Preparing Regional/City or Local AAM Plans

An Advanced Air Mobility Focus

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SASIG Presentation

ARCADIS

Why should AAM be important to Local and Regional Authorities?

Revolutionising Air Transportation

AAM could reduce road-based congestion through the development of air taxis, providing public good missions in the form of medical and emergency drone response, receiving packages faster, and participating in a sustainable and safe mode of transportation.

Forming part of your Local Transport Plan

AAM is a form of transportation and should therefore form part of your LTP. This is also different to provisions for Aerodromes as many of the 'Vertiport' facilities may not be traditional aviation facilities. These could be retro-fitted to existing buildings and could even be floating on your waterways. They will connect with other modes of transport and will potentially be traffic generators.

Creating Benefits

The addition of AAM will benefit the public in several ways. A few examples include easier access for travellers between rural, suburban, and urban communities; rapid package delivery; reduced commute times; disaster response, and new solutions for medical transport of passengers and supplies.

"AAM needs to deliver value and real benefits to society, or it will never really take off"

The challenges: 10 Themes

What are the challenges?

Implementing AAM will need to overcome the challenges for infrastructure:

The 10 themes:

1. **Problem –** What problem is AAM trying to solve and where is it adding or creating value.

2. **Policy –** What is the Infrastructure Strategy – National / Regional / Local / Company.

3. **Places** – Where do you locate Infrastructure.

4. **Planning and Permits** – How do you secure the required permissions.

5. **Perception** – How can you gain the support to build the Infrastructure.

6. **Power** – How can you meet the energy needs of the Infrastructure.

7. **Payment** – What is the business case and how will the Infrastructure be commercially viable.

8. **Programme** – How to deliver the AAM infrastructure required.

9. **Procurement** – How to scale up the supply chain to meet the future demands.

10. **Partnership** – Having the right organisations and people working together.

Where are we today?

In considering on the ground infrastructure that is not part of the National Significant Infrastructure Project (NSIP)….

The current position is that there is NO:

- Policy Framework

- Planning Guidance

- Set of Interpretations or Definitions around AAM

- Suite of relevant Use Cases

- Evidence base to reference

- Data or Benchmarking Information

- Permitted Development (PD) Rights

- Test cases where a challenge to a decision has been in front of the Planning Inspectorate.

- Or limited relevant experience in LA's around AAM / Vertiport Infrastructure.

How others are starting to deal with the challenges

Advanced Air Mobility in the San Diego Region

San Diego Association of Governments (SANDAG)

A Regional Strategy for Advanced Air Mobility Services

A comprehensive, equitable, sustainable, and resilient multi-modal transportation network, with robust air transport, that extends beyond the San Diego jurisdictional line and enables the safe, expeditious movement of goods, services, and people.

SANDAG AAM | Our Scope

Task 1
Project Management

Task 2
Industry Assessment

Task 3
AAM Collaborative

Task 4
Public Outreach & Education Strategy

Task 5
AAM Regional Policy Framework

Task 6
Regional AAM Implementation Strategy

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SANDAG
Advanced Air Mobility in the San Diego Region (AAMSD)

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Submitted by Arcadis IBI Group in partnership with VHB, Hovecon, Sutra Research (DBE) and TTG Environmental (DBE)

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Task 2 | Industry Assessment
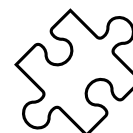
The Industry Assessment is intended to:

Provide a high-level overview of the AAM industry

Add to the AAM Collaborative's knowledge

Prepare SANDAG and regional stakeholders for discussions on AAM

First steps to creating an AAM Strategy

Task 3 | AAM Collaborative Objectives

Establish a clear and uniform vision for integrating AAM in the region

Address major concerns and needs

Define individual roles and responsibilities

Identify non-negotiables as they relate to permitting and transportation integration

Consider CEQA/NEPA implications

Focus on designing efficient vertiport facilities and operations

Task 3 | AAM Collaborative Members

SANDAG AAM Guiding Principles

How can AAM be used at SANDAG to meet its transportation planning and social equity objectives?

How can SANDAG best prepare for AAM infrastructure and prepare the region for AAM adoption?

