



Future Flight - a green, distributed aviation market

Gary Cutts
Future Flight Challenge Director
Investor Webinar
July 2023



Innovate
UK

New market opportunities from better connectivity



UK Research and Innovation

Consumer Vision 2030

How the future aviation environment will benefit consumers in 2030



Drones

Unpiloted, non passenger carrying vehicles varying in size from small to large



Delivery Convenience

Distribution and delivery services are rapid, convenient and within each reach for everyday goods and services



Supporting Services

Drones support emergency services and perform complex inspections / operations



Increased Acceptability

Drone operations are quiet, safe and acceptable as part of day-to-day life



Advanced Air Mobility

Electric vertical take off and landing vehicles that provide short journeys for up to 10 people



Reduced Congestion

Efficient use of airspace resources reduces ground congestion (especially in urban areas)



Increased Consumer Choice

Allowing consumers to choose between cost and environmental efficiency



Reduced Journey Time

Average journey times significantly reduced



Journey Convenience

Services are available on demand, reducing impact of travel and travel times



Regional Air Mobility

10+ person electric, hydrogen or hybrid aircraft providing short-medium range hops between fixed locations



Improved Connectivity

Rural and traditionally disconnected regions form part of a highly distributed transport system within close proximity



Seamless Journeys

Existing transport is integrate as part of a seamless end-to-end transport network including ticketing



Improved Affordability

Operations are affordable and widely available for the general public



Increased Sustainability

Operations are electric or hydrogen based, minimising the environmental impact



Improved Accessibility

Improved access to services and employment opportunities for those with reduced mobility



Benefits to the UK Economy

Predicted 1.8% increase in GDP and 628,000 jobs supported by 2030

The markets include...

...faster medical deliveries and disaster relief



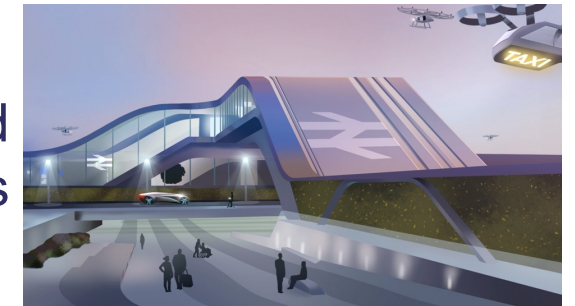
...last mile deliveries to your door



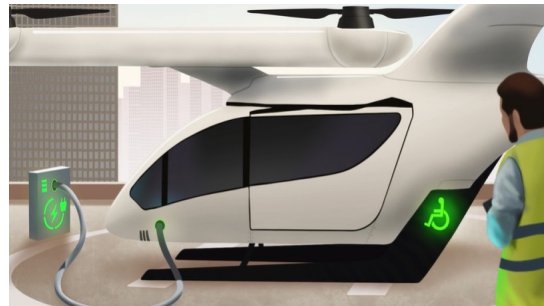
...remote maintenance reducing HSE risks



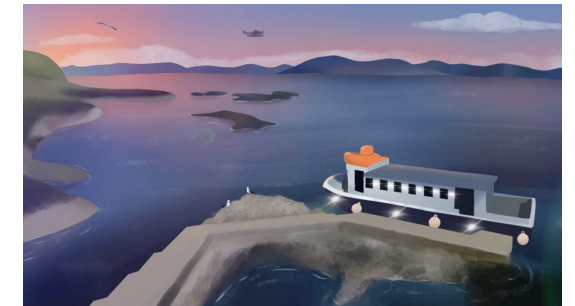
...integrated transport systems



...better connectivity 'town-pairs'



