

Osaka Round Table toward Air Mobility Revolution Social Implementation

March 2022

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## I. Establishing the Society with Advanced Air Mobility in Osaka

#### Potential of Advanced Air Mobility

Advanced Air Mobility (hereinafter referred to as "AAM") has the potential to bring new value to people's lives and cities as a daily and short-distance transportation because compared to airplanes and helicopters, AAM requires no runways, makes less noise, emits no greenhouse gases when driven, and is cheaper to maintain than engine-based aircraft. It is expected that AAM will be utilized in various fields, including urban transportation (passenger transport), tourism & leisure, emergency medical services, and disaster response.

As the next-generation mobility, AAM is also expected to significantly impact industry and business, including the creation of new products and services.

Therefore, in August 2018, " the Public-Private Committee for Advanced Air Mobility" was established as a national-level conference body where stakeholders from the public and private sectors participate and discuss.

On December 20 2018, the committee published "Roadmap towards Air Mobility Revolution," which is the world's first roadmap for the social implementation of AAM.

#### Potential of Osaka and the Kansai Region

Toward the "expansion of practical application" of AAM in the 2030s, implementing the commercial flight operation of AAM at the Expo 2025 Osaka, Kansai, Japan (hereinafter referred to as "Expo2025") is a shared milestone among the public and private sectors. Expo2025 will be an excellent opportunity for many people to experience AAM.

In addition, Osaka and the Kansai Region is a promising market because of its diverse historical, cultural, and natural attractions, including many World Heritage Sites, hot spring resorts, and the integrated resort project at the land adjacent to the Expo2025 venue. Moreover, with Expo2025 venue and airports, the bay area is blessed with a geographical location which is ideal for demonstration and implementation of AAM.

#### Osaka Round Table toward Air Mobility Revolution Social Implementation

In November 2020, Osaka Prefecture launched Osaka Round Table toward Air Mobility Revolution Social Implementation (hereafter referred to as "Osaka RT"), with the immediate goal of implementing commercial flights at Expo2025.

One of the primary missions of Osaka RT is to promote practical discussions and proof of concepts (hereafter referred to as "PoC") that will contribute to system design and rulemaking at the national level, to identify specific and real issues, and to make proposals for the social implementation of AAM.

Although there are many challenges to overcome to implement AAM, we will promote effort with the cooperation and collaboration among government, academia, and industry especially businesses who aim to implement business plans in Osaka. We also care for the consistency with the national government and Japan Association for the 2025 World Exposition by sharing information and functions.

#### Toward the Social Implementation of Advanced Air Mobility

The economic impact of the implementation of AAM will spill over to not only aircraft development and aviation-related services but also surrounding industries such as training of pilots and mechanics, maintenance of aircraft, maintenance and operation of vertiports, air traffic control, and insurance to support commercial operations.

Once the specifications for an aircraft that meets safety and environmental standards are determined, the economic impact of AAM will also extend to industries where Osaka has strengths such as the manufacturing of materials and parts.

Furthermore, in the expansion stage, business opportunities will emerge in various scenes of life in Osaka such as unprecedented services focusing on the feature of AAM: free movement from point to point in the sky.

In FY2021, Osaka RT established four working groups and have discussed devising "the Osaka Edition Roadmap," which will serve as a timetable for future efforts toward the implementation of AAM in Osaka, with conducting PoC.

From FY2022 onward, based on the Osaka Edition Roadmap, the members of Osaka RT will carry out their role roles and steadily promote the efforts toward the implementation of AAM in Osaka by 2025.

# II. Our Approach toward "the Creative City of Urban AAM-Business Model"

Osaka RT has adopted the concept of ""the Creative City of Urban AAM-Business Model " as the basis for the Osaka Edition Roadmap and shared the vision that " Osaka will steadily develop as a city that creates new mobility-based business models." Based on these concept and vision, we define three steps of business expansion and development as "Start-up Phase," "Expansion Phase," and "Maturity Phase."

#### ① "Start-up Phase" (around FY2025)

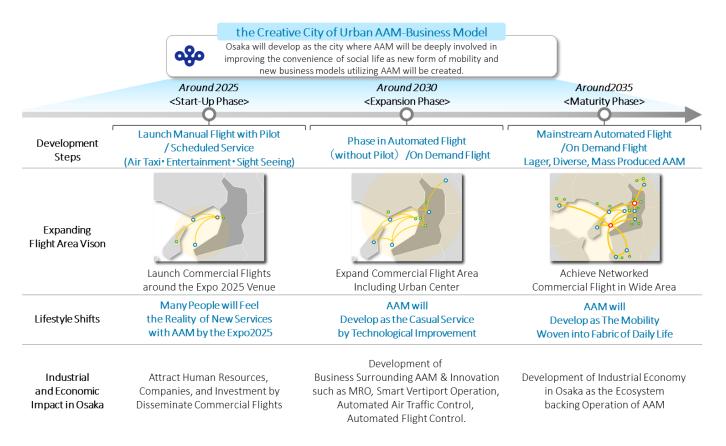
"Start-up Phase" is the stage whose shared immediate goal is implementing commercial flights at Expo2025. In this phase, we aim to implement commercial operations on fixed flight routes with pilots on board so that many people can feel the reality of new service with AAM and disseminate what AAM looks like to the world.

#### 2 "Expansion Phase" (around FY2030)

"Expansion Phase" is the stage in which flight operations will shift to automatic & autonomous unmanned and on-demand operations, including various area within urban areas. In this phase, we aim to expand the use of AAM in daily life and develop related businesses and innovations that support these services.

#### ③ "Mature Phase" (around FY2035)

"Mature Phase" is the stage in which enlargement of size, diversification of type, mass production and expanding the range of services is expected. In this phase, we aim to familiarize the use of AAM for daily movement, to improve quality of life (QOL) for prefectural residents, and to develop Osaka's industry and economy.



#### Figure 1 : The Concept of the Osaka Edition Roadmap

# III. The Osaka Edition Roadmap and the Action Plan

"Roadmap towards Air Mobility Revolution," a roadmap formulated by the Japanese government, outlines the future process of establishing regulations and standards for aircraft safety and skill certification, as well as technological development to ensure and to certify safety and reliability, and technologies for automatic flight, air traffic control, and electric propulsion.

The Osaka Edition Roadmap is consistent with the national roadmap and provides the course of actions for the public and private sector to make efforts toward the social implementation in Osaka Prefecture.

