



Far East - East Asia

AAM/UAM Routes and Programmes

Version 3.5.3 – Sample pages



A guide to advanced and urban air mobility projects in the Far East - East Asia

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Introduction

The **Far East – East Asia AAM/UAM Routes and Programmes** report is aimed at advanced air mobility/urban air mobility (AAM/UAM) industry OEMs and supply chain partners, transport planners, finance companies, consultants and local authorities who need a detailed understanding of what programmes are underway around the world and the market opportunities that exist within these programmes. It provides a unique guide to competitive industry information, global/regional market size and trend analysis, with a specific focus on routes, route lengths, host cities/regions and eco-system suppliers.

It is based on many months of research by the worldwide editorial team and the sources of each entry are referenced.

While most AAM/UAM market intelligence studies are focused on the value and forecast for eVTOLs and associated industry suppliers, the **Far East – East Asia AAM/UAM Routes and Programmes** report analyses operational plans and confirmed industry participation broken down into geographical areas.

The Far East - Asia report gives details on plans to develop passenger AAM/UAM services in 11 countries and 49 cities, with timelines and descriptions along with details on industry participation, broken down into the following areas:

- Cities and routes (with route lengths)
- eVTOL manufacturer partner
- Electric fixed wing platform manufacturer
- AAM/UAM aircraft operators
- AAM/UAM training
- AAM/UAM aircraft operator maintenance and support
- AAM/UAM aircraft charging and power supplies
- Vertiport/airport developer/operator
- Vertiport/airport safety and security
- Airspace integration
- Local authority partner/client
- Others

Information is validated and updated regularly – the sources for all information are outlined in the report.

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Cambodia

Country introduction

In February 2024 Lilium and Philijets, announced the signing of a Memorandum of Understanding at the Singapore Airshow which includes the intent to purchase 10 Lilium Jets, as well as a future strategic collaboration on the establishment of an eVTOL operation network across the Philippines and other Southeast Asia countries, such as Cambodia.

Also in February 2024 Eve Air Mobility and Yugo Global Industries Pte., a Singapore-based aviation company, announced that the two companies have signed a memorandum of understanding (MoU) to study the potential for UAM and eVTOL flights in Southeast Asia.

“As Eve supports the exploration of eVTOL development in Southeast Asia, the region's aviation infrastructure is rapidly advancing. The Philippines is constructing the New Manila International Airport by San Miguel Corporation, while OCIC Group is building Cambodia's Phnom Penh Techo International Airport (TIA), set to open in 2025. To reduce carbon emissions, these modern and sustainable new airports, including Phnom Penh's TIA designed by Foster and Partners, are exploring charging stations and flight routes for flying taxis and electric jets.

Sources:

www.eveairmobility.com

www.yugoplus.com

www.lilium.com

Guangdong-Hong Kong-Macao Greater Bay Area

Timeline

Imminent – *trial flights already concluded*

Route(s):

Currently focused on sightseeing

Programme description

In May 2024 Guangdong Province released its action plan to promote development of the low-altitude economy (2024-2026), according to eVTOL manufacturer EHang.

“The plan provides comprehensive support in policy, airspace management, vertiport layout, low-altitude communication & navigation, and industry chains, backing cities like Guangzhou, Shenzhen, and Zhuhai to launch intra-city and inter-city low-altitude passenger routes” according to the company’s social media post.

“By 2026, the plan aims to achieve a smooth management mechanism, with basic infrastructure in place, and make significant headway in pilot projects for urban air mobility, low-altitude logistics, and other areas.

“Meanwhile, we’re making preparations in key cities like Guangzhou, Shenzhen and Zhuhai, where we’re laying the groundwork for our future operations,” said the company.

Guangdong Province has released its action plan to promote development of the low-altitude economy (2024-2026), according to eVTOL manufacturer EHang. “The plan provides comprehensive support in policy, airspace management, vertiport layout, low-altitude communication & navigation.”