...green flight connecting remote rural locations

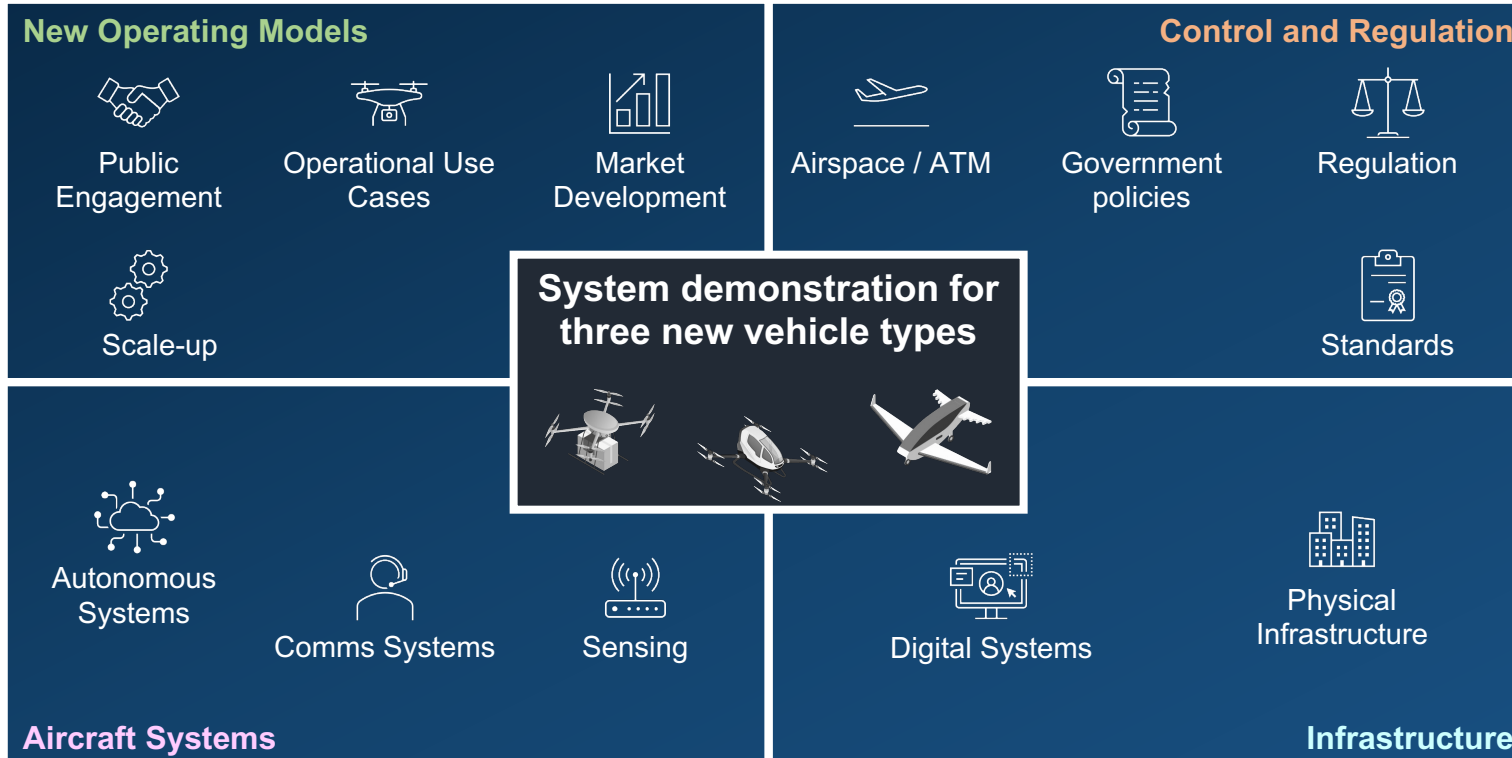


but they are evolving continuously

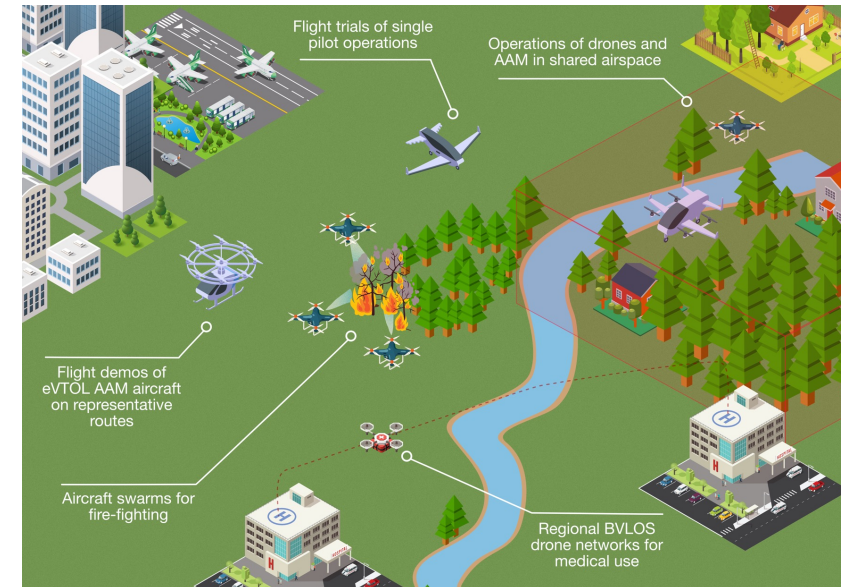
This represents a whole new ecosystem...



