FUTURE AVIATION TECHNOLOGIES

IMPLICATIONS FOR LOCAL AUTHORITIES

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The policy and regulatory challenges arising from new Aviation Technologies

Five Core Themes have been identified

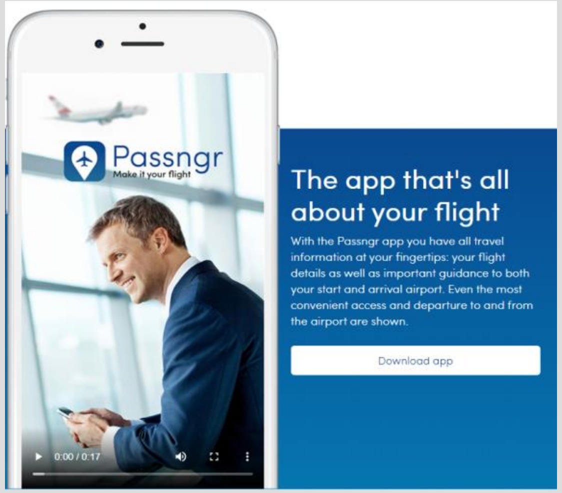
1. Enhancing the Passenger Travel Experience

2. Drones, UAVs and eVTOL

3. New Propulsion Systems

4. Air Navigation and Airspace Management

5. Aviation's CO2 Net Zero Targets



Implications for Local Authorities

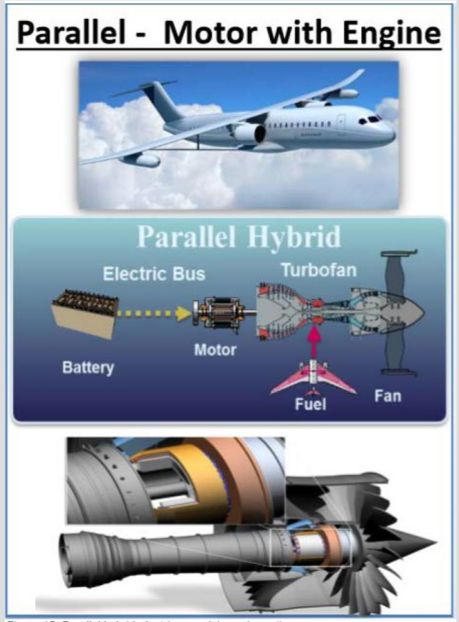


Figure 15: Parallel hybrid-electric propulsion schematic

Cross Cutting Themes are also a feature

Artificial Intelligence and Machine learning

Quantum Computing and Big Data

Automation – absence of direct human control

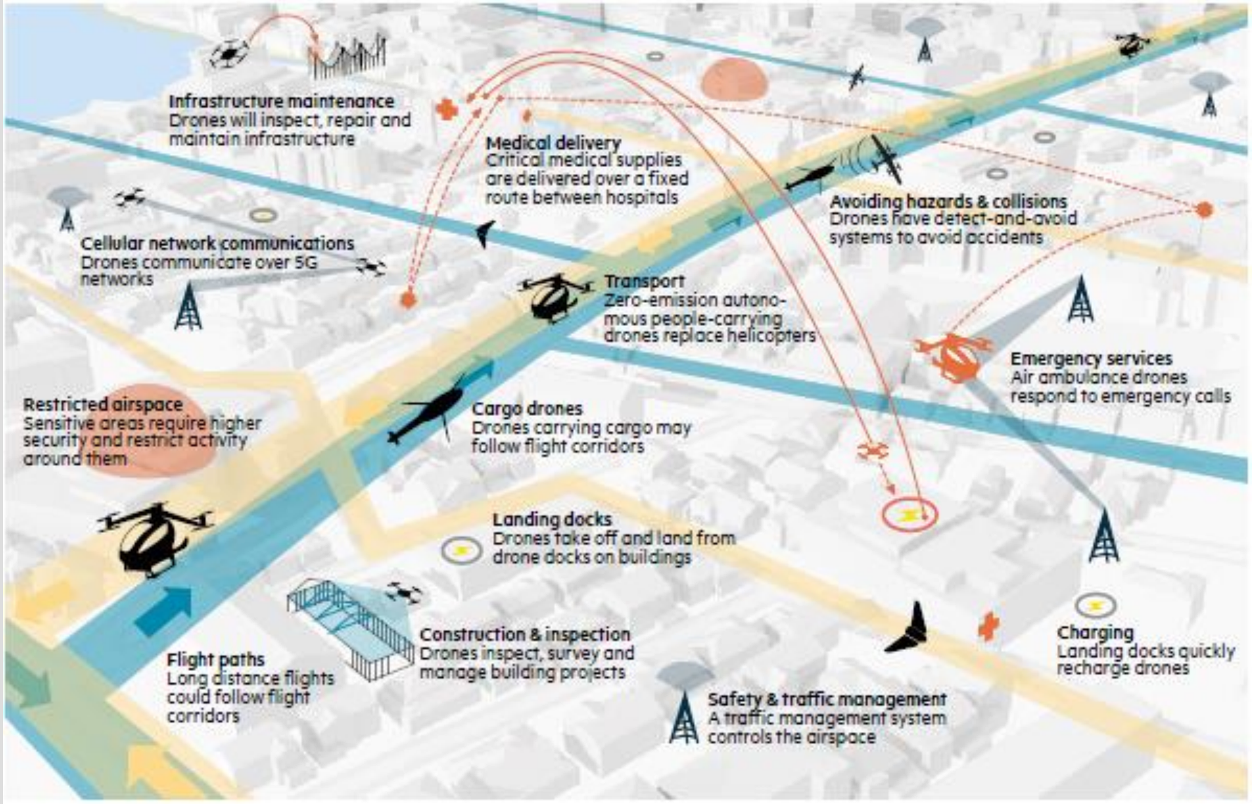
Safety, Security and Systemic Resilience

