Entry 14 - Part One – Junior

What is the problem you are addressing?

The problem I'm addressing is the excessive energy consumption in Australian airports. This includes energy used by machinery, departures, and arrivals of people and planes. The high energy usage leads to expensive electricity bills and relies on unsustainable energy sources.

What is your idea?

I have two main ideas:

1. Installing pressure-sensitive panels under airport runways to harness energy from the speed and momentum of hundreds or thousands of planes taking off and landing.
2. Using kinetic pavements in high-traffic areas of the airport, such as gates, seating areas, eating areas, and walkways, to generate energy from people's movement.

How does it work?

Runway Energy Generation: Pressure-sensitive panels installed beneath the runway convert the speed and momentum of landing and departing planes into energy. This energy is then sent to a generator and stored in batteries for later use in various airport operations.

Kinetic Pavements:

Special pavements in busy areas of the airport convert the kinetic energy from people walking into electrical energy. As more people travel, especially during peak times like the holiday season, more energy is generated. This energy is also stored in batteries for use in airport operations.

Windmill Energy: Additionally, windmills can be strategically placed around the runway area, but at a safe distance to avoid interference with aircraft operations. These windmills would generate energy with each rotation, contributing to the airport's power supply.