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The National Academies

Advancing Airport Readiness for Advanced Air Mobility

Case Study

Advanced air mobility (AAM) is poised to transform how people and goods move, with airports playing a central role in its early adoption. As electric vertical takeoff and landing (eVTOL) aircraft and related technologies transition from concept to reality, airports, whether large commercial hubs or regional general aviation facilities, stand to become key nodes for AAM services, including passenger transport, cargo logistics, and medical or emergency applications.

Recognizing the critical need for informed airport planning, the Transportation Research Board's Airport Cooperative Research Program (ACRP) commissioned RSG to lead a synthesis study of AAM readiness across US airports. The result, *Airport-Centric Advanced Air Mobility Market Study (ACRP Synthesis 130)*, equips airport operators with a consolidated view of market forecasts, infrastructure needs, and planning practices, alongside perspectives from industry leaders and technology developers.

The Challenge

While AAM's potential is significant, its path to implementation is uncertain, particularly for the airport operators expected to support early service. Hundreds of companies are investing in AAM technologies, but critical questions remain around certification timelines, airspace integration, infrastructure standards, and public adoption.

Many airport leaders are intrigued by AAM's promise, especially for use cases such as airport access, regional passenger service, and cargo or emergency transport. Yet few have the information needed to take proactive planning steps. While larger commercial airports will likely face challenges integrating AAM into their existing operations, smaller commercial and general aviation airports could be better suited for early deployment due to less congested airspace, more available land for ground infrastructure, and in some cases more conveniently located near city centers.

Adding complexity is the wide range of demand projections and adoption curves for future AAM service. Market estimates vary substantially by geography, operational model, and timeframe, making it difficult to assess where and when investments might be warranted. With no certified aircraft commercially available at the study's outset, many of the assumptions underpinning these forecasts remain speculative.

Further, although major OEMs and service providers view airports as critical to their rollout strategies, engagement with the broader airport community has been limited. This leaves many airports disconnected from the very companies shaping AAM's future.

In this environment, airport operators face a strategic dilemma: how to begin planning for AAM in ways that are practical, scalable,

and grounded in current realities, yet flexible enough to adapt as the landscape evolves.

RSG's Solution

To help airports navigate this uncertainty, RSG led the development of the *Airport-Centric Advanced Air Mobility Market Study* to assess the state of AAM readiness and deliver actionable insights. The project aimed to consolidate the fragmented landscape of AAM market research, synthesize emerging practices among US airports, and provide guidance on how to prepare for a rapidly shifting transportation mode.

The study began with a meta-analysis of published market forecasts from academic institutions, consultants, and public agencies. These forecasts, differing in assumptions around vehicle cost, performance, use cases, and infrastructure, were systematically reviewed to highlight the wide variance in potential AAM market outcomes.

To ground these findings in airport realities, RSG deployed a national survey targeting airport professionals across diverse geographies and facility types. The survey explored airport familiarity with AAM, current planning efforts, infrastructure assessments, and perceived barriers to implementation.

RSG also conducted follow-up interviews with a subset of airports to develop six in-depth case examples. These case studies, which included major commercial service airports and smaller general aviation facilities, provided tangible insights into how different airports are approaching AAM, from evaluating electrical capacity and airfield integration to coordinating with local and regional stakeholders.

To incorporate the business community's perspective, RSG interviewed major AAM original equipment manufacturers (OEMs) and a leading infrastructure developer. These discussions revealed that nearly all major OEMs anticipate using existing airports as foundational nodes in their early networks, particularly for airport shuttle and regional aviation services.

Together, these research components informed a synthesis that functions both as a baseline and a roadmap. The report outlines early steps that airports can take, such as initiating conversations with OEMs, assessing grid capacity, and identifying suitable locations for AAM operations, while also surfacing key unknowns that will shape long-term decision-making.

By combining forward-looking industry analysis with grounded operational insight, RSG delivered a resource that empowers airports to lead in shaping the future of advanced air mobility rather than waiting to catch up to it.