The Osaka Edition Roadmap outlines the steps for social implementation up to Expo2025. FY2022 is positioned as a period of business preparation and consolidation to accelerate business development and demonstrations in the FY2023 and beyond. It also includes the action plan that outlines specific actions to be taken in each fiscal year.

Each action plan shows the measures to be taken based on the roles and responsibilities of the Osaka Prefectural Government, local municipalities, and private sector. We also hope for the creation of opportunities for co-creation and collaboration among the various stakeholders.

The Osaka Edition Roadmap and action plan are based on the consensus of the members of Osaka RT as of March 2022. In addition, the roadmap and action plan will be updated in line with technological development trends and social conditions related to AAM.

				FY2022		FY2023		FY2024 Service Launch	FY2025 FY2026~29 FY2030~ → EXPO 2025
		s for the Development AM-Related Business		Business Preparation and Consolidation	C	Business D Demonstration(I			Business Launch Business Expansion
Basic Policy on PoC in Osaka		•-(	PoC Contributing to Improve Social Acceptability (Promote Initial Initiatives)	••-(	PoC Con to Improve Soc (Promote Adva s Feasibility Stud ation • Field Oper	ntr cia and	ibuting al Acceptability <u>ced Initiatives</u>	PoC with Advanced Technology	
Est	1       Encourage to Conduct PoC       1-1       Develop Environment to Accelerate PoC in Osaka Prefecture		Impro	ve the Environment for PoC					
ablish Found	2	Develop Vertiport Network	2-1	Preliminary Study for Developing Vertiports	2-2	Develop Initial Vertiports Lead to High-Density and High-Frequency Flight Operation		d High-Frequency	Expand Vertiport Network
Establish Foundation for Social Implementation of AAV		Develop the Business Environment			3-2	Support Strue Contribute	icti e F	xecute Plan for ure and Bases to Reliable Flight ration	Improve Support Structure and Bases
cial Impleme	3		3-1	Preliminary Study for Developing Business Environment to Support Efficient Business Operation	3-3	Devise and Execute Plans for Data Platform & Infrastructure to Support Business		frastructure to	Improve Data Platform & Infrastructure
ntation of A					3-4	Devise and Execute Plans for Develop Funding & Financing Scheme		ling & Financing	Improve Funding & Financing Scheme
AM	4	Ensure Social Acceptability	4-1	Conduct Surveys on Social Acceptance and Establish Way of Communication (&Conduct Initial Actions)	4-2	2 Conduct Actions to Accepta		· · · · · · · · · · · · · · · · · · ·	Continue to Effort in accordance with Social Implementation Level
Collabora	5	Collaborate with the National Government	5-1	Collaborate with the Nationa to Clarify the Regulation and the Role of the National	s & Rules Continuous Consultation and Collaboration		s Consultation and Collaboration		
Collaboration with Stakeholders	6	Collaborate with Local Governments in the Kansai Area and Osaka Prefecture	6-1	Establish the Collaboration Framework toward the Social Implementation of AAM with Local Governments in Osaka Prefecture and the Kansai Region			Operate and Improve the Collaboration Framework		nprove the Collaboration Framework
keholders	7	Collaborate with Companies Based in Osaka and Participating in Green & Orange Table of Osaka RT	7-1	Design the Scheme to Promote B and Discover Business Domains and Potential Collaborat	d Opportunities for Develop and Operate the Scheme and Promote Coll			e the Scheme and Promote Collaborations,	

Figure 2 : The Osaka Edition Roadmap

## Overview of Actions to Establish Foundation for Social Implementation of AAM

The followings are overview of the items to be addressed to improve environment for the social implementation of AAM. .

1-1	Develop Environment to Accelerate PoC in Osaka Prefecture	Develop environment for PoC, through clarifying the requirements of private sector to conduct PoC in Osaka Prefecture and establish support scheme for PoC such as test fields and administrative support.
2-1	Preliminary Study for Developing Vertiports	Clarify the course of action to develop vertiports through studying the requirements and functions of facilities and equipment necessary for vertiports and investigating potential locations for vertiports and ensuring the locations for vertiports installation.
2-2	Develop Initial Vertiports Lead to High-Density and High-Frequency Flight Operation	Devise and execute plans for developing vertiports based on the course of action devised in the action #2-1.
3-1	Preliminary Study for Developing Business Environment to Support Efficient Business Operation	Research business model for AAM based on expected flight routes & use case and clarify the course of action to develop "to-be business environment" which is composed of essential element for AAM-related business such as MRO hub, emergency evacuation facility, training and education center, data platform & infrastructure, and finance scheme.
3-2	Devise and Execute Plans for Support Structure and Bases to Contribute Reliable Flight Operation	Devise and execute plans for developing support structure and bases (such as MRO hub, evacuation facility, training center, and human resource pool) based on the course of action devised in the action plan #3-1.
3-3	Devise and Execute Plans for Data Platform & Infrastructure to Support Business	Devise and execute plans for the development of data platform & infrastructure based on the course of action considered in the action #3-1.
3-4	Devise and Execute Plans for Develop Finance Scheme	Devise and execute plans for the development of finance scheme based on the course of action considered in the action plan #3-1.
4-1	Conduct Surveys on Social Acceptance and Establish Way of Communication (&Conduct Initial Actions)	Conduct surveys such as study on the current level of social acceptance and case study of leading initiatives in Japan and foreign countries that contribute to consider the measures to improve social acceptability. In addition, develop communication platforms that contribute to sharing opinions and information from diverse perspectives and effective and efficient communication with the local communities and citizens.
4-2	Conduct Actions to Improve Social Acceptability	Improve social acceptability by investigating and announce various facts and data that contribute to improving social acceptability, as well as implementing measures to improve the benefits and minimize the negative impact of AAM on communities and citizens.

## Overview of Actions for Working with Stakeholders

The followings are overview of the items to be addressed to enhance cooperation with the national government, local governments in and outside of the prefecture, businesses, and organizations toward the social implementation of AAM.

5-1	Collaborate with the National Government to Clarify the Regulations & Rules and the Role of the National Government	Request that the national government promote necessary actions toward the social implementation of AAM based on the discussions at Osaka RT and promote collaborative initiatives toward the social implementation of AAM in the Expo2025.
6-1	Establish the Collaboration Framework toward the Social Implementation of AAM with Local Governments in Osaka Prefecture and the Kansai Region	Devise and execute the policy to establish the collaboration framework with local governments in Osaka Prefecture and the Kansai Region, regardless of the status of their attempt to promote actions for the social implementation of AAM.
7-1	Design the Scheme to Accelerate Business Matching	Design the scheme to increase the interest of private sector to enter the business and create opportunities of collaboration among domestic and foreign companies in Osaka Prefecture and the Kansai Region.

