



Airport Safety Week: Day 1 Toolbox Talk – The intersection of Airport Safety and Sustainability

Globally, over 93% of CEOs see sustainability as necessary for their company's future. Sustainability has moved from being just an 'add-on' into 'that's how we do things here.'

The same goes with safety; organisations find their financial, social, and environmental risks, obligations, and opportunities better met when focused on safety in workplace culture. So how are these two parameters – safety and sustainability shaping the aviation landscape?

Airports around the world have been increasingly focused on decarbonisation efforts to reduce their environmental impact and mitigate the effects of climate change – committing to net zero emissions by 2050.

In an age defined by growing environmental concerns and the unwavering need for air travel safety, airports worldwide are grappling with a multifaceted challenge. Balancing the imperative of airport safety with the goals of sustainability has become a pressing challenge for the aviation industry. The intersectionality between safety and sustainability is reshaping the way airports operate, leading to innovative solutions and a redefined vision for the future of air travel.

The aviation industry has historically been built upon the bedrock principle of safety. Airports, as the gateways to the skies, play a pivotal role in ensuring the safety of passengers, crew, and aircraft. This commitment to safety encompasses a wide range of measures, including robust security protocols, efficient air traffic control, and rigorous maintenance of runways, terminals, and aircraft.

As the aviation sector moves towards decreasing its carbon footprint, this shift has led to a transformative moment, where sustainability is now recognised as equally vital as safety.

How are airports working towards Net Zero?:

1. **Renewable Energy:** Many airports are investing in renewable energy sources such as solar panels, wind turbines, and geothermal systems to power their operations. This shift toward clean energy reduces their reliance on fossil fuels and lowers their carbon emissions.
2. **Electric Ground Support Equipment (GSE):** Airports are transitioning their ground support equipment, such as baggage tugs and aircraft tow vehicles, from traditional diesel and gas-powered engines to electric or hybrid



alternatives. These changes help reduce air pollution on the tarmac and decrease emissions.

3. **Energy Efficiency:** Airports are implementing energy-efficient technologies and practices within their terminals, lighting systems, HVAC systems, and other infrastructure. This reduces energy consumption and, subsequently, emissions.

4. **Sustainable Building Design:** When constructing or renovating airport facilities, sustainability is a primary consideration. Features like green roofs, energy-efficient windows, and passive heating and cooling systems are incorporated to reduce energy use and emissions.

5. **Carbon Offsetting:** Some airports are investing in carbon offset programs to balance out their emissions. This can involve funding projects such as reforestation or renewable energy initiatives to compensate for their carbon footprint.

6. **Alternative Fuels:** Airports are encouraging the use of alternative fuels for aircraft, such as biofuels or hydrogen, which have lower carbon emissions compared to traditional aviation fuels.

7. **Public Transportation and Connectivity:** Airports are improving their public transportation options and connectivity to reduce the number of passengers traveling to and from the airport by personal vehicles, which can help decrease emissions associated with ground transportation.

8. **Sustainable Procurement:** Airports are increasingly prioritizing the procurement of sustainable and eco-friendly products, from cleaning supplies to construction materials, to reduce their environmental footprint.

9. **Waste Reduction and Recycling:** Airports are implementing waste reduction and recycling programs to minimize the amount of waste sent to landfills and incinerators, which can release greenhouse gases.

10. **Collaborative Initiatives:** Many airports are working together with airlines, governments, and environmental organisations to set carbon reduction targets and share best practices for achieving decarbonisation goals.

11. **Sustainable Airport Master Plans:** Airports are developing long-term master plans that include sustainability goals and strategies, ensuring that decarbonization is integrated into their future development and operations.



12. Education and Awareness: Airports are also engaging with passengers and the community to raise awareness about the importance of sustainable travel and to encourage environmentally responsible behaviour.

Safety and Sustainability - the Overlapping Concerns

At their core, safety and sustainability concepts are geared towards the same objective – preserving resources. And when it comes to airport safety, the resource that is in question is both the human workforce and the travelling public. An airport cannot be called sustainable if it does not focus on protecting the health and safety of its employees and customers.

As the aviation industry grapples with the intersectionality of safety and sustainability, airports are increasingly realising that these two objectives are not mutually exclusive. In fact, they can be mutually reinforcing. By incorporating sustainable practices into airport operations, the industry can mitigate long-term environmental impacts, enhance safety, and protect the wellbeing of their workforce.

The Key Challenges

The path towards harmonising airport safety and sustainability is not without its challenges. Some of the key hurdles include:

Cost Implications: Implementing sustainable practices often involves significant upfront costs. While these investments may yield long-term benefits, securing funding for sustainability initiatives can be a barrier, especially for smaller airports.

Regulatory Complexities: Airports must navigate a complex web of regulations and standards, both in terms of safety and environmental sustainability. Harmonising these requirements can be challenging and may require multi-stakeholder cooperation.

Technological Innovation: Developing and adopting sustainable technologies in aviation, such as electric aircraft, requires significant research and development efforts. These innovations must also meet rigorous safety standards before becoming mainstream.

Changing Consumer Expectations: Passengers are increasingly considering the environmental impact of their travel choices. Airport operators must respond to



changing consumer expectations by offering more sustainable options while ensuring safety remains uncompromised.

The intersectionality between airport safety and sustainability represents a profound transformation within the aviation industry. Airports are evolving into eco-friendly hubs without sacrificing safety standards. While challenges persist, the industry's commitment to this dual mission signifies a positive step toward a more responsible and sustainable future for air travel. Balancing these two imperatives is not only possible but essential for the long-term viability of the aviation sector and workforce in an environmentally conscious world.

As airports continue to innovate and adapt, they will shape a future where passengers can travel safely and sustainably, leaving a smaller carbon footprint on the planet they traverse.

Additional Resources:

What makes a sustainable airport?	https://www.arup.com/perspectives/what-makes-a-sustainable-airport
Safe, Smart and Sustainable Airports	https://search.abb.com/library/Download.aspx?DocumentID=9AKK108466A4914&LanguageCode=en&DocumentPartId&Action=Launch