



From Hong Kong to the World: An Interim Research Report on the Low-Altitude Economy

Executive Summary

The Low-Altitude Economy (LAE), encompassing economic activities within airspace up to 3,000 meters, is rapidly emerging as a new engine for global growth. Driven by advancements in artificial intelligence, advanced manufacturing, and new energy technologies, an industrial ecosystem centered on electric Vertical Take-Off and Landing (eVTOL) aircraft, Unmanned Aerial Vehicles (UAVs), and Unmanned Aircraft System Traffic Management (UTM) is taking shape. This ecosystem has broad applications in passenger transport, logistics, public services, and tourism. Morgan Stanley projects the global LAE market could reach \$9 trillion by 2050, highlighting its immense potential (Morgan Stanley, 2024). This report analyzes the development status, policy frameworks, technological innovations, and business models of the LAE in key global regions: Mainland China, Hong Kong, ASEAN, the Middle East, Europe, and the United States. Based on this analysis, it proposes strategic directions for Hong Kong to leverage its unique advantages and secure a favorable position in this emerging strategic industry. Key recommendations focus on a strategy of "differentiated development, integration with the Greater Bay Area (GBA), and global connectivity," centered on improving infrastructure, accelerating industrial applications, and strengthening the talent pool.

Chapter 1: Introduction

1.1 The Dawn of a New Economy

The LAE represents a comprehensive economic paradigm integrating advanced technologies including, but not limited to aviation, new materials, high functional critical components, AI, big data, and the Internet of Things. It signifies not only a revolutionary change in transportation but also a new industrial frontier. Major economies have identified the LAE as a strategic high ground for future competition. China has designated it a "strategic emerging industry", while the US and Europe are leveraging their strong aviation foundations to lead in aircraft certification and airspace management

regulations. For Hong Kong, an international hub for finance, shipping, and trade, developing the LAE is a crucial step to seize future opportunities and enhance its global competitiveness. This report aims to provide actionable policy recommendations by systematically analyzing global trends and defining Hong Kong's unique position, opportunities, and challenges.

1.2 Core Components of the Low-Altitude Economy

The LAE is built upon a complex industry chain, from upstream R&D to downstream service applications. Its core components include advanced aerial vehicles and the sophisticated infrastructure required to support them.

Core Vehicles: eVTOLs and UAVs. Electric Vertical Take-Off and Landing (eVTOL) aircraft are central to passenger-carrying Urban Air Mobility (UAM), often dubbed "air taxis." They offer quiet, zero-emission, and cost-effective transport by combining the vertical flight of a helicopter with the efficiency of a fixed-wing plane. Leading companies like Joby Aviation, Archer Aviation, and EHang are nearing commercial certification. Unmanned Aerial Vehicles (UAVs) are already mature in applications like logistics, inspection, and agriculture, with Chinese Mainland & Hong Kong firms like DJI dominating the global market.

Infrastructure: Vertiports and Digital Airspace. The physical backbone of the LAE is a network of vertiports—specialized airports for eVTOLs and UAVs that serve as hubs for landing, charging, and maintenance, connecting air and ground transport. The digital infrastructure is equally critical, managed by Unmanned Aircraft System Traffic Management (UTM) systems. Unlike traditional air traffic control, UTM is designed for high-density, automated flights in low-altitude airspace, providing services like registration, route management, and conflict avoidance.

1.3 A Game-Changer for Business and Society

The LAE's value extends beyond creating a new industry; it acts as an enabling technology that can systematically enhance societal efficiency. It offers a solution to urban traffic congestion by opening up a "third transportation network" in the sky, capable of reducing hour-long commutes to mere minutes.

In logistics, UAVs are revolutionizing last mile delivery, enabling minute-level service for e-commerce and critical medical supplies. Furthermore, the LAE empowers public services through automated infrastructure inspection, rapid emergency response, and intelligent urban management, while also creating new consumer experiences like aerial tourism and entertainment.

Chapter 2: Global Low-Altitude Economy Development

The global low-altitude economy race is in full swing, with major economies forging distinct development paths based on their unique strengths and strategic priorities. This chapter delves into the progress in Mainland China, Hong Kong, ASEAN, the Middle East, Europe, and the United States, analyzing their approaches to policy, infrastructure, technological innovation, and commercialization.