Equity, Public Benefit and Engagement
- Emergency Services Enhancement
- Public Awareness and Acceptance
- Stakeholder Collaboration
- Inclusive and Equitable Mobility

Operational Efficiency
- Seamless Multi-modal Connectivity
- Optimal Airspace Management

Safety and Security
- Comprehensive Safety and Security Framework
- Crawl-Walk-Run

Environmental Sustainability and Economic Viability
- Low Emissions
- Noise Abatement
- Financial Sustainability
- Workforce Development

Infrastructure, Demand Capacity and Technology Scalability
- Vertiport Infrastructure
- Grid and Fuel Sustainability
- Demand Capacity Building
- Flexible and Scalable Technology Development

Task 4 | Public Consultation & Educational Strategy

AAM Stakeholders

- Aircraft Manufacturing, Operations & Maintenance

- Airport and Port Authorities

- Community and Non-Profit Organisations

- Economy and Workforce

- Educational Institutions and Organisations

- Emergency Services and Public Health

- Environmental Management and Planning

- Government Agencies & Representatives

- Land Use, Development & Management

- Planning and Modelling

- Public Works and Utilities

- Transportation Departments, Planners & Services

Task 4 | Public Consultation & Educational Strategy

SWOC Analysis

Operations

Infrastructure

Environment & Economy

Public Engagement

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Task 5 | Regional Policy Framework

Emerging Technology

State of AAM Industry

California State Actions

Industry Needs

Vertiport Operators

Regional Planning & Transport

Regional Policy Framework

Workforce Needs

FAA Regulations

States and Local Government

Educational Needs

Federal Policies

AAM OEMs

AAM Operators

Building Owners

SANDAG AAM | Regional Framework Considerations

Infrastructure

Environment and Sustainability

Transport Connectivity

Regulatory

Community Engagement

Safety

Technology

Commercial
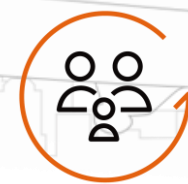
Workforce Development

Task 6 | Regional Implementation Strategy

Potential locations for AAM
Outline technical requirements for AAM operations and identify potential new sites. Conduct inventory of existing infrastructure that can support early operations.

AAM infrastructure
Identify physical requirements based on facility type (e.g. airports vs urban vertiport) and respective needs to accommodate different type of operations and use cases.

Policy and legislative requirements
Identify the need to update policy or legislation specific to SANDAG/San Diego related to zoning, land-use, CEQA, security, safety, and land development.

Mitigation of external factors security, safety, community acceptance, equity, privacy:
National research of similar implementation initiatives, continued stakeholder sessions.

Smart Atlas and Story Maps
GIS tools to visualize potential AAM facilities, airspace corridors, land use/zoning, and multi-modal integration.

SANDAG AAM | Overview of Use Cases

Public Safety and
Emergency Services

Research

Freight/
Cargo
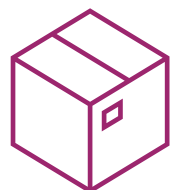
Testing and
Simulation

Maintenance, Inspection
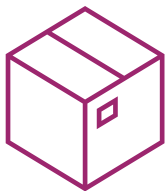and Surveying

Military

People
Movement
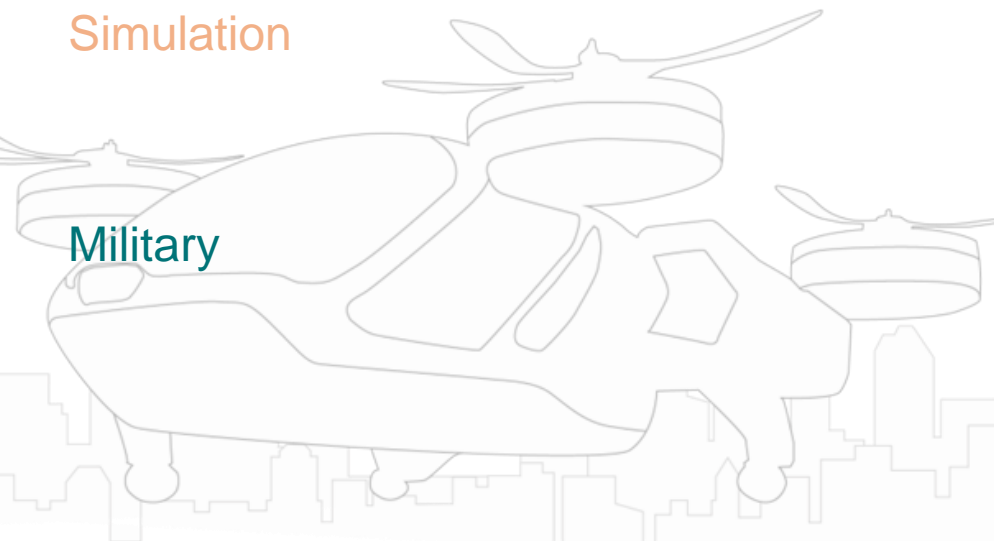
SANDAG AAM | Use Cases

Short-term

- First responder
- Provide framework for enhanced service provision and capabilities
- Explore new applications
- Collaborate with relevant agencies
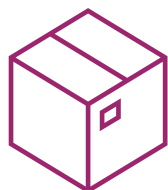- Identify infrastructure and planning requirements

