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Building the Future Supply Chains for Advanced Air Mobility

How States Can Map Manufacturing and Workforce Capabilities to Capture the Emerging AAM and Dual-Use Market

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Executive Summary

Advanced Air Mobility (AAM) is entering a new phase of commercialization and scale. After years of investment in aircraft development, enabling technologies, regulatory frameworks, infrastructure planning, and early operational concepts, the industry is moving closer to widespread deployment. At the same time, rapidly expanding demand for drones, autonomous systems, and dual-use technologies is accelerating the need for many of the same components, suppliers, manufacturing processes, technologies, and skilled workers that will support the broader AAM market.

For states, AAM represents more than a new transportation opportunity. It is an emerging ecosystem encompassing advanced aircraft, autonomous systems, infrastructure, and digital technologies—and with it, a significant advanced-manufacturing and economic-development opportunity.

The aircraft themselves are only one part of the story. Successful AAM deployment will depend on an interconnected industrial ecosystem encompassing ground infrastructure, air navigation infrastructure, flight operations, and aircraft manufacturing. Each creates demand for manufactured products, technologies, services, suppliers, and skilled workers.

The challenge is timing. Supply chains cannot be created overnight. Manufacturers need time to invest in equipment, achieve certifications, develop new customers, and scale production. Workforce and education partners need time to develop training programs and produce skilled workers. States need time to identify industrial gaps, align public and private investment, and position existing manufacturers to enter new markets.

Several powerful market forces make this increasingly urgent.

- Commercial AAM is progressing toward initial operations and scale.
- Commercial drone applications continue to expand.
- U.S. Department of Defense investment in drones, autonomy, counter-UAS, sensors, communications, propulsion, and other advanced systems is creating substantial demand for domestic manufacturing capacity.

Major global events provide additional milestones. The Los Angeles 2028 Olympic and Paralympic Games offer an opportunity to demonstrate AAM technologies and operational concepts on a global stage. Six years later, the Salt Lake City-Utah 2034 Winter Olympic and Paralympic Games provide an opportunity to move beyond individual demonstrations **toward an integrated regional AAM network.**

Is your state preparing only for AAM operations—or is it preparing its manufacturers and workforce to participate in the supply chains that will build the AAM industry?

States that want to capture the economic benefits of this transition should begin by asking a different question:

The Market Is Coming

Numerous global studies have been conducted by

the likes of McKinsey, Goldman Sachs, Aviation Week and others. NEXA Advisors' forecasts align generally with others, and point to a cumulative trillion-dollar global market opportunity over the next 25 years.

Forecasts of the future AAM and drone markets vary considerably depending on geography, technology, use cases, and whether estimates include aircraft, infrastructure, operations, software, and services. The precise size of the market is less important than the direction and magnitude of change: multiple aviation, technology, and defense markets are converging around a common set of advanced capabilities.

Commercial AAM represents one source of demand. Industry forecasts anticipate substantial growth as electric and hybrid-electric aircraft progress through certification and enter passenger, cargo, logistics, public-service, and other applications. The Federal Aviation Administration has cited the potential for AAM to become a **$30 billion annual market by 2030**, while other analyses project substantially larger opportunities as the industry matures.

Commercial drones represent a second, already-established market. Drones are increasingly being deployed for infrastructure inspection, mapping, agriculture, logistics, public safety, energy, construction, and other applications. The commercial UAS fleet provides an important installed base for technologies including sensors, communications, navigation, autonomous systems, propulsion, batteries, and ground-control equipment.

The third, and potentially most important near-term manufacturing catalyst, is defense.

The Department of Defense is accelerating investment in unmanned and autonomous systems as these technologies become increasingly central to national-security strategy. The FY2026 defense budget identified approximately $13.4 billion for autonomy and autonomous systems, including approximately $9.4 billion for unmanned and remotely operated

aerial vehicles. Additional investment in counter-UAS, communications, sensing, artificial intelligence, propulsion, and related technologies further expands the addressable industrial opportunity.

From a manufacturing perspective, the distinction between commercial AAM, commercial drones, and defense autonomous systems is increasingly porous. The markets may have different customers, missions, regulatory requirements, and acquisition processes, but they draw upon many of the same underlying industrial capabilities: composites, precision machining, batteries, electric motors, avionics, electronics, sensors, communications, software, autonomous systems, and advanced production technologies.

The implication for states is straightforward:

The market may be emerging, but the supply chains that will support it need to be developed now.

This convergence creates an important dual-use opportunity. A manufacturer entering a defense drone supply chain today may be developing capabilities applicable to commercial AAM tomorrow. Conversely, suppliers developing technologies for commercial AAM may find opportunities in defense, public safety, logistics, and other autonomous-system markets.

The timeline is also becoming clearer.

Defense and UAS demand is creating manufacturing requirements today. LA28 provides a demonstration milestone. Commercialization and production can expand during the years that follow. By 2034, Utah has the opportunity to demonstrate something considerably more ambitious: an integrated AAM network connecting transportation infrastructure, communities, venues, logistics, public safety, and other use cases.