Detailed Action Plan: Establish Foundation for Social Implementation of AAM

# Action Plan #1. Encourage to Conduct PoC

Develop environment and to encourage PoC to promote service and technology development related to AAM in Osaka Prefecture and the Kansai Region to attract and ensure smooth implementation of PoC in Osaka Prefecture.

2		os for the Development AAM-Related Business		FY2022 Business Preparation and Consolidation			FY2024 Service Launch evelopment ield Verification)	FY2025       FY2026~29       FY2030~         • EXPO 2025       Business Launch       Business         Business Launch       Expansion
	Basic Policy on PoC in Osaka		•-(	⊢( to Improve Social Acceptability )–●●−( to Improve Social			al Acceptability	PoC with Advanced Technology
Est	1	Encourage to Conduct PoC	1-1	Develop Environment to A PoC in Osaka Prefect		erate	Impro	ve the Environment for PoC
tablish Found	2	Develop Vertiport Network	2-1	Preliminary Study for Developing Vertiports	2-2	High-Density a	Vertiports Lead to nd High-Frequency Operation	Expand Vertiport Network
Establish Foundation for Social Implementation of AAV	3	Develop the Business Environment			3-2	Support Struc Contribute	Execute Plan for ture and Bases to Reliable Flight eration	Improve Support Structure and Bases
cial Impleme			3-1	Preliminary Study for Developing Business Environment to Support Efficient Business Operation	3-3 3-4	Devise and Execute Plans for Data Platform & Infrastructure to Support Business		Improve Data Platform & Infrastructure
ntation of A,						Devise and Execute Plans for Develop Funding & Financing Scheme		Improve Funding & Financing Scheme
AM	4	Ensure Social Acceptability	4-1	Conduct Surveys on Social Acceptance and Establish Way of Communication (&Conduct Initial Actions)	4-2		s to Improve Social ptability	Continue to Effort in accordance with Social Implementation Level
Collabora	5	Collaborate with the National Government	5-1	Collaborate with the National Government to Clarify the Regulations & Rules and the Role of the National Government			Continuous	Consultation and Collaboration
	6	Collaborate with Local Governments in the Kansai Area and Osaka Prefecture	6-1	<ul> <li>Establish the Collaboration Framework toward the Social Implementation of AAM with Local Governments in Osaka Prefecture and the Kansai Region</li> <li>Design the Scheme to Promote Business Matching and Discover Business Domains and Opportunities for Potential Collaboration</li> </ul>			Operate and Improve the Collaboration Framework	
akeholders	7	Collaborate with Companies Based in Osaka and Participating in Green & Orange Table of Osaka RT	7-1				e the Scheme and Promote Collaborations	

#### 1-1. Develop Environment to Accelerate PoC in Osaka Prefecture

#### Timeframe

■ FY2022~FY2023

#### Action Details

- Clarify the requirements on environment for PoC such as test fields, administrative support for PoC, based on the opinion of companies and organizations who intend to conduct PoC to implement the commercialization of AAM-related business in Osaka Prefecture and the Kansai Region.
- Improve environment and scheme to support various PoC in Osaka Prefecture including making candidate list of public and private properties that can be leased or offered as test fields.

The example of Consideration						
Requirements on Environment for PoC	Potential Locations for Test Fields					
Potential contents of PoC.	Information about existing and potential location of					
Requirements on test fields and environment to	test fields owned by public and private sectors,					
conduct PoC such as requirements on land, flight	including information about the current availability					
area, surrounding environment.	and future potential development plan.					
• Requirements on administrative support.	Tolerance of stakeholders around the potential					
	locations of test fields for the PoC.					

rimary Roles for Each Pa	arty
imary Roles for Each P Osaka Prefectural Government	<ul> <li>Osaka Prefectural Government will consider support package for PoC such as financial support and coordination with related organizations based on the leading cases of support for PoC conducted by the national government and local municipalities.</li> <li>Osaka Prefectural Government will support conducting surveys on the opinion of private sector about the requirements for test fields.</li> <li>Osaka Prefectural Government will support investigation on properties that can be utilized as test fields.</li> <li>Osaka Prefectural Government will consider supporting package for private sector that</li> </ul>
	intends to develop its test fields, by leasing public properties owned by Osaka Prefectural Government.
Local Municipalities	<ul> <li>Local municipalities will consider measures to support PoC such as financial support and coordination with related organizations</li> <li>Local municipalities will conduct surveys toward improving environment for PoC such as surveys on the willingness of private sector to conduct PoC or the willingness of landowners to lease or offer their property for test fields.</li> <li>Local municipalities will consider supporting package for private sector, which intends to develop its test fields by leasing public properties owned by Osaka Prefectural Government.</li> </ul>
Private Sector	<ul> <li>Private sector will support the surveys to develop test fields conducted by Osaka prefectural government and local municipalities.</li> <li>* This plan does not prevent private sector from developing own test fields for the PoC in cooperation with local municipalities.</li> </ul>

# Action Plan #2. Develop Vertiport Network

- Clarify the course of action for efficient and effective development of vertiports network for AAM to realize the future vision of high-density, high-frequency operations of AAM in Osaka Prefecture and the Kansai Region.
- Promote the construction of vertiports incorporation with private sector, Osaka Prefectural Government, local municipalities, and other stakeholders based on the course of action.