2.1 Chinese Mainland

Chinese Mainland has established the low-altitude economy as a national strategic emerging industry, driving its development with unprecedented speed and force. Leveraging strong policy support, a vast domestic market, a complete industrial system, and leading digital technologies, Chinese Mainland has secured a leading position in the global low-altitude economy.

2.1.1 Top-Level Design and Policy-Driven Approach

Since the Central Economic Work Conference designated the "low-altitude economy" as a key development area in early 2024, a comprehensive policy support system has been rapidly established from the central to local levels. More than 20 provinces have included the low altitude economy in their government work reports and established industry funds, with Suzhou's fund exceeding 20 billion RMB. These policies provide substantial financial backing and clear developmental roadmaps.

2.1.2 Technological Innovation and Industrial Ecosystem

Chinese Mainland excels in technological innovation, particularly in UAVs and eVTOLs, accounting for over 70% of global low-altitude drone-related patent applications. EHang achieved a global breakthrough by obtaining the world's first Type Certificate (TC) and Production Certificate (PC) from the Civil Aviation Administration of China (CAAC) for its EH216-S autonomous passenger-carrying eVTOL. Furthermore, Chinese Mainland possesses the world's most complete LAE supply chain, with Shenzhen, the "drone capital of the world," hosting a massive industrial cluster that drives down costs and accelerates innovation.

2.1.3 Abundant Application Scenarios and Commercial Exploration

Chinese Mainland's vast and diverse geography provides rich application scenarios. Commercial applications are already underway in logistics (Meituan, SF Express), air tourism (EHang's sightseeing services), and public services (power line inspection, emergency rescue). The Guangdong-Hong Kong-Macao Greater Bay Area serves as a pioneering demonstration zone, with cities like Shenzhen and Guangzhou accelerating infrastructure construction and exploring integrated cross-border operations.

2.1.4 Challenges

Despite its rapid progress, Chinese Mainland faces challenges, including the complexity of airspace management, which requires high-level coordination between military, civil aviation, and local authorities. Infrastructure development, particularly for urban vertiports, presents systematic challenges. Finally, building public trust regarding the safety and privacy of passenger-carrying flights remains a key task.

2.2 Hong Kong

2.2.1 Strategic Positioning and Policy Planning

Hong Kong is leveraging its unique position as an international financial, trade, and shipping hub. The government has identified the LAE as a new growth engine and plans to release a detailed action blueprint. Its strategy focuses on becoming a "super-connector" and high-value service provider, concentrating on being an international financing hub, a standards and certification center, and a hub for cross-border logistics and premium passenger transport connecting the Greater Bay Area.

2.2.2 Pilot Projects and Industry Collaboration

Several companies are actively exploring LAE applications, including plans for eVTOL cross border routes to Shenzhen. Within the smart city framework, drones are already used for construction site monitoring and asset management. R&D institutions like the Hong Kong Productivity Council are also driving technological development and application.

2.2.3 Challenges and Countermeasures

AI Industry in Hong Kong faces challenges of complex airspace and limited land for vertiports. Regulatory coordination across multiple government departments is crucial, especially for cross-border flights, which require innovative cooperation models with Mainland authorities. Public acceptance regarding noise and safety, along with a shortage of specialized talent, are other key issues to be addressed.

2.3 ASEAN

2.3.1 Market Drivers and Application Scenarios

The ASEAN region's development is primarily driven by strong market demand for localized applications. In agricultural countries like Malaysia and Indonesia, drones are widely used for precision farming. In logistics, drones address the "last-sea-mile" challenge in archipelagic nations by delivering medical supplies and goods to remote areas. Singapore is a leader in using drones for smart city management.

2.3.2 Regulatory Environment and Uneven Development

The region faces significant regulatory fragmentation, with varying rules on drone registration and flight permits across countries, which hinders cross-border operations. UTM system maturity is also stratified: Singapore is advanced, Malaysia is developed, while countries like the Philippines and Vietnam are in the nascent stages.

2.3.3 Infrastructure and Technology Gap

Most ASEAN countries, except for Singapore and Malaysia, have significant gaps in digital and physical infrastructure. The region largely relies on technology and products from Chinese Mainland, Europe, and the US, although local companies are emerging.

