

This topic is “practice ready.” Yes No

Emphasizing Sustainability and Wellness in Airports: Fitness Facilities in Airports

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Abstract

As the significance of reducing fossil fuel consumption and increasing energy efficiency to be more environmentally friendly is becoming more prominent, the FAA seeks to increase energy efficiency and sustainability at airports. Many airports use exterior power systems to help reduce power consumption such as solar panels or wind turbines. The exterior power systems are a possible safety concern because of glare and having tall objects near the airport. A student team from the University of Missouri (MU or Mizzou) proposes the design of an energy generating gym facility that provides renewable energy while improving the health and wellness of passengers, flight crews, and airport employees. Public health and alternative energy are both topics that are on the forefront of national concern. Both topics are addressed with the installation of a sustainable gym due to the benefits that the exercise equipment provides both the body and the environment. The motivation of the design was to create a healthy and safe alternative while waiting for a flight. The idea had to be environmentally friendly to benefit the airport yet feasible to implement. The energy generating gym facility utilizes the kinetic energy from users using a treadmill, elliptical, or stationary bike, which can be transformed into electrical power by having specialized equipment that would supply its own grid with power. With this alternative energy generating capabilities, the operational costs of the airport terminal would be decreased. This system effectively allows passengers to live a healthy life while traveling without increasing the power consumption of the airport but instead decreasing the power consumption with an environmentally friendly alternative.

Keywords: Airport, Public Health, Energy Efficiency, gym