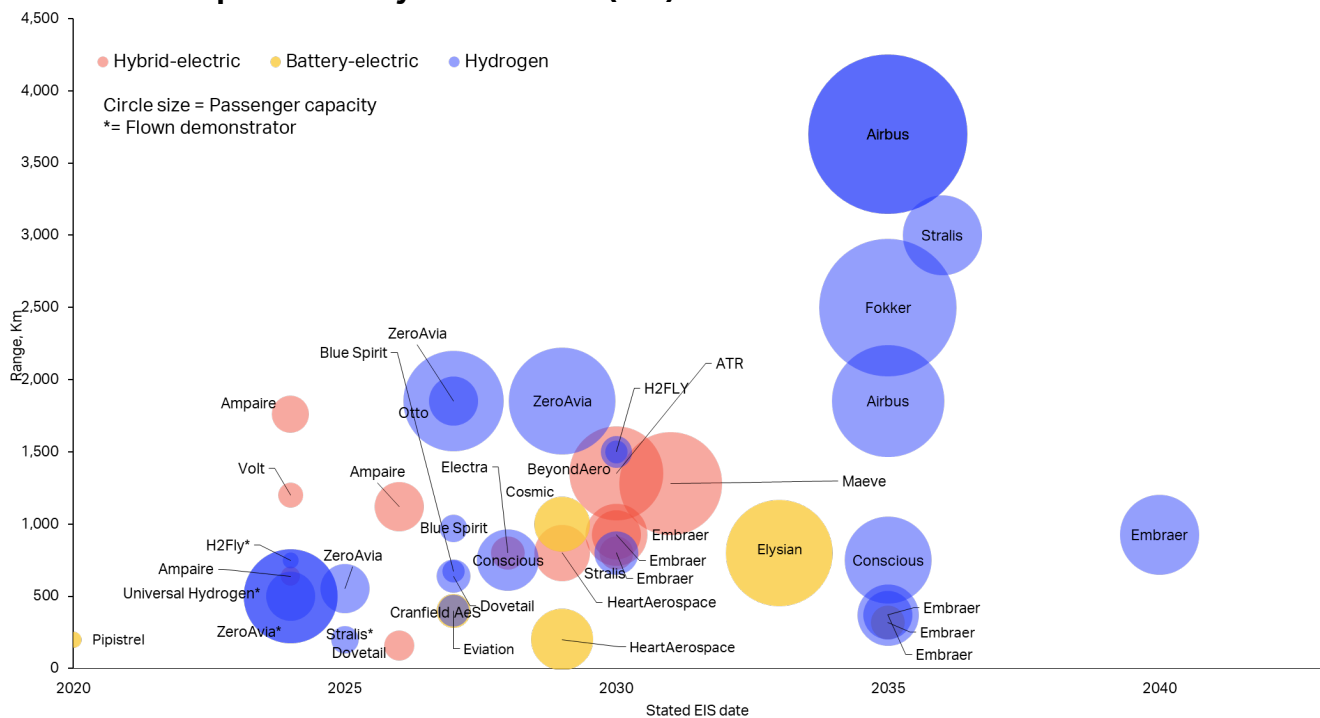


Chart of the Week

29 November 2024

Aviation is innovation: A peek into future aircraft concepts

Announced hydrogen, battery, and battery-hybrid aircraft by range, passenger capacity, and date of expected entry into service (EIS)



Source: IATA Sustainability and Economics

- The [IATA Net Zero Roadmaps](#) highlight the transformative potential that new aircraft propulsion systems and energy carriers such as hydrogen and batteries can have in reducing CO₂ emissions from global air transportation. These aircraft will initially impact mostly domestic emissions due to their range and payload.
- We identified a non-exclusive list of 44 individual aircraft concepts from 23 companies, including future platforms and flying demonstrators, and classified them by energy source: hydrogen (26), battery (6), and battery-hybrid (12). Some companies with multiple concepts appear numerous times in the chart. No analysis has been done as to the maturity or possibility of success of these aircraft architectures.
- Aviation has transformed itself many times, from piston-engine biplanes made of wood and canvas, to swept-wing jet-engine airliners, to composite material transatlantic aircraft with unprecedented efficiency and safety. The companies on this chart and the people that work in them are an example of aviation's long tradition of courageous innovation. They strive to make aviation not only the fastest and safest mode of transportation, but also the cleanest.
- Investment, supporting policies, and open-door cooperation must continue and increase to accelerate the development of these aircraft and increase their contribution to the Net Zero 2050 goal. Even if not all companies and concepts shown on this chart succeed, the technological development and the upskilling resulting from this innovation wave will undoubtedly benefit aviation for generations to come.

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