				FY2022		FY2023	FY2024 Service Launch	FY2025 FY2026~	~29 (FY2030~)
	Steps for the Development of AAM-Related Business			Business Preparation and Consolidation	C		evelopment ield Verification)	<b>Business Launch</b>	Business Expansion
E	Basic Policy on PoC in Osaka		PoC Contributing     To Improve Social Acceptability     PoC Contributing     (Promote Initial Initiatives)     Business Feasibility Study     Flight Demonstration • Field Operation		cributing ial Acceptability nced Initiatives	e Ad	C with vanced hnology		
E	1	Encourage to Conduct PoC	1-1 Develop Environment to Acc PoC in Osaka Prefectur					ve the Environment for I	
stablish Foun	2	Develop Vertiport Network	2-1	-1 Preliminary Study for Develop Initial Vertiports Lead to 2-2 High-Density and High-Frequency Flight Operation		nd High-Frequency	Expand Vertipor	t Network	
Establish Foundation for Social Implementation of AAM		Develop the Business Environment			3-2	Support Struc Contribute	Execute Plan for ture and Bases to Reliable Flight eration	Improve Support Stru	cture and Bases
cial Impleme	3		3-1	Preliminary Study for Developing Business Environment to Support Efficient Business Operation	3-3	Platform & I	cute Plans for Data nfrastructure to rt Business	Improve Data Platform	
ntation of A						Develop Fun	execute Plans for ding & Financing heme	Improve Funding & Fir	
AM	4	Ensure Social Acceptability	4-1	Conduct Surveys on Social Acceptance and Establish Way of Communication (&Conduct Initial Actions)	4-2		as to Improve Social eptability	Continue to Effort in a Social Implement	
Collabora	5	Collaborate with the National Government	5-1	to Clarify the Regulations	llaborate with the National Government to Clarify the Regulations & Rules id the Role of the National Government		Continuous	Consultation and Collab	oration
Collaboration with Stakeholders	6	Collaborate with Local Governments in the Kansai Area and Osaka Prefecture	6-1	Establish the Collaboration Framework toward the Social Implementation of AAM with Local Governments in Osaka Prefecture and the Kansai Region		AM	Operate and In	Improve the Collaboration Framework	
akeholders	7	Collaborate with Companies Based in Osaka and Participating in Green & Orange Table of Osaka RT	7-1	Design the Scheme to Promote Business Matching			Develop and Operat	e the Scheme and Promo	ote Collaborations

## 2-1. Preliminary Study for Developing Vertiports

#### Timeframe

■ FY2022

#### Action Details

- Clarify the course of action to develop vertiports in Osaka Prefecture and the Kansai Region by studying the requirements and function of facilities and equipment necessary for vertiports.
- Consider the necessary measures to ensure locations for vertiports installations.

#### The Example of Considerations

	The Requirements and Function of Vertiport		Potential location for Vertiport Installation
•	The requirements and function of facilities and	•	Specific candidate locations for vertiports installation.
	equipment necessary for vertiports.	•	Possibility for related businesses such as construction
•	Number of vertiports required.		companies or real estate companies to participate in
•	The criteria to determine the location of vertiports		vertiports development, and willingness of
	with priority.		landowners to provide lands for vertiports
•	The requirements and criteria of location suitable for		installation.
	vertiports.	•	Willingness of local municipalities to attract and to
			install vertiports to their cities and towns.

Osaka Prefectural Government	<ul> <li>Osaka Prefectural Government will conduct necessary preliminary studies such as studying the requirements for vertiports installation and searching candidate location for vertiports.</li> <li>Osaka Prefectural Government will also consider its roles and necessary support for the development of vertiports.</li> </ul>
Local Municipalities	<ul> <li>Local municipalities will conduct necessary surveys such as searching candidate locations for vertiports and willingness of landowners to provide properties for vertiports installation.</li> <li>Local municipalities will also provide the necessary information to consider vertiports installation incorporation with Osaka Prefectural Government and other stakeholders.</li> <li>Local municipalities will consider their roles and necessary support for the development of vertiports.</li> </ul>
Private Sector	<ul> <li>Private sector will support Osaka Prefectural Government and local municipalities to conduct surveys by providing knowledge and information about the requirements and criteria of location suitable for vertiports.</li> <li>Private sector will also consider the business policy to develop vertiports incorporation with Osaka Prefectural Government and local municipalities.</li> <li>*This plan does not prevent private sector from conducting surveys to develop their own business.</li> </ul>

## 2-2. Develop Initial Vertiports Lead to High-Density and High-Frequency Flight Operation

#### Timeframe

■ FY2023~FY2024

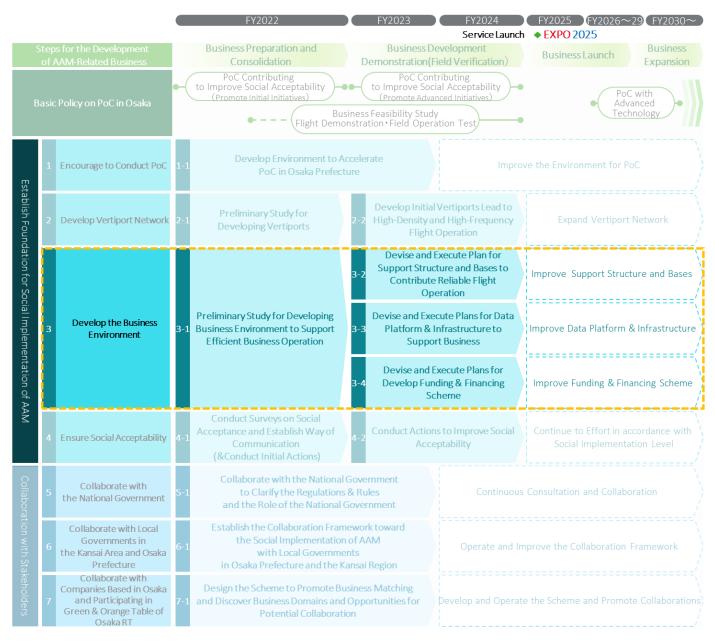
## Action Details

Devise and execute plans for developing vertiports based on the course of action devised in the action #2-1.

	<ul> <li>Osaka Prefectural Government will provide the necessary support for private sector such as</li> </ul>
	financial support and leasing public land to encourage developing vertiports.
Osaka Prefectural	<ul> <li>Osaka Prefectural Government will also consider clarifying and accelerating the administrative</li> </ul>
Government	permission procedure of vertiports construction, enacting necessary ordinances.
	■ In addition, Osaka Prefectural Government will also consider collaboration and support for
	local municipalities.
Local Municipalities	Local municipalities will provide the necessary support for private sector such as leasing public land or coordinating with local community and citizens to encourage developing vertiports in accordance with fundamental policies such as town development vision.
Private Sector	<ul> <li>Private sector will develop vertiports incorporation with Osaka Prefectural Government and local municipalities.</li> <li>*This plan does not prevent private sector from developing vertiports as their own business.</li> </ul>

# Action Plan #3. Develop Business Environment

- Clarify the course of action to consolidate "to-be business environment" (such as MRO hub, emergency evacuation facility, training center, human resource pool, data platform & infrastructure, and finance scheme, which are necessary for AAM-related business), based on the expected business model of AAM-related business in Osaka Prefecture and the Kansai Region.
- Promote the consolidation of "to-be business environment" incorporation with private sector, Osaka Prefectural Government, local municipalities, and other stakeholders Based on the course of action.