2.3.4 Future Outlook

To realize its potential, ASEAN needs to enhance regional coordination on regulatory standards, encourage public-private partnerships through "regulatory sandboxes," and invest in foundational infrastructure.

2.4 Middle East

2.4.1 National Strategy and Massive Investment

Led by the UAE and Saudi Arabia, the Middle East is pursuing a top-down, capital-intensive strategy. This approach is integrated into grand national visions, such as Dubai's plan to launch "air taxi" services by 2026 and Saudi Arabia's "NEOM" futuristic city, which incorporates UAM as a core part of its transport system.

2.4.2 Open Cooperation and Ecosystem Building

The region has adopted an open collaboration strategy, attracting top global eVTOL manufacturers like Joby, Archer, Volocopter, and EHang through investments and large orders to build a complete local ecosystem, including vertiport operations and pilot training.

2.4.3 Proactive Regulation and Rapid Implementation

Proactive regulators, such as the UAE's General Civil Aviation Authority (GCAA), have already issued national regulations for vertiports, paving the way for early commercialization and making the region a likely candidate for the world's first regular air taxi services.

2.4.4 Development Focus and Challenges

The focus is clearly on high-end Urban Air Mobility (UAM) for business and tourism, and smart city services. Challenges include the impact of the geographical weather conditions in Middle East countries with extreme heat on battery performance and the need to cultivate local R&D and manufacturing capabilities.

2.5 Europe

2.5.1 Unified Regulatory Framework: U-Space

Europe's core contribution is the U-Space framework, a set of regulations that became law in 2023, providing a clear, phased roadmap for safely integrating drones and eVTOLs into the airspace. This provides regulatory stability and is a key competitive advantage. The European Union Aviation Safety Agency (EASA) has also established specific certification standards for VTOL aircraft (SC-VTOL).

2.5.2 Strong R&D and Manufacturing Base

The continent boasts a strong R&D and manufacturing base, with traditional giants like Airbus and innovative startups like Germany's Lilium and Volocopter. Countries like Germany, France, and the UK are actively fostering the industry through research funding and test sites.

2.5.3 Cross-National Cooperation and Demonstration Projects

Numerous cross-national projects, such as those under the SESAR program, are conducting large-scale UAM demonstrations across Europe. These projects are crucial for testing interoperability and gathering data to refine regulations.

2.5.4 Challenges

Commercialization is more cautious, facing challenges such as public acceptance over noise and privacy, as highlighted by opposition to air taxi

plans in Paris. The complexity of coordinating across member states and a slower, more market-driven approach to infrastructure investment also pose hurdles.

2.6 United States

2.6.1 Leading Technology and Corporate Clusters

The US is at the forefront of technological innovation, driven by a vibrant ecosystem of private companies. It is home to leading eVTOL innovators like Joby Aviation, Archer Aviation, and Wisk Aero, which have made significant progress in flight testing and certification.

2.6.2 Pragmatic Regulatory and Certification Path

The Federal Aviation Administration (FAA) has adopted a pragmatic and collaborative regulatory approach. Its "Innovate28" plan aims to achieve integrated AAM commercial operations in key locations by 2028. A crucial step was the creation of a clear certification pathway for eVTOLs under the "powered lift" aircraft category, providing regulatory certainty that has been pivotal for the industry's progress.

2.6.3 Widespread Cross-Sector and Local Participation

Development is characterized by broad collaboration. NASA's AAM National Campaign provides data for standard-setting, while the Department of Defense has accelerated technology maturation through investment and procurement. State and city governments are also actively planning local vertiport networks and pilot projects.

2.6.4 Challenges

Key challenges include the immense investment and coordination required for nationwide vertiport construction, gaining community trust and support to address concerns about noise and safety, and reforming the workforce training system to meet the demand for new types of aviation talent.

Chapter 3: Focus Group Meeting

3.1 First Group Meeting

A focus group meeting was held to discuss the development of Hong Kong's low-altitude economy, bringing together representatives from government departments, research institutions, and industry enterprises. The meeting aimed to systematically review the current development status, identify challenges, and gather practical recommendations to support the compilation of this research report.

