



Working for our members



Urban Air Mobility

Drones Industry Advisory Group

Sameer Savani

Head of Innovation and Engineering

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“There was a time when people were restricted to the ground when they wanted to move between, or even through, our crowded cities”



Why Urban Air Mobility is the Future

- Road delays cost the UK £9bn per year
- Traffic congestion today costs more than €100bn a year in the EU alone
- American drivers lose an average of over a week a year in traffic jams
- Average London commute is over 75 minutes
- By 2030, more than 60% of the world's population will be living in cities

2030: 41 MegaCities, over 500 million citizens potentially effected by traffic jams

CURRENT AND FUTURE MEGACITIES 2015 - 2030



If you were in any doubt



HOW ASTON MARTIN COULD TAKE TO THE AIR

BUILD: Super-Lightweight carbon fibre composites

POWER: Green hybrid electric Rolls Royce engine

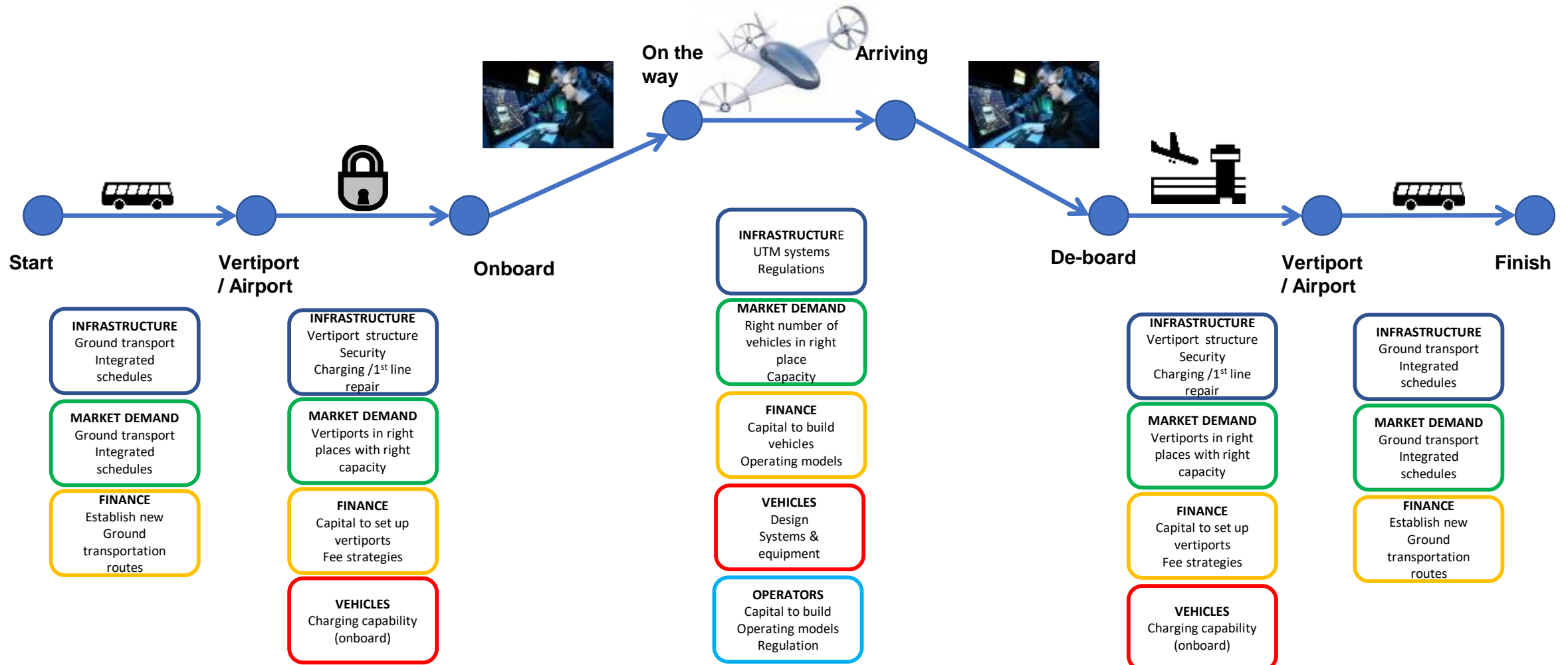
LIFE: 3 propellers for vertical take-off and landing

