Zero Impact Aviation Alliance

Ambition Statement

Aviation is crucial to connect people, cultures, and economies across the globe. As the only means of rapid long-distance transportation, it provides vital links for business and leisure passengers, and enables transportation of goods that are perishable, high value, or time sensitive.

The industry has a long track record in both improving fuel efficiency and reducing noise; but more can be done to further minimize noise and improve aviation's overall environmental footprint. Currently, global civil air transportation contributes approximately 2% to anthropogenic CO_2 emissions. Non-CO_2 effects – including those from contrails, the white line-shaped clouds that form behind aircraft engines – are currently understood to increase aviation's impact on anthropogenic warming.

To substantially reduce the environmental impacts of our industry, we must work collectively and seek meaningful actions based on the latest science. In response to this need, Boeing, Delta Air Lines, Massport, Pratt & Whitney, and World Energy are coming together with the Massachusetts Institute of Technology in the Zero Impact Aviation Alliance. The Alliance combines cutting-edge academic thinking with leading industry expertise; it represents the full value chain of air transportation. It aims to provide us with research-driven thought leadership to re-imagine aviation. We want ZIAA to help the industry reduce the impacts of aviation on the environment, while ensuring that air transportation can continue to serve humanity and connect the world.

In this spirit, we pledge to work together in this collaborative forum as follows:

- ***Setting goals and tracking progress:***
  In our regular consortium meetings, we share insights from our different perspectives on verifiable goals and metrics that can guide decision-makers across aviation and energy sectors towards a sustainable future. Through these perspectives, we want to help set a robust standard for tracking progress that the public and our customers understand and embrace. We want to help explain our actions and guide both national and international decision-making.

  Our efforts will have to consider measuring trade-offs among different environmental impacts, wherein efforts to reduce one impact can negatively affect other areas. We hope to develop an integrated approach which will allow the decarbonization challenge to be pursued consistent with existing strategies to reduce localized noise and air emissions.

- ***Plotting paths into a sustainable future:***
  In regular workshops, we aim to jointly explore solutions across the value chain, informed by academic rigor and creativity. We want to understand and identify the viability of paths toward a sustainable future from our different perspectives. To do so, we must jointly assess the opportunities and hurdles associated with each path from our different perspectives.

- ***Experiments and prototypes:***
  As we assess different paths towards meeting environmental goals, we want to work under MIT's academic and scientific leadership to seek experiments and prototypes that could accelerate progress. The members intend to seek such opportunities in a research-driven effort to achieve ambitious sustainability goals.

- ***Education***:
  Through yearly courses for our employees, we want to create opportunities to learn from one another and from the most recent academic findings. We will work together with MIT to advance, in our respective organizations, the knowledge, skills, and thinking required to achieve a sustainable future for air transportation.