In November 2023 Lilium and CITIC Offshore Helicopter announced the signing of a Memorandum of Understanding that will allow the two companies to strategically collaborate on the establish of an eVTOL operation network in China, starting with the Greater Bay Area.

As part of the agreement, Lilium and COHC will work together to develop services in the region based on market demand, and eventually offer regular eVTOL services, said the companies in a press release. This will initially commence in the Greater Bay Area, with additional planned service across the Guangdong-Hong Kong-Macao Greater Bay Area, Hainan Island, and Tianjin in the future.

In April 2021, EHang announced the “100 Air Mobility Routes Initiative” to open 100 aerial traffic routes, focusing on Guangdong-Hong Kong-Macao Greater Bay Area and gradually expanding to other parts of China.

In 2021 September, EHang reached a cooperation agreement with China Eastern General Aviation, a helicopter service provider and airspace management company in the region. EHang and China Eastern General Aviation have established an operation framework for tourism flights in Malunshan Base, located in Linhai, Shenzhen. The base will eventually serve more than 30,000 passengers per year. “In addition, EHang has established a set of air traffic operation systems and the mechanism that covers route planning, flight operation, safety management, regulatory compliance, digital operation platform, sales, and marketing... Core members of the operations team have worked in world-renowned or regional leading aviation, automotive or

technology companies, such as Airbus, Hainan Airlines, Hong Kong Airlines, HK Express, BMW, CITIC Direct, IBM, etc.”

Other partnerships include:

- Greenland Hong Kong to carry out AAV aerial tour trial operations in Greenland of Yuhu Town, Zhaoqing;
- Vertiport industry partners to develop an AAV airport in Hezhou with local customers;
- Giancarlo Zema Design Group, an Italian architecture firm, to design ecological terminals;
- Heli-Eastern, a major low-altitude general aviation carrier and helicopter service provider in the Guangdong-Hong Kong-Macao Greater Bay Area (“Greater Bay Area”) to develop operations in the designated integrated airspace for helicopters and AAVs in Shenzhen, developing low-altitude UAM operation management systems and exploring specific UAM use-cases, including aerial emergency rescue for ground transportation and aerial cargo transportation over the highway network. At the HELI-EASTERN helicopter base in Shenzhen, both parties featured demo flights with both HELI-EASTERN’s helicopter Bell 206 EHang 216 flying together to demonstrate live practical UAM operations in an integrated airspace. In addition, two units of EHang 216 AAVs showcased trial flights simultaneously and safely in the shared airspace;
- HAECO, an independent aircraft engineering and maintenance group founded in Hong Kong and
- Shenzhen Expressway Operation and Development Company Limited – to broaden use-cases of EHang AAVs for road inspection, emergency rescue, materials transportation among other things (EHang and Shenzhen Expressway Operation and Development Company have built the first AAV command-and-control platform, equipped with various types of AAV and intelligent sensor devices for expressway networks management, emergency rescue and safe operations).

In June 2023 the Bao’an District of Shenzhen municipality and Lilium in June 2023 signed a Memorandum of Understanding (MoU) for the opening of a regional Lilium headquarters in Bao’an District as a first step in a partnership to establish a safe and sustainable eVTOL service in China with the Lilium Jet. Lilium reported the collaboration will initially focus on the Guangdong–Hong Kong-Macao Greater Bay Area, with a population of over 85 million people, with plans to grow across China and the broader Asia-Pacific region.

Also in June 2023, at the Paris Air Show, Lilium an agreement with Shenzhen Eastern General Aviation (Heli-Eastern), a low-altitude general aviation carrier and helicopter service provider in the Guangdong-Hong Kong-Macao Greater Bay Area in China.

Under the agreement the company reports Heli-Eastern, which operates across the Greater Bay Area, the Yangtze River Delta, and the Beijing-Tianjin-Hebei Areas, intends to order 100 Lilium Jets. In addition, the agreement contemplates that Heli-Eastern will partner with Lilium to identify potential sites and partners for Lilium’s vertiports and other ground infrastructure. Upon type-certification of the Lilium Jet, Heli-Eastern will operate the aircraft in the region and provide crewing and maintenance services.