SPEED: 200mph
RANGE: 300 miles
PRICE: £2m-£5m
SEATS: 3 (pilot and 2 passengers)

ASTON MARTIN



Consider an end-to-end journey

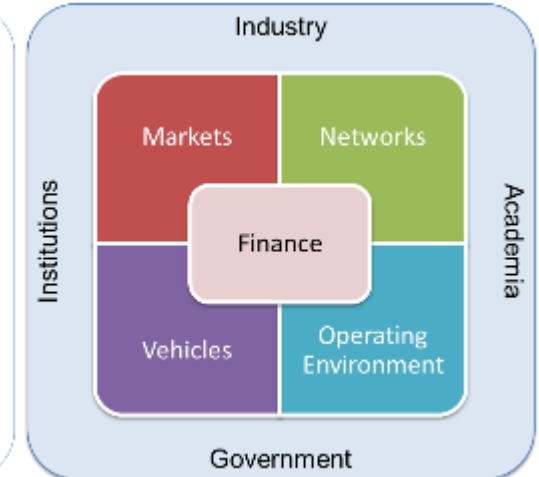


Requires an integrated approach across industry, operators, government, regulators, developers, financiers.....

ADS is responding by...

ADS UAM Group of over 50 organisations, including vehicle start-ups, Aerospace Systems companies, Government, Regulators, Technology Companies, Infrastructure specialists, Standards bodies...

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|--|---------------------------------|
| ADS Group Ltd | Knowledge Transfer Network |
| Achieving the Difference LLP | Leonardo |
| Aerospace Technology Institute | Manufacturing Technology Centre |
| Aerossurance | NATS |
| Airbus Helicopters | NESTA |
| AMRD | Nova Systems |
| Atkins | Rockwell Collins |
| Aum Capital | Roland Berger |
| Aviary Project | Rohr-Royce |
| British Aviation Group | Royal Aeronautical Society |
| BAE Systems | Saab |
| Boeing | Safran Power Systems |
| British Standards Institute | Samad Aerospace |
| Cently Group | Skyports |
| Civil Aviation Authority | Swansea Aviation |
| Consortia | Team Defence Information |
| Coventry University | Thales |
| Cranfield Aerospace | ThinkTank Maths Limited |
| DS Aviation | Trackwise |
| Department for Business, Innovation & Skills | Transport for London |
| Department for International Trade | Transport Systems Catapult |
| Department for Transport | UKRI (Innovate UK) |
| Faraday Aerospace Limited | UTAS (UTC) |
| Farnborough International Ltd | Vertical Aerospace Ltd |
| GE Aviation | VRCC |
| Honeywell | Warwick Manufacturing Group |
| Joby Aviation | Williams Advanced Engineering |



Major new event led by FIL, supported by ADS, to bring the UK community together, showcase to the world, and build towards the Airshow to be the home of global UAM

ADS and the UAMG contributed to the investment case (upto £125m from Government) for Future Flight – the key component of the Aerospace Sector Deal