Anti Trust and Monopolistic Concerns

Legal (e.g. air rights and privacy) and Insurance issues

Social Licence – noise, CO2, visual intrusion, safety, public confidence, balancing interests, enforcement

Developing a UK Aviation Technology Road Map – R&D (Innovation, Product Development), investment (Govt and venture capital), scaling up, maintaining market leading position and competitiveness), skills & job creation



Implications for Local Authorities

Levels of Agency

ICAO: Global Standards and Agreements wherever possible

EU/EEA/ECAC wide: co-ordinated initiatives such as U-Space (air traffic management), safety, security, state aid, ETS, environment

UK (Govt and CAA):

- Legislation (Industrial strategy, airports policy, airspace management, data protection, IP, privacy, transcribing ICAO and European standards);
- Fiscal (investment, taxation, trading rules & sectoral/regional networking);
- Regulation (licensing; certification, anti-trust, delegated authority, environment).

Combined Authorities/LEPs: Strategic planning, transport & logistics integration, traffic management, economic development & job creation, skills & training, inward investment, EZ's & Freeports, management of lower airspace

Local Authorities: Use of technologies in service delivery, land use planning, environmental compliance, social licensing rules,

Implications for Local Authorities

Issues and Concerns

Speed of change and ability of all to keep up – and resource adequately with qualified people

Open, rather than closed, proprietary solutions avoiding monopolistic concerns – many of the main movers are billionaires or IT giants

Citizen protections (data; environmental impacts; social licence - in essence new social contract evolving between aviation and society)

Optimising benefits – Green potential; reduce terrestrial congestion; economic & productivity benefits

Passenger experience improvements beckon – how do we plan/co-ordinate

Need for ground based infrastructure planning and integration

Finance – who pays?

Policy – who develops, consults, rolls out, enforces?

Need for cross-departmental and Govt/LA/Industry co-ordination/expertise

Consultation on the policy changes arising from new aviation technologies

Drones and UAMS - Questions

15a. What are the top 5 opportunities/uses that drones technologies present? Please provide your view of likely timelines and key milestones

Your answer

15b. Please provide your view of likely timeline and key milestones.

Your answer

16. What are the top 5 challenges you foresee in their adoption and more widespread use?

Your answer

30b. What are the timescales over which this impact will occur, using 2020 as a base date?

- ◯ 0-5 years
- ◯ 5-10 years
- ◯ 10-20 years
- ◯ 20-30 years
- ◯ + 30 years
- ◯ Do not know

30c. Which of the following markets do you think electric/hybrid-electric aircraft are likely to succeed commercially in?

- ☐ E-VTOL/air taxis – urban environments
- ☐ E-VTOL/air taxis – rural environments
- ☐ Private GA
- ☐ Business Aviation
- ☐ Short hop (up to 150km) commercial air transport
- ☐ Short distance (150-400km) domestic/nr Europe air transport
- ☐ Medium distance (500-100km) domestic/nr Europe air transport
- ☐ Offshore industry support
- ☐ Emergency services
- ☐ Military
- ☐ Other: ____

You are invited to participate in this online survey

https://forms.gle/TmqBg41LhFfJCszn6

It is quite comprehensive, so focus on the sections that are of most relevance to you