What Must Be Built

Advanced Air Mobility is often discussed in terms of aircraft. Yet the economic ecosystem required to make AAM successful is much broader than aircraft manufacturing alone.

NEXA views AAM through four interconnected supply chains:

- Ground Infrastructure
- Air Navigation Infrastructure
- Flight Operations
- Aircraft Manufacturing

Together, they provide a framework for understanding what must be built, and where manufacturers across a state or region may be able to participate.

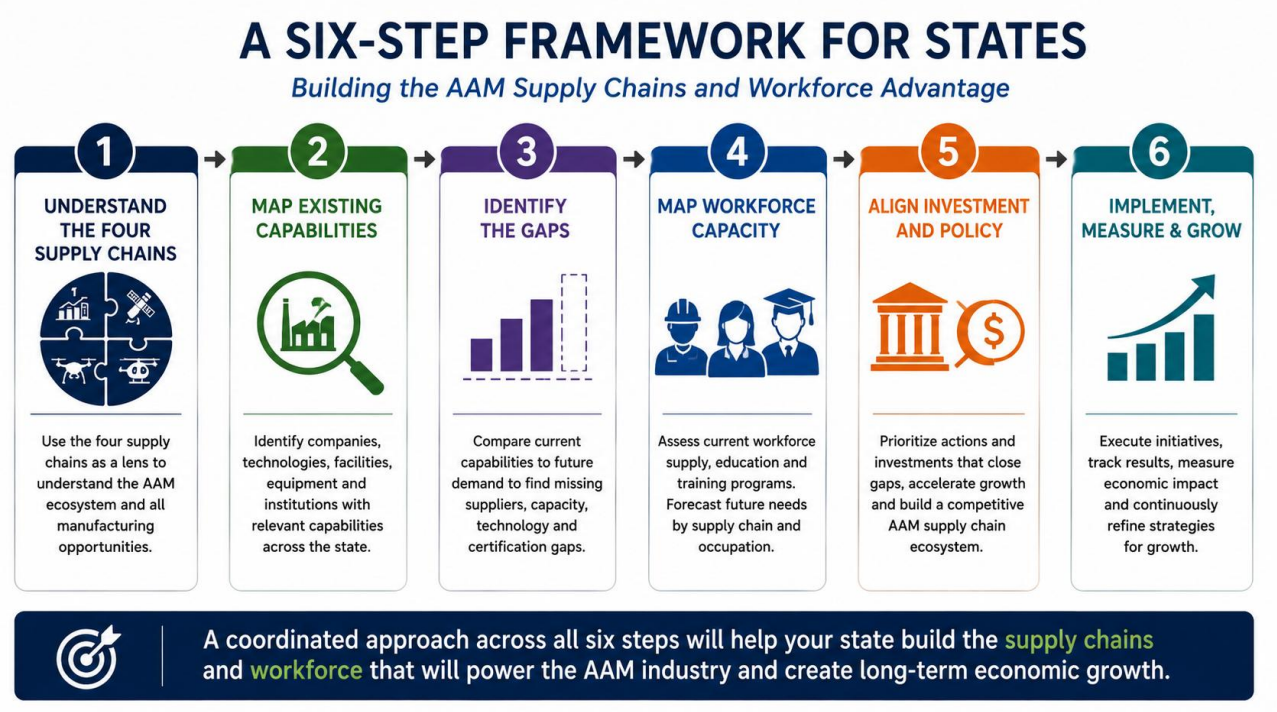
Ground Infrastructure provides the physical foundation for AAM operations. Vertiports and vertipads will require charging systems, electrical-grid upgrades, passenger facilities, construction and civil engineering, and specialized ground-support equipment.

These requirements translate into manufacturing opportunities for electrical equipment, charging hardware, steel and concrete products, building systems, HVAC and mechanical equipment, and related technologies.

Air Navigation Infrastructure provides the digital backbone for AAM, enabling unmanned aircraft traffic management (UTM) to integrate with traditional air traffic management (ATM) so that drones, AAM aircraft, and conventional aviation can operate safely and efficiently within shared airspace. A scalable AAM ecosystem will require communications networks, Remote ID, detect-and-avoid technologies, weather services, cybersecurity, and other digital infrastructure. These systems, in turn, create manufacturing opportunities for sensors, radar, communications equipment, avionics, electronics, and related hardware.

Flight Operations create another supply chain. Operators will require maintenance capabilities, training, dispatch, scheduling, emergency response, and cargo and passenger support. These activities generate demand for maintenance tooling, ground-support equipment, training simulators, fleet-management technologies, cargo-handling systems, replacement parts, and other manufactured products.

Finally, Aircraft Manufacturing encompasses the aircraft and their principal systems: airframes, composite structures, electric propulsion, batteries, flight controls, avionics, final assembly, and the extensive Tier 1–3 supplier network supporting production. Manufacturing opportunities range from CNC machining and



composite fabrication to electric motors, battery manufacturing, wire harnesses, additive manufacturing, and precision components.