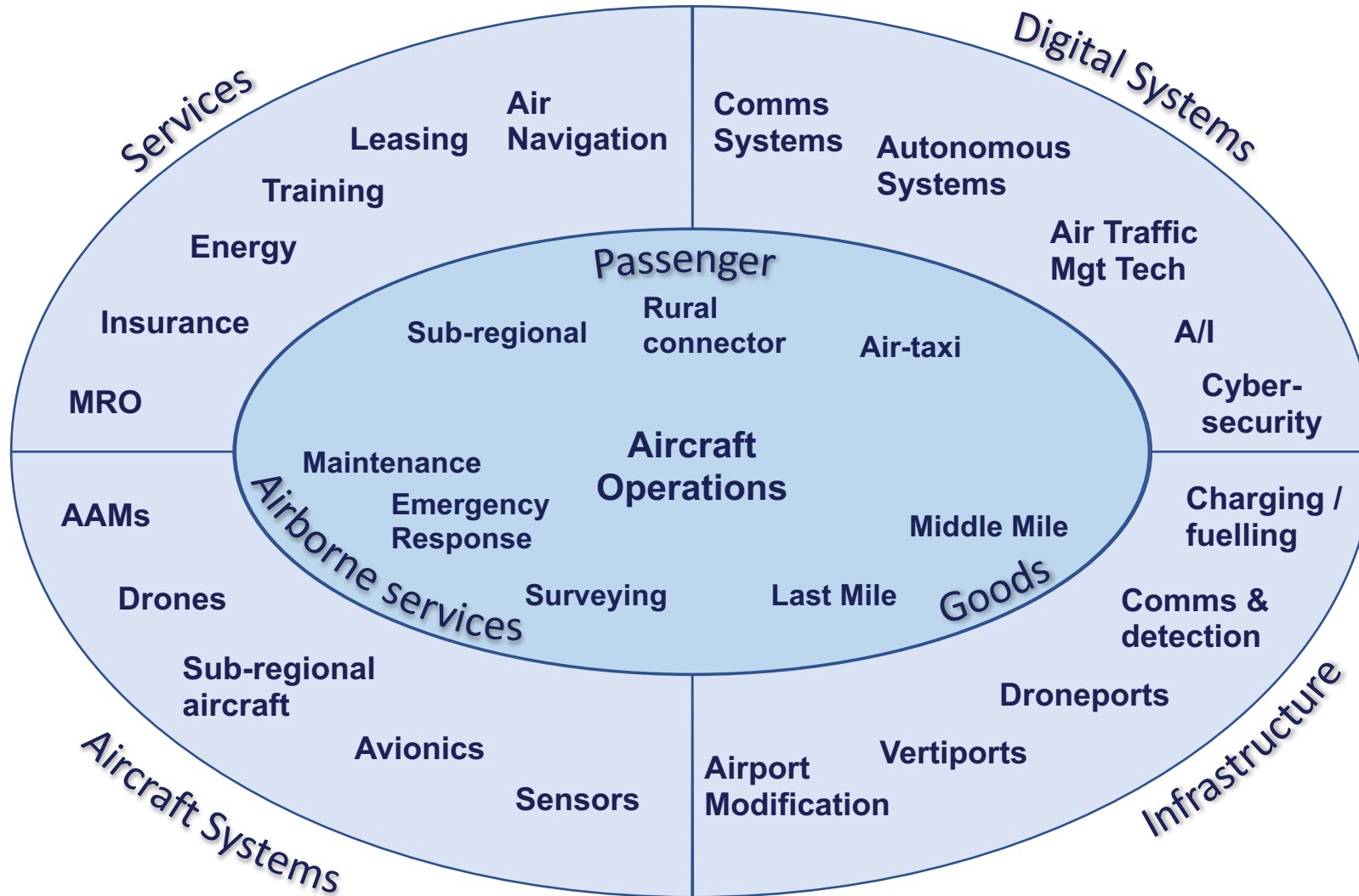
UK Research and Innovation



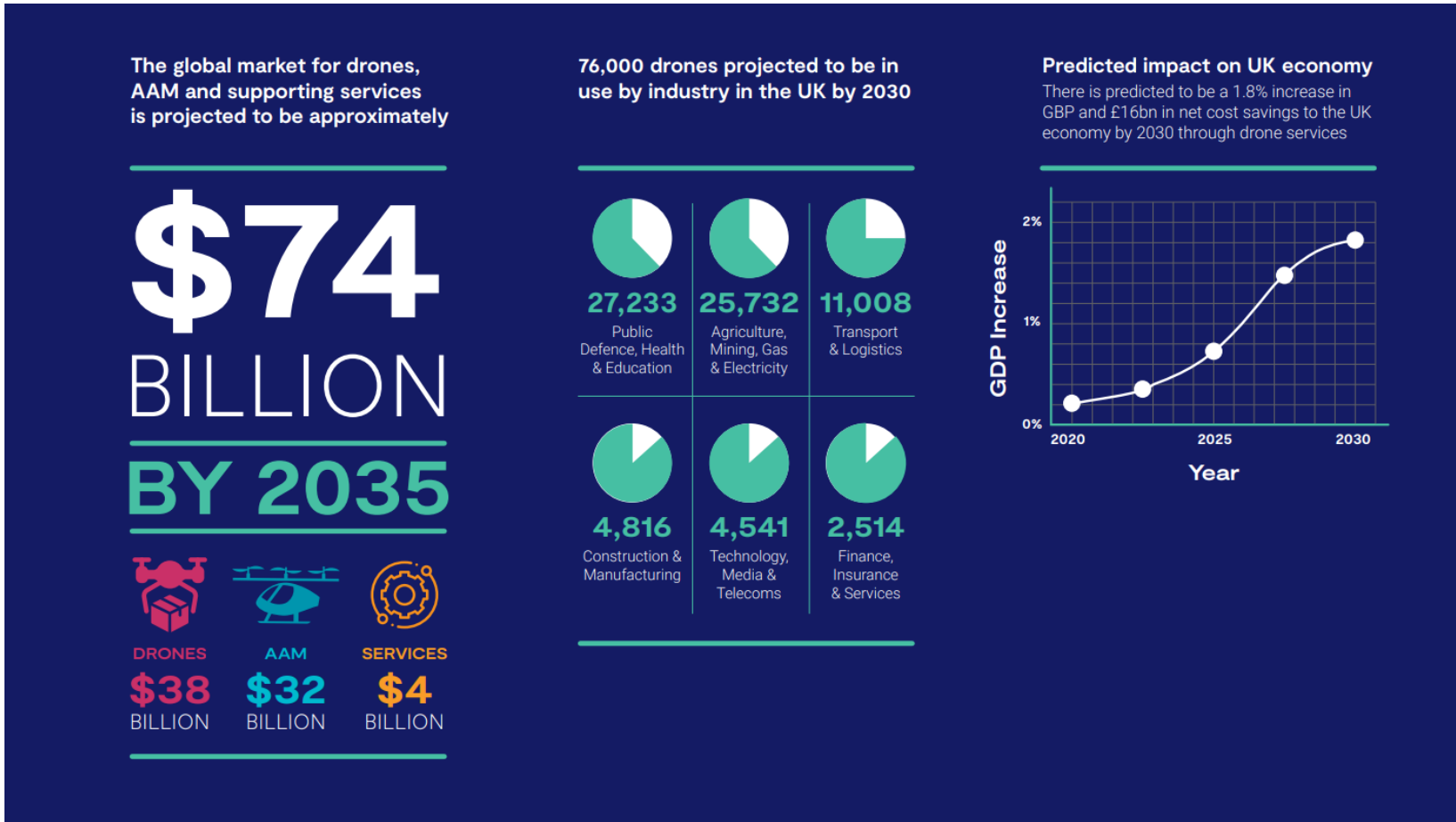
..being accelerated to deliver early, real-world use cases with huge market potential