#### 3-1. Preliminary Study for Developing Business Environment to Support Efficient Business Operation

#### Timeframe

■ FY2022

### Action Details

- Research business models for AAM based on expected flight routes and use cases in Osaka Prefecture and the Kansai Region.
- Clarify the course of action to develop "to-be business environment" which is composed of essential element for AAM-related business such as MRO hub, emergency evacuation facility, training and education center, data platform & infrastructure, and finance scheme.

Study on Business Model	Research on Fundamental Information for Environmental Development
• Expected flight routes and use cases.	The functional requirements for basic operational
Market growth and maturity scenario.	support structure and hub such as required facilities
Typical business models.	& equipment and potential locations of hub.
Business economics simulation and evaluation	• The functional requirements for data platform &
based on overall operational costs including	infrastructure such as business domains that need
electricity charging cost.	data platform & infrastructure and required data
	content.
	• Finance needs and possible finance options.

Osaka Prefectural Government	<ul> <li>Osaka Prefectural Government will support the research that widely contributes to private sector to consider business entry.</li> <li>Osaka Prefectural Government will also consider its roles and necessary support for the development of organizations and bases which are indispensable for AAM-related business</li> </ul>
Local Municipalities	<ul> <li>Local municipalities will cooperate with surveys of potential locations for fundamental support hub, including the intentions of landowners.</li> <li>Local municipalities will also consider providing data for the data platform &amp; infrastructure and establishing their own finance scheme.</li> </ul>
Private Sector	<ul> <li>Private sector will cooperate with surveys conducted by Osaka Prefectural Government and local municipalities by providing knowledge and information about the functional requirements on "to-be Business Environment" for AAM-related business.</li> <li>Private sector will also consider the course of action to develop "to-be business environment" necessary for AAM-related business.</li> </ul>

#### 3-2. Devise and Execute Plans for Support Structure and Bases to Contribute Reliable Flight Operation

#### Timeframe

■ FY2023~FY2024

#### Action Details

Devise and execute plans for developing support structure and bases (such as MRO hub, evacuation facility, training center, and human resource pool) based on the course of action devised in the action plan #3-1.

## The Example of Considerations

	Plans for Developing Support Structure and Bases					
• Detailed policy for developing support structure and bases such as specific locations for bases, number of bases						
required, and priority for developing and constructing.						
• The entity responsible for development and operation of support structure and bases.						
• The timeline for	or the development and construction of support structure and bases and the roles and					
responsibilities	s among stakeholders.					
imary Roles for Each P	arty					
	<ul> <li>Osaka Prefectural Government will provide the necessary support for private sector such as</li> </ul>					
Osaka Prefectural	financial support or leasing public land to promote developing support structure.					
Government	<ul> <li>Osaka Prefectural Government will also consider collaboration and support for local</li> </ul>					
	municipalities who support private sector.					
Local Municipalities	Local municipalities will provide the necessary support for private sector such as leasing public properties.					
Private Sector	<ul> <li>Private sector will devise the plan to develop basic operational support structure and bases incorporation with Osaka Prefectural Government and local municipalities</li> <li>* This plan does not prevent private sector from developing support structure and bases as</li> </ul>					

their own business.

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#### 3-3. Devise and Execute Plans for Data Platform & Infrastructure to Support Business

#### Timeframe

■ FY2023~FY2024

#### Action Details

Devise and execute plans for the development of data platform & infrastructure based on the course of action considered in the action #3-1.

#### The Example of Considerations

	Plans for the Development of Data Platform & Infrastructure					
The architecture of data platform & infrastructure.						
• Detailed policy for developing and constructing data platform & infrastructure (such as detailed functional						
requirements and priority for development) .						
• The entity responsible for development and operation of data platform & infrastructure.						
• The timeline for	developing data platform & infrastructure and roles and responsibilities among stakeholders.					
nary Roles for Each Par	ty					
Osaka Prefectural Government	Osaka Prefectural Government will provide the necessary support for private sector such as financial support and providing available data that Osaka Prefectural Government retains.					
Local Municipalities	Local municipalities will provide the necessary support for private sector such as providing available data that Local municipalities retain.					
Private Sector	<ul> <li>Private sector will devise the plan to develop data platform &amp; infrastructure and to implement measures to develop data platform &amp; infrastructure incorporation with Osaka Prefectural Government and local municipalities</li> <li>*This plan does not prevent private sector from developing data platform &amp; infrastructure as their own business.</li> </ul>					

#### 3-4. Devise and Execute Plans for Develop Finance Scheme

#### Timeframe

■ FY2023~FY2024

#### Action Details

Devise and execute plans for the development of finance scheme based on the course of action considered in the action plan #3-1.

#### The Example of Considerations

#### Plans for the Development of Finance Scheme

- Detailed policy for the development of finance scheme such as finance method.
- Businesses that are expected to be the recipients of funds by business scale and business contents.
- Targeted volume of funding.
- The timeline for the development of finance scheme.

	Osaka Prefectural Government will devise the concept of finance scheme and development
Osaka Prefectural	policy and develop finance scheme in cooperation with local municipalities and private sector.
Government	In addition, Osaka Prefectural Government will also promote cooperation with the national
	government in this area.
	<ul> <li>Local municipalities will consider the concept and development policy of their own finance</li> </ul>
Local	scheme that contributes to the implementation of flights in their city and town, and
Municipalities	implement measures to develop finance scheme in cooperation with Osaka Prefectural
	Government and private sector.
	<ul> <li>Private sector will devise and execute the plan to develop finance scheme incorporation with</li> </ul>
Private Sector	Osaka Prefectural Government and local municipalities.
rivate Sector	*This plan does not prevent private sector from developing data platform & infrastructure as
	their own business.

# Action Plan #4. Ensure Social Acceptability

- Establish way of communication to improve social acceptability necessary for the social implementation of AAM in Osaka Prefecture and the Kansai Region.
- Promote actions to improve social acceptability toward the social implementation of AAM and build a trusted relationship with local communities and citizens.