These four supply chains are interconnected. Ground infrastructure depends upon digital connectivity. Aircraft manufacturing enables flight operations. Operations create demand for infrastructure, maintenance, replacement components, and additional aircraft. Growth in one part of the ecosystem stimulates demand elsewhere.

This is why viewing AAM solely through the lens of aircraft production understates the economic-development opportunity.

It also significantly expands the universe of companies that can participate.

Many manufacturers capable of supplying AAM may not currently identify themselves as aerospace or AAM companies. A precision manufacturer serving medical, automotive, or defense customers may have equipment and quality systems applicable to advanced aircraft. An electronics manufacturer may possess capabilities relevant to avionics or communications. Companies producing electrical systems, construction products, sensors, batteries, robotics, software, composites, or industrial equipment may already possess capabilities that fit somewhere within the four AAM supply chains.

The opportunity for states is therefore not simply to attract a future AAM OEM.

It is to identify, develop, and connect the entire industrial ecosystem capable of supplying this emerging market.

Success in Advanced Air Mobility depends on developing all four supply chains—not just building aircraft.

What States Should Do

The starting point is not necessarily building something new. It is understanding what a state already has.

States should begin by using the four supply chains as a lens through which to map existing industrial capabilities. The objective is to identify companies, institutions, technologies, manufacturing processes, facilities, certifications, and workforce capabilities that could support the emerging AAM and dual-use markets.

This creates a state AAM manufacturing capability map.

The mapping should extend beyond established aerospace companies. Precision manufacturers, electronics firms, composites producers, energy companies, software developers, construction suppliers, robotics companies, communications providers, maintenance organizations, and manufacturers in adjacent industries may all possess relevant capabilities.

The opportunity for states is therefore not simply to attract a future AAM OEM.

It is to identify, develop, and connect the entire industrial ecosystem capable of supplying this emerging market.

The next step is to compare those capabilities against projected requirements across the four supply chains.

Where are the missing suppliers? Where is production capacity insufficient? What technologies or certifications are absent? What capital equipment will manufacturers need to enter the market? Where are critical components dependent on vulnerable or foreign supply chains? Which existing companies could diversify into AAM or dual-use markets with targeted assistance?

This converts capability mapping into a supply-chain gap analysis. Workforce must be mapped at the same time.

AAM growth will require engineers, technicians, CNC machinists, composite specialists, avionics and electronics personnel, software and AI specialists, battery technicians, maintenance professionals, construction trades, and many other occupations. The mix will differ across each of the four supply chains and across individual states.

States can compare projected occupational requirements against existing workers, education programs, technical colleges, universities, apprenticeships, and industry training resources. The objective is not simply to forecast jobs. It is to determine where workforce capacity must be developed before shortages become a barrier to industrial growth.

Once capabilities and gaps are understood, states can make more strategic decisions about investment.

Supplier-development programs can help existing manufacturers enter aerospace and defense markets. Targeted incentives can address capital-equipment requirements. Universities and technical colleges can align training with documented industry demand. Infrastructure investment can support manufacturing clusters. Economic-development organizations can pursue companies that fill identified gaps rather than recruiting broadly. State aviation organizations can connect transportation planning with manufacturing and economic-development strategies.

The result is a coordinated framework:

Understand the four supply chains. Map existing capabilities. Identify the gaps. Map workforce capacity. Align investment and policy. Implement, measure, and grow.

This is fundamentally different from simply commissioning an AAM market forecast. The objective is not merely to determine how large AAM could become.

Conclusion

Advanced Air Mobility is creating a new opportunity at the intersection of aviation, advanced manufacturing, infrastructure, autonomy, defense, and economic development.

The emerging market will require far more than aircraft. It will require physical infrastructure, digital systems, operational equipment, components, technologies, suppliers, skilled workers, and significant public and private investment across four interconnected supply chains.

The growing defense and autonomous-systems market adds urgency. Unlike some commercial AAM applications that are still progressing toward certification and scaled operations, defense demand is creating manufacturing requirements today. This provides an important bridge for companies capable of serving both commercial and national-security markets.

The objective is to answer: How much of the emerging AAM and dual-use supply chain can our state's manufacturers and workforce capture?

The Olympics provide visible milestones for the industry's progression. LA28 can demonstrate the technology. Utah34 can demonstrate the network. But neither a regional AAM network nor the industrial capacity supporting it can be created at the last minute.

For state aviation leaders, this presents an opportunity to broaden the AAM conversation. Aviation agencies do not need to become manufacturing agencies. But they can serve as important conveners, connecting aviation planning with economic development, manufacturing, workforce, education, infrastructure, and investment.

States that begin this work early will be better positioned to help existing manufacturers diversify, attract new suppliers, develop skilled workers, strengthen domestic supply chains, support national-security objectives, and capture a greater share of the economic value generated by Advanced Air Mobility.

The question for states is therefore no longer simply when AAM will arrive.

The more consequential question is: Is your state preparing only for AAM operations, or is it preparing its manufacturers and workforce to participate in the supply chains that will build the AAM industry?

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