Logistics Applications and Sandbox Program:

Logistics services (including food delivery and courier services) are common application scenarios in the low altitude economy. In Hong Kong's current low altitude economy regulatory sandbox project, the efficiency advantages of low altitude logistics compared with traditional ground transportation, especially in specific environments such as crossing bodies of water—have already been clearly demonstrated (e.g. The route from Ma On Shan to Hong Kong Science & Technology Park). However, companies participating in the government's "Sandbox" program reported significant operational pressures, including long investment cycles (7-12 months per project), high costs related to cross-border equipment tariffs and the speed of airworthiness certification approval (the mutual recognition of airworthiness certification results between Chinese Mainland and Hong Kong has not yet been established), and difficulties in securing testing sites.

Industry-Academia-Research Collaboration:

Hong Kong's universities and local enterprises are collaborating on key technologies. One university-affiliated company is developing solid state batteries with energy densities of 450-500Wh/kg, potentially increasing flight endurance by up to 60%. Other collaborations focus on lightweight materials like carbon fiber composites and developing low-noise propeller designs to reduce operational noise from 75-85 dB to 60-70 dB, which is closer to the level of urban conversation.

Key Challenges:

The primary challenges identified include:

1. **Airspace and Infrastructure:** Hong Kong's complex terrain of mountains and dense high-rises creates "signal blind spots," while a lack of high-precision wind field data (current resolution is 50m) poses safety risks. There is also a shortage of standardized vertiports.
2. **Cross-Border Operations and Talent:** Double certification requirements in both the Chinese Mainland and Hong Kong for equipment increase costs and time. Furthermore, a talent gap exists for specialized roles like airworthiness engineers and large-drone (e.g. weighing over 150kg) pilots, with a lack of mutual recognition for pilot qualifications.
3. **Social and Safety Concerns:** Noise pollution in high-density residential areas is a major concern. Additionally, the absence of a comprehensive battery recycling system for retired drone batteries poses environmental risks.

3.2 Second Focus Group Meeting

Building on the outcomes of the first focus group meeting, a second session was convened to further delve into the development of Hong Kong's low-altitude economy (LAE), gathering representatives from a wide spectrum of stakeholders—including key government departments, industry associations, public utilities, leading LAE service enterprises, and educational institutions. This meeting aimed to deepen discussions on practical opportunities, industry-specific challenges, and actionable policy recommendations, with the goal of enriching the research report and providing targeted insights for Hong Kong's LAE development roadmap.

Government departments took centre stage to outline regulatory progress, safety priorities, and practical application advancements, emphasizing that safety and institutional improvement are foundational to LAE growth. The Civil Aviation Department (CAD) stressed that airworthiness is the paramount prerequisite, noting that safety standards for passenger-carrying LAE

equipment must align with those of large commercial aircraft. It updated participants on regulatory developments: regulations for small unmanned aerial vehicles (UAVs) weighing between 25kg and 150kg are under advancement, while rules for UAVs exceeding 150kg are in the planning stage, currently governed by interim legislation such as Cap. 448C. The CAD also highlighted the need for sandbox pilots to collect real-world operational data, clarifying how Hong Kong's urban environment differs from Chinese Mainland and its impact on equipment performance, while underscoring Type Certificate (TC) as a critical requirement for legal operation and urging enterprises to adhere to OEM guidelines for maintenance. Complementing this, the Hong Kong Police Force (HKPF) shared its experience with drone patrols, which have been implemented in border areas and Yau Tsim Mong District since May 2024, with suburban patrols ongoing for 2-3 years and plans to expand to Cheung Chau and Lamma Island's peaks. The HKPF emphasized strict adherence to safety and privacy protocols—flight altitude is limited to 90 meters, flights parallel to building windows are prohibited, and drones are equipped with red-blue flashing lights and reflective markers, with public notices issued 7 days in advance—while noting challenges such as insufficient operator training duration and staffing shortages, and calling for expanded drone docking stations and more law enforcement scenarios like aerial broadcasting. The Lands Department (LD) added insights into its long-term use of drones for land management and data collection, including a 5-year project to develop 3D digital maps for smart city development, and its progress in building a satellite positioning reference network already applied in scenarios like horse racing rankings and automatic stadium line marking. It also addressed concerns about GPS interference, noting that while full-coverage high-density monitoring is impractical, regional monitoring initiatives are being explored to enhance oversight.