Market Opportunities by segment / business

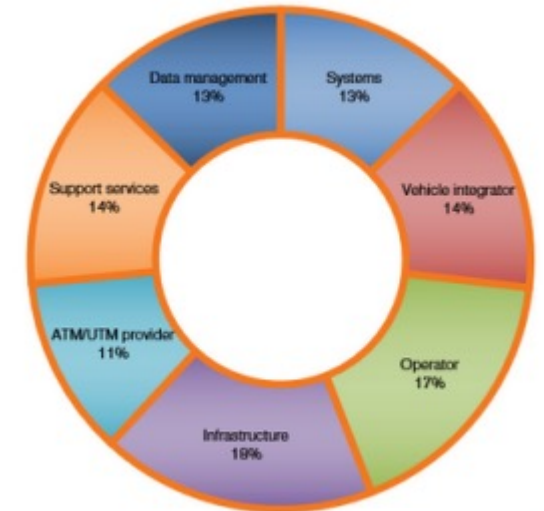


Market Opportunities by size



FFC Vision and Roadmap 2021

The AAM market can be expected to be large with a nominal forecast prediction of \$510bn by 2040



ADS AAM Outlook June 2021



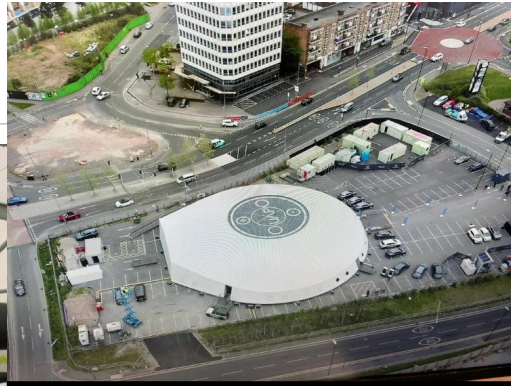
The ≈£110m FFC investment in UK industry is forecast to generate £400m+ co-funding

Future Flight Projects and Companies showing the way

- 78 projects completed and underway culminating in ambitious 2024 showcase demonstrations
- 200+ unique organisations - largely SMEs, tech companies and start-ups

Flying taxis hub opens in Coventry for demonstrations

2 days ago



Major funding for 'green' aviation zone project



Farnborough 2022

Atkins teams with Vertical Aerospace and Virgin Atlantic for Heathrow eVTOL test

By Dominic Perry | 18 July 2022



Aerospace

Project Heart pushes ahead with sub-regional plans as phase 3 funding kicks in



By Dominic Perry | 14 September 2022



A UK government-backed consortium seeking to develop technologies that could revolutionise sub-regional aviation could begin tests of a highly automated, retrofittable flight-control system as early as next July.

Led by specialist autonomous system integrators Blue Bear Systems Research, Project Heart – or Hydrogen Electric and Automated Regional Transportation – was in July awarded a £10 million (\$11.5 million) grant under phase 3 of the UK's Future Flight Challenge (FFC) initiative.



The site's operator said a life-sized model of an air taxi being built by Supernal, part of Hyundai, would be on show

A hub for future vehicles like air taxis and delivery drones is opening to the public for demonstrations.

Over at least a month the Air-One mini-airport site in Coventry will host demonstrator flights and outline how to control aircraft.

UK set to have world's biggest automated drone superhighway

18 July · Comments

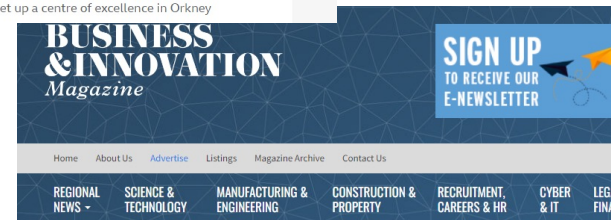


Sport Weather

World Business Politics

At a glance

- Plans to create a low-carbon aviation zone has won major funding
- The almost £9m in support will help set up a centre of excellence in Orkney

