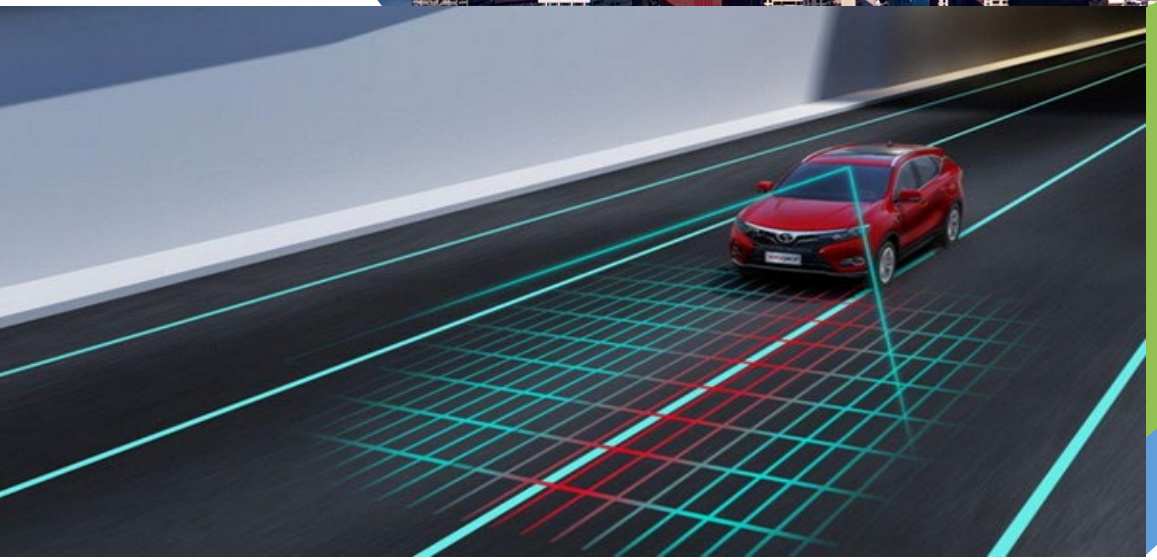

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Global and China Flying Car Industry Research Report, 2022

May 2022

Multi-rotor configuration is the current mainstream

ResearchInChina has released “Global and China Flying Car Industry Research Report, 2022".

A flying car is a three-dimensional vehicle. Broadly speaking, it is a low-altitude intelligent autonomous transportation tool carrying cargo or people, namely electric vertical take-off and landing (eVTOL). It features electric vertical take-off and landing, intelligent autonomous driving, amphibious transport and so on.

Comparison of Flying Cars with Different Technical Configurations

Suppliers	AeroMobil4.0	Airbus	Embraer	Lillium
Products	AM NEXT	CityAirbus NextGen	Eve	Jet 7
Launch time	2017	2021	2017	2021
Configurations	Fixed wings	Multi-rotors	Composite wings	Tilting wings
VTOL	N.A.	Available	Available	Available
Cruising speed (km/h)	260	120	240	280
Range (km)	750	80	96	250
Load	1 passenger + 1 pilot	4 passengers	4 passenger + 1 pilot	6 passenger + 1 pilot

Source: ResearchInChina

Multi-rotor configuration is the current mainstream

The technical configurations of flying cars mainly include four types: fixed wings, multi-rotors, composite wings and tilting wings. Among them, the most traditional fixed wings are rarely used due to the inability to take off and land vertically and hover. On the market, the most used multi-rotors take off and land vertically, hover precisely, are simple to operate with little technical difficulty, and land quickly. But, they are only suitable for short-distance transportation because of a short range.

In the future, with the improvement of the route network and the growth of long-distance transportation demand, composite wings and tilting wings with longer range and faster cruising speed will gradually become the mainstream.

Around 2025, flying cars will spring up

As per the planning announced by vendors, the commercialization of flying cars will happen around 2025. By then, the Paris 2024 Summer Olympics and the Expo 2025 Osaka will be in the global spotlight. Therefore, both Paris and Osaka have deployed flying cars.

The city of Paris hopes to create two dedicated flight paths to ferry passengers for the 2024 Olympics and Paralympics. One route will carry passengers via Paris-Charles de Gaulle and Le Bourget airports, while the second will travel between two suburbs southwest of the French capital.

