting parking space availability and locations using dashboard displays).
- Changes in private vehicle ownership and use due to Zip cars and the like, or Uber Taxi and other ridesharing apps.
- Continued emphasis on HOV modes including increased use of rail, Bus Rapid Transit, and other transit services at airports such as shared-ride vans, taxicabs, and limousines
- Changes in parking controls and access such as ticketless entry and exits, less use of cashiers but instead using AVI, credit card in/out, near field communications/electronic wallets, and other evolving technologies
- The role of air cargo in landside operations
- Ground transportation center/intermodal centers, alternative curbside areas and their operation

Goals and objectives:

Promote the safe, secure, sustainable and enjoyable movement of passengers from the airport boundary through aircraft boarding by providing leadership and vision, through:

- Applied research and development
- Communication and publication of best-in-class and leading-edge practices in planning, design and operations of airport ground transportation and terminal infrastructure, facilities and systems
- Engaging practitioners, academics and operators in conducting research about critical operational, safety, security, intermodal and capital investment issues
- Providing a forum for disseminating current research
- Providing peer reviews to the industry and academia for publications related to critical issues and suggested research topics.
- Submitting ACRP research statements for major topics related to our committee.
- Engaging other industry groups to co-sponsor and facilitate research efforts and identification of critical issues.

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This section of the strategic plan discusses both the primary factors influencing the transportation community within committee's scope and mission over the next three years as well as the impact to the committee's members and the challenges the committee must fulfill:

The primary factors that will influence the transportation community within the scope of our committee over the short- and long-term include:

- Next Gen — As NextGen technology is implemented, increasing airside capacity, airport landside capacity can be affected. We will work with the aviation community research and plan concurrent, cost-effective new technology and operational strategies to ensure that the airport landside system is prepared to handle the increased demand. This work is to be coordinated with the Aviation System Planning and Airfield and Airspace Capacity and Delay.
- Airline consolidation — As airlines consolidate, there will be changes in fleet mix, airline processing methods, airline operations that will require increased flexibility in airport ramp and terminal systems to accommodate the changing demands. We will work with aviation community to research and plan cost-effective design strategies, new technology and/or operational strategies maximize nimbleness in responding to changing terminal and apron requirements necessary to satisfy changing airline equipment and passenger processing demands. Work with the Aircraft/Airport Compatibility committee as appropriate.
- Constrained and reduced funding from traditional sources — This will require airports to do more with less requiring facilities and systems to last longer and be more easily reconfigured to wring more capacity out of existing systems. Additionally, it will require the aviation community to be more creative in pursuing alternative project delivery methods that will make planning/design/development dollars go further. It will also require airports to pursue alternative sources of revenue that include new airport development trends resulting in changes in traditional airport land use, airport facility development and operational strategies. We will work with the aviation community to prepare to address this challenge creatively. Work with the Aviation Economics and Forecasting committee to examine critical infrastructure investment issues.
- Development and expansion of systems that provide immediate, ubiquitous information supported by real-time updates—IT is evolving daily and passengers are adopting and adapting to the use of technology remarkable rates. This creates both an expectation by passengers for information delivery smartly—as well as provides airports with an important tool to potentially enhance capacity through deployment of IT systems that allow more accurate matches passenger of demand with incremental, available capacity. We will work with that the aviation community to exploit this technology to the maximum extent possible to harness the benefits to airport capacity and passenger wayfinding to enhance the seamlessness, convenience and comfort of passengers' journey.
- Aging customer base that includes larger populations requiring mobility and other assistance—Work with the Aviation committee to collaborating with related TRB

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committees (e.g., Access Management, Accessible Transportation and Mobility, Intermodal Facilities, and Commuter Rail) to seamless interfaces between public transit and access systems and airport access systems, with appropriate consideration to providing the easiest primarily physical, but also informational and intuitive transitions between suburban and urban communities and the airport. We will also work with the airport planning and design community to focus on cost-effective ways to increase ease of access and transit through airport terminals to reduce the physical demands of walking and standing, and transporting baggage. Ensure that airport systems provide all necessary assistance with passenger acquisition of necessary travel information through systems that are enhanced to serve the visually and hearing impaired.

- Continuing, and at times, rapidly increasing rate of change in airport access transportation systems, airport security requirements, and airline processing technology- All of these issues drive the need for flexibility in ground transportation and access and airport terminal infrastructure, facilities and systems. We will work with the TRB committees on Aviation Security and Emergency Management, Accessible Transportation and Mobility, Intermodal Transfer Facilities, and Commuter Rail and the airport landside and terminal planning and design community to prepare to exploit the benefits of innovations being developed in these related areas and incorporate them in their infrastructure, facility and systems planning, design and operations efforts.
- Meeting the needs of ground transportation infrastructure and airport terminal sustainably - We will work with the Environmental Impacts of Aviation and Aviation Economics and Forecasting committees, and airport landside and terminal planners, designers and operators to incorporate the discipline of evaluating all projects relative to the triple bottom line standard to support achieving the minimal impact / overall cost to environmental, social and economic resources.
- The role of air cargo in ground access facilities, programs, and operations. AV050 will work with AV040 in supporting the activities of the new AV040 Air Cargo Subcommittee.

Committee Plan

- Consider whether some of these areas are covered by other TRB Aviation or other committees and develop strategies to collaborate effectively with them. Otherwise, consider if use of task forces (to address issues that may require only short-term response), sub-committees within the control of AV050 or creation of a separate committee is necessary. Note that in considering how best to address this challenge in committee scope breadth it is critical that solutions to committee structure ultimately promote planning/design/operations solutions that ensure the maximum seamlessness in air passengers' journey
- Work with relevant TRB aviation and other committees in the areas discussed above to:
 - Reach out to the academic, planning/design consultant and airport operational community to invite them to participate in committee discussions on industry

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challenges and to promote research to expand the industry's capabilities in these areas.

- Develop ACRP research problem statements.
- Create sessions and workshops at TRB conferences on these topics.
- Implement a membership committee that works to identify required committee expertise to support some of these areas, evaluate composition of current committee with respect to these areas of expertise and target potential members with the necessary expertise. Ensure that committee membership is composed of representatives from academic, government, consultant and operator community and that it has representation from young as well as “seasoned”, diverse and many more members.
- Continue use of annual meeting and quarterly committee conference calls to maintain good committee communication. Develop a plan to utilize social media or other technology to provide on-going “chat” or discussion capabilities within the committee.

Products/Activities

- Establish and maintain an updated list of critical issues regarding ground access and the terminal landside.
- Publish a list of suggested research topics for industry and academia to pursue in TRB's Research Needs Database.
- Create a LinkedIn site to foster information exchange and committee “connectivity”.
- As part of a succession plan, Create a Vice or Assistant Chair slot that will work with the committee chair with eventual transition to Chair.
- Conduct an annual examination of membership breakdown and identify potential committee members (“active recruitment”). Same with Friends.
 - Expand Friends and encourage their participation.
- Delegation of responsibilities related to Strategic Plan to members via creating sub-committees.
- Dedicate a portion of the annual committee meeting to identify internal and external critical/emerging issues.