Partners

eVTOL manufacturer

EHang
Lilium

AAM/UAM aircraft operator

CITIC Offshore Helicopter (Lilium)
Greenland Hong Kong
Heli-Eastern (Lilium)
China Eastern

AAM/UAM aircraft maintenance and support

HAECO

Vertiport/airport developer/operator

EHang
Giancarlo Zema Design Group

Local authority partner/client

Shenzhen Expressway Operation and Development Company

Sources:

www.sohu.com/a/557517660_121127980

asianskymedia.com/interviews/uam-ehang#:~:text=EHang%20introduced%20the%20%E2%80%9C100%20Air,open%20100%20aerial%20traffice%20routes

www.ehang.com/news/822.html

lnkd.in/e6q8FTY

lnkd.in/epGyqQCc

lilium.com

lilium.com/newsroom-detail/lilium-signs-agreement-with-heli-eastern

India

Country introduction

In February 2024 Swiss aerospace company, Sirius Aviation AG, has announced a partnership with MEHAIR, an India seaplane operator, to secure 50 orders of the Sirius Millennium Jet. The company says the agreement includes 50 firm orders, with an option to add 50 more, totalling approximately USD400 million in value.

In January 2024 New Horizon Aircraft Ltd announced it has entered into a Letter of Intent (LOI) with JetSetGo, a regional air operator servicing multiple mission profiles in India, for the purchase 50 Cavorite X7 Aircraft at a purchase price up to USD5 million per aircraft for a total aggregate consideration of USD 250 million, with an option to purchase an additional 50 aircraft for a total possible consideration of USD500 million.

JetSetGo, founded in 2014, is headquartered in New Delhi. In January 2024 JetSetGo announced a US780 million order for 150 Horizon Aircraft, Electra.aero and Overair advanced air mobility aircraft to connect smaller cities in India. The agreements include an option to add more aircraft, raising the total to 280 valued at more than USD1.3 billion.

According to a Facebook page statement:

"JetSetGo takes its first step to revolutionizing the on-demand regional and private aviation with the air mobility technology. By signing letters of intent with Electra.aero, Horizon Aircraft and Overair JetSetGo is soaring to new heights."

The deal includes an order worth up to USD 500 million for Horizon eVTOLs

In November 2023 InterGlobe Enterprises, an Indian travel and hospitality conglomerate and Archer Aviation announced that they had entered into a memorandum of understanding (MOU) with the goal of partnering to launch and operate an all-electric air taxi service in India. "The parties intend to work with select in-country business partners to operate Archer's aircraft, finance and build vertiport infrastructure, and train pilots and other personnel needed for these operations" according to the press release. "The partnership also plans to finance the purchase of up to 200 of Archer's Midnight aircraft for the India operations....The goal is for a passenger on an InterGlobe-Archer flight to be able to fly the 27-km Delhi trip from Connaught Place to Gurugram, typically taking 60 to 90 minutes by car, in approximately 7 minutes.

"In addition to urban air taxi services, the parties plan to pursue a variety of other use cases for the electric aircraft in India, including cargo, logistics, medical and emergency services, as well as private company and charter services."

Also in November 2023 Indian aircraft leasing company Vman pre-ordered 10 40-seat LA-44 SkyBus eVTOLs from Lyte Aviation, according to *Helicopter Investor*.

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Vman is aiming to launch India's urban air mobility market and the company's CEO, Vishok Mansingh, said: "We see the value of eVTOLs in India, but so far the two- to four-seater eVTOLs were not really filling the market demand that we are focused on. When we were introduced to

the 40-seater eVTOL by Lyte Aviation, we immediately connected the pain points of our region with the benefits that their SkyBus offer. We want to make sure that we are the front runners of mass transit disruption in India, as it is inevitably coming."

"Lyte's SkyBus offers a range of 620 miles (1,000km) with a max speed of 190mph (300km/hr). A full-scale prototype is being planned within 24 months" according to the *Helicopter Investor*. "The SkyBus design features two separate propulsion systems, one electric and powered by hydrogen fuel cells, the other turbine powered by SAF (sustainable aviation fuels)."

