RUN WEIGHT

Aircraft Weighing & Balancing System

For a Safer Take-Off & Landing

Aviation's first safeguard solution

for cross checking an aircraft's total weight & balance to obtain the Accurate Centre of Gravity (COG) prior to take-off

Unique Australian/German Design & Innovative State of the Art Hi-Technology

What is Runweight™?

Runweight™ is an intelligent Weighing and Balancing System that is integrated into a aerodrome apron/taxiway, airline maintenance or military facility.

For the first time in aviation history, Runweight™ allows flight crew to obtain an accurate TOW.

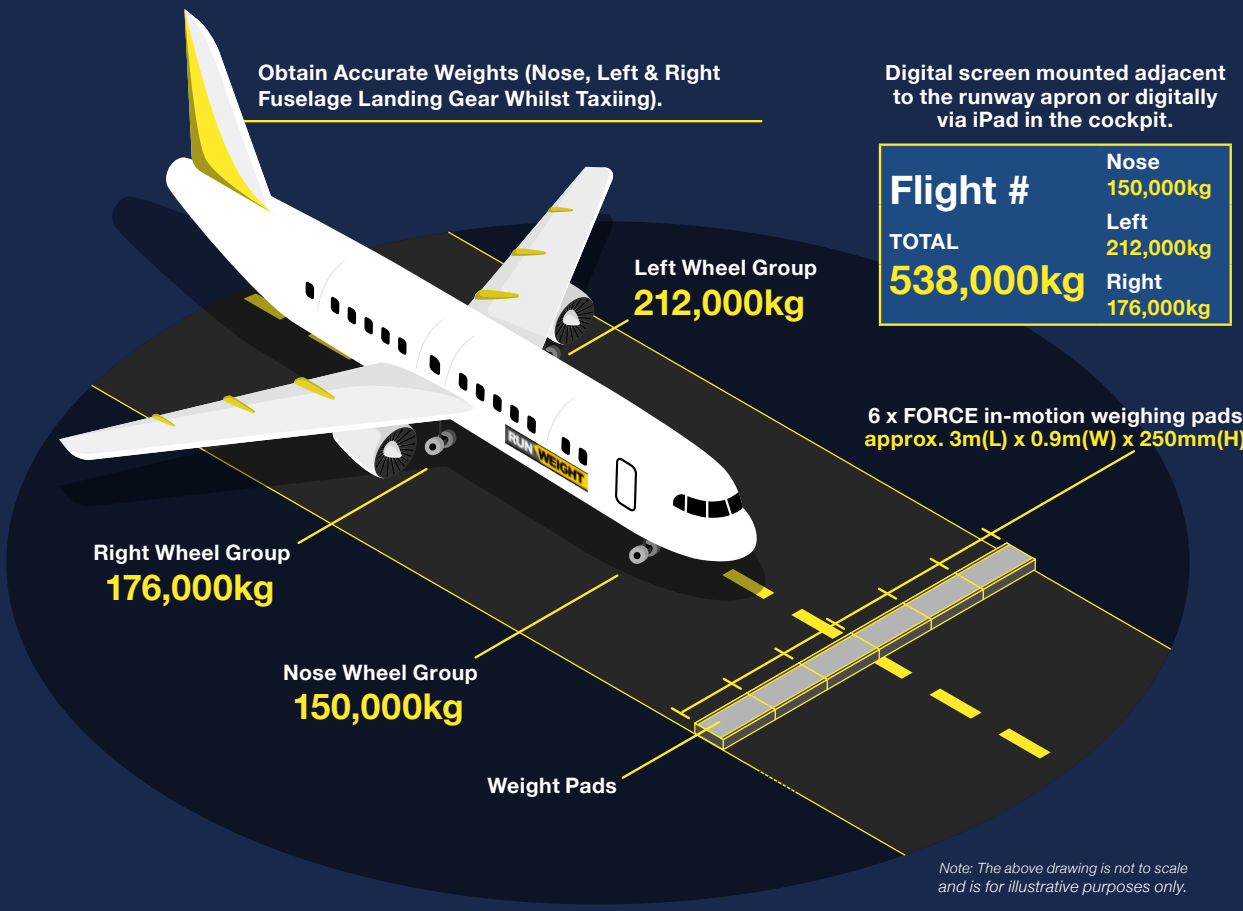
It provides one final safety solution to assist in minimising human error and at least question and or verify if the load data input is correct prior to take-off?