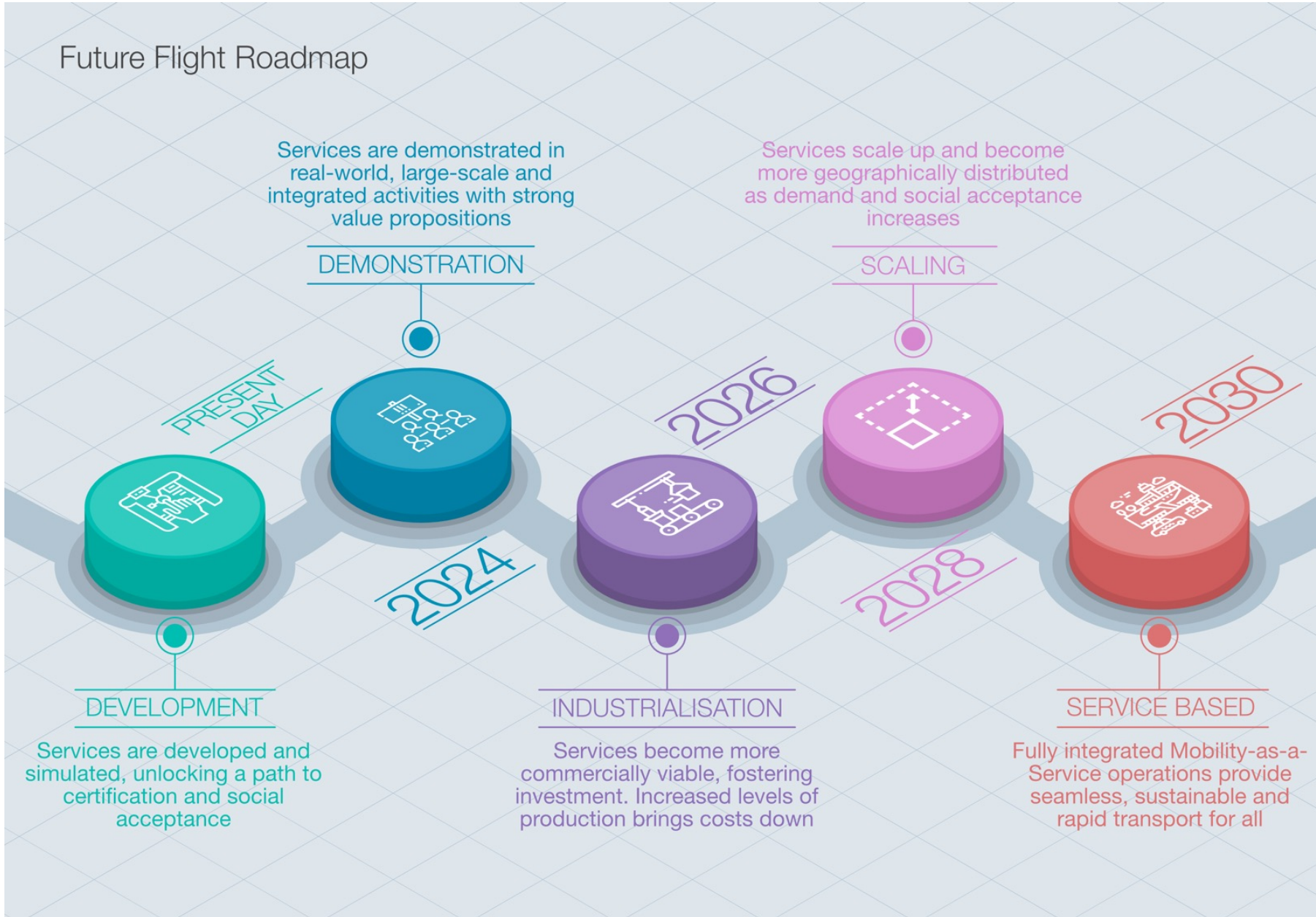


THE SKY'S THE LIMIT FOR READING-BASED PROJECT HADO

19th July 2022



It's closer than you think...





UK Research
and Innovation

Thank you

Gary Cutts
Future Flight Challenge Director
gary.cutts@iuk.ukri.org
+44 (0)7342 088572