Industry associations and enterprises contributed practical experiences, market insights, and technical demands, shedding light on the gap between policy and practice. The Hong Kong Aviation Industry Association (Hong Kong AIA) highlighted Hong Kong's unique advantages—superior geographical

location, sound legal framework, solid innovation foundation, and synergistic potential with the Greater Bay Area (GBA), particularly Shenzhen—backed by national support. It outlined a phased development approach: upstream industry research has been advanced, with this meeting focusing on midstream, downstream, and user markets, and subsequent steps including field visits and data collection to compile a comprehensive report. The association advocated for cross-regional cooperation, streamlined fixed route application processes, and exploration of LAE applications in tourism and sports events. SAE Hong Kong Section, as a standard-setting body, offered access to SAE International's patents and standards to align Hong Kong's LAE component production and equipment manufacturing with international norms, while advising the government to adopt a forward-looking approach to planning, given LAE's transformative impact on land, maritime, and aviation transport sectors. Enterprise representatives shared firsthand challenges and aspirations: China Light & Power Company Limited, which established a drone fleet in 2018 and obtained logistics permits in 2021, currently operates 4 beyond-visual-line-of-sight (BVLOS) routes for power line inspections but noted that Hong Kong's restricted airspace and low-density scenarios limit application scale compared to Chinese Mainland's State Grid, calling for clear safety standards within a regulatory framework to reduce administrative costs for new application testing and planning to expand into power facility maintenance and emergency response. Star Vision Intelligent Surveying and Mapping Services Limited, a sandbox-participating enterprise, has completed BVLOS pilots for 3D mapping and urban modelling but cited core challenges including institutional and legal frameworks lagging behind technological advancement, unclear "low-altitude" definition in Hong Kong's Aeronautical Information Publication (AIP), insufficient integration of UTM and ATM systems, and ambiguous aviation law-related operational procedures; it proposed joint efforts by the government and industry to clarify airspace rules, promote data sharing (e.g., CSDI resources), align with ICAO standards, and strengthen operator emergency training. Flightpro Drone Solution Limited, which specializes in drone operator training and collaborates with the Lands

Department, emphasized the need for high-precision satellite signal reception and positioning enhancement, suggesting reference to large aircraft systems like IRS and EGBWS to improve drone positioning accuracy and stability, while linking airworthiness certification with maintenance standards. Other enterprises, such as AOC Skyland Limited and Lee Wai Kee Limited, expressed concerns about profitability—noting that few enterprises have achieved sustainable profits despite government support—and recommended exploring commercialization paths in tourism and logistics while lowering industry entry barriers; they also identified key technical R&D priorities, including battery energy density, lightweight design, communication and positioning accuracy, 3D collision avoidance technology, and rapid energy replenishment.

Educational institutions and other stakeholders focused on talent development, infrastructure construction, and cross-sector coordination, addressing long-term foundational needs. The Hong Kong International Aviation Academy drew lessons from Chinese Mainland's large-scale LAE training market and tightening regulatory standards, suggesting Hong Kong separate training and examination institutions to avoid conflicts of interest and strengthen training standard oversight. It stressed that safety is critical for long-term development in Hong Kong's densely populated environment, calling for strict training entry requirements, rigorous assessment mechanisms, and enhanced public safety awareness. Other participants emphasized the urgency of infrastructure development, urging prioritization of global navigation system enhancement stations, take-off/landing sites, and charging facilities—highlighting land supply as a core challenge and proposing public-private partnership (PPP) models for implementation. They also recommended using AI technology for privacy protection (e.g., image blurring) and establishing data storage time limits, while advocating for the development of PNT (Positioning, Navigation, Timing) economy to enable multi-device coordination and precise synchronization. Additionally, they called for a cross-sector coordination mechanism to clarify standards and data sharing rules, streamline approval processes for event-based and cross-border logistics scenarios, and drive large-scale LAE development.