The Runweight™ system is built to military grade precision quality & designed for all types of planes up to and including Airbus A380

Runweight™ features

- Identify iced wings.
- Identifies aircraft type by weight.
- Monitoring Tarmac/Runway damage caused by overloaded/heavy aircraft.
- Undercarriage damage & failure or collapse + runway excursions.
- Take-off and landing noise pollution reduced via using less take-off thrust by knowing the aircrafts accurate weight.
- Excess pollution from burnt tire rubber due to heavy & overloaded aircraft.
- Assists with fuel calculations confusion from pounds to kilograms.
- May lower insurance premiums.
- By accurately determining the aircraft's weight before take-off, a shorter runway can be used, preventing delays and reducing emissions from idling planes.

Taxiway or apron install



Note: The above drawing is not to scale and is for illustrative purposes only.

Why is Runweight™ required?

In 2014 the Transport Safety Bureau tabled its independent investigation into the occurrence of aviation take-off incidents that occurred between 1989 and 2009. The report identified RISK CONTROL relative to human error involving incorrect take-off performance parameter calculation methods used as a contributing factor behind take-off incidents & accidents. The report identified that a single solution for minimising or eliminating these errors was missing and made recommendations, including the need for a procedural SYSTEM CROSS-CHECK prior to take-off.

The most recent deadly disaster was Cuban Flight 972 in 2018, 113 people died which was blamed on the actions of the crew and their "errors in the calculations of the weight & balance". Runweight™ may have prevented this. Yet in 2024 it's impossible to believe there is still NO accurate and reliable user friendly safety cross-checking system available to the Aviation Industry, pilots and/or engineers, relative to one of the most critical factors in determining 'take-off performance parameters', total Overall Weight (TOW), weight distribution and Centre of Gravity (COG).

Bottom line is simply:

The weight of everything onboard an aircraft must be accounted for as accurately as possible (but not accounted for more than once) and at one time using modern technology prior to take-off rather than trying to be calculated from multiple human sources.

Reducing:
global carbon emissions
tail strikes
human error
noise pollution
runway damage
engine wear
brake wear

Saving:
lives
fuel
the planet

Tail strikes can be caused by incorrect balance and can be deadly

Tail strikes can indeed occur due to weight and balance issues i.e. the incorrect distribution of weight within an aircraft and its effect on its stability and control.

1. **Center of gravity (COG) position:**
   The center of gravity is the point at which the aircraft balances and if the COG is too far aft (toward the tail) during take-off when the nose is raised to rotate, it is more prone to striking the tail on the runway, so it's critically important to ensure that the TOW/COG is within the prescribed limits to maintain proper balance.

2. **Loading and cargo placement:**
   Improper loading of cargo or passengers can affect the weight and balance of the aircraft making the aircraft dangerously tail or nose heavy.

3. **Fuel distribution:**
   Fuel distribution plays a crucial role in weight and balance and uneven fuel distribution can cause a shift in the COG and this imbalance can affect the aircraft's pitch control and make it more susceptible to a serious tail strike.

A tail strike during take-off or landing can caused damage to the tail skid, antennas and other structures located at the rear underside of the aircraft, leaving debris on the runway which is very dangerous for other trailing aircraft.

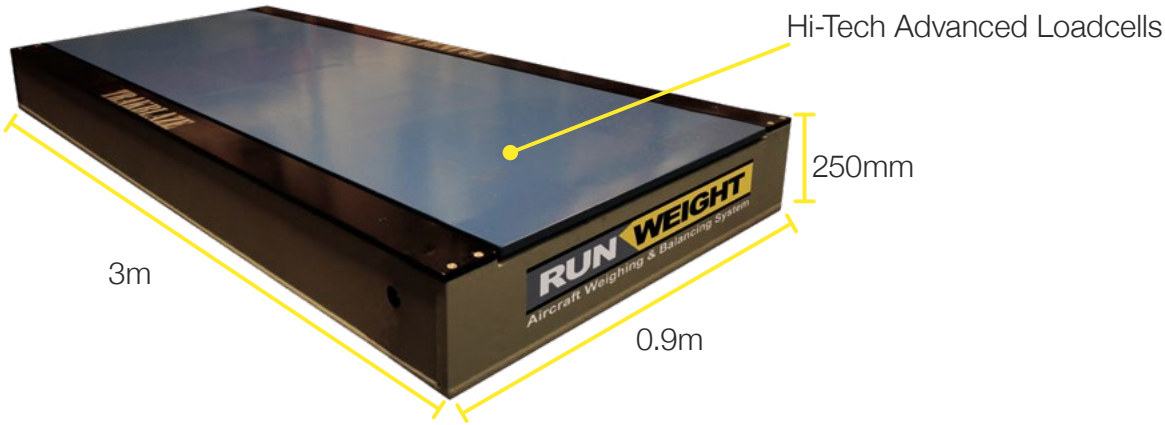
Impact on global warming

Aviation is the most **CARBON INTENSIVE** form of transport on Earth, known as a **SUPER EMITTER** to our **Carbon Footprint**, which is poisoning our Earth & seriously adding to the global warming and climate change problems including increased turbulence.