- Takeaway and food delivery
- Last mile delivery

SANDAG AAM | Use Cases

Long-term

- Public transport connectivity
- Intra-city and inter-city connections
- Rural transit
- Multi-modal transport hubs
- Cross-border transport

- Enhanced delivery applications
- High-value/security delivery
- Cross-border trade
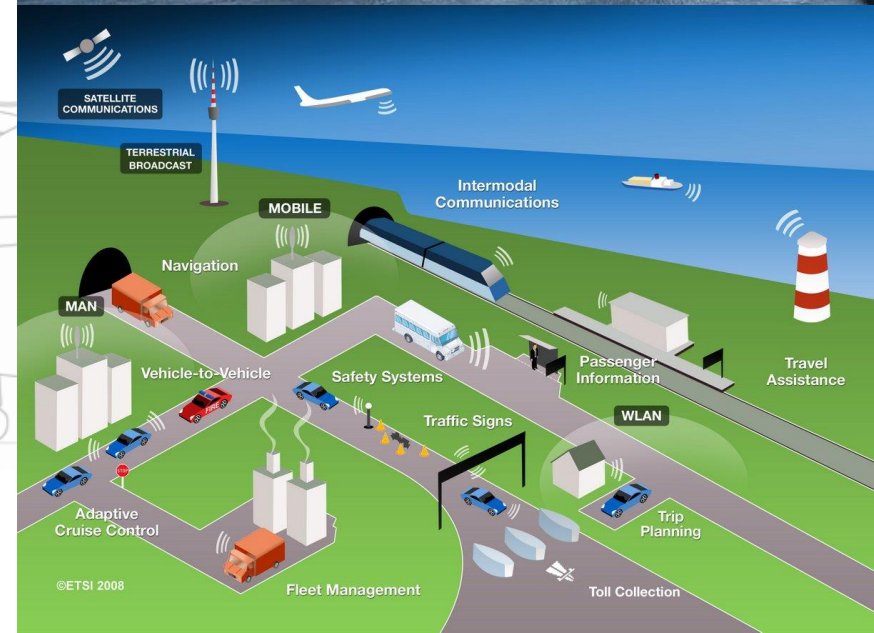
# Where do we need to be in the future?

Local Authorities will need:

- A Clear Policy Framework

- Planning Guidance

- A set of Interpretations or Definitions around AAM

- Agreed relevant Use Cases for AAM

- To develop an AAM evidence base to reference

- AAM Data and Benchmarking Information

- Understand decisions and any implications that come from test cases for AAM infrastructure.

- To develop the relevant experience in AAM / Vertiport Infrastructure.

To incorporate AAM into their regional or city plans
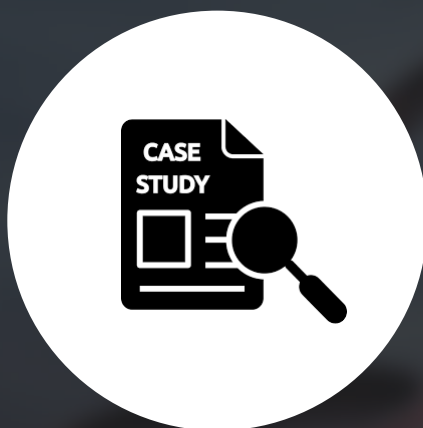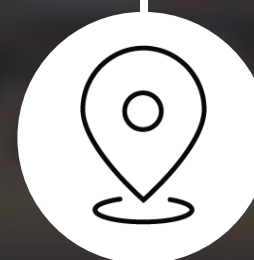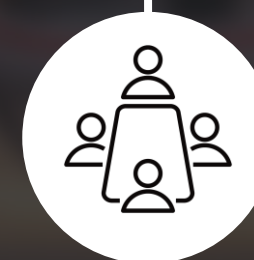
Team Upskilling

Identify AAM Knowledge Requirements

Team Assessment

Gap

GPS Need

Team Up

Acquire

Thank you

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