Key Challenges Identified

Synthesizing stakeholder discussions, the core challenges facing Hong Kong's LAE development are multi-faceted: regulatory and institutional gaps, including ambiguous low-altitude airspace definition, legal frameworks lagging behind technological progress, and insufficient integration of UTM and ATM systems; infrastructure and resource constraints, such as shortages of standardized vertiports, limited land supply for infrastructure, and inadequate high-precision environmental data (e.g., wind field data); talent and capacity shortfalls, with gaps in specialized roles like airworthiness engineers and large-drone operators, and insufficient emergency response training for operators; and commercialization and cross-border barriers, including unclear profitability models, high administrative costs for testing, and lack of mutual recognition for certifications and qualifications across the GBA.

Chapter 4: On-Site Investigation and Practical Insights

To supplement the global and regional analysis of the low-altitude economy (LAE) and gain first-hand insights into industrial application practices, the research team conducted on-site investigations of two leading enterprises in the LAE sector: Damoda, a drone performance solution provider, and Meituan UAV, a low-altitude logistics innovator focusing on food delivery. The investigations included visits to production lines, product demonstration sites, and in-house showcases, followed by in-depth discussions with enterprise representatives. The findings from these on-site interactions provide valuable practical references for Hong Kong's LAE development strategy, particularly in terms of technological application, scenario adaptation, and industrial collaboration.

4.1 Damoda: Drone Performance Solutions and Technological Advantages

Damoda specializes in integrated solutions for drone performances, encompassing performance-grade UAV hardware, cluster control software, technical training, and on-site performance services. As the current holder of

the Guinness World Record for the largest number of drones in a single performance, the company has established a mature industrial chain and technical system.

4.1.1 Production and Product Maturity

The company operates two final assembly production lines with an annual production capacity of tens of thousands of units, supporting large-scale commercial applications. Its products have evolved to the fourth generation, with notable advancements in safety redundancy design—an essential technical requirement for low-altitude operations. The redundant design effectively mitigates risks associated with equipment failure, laying a solid foundation for the safe popularization of low-altitude aerial services.

4.1.2 User-Centric Technological Innovation

Damoda's core competitiveness lies in its self-developed cluster control software and supporting communication hardware, which enables efficient and intuitive management of large fleets of UAVs. User-friendly interactive functions such as automatic homing and charging, as well as contactless startup, significantly reduce the learning curve and operational costs. For users with 3D modeling experience, proficiency in drone performance choreography and execution can be achieved within just a few days, demonstrating strong adaptability to market demands for rapid deployment.

4.2 Meituan UAV: Low-Altitude Logistics Practice in Food Delivery

Meituan UAV focuses on providing equipment and technical support for low-altitude logistics, with a primary focus on food delivery services. The company's on-site exhibition and technical seminars showcased its in-depth layout and mature application capabilities in the low-altitude logistics sector.

4.2.3 Scenario Application and Market Landing

Benefiting from favorable policy frameworks and vibrant market demand, Meituan UAV has concentrated on its low-altitude logistics operations in Shenzhen, where it maintains a substantial daily order volume. This practical

experience verifies the commercial viability of low-altitude logistics in urban scenarios, especially for last-mile delivery. The company's flagship six-rotor UAV has undergone multiple iterations and can operate stably under diverse working conditions, including complex urban environments and varying weather conditions.

4.2.4 Infrastructure and Product Optimization

As a key infrastructure component, Meituan's takeoff and landing stations feature an integrated design for both receiving and dispatching, expanding their applicability without increasing land occupation—an important reference for space-constrained regions like Hong Kong. The company's patented logistics box incorporates protective performance, lightweight design, and reusability, balancing functional requirements with energy conservation and environmental protection, aligning with the global trend of sustainable LAE development. Additionally, Meituan has explored multi-modal delivery solutions integrating UAVs and autonomous vehicles, demonstrating the potential for diversified low-altitude logistics ecosystems.

4.2.5 Airspace Management and Technical Exchange

A core focus of the seminar was Meituan's airspace management system, particularly its key "time-space capsule" technology. This technology optimizes route planning and conflict avoidance by segmenting low-altitude airspace into time-specific, geographically defined "capsules," ensuring safe and efficient operations. The investigation team also discussed the feasibility of establishing industry standards for airspace management and integrating multiple manufacturers and operators into a unified low-altitude traffic management system—issues highly relevant to Hong Kong's cross-border LAE operations and infrastructure construction.