Mission and Vision

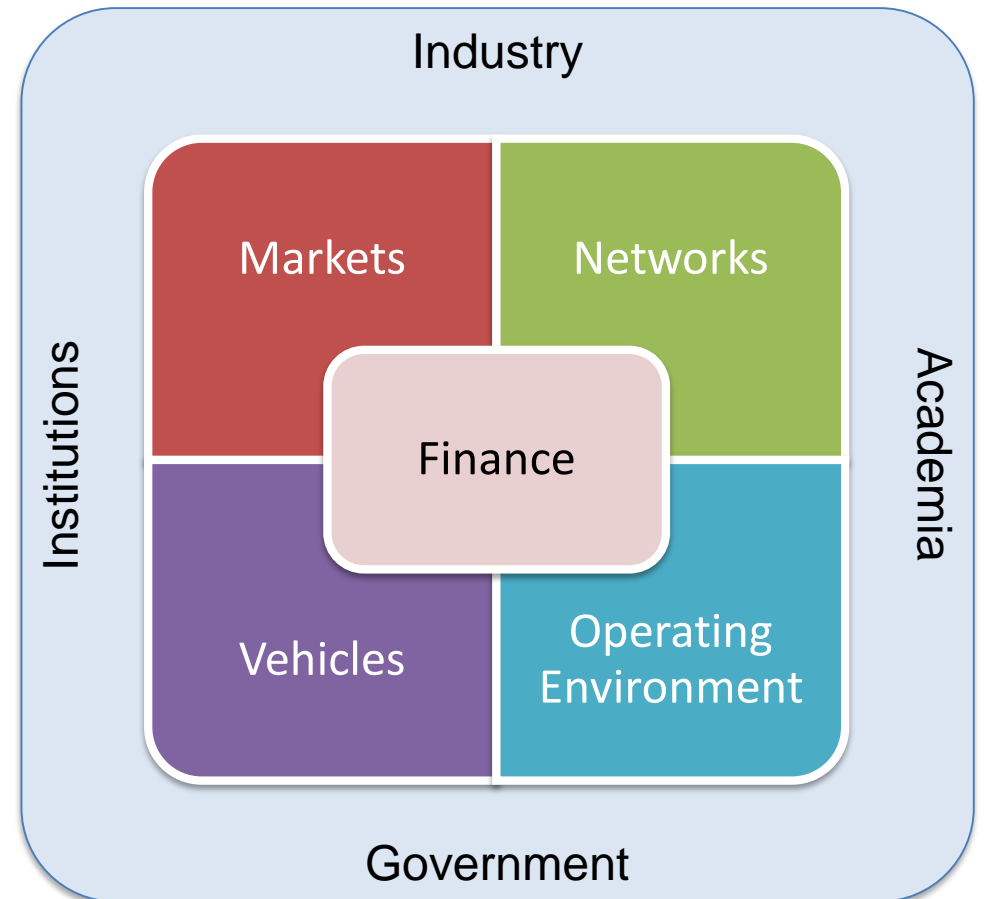
Establish the UK as a world-leading location where UAM solutions and services are developed and delivered by bringing together the diverse stakeholders that will shape, and offer solutions into, this new and emerging sector of aviation

- Demonstrate the UK value-add; understand the global market, establish business cases, identify use cases, create awareness within relevant stakeholder communities
- Foster an ecosystem of developers, infrastructure providers, regulators, operators and investors where collaborative partnerships can be formed
- Promote the UK offering to the global market
- Establish a world class Regulatory Framework, including effective standards and practices, so that products and services can be brought to market



ADS Urban Air Mobility Group

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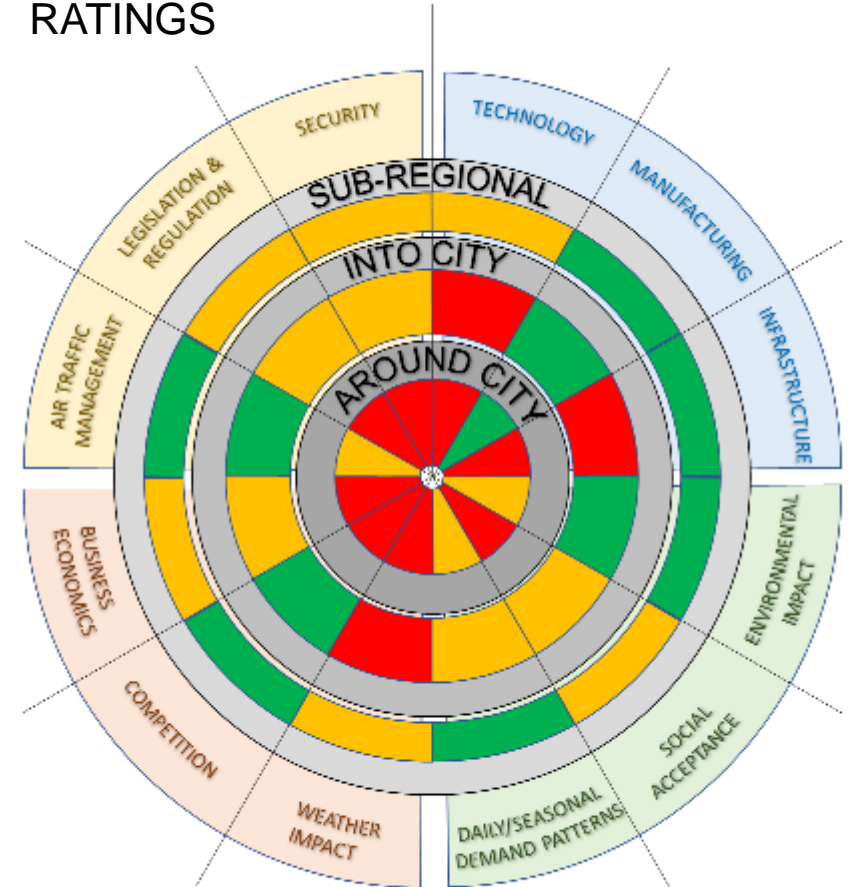
Markets