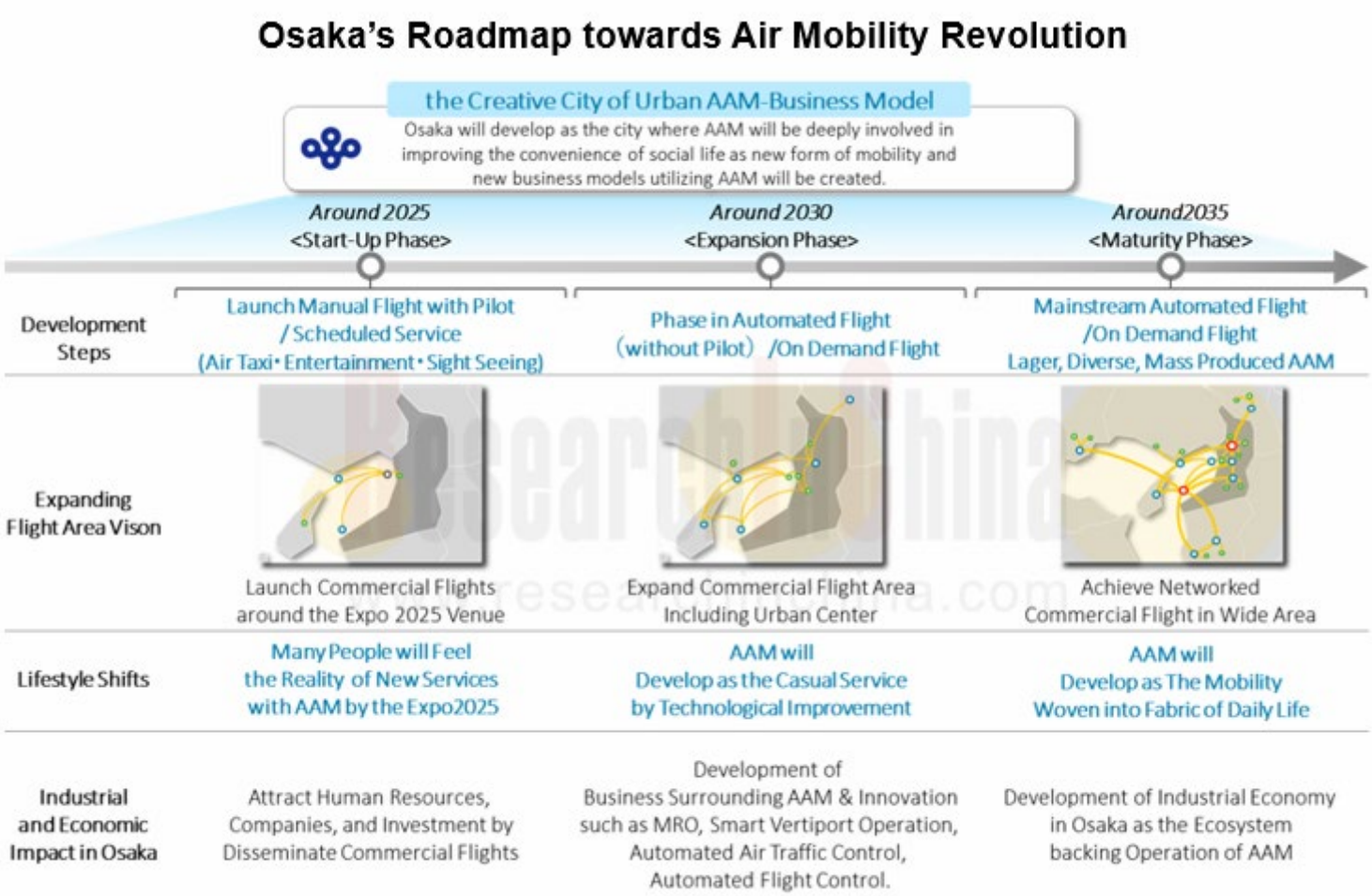
At present, Volocopter and Airbus have commercial plans for the Paris Olympics. Volocopter successfully flew its electric air taxi 'helicopter', the VoloCity, from Le Bourget airport in 2021. Also in 2021, Airbus revealed CityAirbus NextGen, an all-electric, four-seat eVTOL multicopter concept featuring a wing, for the general public during the 2024 Olympic Games.

Flying Car Projects with Definite Commercialization Time

Suppliers	Flying cars	Release date	Technical progress	Planned model certification	Planned commercialization time
Airbus	CityAirbus NextGen	2021	Detailed design stage	Around 2025	2024
Bell	Nexus 6HX	2019	2023: testing	-	2025
Embraer	Eve	2017	-	2025	2026
Volocopter	VoloCity	2019	The prototype completed its maiden flight	2022	2024
AeroMobil	AeroMobil4.0	2017	-	2023	2024
Lillium	7-seater Jet	2021	-	2025	2026
SkyDrive	SD-03	2019	A manned flight test was completed	-	2025
Joby Aviation	S4	2019	The prototype flew more than 5,300 miles	2023	2024
PAL-V	PAL-V Liberty	2018	Mass-produced	2022	2023
EHang	EH216	2018	Mass-produced	2022	2019

Source: ResearchInChina

Osaka's Roadmap towards Air Mobility Revolution



Source: The Osaka Round Table for Air Mobility Revolution Social Implementation

Osaka, Japan has made a very detailed roadmap for the commercialization of flying cars: regular flights will be opened in 2025, routes will be added in 2030, and aircrafts will be larger and diversified in 2035. SkyDrive and Joby Aviation have planned to provide commercial services during the Expo 2025 Osaka (in February 2022, ANA HOLDINGS, INC. and Joby Aviation announced they were forming a partnership that will see Japan's largest airline join with Joby to bring aerial ridesharing services to cities and communities across Japan. Toyota Motor Corporation also joined the partnership).

How do flying cars become possible?

How do flying cars become possible? The platform operation mode is the prerequisite Usually, a flying car costs more than USD300,000 (for instance, PAL-V Liberty sells the standard model, known as the Liberty Sport, for USD399,000). As the automation technology is not yet perfect, most eVTOLs require operators with pilot certificates or pilots. Therefore, the platform operation mode is the main business model in the initial stage.

For example, Joby Aviation plans to launch an App-based air ride-sharing service in 2024. Volocopter also plans a complete air carpooling service process, allowing customers to learn about carpooling services through Volocopter website, app, and VoloPort kiosk before placing orders, enjoying services and then evaluating them. In addition, EHang's carpooling service process includes “finding a suitable route in the APP - selecting a destination - selecting an EHang AAV and making a reservation”.

Air Carpooling Service Process of Joby Aviation

Source: Joby Aviation

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