2		s for the Development AAM-Related Business		FY2022 Business Preparation and Consolidation			FY2024 Service Launch evelopment field Verification)	FY2025       FY2026~29       FY2030~         ◆ EXPO 2025       Business Launch       Business         Business Launch       Expansion
B	lasio	: Policy on PoC in Osaka	•-(	PoC Contributing to Improve Social Acceptability (Promote Initial Initiatives) Flight Demo	sines		ial Acceptability nced Initiatives)	PoC with Advanced Technology
Est	1 Encourage to Conduct PoC 1-1 Develop Environment to Accelerate PoC in Osaka Prefecture		erate	Improve the Environment for PoC				
ablish Found	2	Develop Vertiport Network	2-1	Preliminary Study for Developing Vertiports	2-2	High-Density a	Vertiports Lead to nd High-Frequency Operation	Expand Vertiport Network
Establish Foundation for Social Implementation of AAM	3	Develop the Business Environment 3-	3-1	Preliminary Study for Developing Business Environment to Support Efficient Business Operation	3-2	Support Struc Contribute	Execute Plan for ture and Bases to Reliable Flight eration	Improve Support Structure and Bases
					3-3	Platform & I	cute Plans for Data Infrastructure to rt Business	Improve Data Platform & Infrastructure
					3-4	Develop Fun	Execute Plans for ding & Financing theme	Improve Funding & Financing Scheme
AM	4	Ensure Social Acceptability	4-1	Conduct Surveys on Social Acceptance and Establish Way of Communication (&Conduct Initial Actions)	4-2		as to Improve Social eptability	Continue to Effort in accordance with Social Implementation Level
Collabora	5	Collaborate with the National Government	5-1	Collaborate with the National Government to Clarify the Regulations & Rules and the Role of the National Government			Continuous	Consultation and Collaboration
	6	Collaborate with Local Governments in the Kansai Area and Osaka Prefecture	6-1	Establish the Collaboration Framework toward the Social Implementation of AAM with Local Governments in Osaka Prefecture and the Kansai Region			Operate and Improve the Collaboration Framework	
Collaborate with Companies Based in Osaka and Participating in Green & Orange Table of Osaka RT Design the Scheme to Promote Business Matching and Discover Business Domains and Opportunities for Potential Collaboration				e the Scheme and Promote Collaboration				

#### 4-1. Conduct Surveys on Social Acceptance and Establish Way of Communication (&Conduct Initial Actions)

#### Timeframe

■ FY2022

#### Action Details

- Conduct surveys contributing to consider the measures to improve social acceptance such as study on the current level of social acceptance in Osaka Prefecture and its vicinity and case study of leading initiatives to improve social acceptability in Japan and foreign countries.
- Develop communication platforms that contribute to sharing opinions and information from diverse people including experts, and to communicating with local communities and citizens.
- Implement the initial actions as to improve social acceptability.

#### The Example of Considerations

S	Surveys on The Current Level of Social Acceptance and Possible Measures to Improve Social Acceptance		Communication Platforms
•	Surveys on the current level of social acceptance in	•	Effective communication platforms for each segment
	Osaka Prefecture and the Kansai Region.		such as professional media, symposiums, seminars,
•	The segments that needed to be focused on to		and public relations facility.
	improve social acceptance level such as business	•	The timeline for developing communication
	operators and citizens living under the flight routes		platforms and roles and responsibilities among
	and around vertiports.		stakeholders.
•	Possible measures to improve social acceptability		
	based on examples of leading initiatives to improve		
	social acceptance in Japan and foreign countries.		

	<ul> <li>Osaka Prefectural Government will conduct survey on the current level of social acceptance</li> </ul>
	toward AAM in local communities and citizens.
Osaka Prefectural	In addition, Osaka Prefectural Government will consider its roles and necessary support for
Government	developing communication platforms.
	<ul> <li>Osaka Prefectural Government will also support the initial actions promoted by business</li> </ul>
	operators in this area.
	Local municipalities will conduct a survey on the current level of social acceptance toward
Level.	AAM in local communities and citizens.
Local	<ul> <li>Local municipalities will consider their roles for developing communication platforms and</li> </ul>
Municipalities	necessary support, including cooperation with municipal councils and neighborhood
	associations.
	Private sector will conduct surveys incorporation with Osaka Prefectural Government and
	local municipalities.
Private Sector	Private sector will also consider the initial actions to improve social acceptability.
	*This plan does not prevent private sector from conducting surveys and promoting actions for
	their own business.
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#### 4-2. Conduct Actions to Improve Social Acceptability

#### Timeframe

■ FY2023~FY2024

#### Action Details

- Investigate and announce various facts and data contributing to the improvement of social acceptability such as the facts and data showing positive benefits and littleness of negative impacts on local communities and citizens by social implementation of AAM.
- Implement measures to increase benefits and minimize negative impact on local communities and citizens.

Osaka Prefectural Government	<ul> <li>Osaka Prefectural Government will promote actions to improve social acceptability.</li> <li>In addition, Osaka Prefectural Government will support the actions conducted by private sector and local municipalities.</li> </ul>
Local Municipalities	<ul> <li>Local Municipalities will promote actions to improve social acceptability.</li> <li>In addition, Local Municipalities will support the actions conducted by private sector.</li> </ul>
Private Sector	<ul> <li>Private sector will promote actions to improve social acceptability in cooperation with Osaka Prefectural Government and local municipalities.</li> <li>*This plan does not prevent private sector from promoting actions as their own business.</li> </ul>

Detailed Action Plan: Collaborate with Stakeholders

## Action Plan #5. Collaborate with the National Government

- Request the national government to promote necessary actions for the social implementation of AAM.
- Promote the collaborative initiatives to build momentum toward the social implementation of AAM in Expo2025.
- Promote continuous collaboration based on the discussion at Osaka RT, including requesting additional action based on the results of various actions.