In May 2022, press reports said the Civil Aviation Minister Jyotiraditya Scindia has asked Beta Technologies (in partnership with the Blade group) to explore the Indian market for eVTOLs. Blade already has a presence in India with its helicopter services.

The reports said: "India will see the deployment of electric vertical take-off and landing (eVTOL) aircraft to ensure urban air mobility in the days to come," said Jyotiraditya Scindia, Union Minister for Civil Aviation....'We are already in conversations with a number of eVTOL technology producers in the US and Canada. To start with, newer aviation technologies are being adopted by the Army and the Air Force. Once they become proofs of concept... that is when they permeate into the civil space.'"

In September 2021 two Chennai-based start-ups involved in the flying taxi market announced progress in developing eVTOLs. Vinata Aeromobility demonstrated a scale model of "Asia's first hybrid flying car" at the Helitech Expo in October 2021. According to the project's founders it will run on hybrid power, both electrical and sustainable biofuel. Vinata's two-seater hybrid, based on eVTOL technology, will have a range of 100 km and a cruise speed of around 120 km per hour.

"The same aircraft platform will support low-altitude air cargo flights, which will have a weight capacity of up to 250kg," said the company's Yogesh Ramanathan. "Therefore, we see more use-cases in emergency medical services, fire services and the defence sector. Personal mobility and flying taxis come in the third stage."

The other start-up, ePlane, originally beginning life at the Indian Institute of Technology, Madras and set up in February 2019, is aiming to create "an affordable flying taxi that not only promises quiet and pollution-free travel, but also significantly less travel time".

Satya Chakravarthy, ePlane founder, said, "We actually have a footprint of 4x4 metres, which is the most compact eVTOL vehicle in the world. This essentially means we are targeting to take-off and land from rooftops of apartment complexes, high-rise buildings, the front yards of urban homes and offices in the middle of cities," adding: "This makes it more accessible at all places." ePlane plans to find a manufacturing base in 2023 with an initial annual capability of 100 planes. Bengaluru and Mumbai are to be the company's entry markets.

In March 2023 FlyBlade India, a joint venture between Hunch Ventures and Blade Air Mobility, and Jaunt Air Mobility, an AIRO Group company, announced a strategic partnership aimed at launching eVTOL aircraft operations in India and the subcontinent region by 2027. "The partnership includes Blade India's intended acquisition of 150 Jaunt Journey aircraft, with an option to order another 100 aircraft to meet the projected demand over the next decade" the two companies report.

"The companies expect to collaborate in specific areas that are critical to support future short-haul mobility operations. Their plans include, in particular, Blade India working with Jaunt and its partners to explore development of key infrastructure capabilities in aircraft charging and energy distribution technologies. In turn, Jaunt intends to use Blade India's existing short haul operational and customer experience to support the development of the Jaunt Journey aircraft and its integration into the Indian airspace."

Sources:

www.outlookindia.com/business/civil-aviation-minister-iyotiraditya-scindia-pitches-to-bring-evtol-planes-to-india-news-196330

www.eplane.com

evtol.news/vinata-aeromobility

lifestyle.livemint.com

www.youtube.com/watch?v=7BHff_wlKu8

www.eplane.ai

www.onlineev.com

www.thehindu.com/business/Industry/india-will-have-evtols-for-urban-air-mobility-iyotiraditya-scindia/article65443285.ece

flyblade.in/p/about

jauntairmobility.com

theairogroup.com

lyteaviation.com

www.helicopterinvestor.com/news/100650/lyte-aviation-eyes-indian-market-with-10-pre-orders-from-vman

www.siriusjet.com

www.flymehair.com

www.urbanairmobilitynews.com/air-taxis/indias-jetsetgo-orders-up-to-usd500-million-new-horizon-cavorite-x9-evtols

www.facebook.com/photo/?fbid=815251737284469&set=a.47394136808217

www.reuters.com/business/aerospace-defense/indias-jetsetgo-expand-smaller-cities-with-private-jets-2024-01-19

www.horizonaircraft.com

Bengaluru

Timeline

Imminent – to be launched within the next three years

Programme description

In May 2024, The Times of India reported InterGlobe Enterprises, which owns IndiGo, and Archer have announced plans to launch flying taxi services between Delhi and Gurgaon, Bengaluru city and its international airport, and Bandra to Colaba in Mumbai.