4.3 Key Insights from the Investigation

The on-site investigations of Damoda and Meituan UAV yielded three critical practical insights that complement the report's earlier analysis:

Technology Maturity Drives Scenario Expansion: Mature hardware production capacity (e.g., Damoda's mass production lines) and user-centric technical optimization (e.g. simplified operation, safety redundancy) are prerequisites for LAE commercialization. For Hong Kong, prioritizing partnerships with technology-leading enterprises can accelerate the validation of local application scenarios.

Infrastructure Adaptability is Critical to Urban LAE: Meituan's space-saving integrated takeoff and landing stations and environment-friendly logistics solutions provide a model for Hong Kong, where land resources are scarce. The city's future vertiport planning must emphasize compact design, multi-functional integration, and sustainability.

Unified Airspace Management and Standardization are Urgent Needs: The challenges of cross-entity collaboration in airspace management, highlighted by Meituan's "time-space capsule" technology and the discussion on industry standards, resonate with Hong Kong's need for cross-border airspace coordination with the Greater Bay Area (GBA). Establishing compatible technical standards and collaborative management mechanisms is essential for realizing efficient cross-border LAE operations.

These practical insights reinforce the report's earlier conclusions and recommendations, emphasizing that Hong Kong's LAE development must leverage its strengths in service integration and standard-setting while drawing on proven technological and operational models from leading enterprises to address local constraints.

Chapter 5: Conclusion and Recommendations

5.1 Conclusion

The global low-altitude economy is developing along diverse paths, with Chinese Mainland leading in industrialization, the US in private-sector innovation, Europe in regulation, and the Middle East in capital-driven

implementation. In this landscape, Hong Kong stands at a critical juncture. Its strengths lie not only in manufacturing but also in its role as a global hub for finance, international regulatory standards, product and technology development as well as professional services. Hong Kong's strategy must be one of differentiation—focusing on "enabling" rather than "making." Its core competitiveness should be its ability to provide the capital, innovative design, technologies, standards, insurance, legal frameworks, and talent that the global LAE industry needs. By becoming an indispensable high-value research and development, service hub and rule-influencer, Hong Kong can leverage a market far larger than its geographical constraints, reinforcing its international standing while contributing uniquely to Chinese Mainland's global LAE ambitions.

5.2 Development Recommendations

To establish Hong Kong as a key global hub for the low-altitude economy, this report proposes the following strategic directions.

- I. **Improve Infrastructure:** Prioritize the planning of a cross-border vertiport network at key transport and business hubs to enable "air taxi" and cargo routes with GBA cities. Concurrently, develop a GBA-synergized digital airspace (UTM) system and establish internationally aligned data security regulations to ensure safe and efficient cross-border operations.
- II. **Accelerate Industrialization:** The government should lead by launching demonstration projects in public services, such as medical supply delivery to outlying islands. Hong Kong should leverage its financial strengths to become an "International Financing Hub for LAE Enterprises" and establish a global LAE testing and certification center, turning its accreditation into a "global passport" for local, Chinese Mainland and international products.
- III. **Focus on Targeted Technological R&D to Boost LAE Core Competitiveness:** Hong Kong should leverage its strengths in high-end research, international talent pool and cross-border innovation to develop key LAE technologies that align with industrial needs and fill gaps in the global industrial chain. It is advisable to prioritize high-

precision Unmanned Aircraft System Traffic Management (UTM) tailored for dense urban areas, integrating real-time airspace monitoring, intelligent route planning and cross-departmental data sharing to address the core challenge of safe and efficient low-altitude traffic control in compact cities. Invest in core eVTOL components—including high-energy-density lightweight batteries, efficient electric propulsion systems and corrosion-resistant composites—by tapping into Hong Kong’s leading capabilities in materials science and electrical engineering, so as to enhance eVTOL endurance, safety and environmental adaptability. Meanwhile, strengthen R&D in low-altitude communication, including 5G-A/6G high-speed low-latency modules and anti-interference data transmission systems, to ensure stable connectivity among aircraft, ground control centres and urban infrastructure. Concentrating resources on these areas will help Hong Kong build differentiated technological advantages, bridge basic research with industrial application, and establish itself as a global hub for high-end LAE technological innovation and achievement transformation.