		s for the Development AAM-Related Business		FY2022 Business Preparation and Consolidation		FY2023 Business De Demonstration(F	evelopment	FY2025       FY2026~29       FY2030~         ◆ EXPO 2025       Business       Business         Business Launch       Business
E	Basic Policy on PoC in Osaka		PoC Contributing     PoC Contributing     to Improve Social Acceptability     to Improve Social Acceptability		PoC Cont to Improve Soci (Promote Advar s Feasibility Study	ributing al Acceptability acced Initiatives	PoC with     Advanced     Technology	
Est	1	Encourage to Conduct PoC	1-1	Develop Environment to A PoC in Osaka Prefect				ve the Environment for PoC
tablish Four	2	Develop Vertiport Network	2-1	Preliminary Study for Developing Vertiports	2-2	High-Density ar	Vertiports Lead to nd High-Frequency Operation	Expand Vertiport Network
Establish Foundation for Social Implementation of AAN		Develop the Business Environment	3-1	Preliminary Study for Developing Business Environment to Support Efficient Business Operation	3-2	Support Struc Contribute	Execute Plan for ture and Bases to Reliable Flight eration	Improve Support Structure and Bases
ocial Impleme	3				3-3 3-4	Platform & I	cute Plans for Data nfrastructure to t Business	Improve Data Platform & Infrastructure
ntation of A.						Devise and Execute Plans for Develop Funding & Financing Scheme		Improve Funding & Financing Scheme
AM	4	Ensure Social Acceptability	4-1	Conduct Surveys on Social Acceptance and Establish Way of Communication (&Conduct Initial Actions)	4-2		s to Improve Social ptability	Continue to Effort in accordance with Social Implementation Level
Collabora	5	Collaborate with the National Government	5-1	Collaborate with the National Government to Clarify the Regulations & Rules and the Role of the National Government			Continuous	Consultation and Collaboration
Collaboration with Stakeholders	6	Collaborate with Local Governments in the Kansai Area and Osaka Prefecture	6-1	Establish the Collaboration Fran the Social Implementatior with Local Governme in Osaka Prefecture and the K	AM	Operate and Improve the Collaboration Framework		
keholders	<ul> <li>Collaborate with</li> <li>Companies Based in Osaka</li> <li>and Participating in</li> <li>Green &amp; Orange Table of</li> <li>Osaka RT</li> </ul>			Юрр			e the Scheme and Promote Collaborations	

## 5-1. Collaborate with the National Government to Clarify the Regulations & Rules and the Role of the National

#### Government

#### Timeframe

■ FY2022~FY2023

#### Action Details

- Request that the national government promote necessary actions based on the discussions at Osaka RT: establishing the regulations, rules, and guidelines; promoting deregulations; offering definite vision especially about air traffic control and telecommunication; promoting standardization; providing financial support for related projects; and enhancing the partnership with local governments to improve social acceptability.
- Promote the collaborative initiatives to build momentum toward the social implementation of AAM in Expo2025.

The Example of Requests

Request items to the National Government
• Request for developing the regulation, rules, and guidelines, and for promoting deregulation about design and
production, test flight, flight service, air traffic control, and constructing and operating vertiports.
• Request for clarifying the vision as the Japanese government, especially about air traffic control and

• Request for promoting standardization.

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telecommunication.

- Request for providing financial support.
- Request for promoting collaborative initiatives to improve social acceptability.

Osaka Prefectural Government	<ul> <li>Osaka Prefectural Government will lead requesting and collaborating with the national government based on discussions at Osaka RT.</li> <li>Osaka Prefectural Government will promote the collaborative initiatives to build momentum toward the social implementation of AAM in Expo2025.</li> </ul>
Local Municipalities	Local municipalities will support requests and collaborative initiatives with the national government led by Osaka Prefectural Government by sharing the issues to request the national government to promote necessary actions with Osaka RT.
Private Sector	Private sector will support request and collaborative initiatives with the national government led by Osaka Prefectural Government through sharing the issues which they want to request to the national government, with Osaka RT.

# Action Plan #6. Collaborate with Local Governments in Osaka Prefecture and the Kansai Region

- Enhance the collaboration to facilitate communication among local governments in Osaka Prefecture and the Kansai Region regardless of the status about their attempt to promote social implementation of AAM.
- Based on the collaboration, promote the collaborative initiatives to boost momentum, share the knowledge of developing vertiports and flight routs, and improve social acceptability.

Steps for the Development of AAM-Related Business				FY2022 Business Preparation and Consolidation	FY2025       FY2026~29       FY2030~         ◆ EXPO 2025       Business Launch       Business Expansion				
	Basic Policy on PoC in Osaka		PoC Contributing     Poc Poc Contributing     Poc Poc Poc Poc Poc Poc     Poc Poc Poc Poc Poc Poc Poc     Poc Poc Poc Poc Poc Poc Poc     Poc Poc Poc Poc Poc Poc Poc Poc Poc				ial Acceptability <u>need Initiatives</u> PoC with Advanced		
Est	1	Encourage to Conduct PoC	1-1	1 Develop Environment to Accelerate PoC in Osaka Prefecture			Improve the Environment for PoC		
	2	2 Develop Vertiport Network 2-1		1 Preliminary Study for Developing Vertiports		High-Density a	Vertiports Lead to nd High-Frequency Operation	Expand Vertiport Network	
		3 Develop the Business Environment	3-1	Preliminary Study for Developing Business Environment to Support Efficient Business Operation	3-2	Support Strue Contribute	Execute Plan for cture and Bases to Reliable Flight eration	Improve Support Structure and Bases	
	3				3-3	Devise and Execute Plans for Data Platform & Infrastructure to Support Business		Improve Data Platform & Infrastructure	
					3-4	Develop Fun	Execute Plans for Iding & Financing Cheme	Improve Funding & Financing Scheme	
	4	Ensure Social Acceptability	4-1	Conduct Surveys on Social Acceptance and Establish Way of Communication (&Conduct Initial Actions)	4-2		as to Improve Social eptability	Continue to Effort in accordance with Social Implementation Level	
Collabora	5	Collaborate with the National Government	5-1	Collaborate with the National to Clarify the Regulations and the Role of the National	ıles	Continuous Consultation and Collaboration			
Collaboration with Stakeholders	6	Collaborate with Local Governments in the Kansai Area and Osaka Prefecture	6-1	Establish the Collaboration Fran the Social Implementatior with Local Governme in Osaka Prefecture and the K	n of A ents	AM	Operate and In	nprove the Collaboration Framework	
keholders	7	Collaborate with Companies Based in Osaka and Participating in Green & Orange Table of Osaka RT	7-1	Design the Scheme to Promote Bu and Discover Business Domains and Potential Collaborat			e the Scheme and Promote Collaborations		

#### 6-1. Establish the Collaboration Framework toward the Social Implementation of AAM

#### with Local Governments in Osaka Prefecture and the Kansai Region

#### Timeframe

■ FY2022~FY2023

#### Action Details

- Devise the policy to establish the collaboration framework with local governments in Osaka Prefecture and the Kansai Region such as establishing a conference body within Osaka RT and communication platform using online tools.
- Call for the local governments in Osaka Prefecture and the Kansai Region, regardless of the status of their attempt to promote actions for the social implementation of AAM.