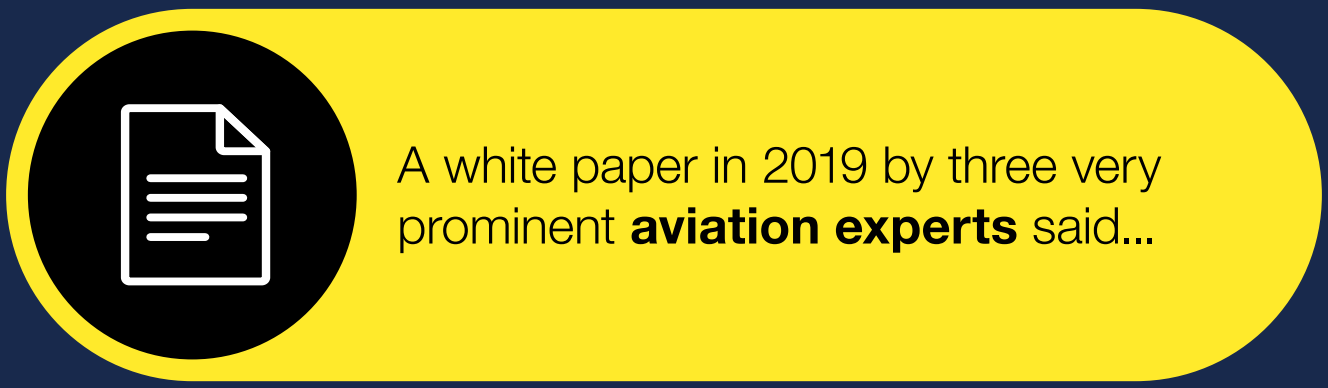
EXAMPLE: Flight crews overestimate take-off weight by 2 tonnes or more depending on aircraft type. Up to 20% of an aircraft's thrust/fuel can be used during take-off & climb and by knowing an aircraft's accurate weight, it is estimated thrust could be reduced by up to 5%, resulting in **enormous fuel & emissions savings** including at cruising speeds and landing.

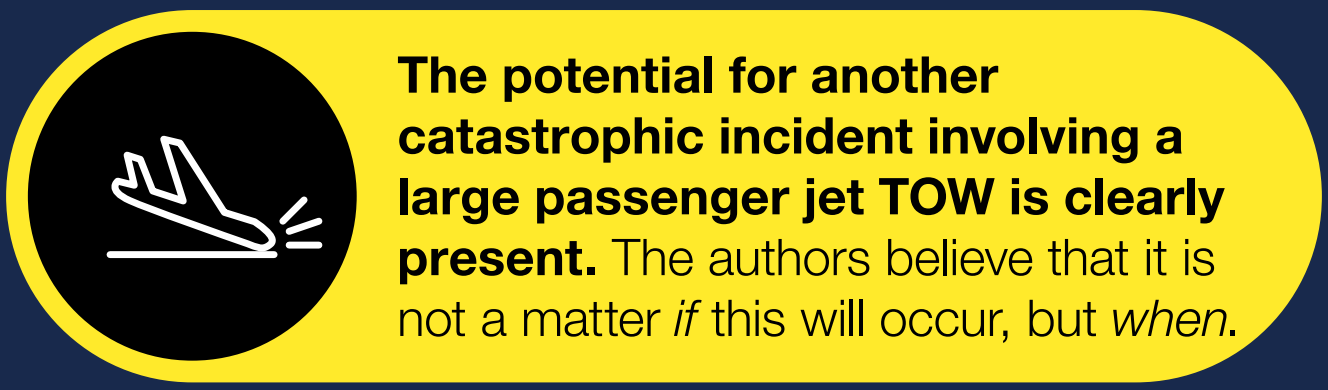
Calculate the potential global impact by considering up to 100,000 flights daily. If each flight saves at least 1 tonne, that translates to **100,000 tonnes saved every 24 hours**. This equates to an approximately impressive **36.5 million tonnes annually**. Note: This estimate excludes private and military aircraft.

Product Specs



Pad size:		Approx. 3m(L) x 0.9m(W) x 250mm(H)
Weighing Range:		0 to 150 tonnes per pad
Load - Totalling:		In dynamic mode 6 landing gear groupings
Accuracy Precision	**Dynamic Mode:** **Static Mode:**	1% ~ 3% or better up to 15-20km/h (approx.) 0.05% per pad (approx.)
Operating Temperature	**Digital controller:** **Loadcells:**	5°C to +50°C 20°C to +60°C
Degree of Load Cell Protection:		IP68
Number of Load Cells Per Pad:		4
Number of Weigh Pads		Up to 6





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