In November 2023 Eve Air Mobility and Hunch Mobility, a joint venture between Hunch Ventures and Blade Air Mobility, announced that the two companies are working together to bring electric commuter flights to Bangalore, India.

“The announcement is the first step as both companies will be working with local, state and federal officials, infrastructure, energy and technology providers” according to the press release. “The goal is to ensure the appropriate infrastructure is in place to introduce eVTOL aircraft flights.

“Eve’s eVTOL will offer Hunch Mobility’s customers a quick and economical way to avoid traffic congestion in one of the world’s most dense urban environments. Eve’s eVTOL is 100% electric and has a range of 100 kilometers (60 miles) allowing it to complete a variety of urban air mobility missions in Bengaluru....Eve was the first eVTOL manufacturer to announce an LOI in India with Hunch Mobility announcing an agreement to purchase 200 eVTOLs, Services and the company’s Urban ATM (Air Traffic Management) solution.” As part of the LOI announcement, Eve and Hunch embarked on a three-month-long pilot project, conducting intra-city helicopter flights in the city.

Partners

eVTOL manufacturer

Archer
Eve

AAM/UAM aircraft operator

IndiGo (Archer)
Hunch Mobility (Eve)

Sources:

www.urbanairmobilitynews.com/air-taxis/dubai-2023-eve-air-mobility-and-hunch-mobility-collaborating-to-bring-evtol-flights-to-bangalore

timesofindia.indiatimes.com/articleshow/109868714.cms?utm_source=twitter.com&utm_medium=social&utm_campaign=TOIDesktop&utm_source=contentofinterest&utm_medium=text&utm_campaign=cppst

Nusantara

Timeline

Intended – *an outline vision has been agreed*

Programme description

In November 2022 Hyundai Motor Group signed a memorandum of understanding (MOU) with the Nusantara Capital City Authority to work together to establish an advanced air mobility (AAM) ecosystem in Indonesia. According to a press report: “The MOU aims to introduce AAM as part of a smart mobility ecosystem in the new capital city that Indonesia is working to establish. The Group plans to develop a roadmap and review the concept of consolidated mobility for ground and air while carrying out an AAM demonstration project and test flights.”

The first flying taxi trials for the country’s new capital were planned for July 2024, according to a ChannelNewsAsia article.

“Trials will be conducted at Samarinda airport for a month after the parts are inspected and assembled. The vehicles can carry five people” according to the article. “The flying taxis are a collaboration between the Korea Aerospace Research Institute (KARI) and Hyundai Motors Company. The Nusantara Capital City Authority and Hyundai signed a memorandum of understanding to develop an advanced air mobility ecosystem in Indonesia in 2022.

“After the trial, Hyundai is expected to develop a business model for the flying taxis through Supernal, its subsidiary in the United States specialising in urban air mobility. It will also develop autonomous flight technology for the vehicles. Nusantara expects to have the vehicles flying over the city by 2045.”

Sources:

[www.prnewswire.com/news-releases/hyundai-motor-group-signs-mou-with-nusantara-capital-city-authority-to-establish-ecosystem-for-advanced-air-mobility-301676915.html#:~:text=14%2C%202022%20%2FPRNewswire%2F%20%2D%2D,\(AAM\)%20ecosys](https://www.prnewswire.com/news-releases/hyundai-motor-group-signs-mou-with-nusantara-capital-city-authority-to-establish-ecosystem-for-advanced-air-mobility-301676915.html#:~:text=14%2C%202022%20%2FPRNewswire%2F%20%2D%2D,(AAM)%20ecosys)

www.channelnewsasia.com/asia/indonesia-ikn-nusantara-flying-taxis-4373756

Tokyo

Timeline

Intended – *an outline vision has been agreed*

Route(s):

City centre – airport (Narita) (64km)

Programme description

The Tokyo Metropolitan Government has selected Mitsubishi Estate, Japan Airlines (JAL) and Kanematsu Corporation to implement a three-year project aimed at preparing the Japanese capital for its first eVTOL taxi services.