#### The Example of Items of Corporation

#### Items of Corporation toward the Social Implementation of AAM

- Sharing information about the PoC.
- Discussion on implementing PoC in the Kansai Region.
- Sharing information about the development of vertiports and flight routes.
- Discussion on optimizing the disposition of vertiports and flight routes from inter-city perspective.
- Discussion on collaborative initiatives to improve social acceptability.

Osaka Prefectural Government	Osaka Prefectural Government will devise the policy to establish the collaboration framework with local governments in Osaka Prefecture and the Kansai Region. Osaka Prefectural Government will call for the local governments in Osaka Prefecture and the Kansai Region, regardless of the status of their attempt to promote actions.					
Local Municipalities	Local municipalities will participate in the collaboration framework in response to the call from Osaka Prefectural Government.					
Private Sector	<ul> <li>The Private Sector will support establishing the collaboration framework by providing information about the consideration of their own business.</li> <li>The Private Sector will approach the local governments in Osaka Prefecture and the Kansai Region to participate in the collaboration framework.</li> </ul>					

# Action Plan #7. Collaborate with Companies Based in Osaka and Participating in Green & Orange Table of Osaka RT

Design the scheme contributing to discover new business domains of potential collaboration and promoting collaboration between companies based in Osaka having advantages in elemental technologies of AAM and domestic and foreign companies to promote the development of AAM-related industry in Osaka Prefecture.

				FY2022		FY2023		FY2024 Service Launch	FY2025 FY2026 <b>EXPO 2025</b>	~29(FY2030~)
	Steps for the Development of AAM-Related Business			Business Preparation and Business D Consolidation Demonstration(F					<b>Business Launch</b>	Business Expansion
B	lasio	: Policy on PoC in Osaka	•-(			PoC Cont to Improve Soc (Promote Adva s Feasibility Study ation • Field Opera	ial / nce v	Acceptability d Initiatives)	A A	oC with dvanced chnology
Esta	1	Encourage to Conduct PoC	1-1 Develop Environment to Acc PoC in Osaka Prefectu					we the Environment for PoC		
ablish Found	2	Develop Vertiport Network	2-1	Preliminary Study for Developing Vertiports	2-2	Develop Initial Vertiports Lead to High-Density and High-Frequency Flight Operation		Expand Vertiport Network		
Establish Foundation for Social Implementation of AAIV		3 Develop the Business Environment	3-1	Preliminary Study for Developing Business Environment to Support Efficient Business Operation	3-2	Devise and Execute Plan for Support Structure and Bases to Contribute Reliable Flight Operation		Improve Support Structure and Bases		
cial Impleme	3				3-3	Devise and Execute Plans for Data Platform & Infrastructure to Support Business		Improve Data Platform & Infrastructure		
ntation of A					3-4	Devise and Execute Plans for Develop Funding & Financing Scheme		Improve Funding & Financing Scheme		
AM	4	Ensure Social Acceptability	4-1	Conduct Surveys on Social Acceptance and Establish Way of Communication (&Conduct Initial Actions)	4-2		ctions to Improve Social Acceptability		Continue to Effort in accordance with Social Implementation Level	
Collabora	5	Collaborate with the National Government	5-1	Collaborate with the National Government to Clarify the Regulations & Rules and the Role of the National Government Establish the Collaboration Framework toward the Social Implementation of AAM with Local Governments in Osaka Prefecture and the Kansai Region Design the Scheme to Promote Business Matching and Discover Business Domains and Opportunities for Potential Collaboration			Continuous Consultation and Collaboration Operate and Improve the Collaboration Framework			
Collaboration with Stakeholders	6	Collaborate with Local Governments in the Kansai Area and Osaka Prefecture	6-1							n Framework
keholders	7	Collaborate with Companies Based in Osaka and Participating in Green & Orange Table of Osaka RT	7-1				Develop and Operate the Scheme and Promote Collaborations			

#### 7-1. Design the Scheme to Accelerate Business Matching

#### Timeframe

■ FY2022~FY2023

#### Action Details

- Conduct a survey to clarify business domains related to AAM with high potentiality for collaboration and consider the business domains which should be promoted collaboration intensively.
- Design the scheme to increase the interest of private sector to enter the business and create opportunities of collaboration among domestic and foreign companies in Osaka Prefecture and the Kansai Region

#### The Example of Considerations

## Business Matching Scheme to Discover New Business Domains and Opportunities for Collaboration

- Domains related AAM with high potentiality for collaboration and consider the business domains in which should be promoted collaboration intensively.
- Potential measures to create opportunities for collaboration.
- Potential measures to increase the interest of private sector to enter the business in Osaka Prefecture and the Kansai Region.
- Scheme to create opportunities for collaboration between the companies which are interested in participating in AAM-related business within Osaka Prefecture and the Kansai Region.

Osaka Prefectural GovernmentOsaka Prefectural Government will conduct surveys to clarify the intention of local compar to enter AAM-related business and their technical and business needs and seeds.GovernmentIn addition, Osaka Prefectural Government will design business matching scheme to discov new business domains and opportunities for collaboration.LocalLocal municipalities will conduct surveys on the intention of local companies to enter AAM related business.MunicipalitiesIn addition, local municipalities will support the surveys conducted by Osaka Prefectural Government.Companies and organizations participating in Osaka RT with the plan to develop AAM-related							
Government       In addition, Osaka Prefectural Government will design business matching scheme to discover new business domains and opportunities for collaboration.         Local       Local municipalities will conduct surveys on the intention of local companies to enter AAM related business.         Municipalities       In addition, local municipalities will support the surveys conducted by Osaka Prefectural Government.	ies						
new business domains and opportunities for collaboration.         Local         Local         Municipalities         In addition, local municipalities will support the surveys conducted by Osaka Prefectural Government.	to enter AAM-related business and their technical and business needs and seeds.						
Local       Local municipalities will conduct surveys on the intention of local companies to enter AAM related business.         Municipalities       In addition, local municipalities will support the surveys conducted by Osaka Prefectural Government.	er						
Local       related business.         Municipalities       In addition, local municipalities will support the surveys conducted by Osaka Prefectural         Government.       Government.							
Municipalities In addition, local municipalities will support the surveys conducted by Osaka Prefectural Government.							
Government.							
<ul> <li>Companies and organizations participating in Osaka RT with the plan to develop AAM-relat</li> </ul>							
	۶d						
Private Sector business in Osaka Prefecture and the Kansai Region will support the surveys conducted by							
Osaka Prefectural Government regardless of the status of their involvement in aviation-							
related industries.							