Objective: To describe in detail the global market opportunities that could be addressed by the UK

Outputs:

1. Definition of market segmentation and consensus of demand forecasts
2. UAM business and operating models against defined market segments and use cases
3. Capability needs (vehicle and wider system) to meet market requirements and associated constraints
4. UK Capability mapping against the market need

NEAR-TERM RATINGS





Operating Environment

Objective: Define the changes needed to the (1) regulatory, (2) infrastructure development and (3) local planning frameworks, which will enable the relevant business models to operate in the UK

Outputs:

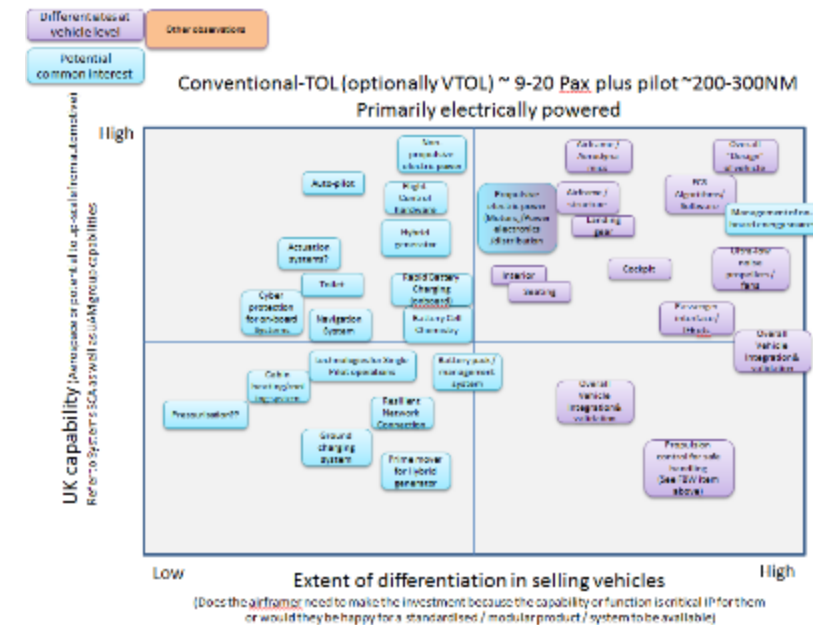
1. State of play: If the right vehicle/system existed today, what are the processes for establishing the right operating environments (against the market segments)
2. Art of the possible: Art of the possible: What is the idealised process for establishing operating environments? And given the 'state of play', what the are timelines and roadmaps for getting there?

Vehicles

Objective: To understand the UK challenges and opportunities for indigenous vehicle development

Outputs:

1. Detailed compendium of UK vehicle programmes, mapped against the segmented market definitions (Link to market group)
2. Industry input to Future Flight Challenge development
3. Definition of business models for UK vehicle developers
4. Common barriers perceived by UK vehicle developers
5. Enablers for attracting existing Aerospace systems and equipment providers to the UAM market
6. Developing strategy for vehicle and systems development and funding



Networks

Objective: To connect with stakeholders (groups, networks, individuals, organisations) to enable rapid progress, while establishing the [ADS] Group as the voice of the UK UAM sector.

Outputs:

1. UK Stakeholder map and connectivity framework
2. Engagement plan for external stakeholders
3. Establish an “essential reading list” to share relevant updates and knowledge from across global UAM
4. Global Urban Air Summit, 3-4 September, Farnborough, UK





Finance

Objective: To ensure that UK UAM activity is appropriately financed and that we overcome the challenges faced in financing UK UAM development, supply chain and infrastructure.

Outputs:

1. Identify available funding sources
2. Work with government, accelerators and industry
3. Create the right environment to attract UK and global PE/VC investment including a proposal for an international Investment Conference in 2019