According to *Akihabara News*: “Mitsubishi Estate, which owns most of the Marunouchi financial district adjoining Tokyo Station and the Imperial Palace, will be the primary project manager, offering its property to host experiments. JAL will take charge of feasibility studies and the planning of demonstration flights. Kanematsu will provide information on overseas technologies and regulatory trends, as well as work on vertiport development. Between April 2023 and March 2024, the consortium plans to begin demonstration experiments using helicopters within the metropolitan area. Thereafter it will switch to eVTOLs – though the make and model is undecided.”

According to other local press reports Volocopter is the front-runner to become the Tokyo Metropolitan Government's first eVTOL partner in the Tokyo Bay eSG Project, which envisages a new urban eco-system in the city's waterfront area. The German company is part of a first group of private partners in the project, according to an announcement last week from the metropolitan government. Volocopter's current responsibility is to begin compiling a feasibility study on urban air mobility and drone flights within Tokyo. While the project is not yet fully confirmed beyond next March, it is expected to culminate around March 2025 with the first eVTOL test flights in Tokyo. The plan is to make use of the electric heavy-lift VoloDrone vehicle, which in October 2021 conducted its first public flight, with a demonstration at ITS Congress in Hamburg.

Meanwhile, according to Shigeru Takano, a former official at the Japan Civil Aviation Bureau (JCAB) executive advisor for ANA Strategic Research Institute, quoted in eVTOL.com (<https://evtol.com/features/japan-evtol-air-taxis-osaka-expo/>), ANA plans to use eVTOL aircraft initially for airport shuttle services in Osaka, Tokyo, Nagoya and Okinawa Prefecture. “ANA plans to operate the aircraft itself through a subsidiary company, although Takano indicated that it may have partners in the effort. From 2026 onward, the airline expects to start adding intercity and intracity routes in its key Japan markets, integrating its services with public transportation options including subways and railways as it grows into a provider of large-scale UAM.”

In December 2023 Joby Aviation announced it has partnered with ANA Holdings Inc. and Nomura Real Estate Development Co. Ltd, one of Japan's largest real estate developers, on the development of vertiports, to support the commercialization of its electric air taxi service across Japan. The three companies plan to jointly explore the design, location, operation, and financing of vertiport locations that will serve as the backbone of future commercial air taxi services in Japan.

According to a press release:

“The partners will primarily focus on locations in the metropolitan areas such as Tokyo, expanding over time to include numerous urban areas across greater Japan. Joby recently became a technical advisor to the Tokyo Bay eSG Project, led by NRE and sponsored by the Tokyo Metropolitan Government, which will demonstrate various multi-modal mobility solutions including a floating landing port in the Tokyo Bay. The partners will also work with a wide range of local stakeholders to introduce the benefits of the technology and support community acceptance of air taxi services.

Partners

AAM/UAM aircraft operator

ANA

Vertiport/airport developer/operator

Kanematsu

Joby Aviation/ANA Holdings/ Nomura Real Estate Development Co. Ltd

Vertiport/airport safety and security

Kanematsu

Local authority partner/client

Mitsubishi Estate

Sources:

www.jal.com/en/air_mobility/

akihabaraneews.com/tokyo-launches-three-year-evtol-project/?fbclid=IwAR0GRuZCUOut-cxJ3tbueL89vqYA5nJC5JWwUdSDDC2kC3w0tmoP4Zlfp4

akihabaraneews.com/volocopter-tapped-for-tokyo-bay-project

www.jobyaviation.com/news/joby-ana-partner-nomura-real-estate-vertiports-japan