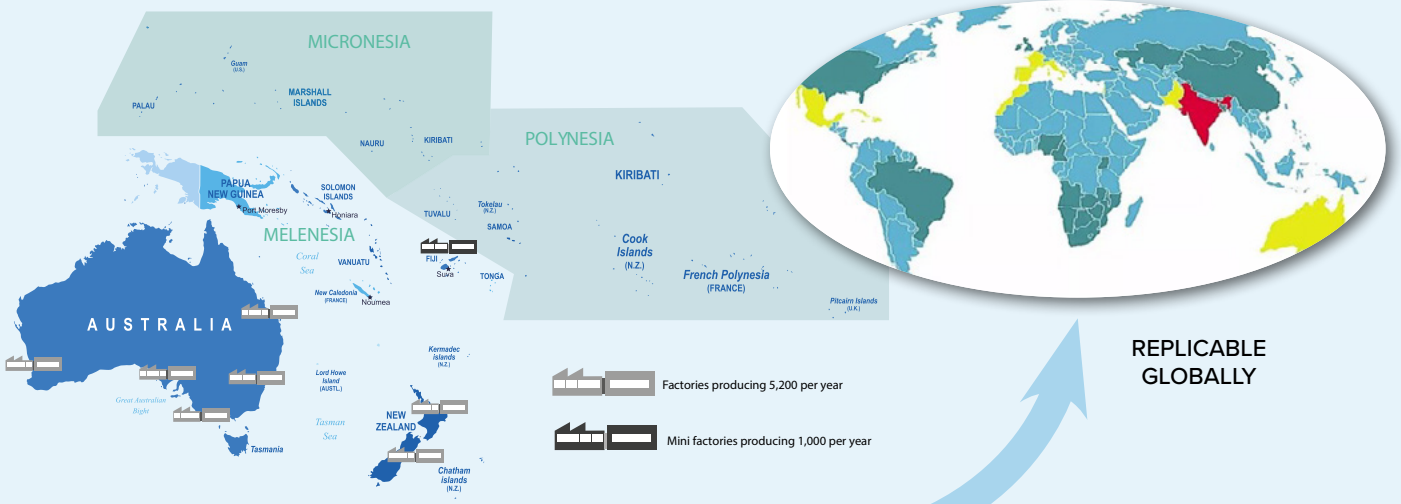




AIRFUTURE → GROUP



REPLICABLE
GLOBALLY

Affordable, long duration, scalable, energy storage with local supply chain manufacture & security, plus clean transport for everyone; individuals, masses & commercial

Brief Introduction

Showcasing Australasia

A New Climate Technology

Decentralised micro compressed air: energy storage & transport for homes, communities, businesses, micro grids and virtual power plants...

...providing affordable, modular, long duration storage without embedded emissions.

(This document is not stand alone but an introduction to the full Showcase Document)

1 NOVEMBER 2022



Website (AFG): www.airfuturegroup.com.au

Website (MDI): www.mdi.lu

Contact: CEO John Mennega, LinkedIn.

Email: info@airfuturegroup.com.au

Mobile: +61 (0) 418 286 059



AIRFUTURE → GROUP



I RUN ON AIR | *Green' Air*

Brief Introduction

Australasian Climate Innovation

Compressed Air Transport & Energy Products
with Distributed Micro Manufacture



TRANSPORT: From golf carts to waste vehicles.



ENERGY STORAGE: From homes to microgrids.

Compressed Air Energy – a solution for a cleaner climate future.

With global replication.

1 JANUARY 2023 | Website (AFG): www.airfuturegroup.com.au | Website (MDI): www.mdi.lu
Contact: CEO John Mennega, LinkedIn | Email: info@airfuturegroup.com.au | Mobile: +61 (0) 418 286 059

AFG prepared Flyer available that introduces our Climate Innovation.



Who we are...

Australasian Air Future Group (AFG) has a long term partnership with European Motor Development International (MDI) to roll out a showcase of innovative compressed air vehicles and energy storage across Australasia (Australia, New Zealand, and Pacific Islands).

MDI are the world leader in their field, with a range of entry vehicles and energy storage products, and have demonstrated their capabilities via major corporate client commissioned products. Mass roll-out is the next stage.

An “Australasian – European” corporate collaboration

AFG and MDI have collaborated exclusively in the plans for an Australasian showcase. Some of MDI entry products below.

Our compressed air engine is crossing borders



Products in Progress

- AIRPOD
- AIRPOWER
- GREENAIR

Future Projects

- AIRBIKE
- AIRSTREAM
- AIRWALL
- AIRONE

COMPRESSED AIR

United Nations MDI Award for Powering the Future We Want



A new paradigm

Surely within climate change one must wonder. All the elements are involved - sun and solar, wind, fire, water, hydrogen, carbon, nitrogen, rare minerals, heating and cooling, plants - except air! To date air doesn't feature in combating climate change or on most people's radar screen as a potential solution.

That changes herein! But it requires the reader to forget what they know and open up their minds to innovation and modern science to show that air can be a huge contributor to a clean planet.

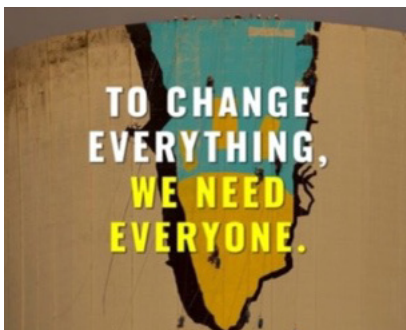
What solutions we address



What we solve.

After decades of development and using state of the art technology in a holistic manner, we demonstrate that micro compressed air energy storage brings unique benefits and solutions to climate change.

A key factor is the scale. With air solutions across energy, transport, and other industries, plus as an enabler for other climate technologies, the technology truly has potential to tackle the 51 billion tonnes of carbon spewing out annually.



Why this innovation.

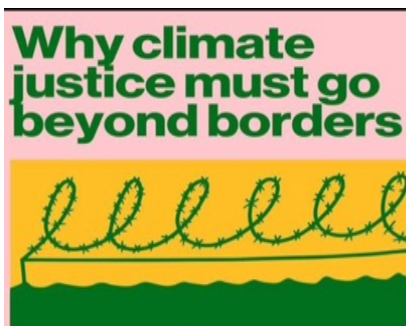
The most recent pandemic introduced many people for the first time to the word efficacy. The ability to produce a desired result. Overleaf we list five key characteristics for climate solution efficacy. You will quickly see that all current solutions lack something in efficacy. Therefore the way to achieve the overall result is to have a balancing portfolio of solutions.

Air has a critical role to play in such a portfolio.



Impactfulness.

Air as applied herein exhibits both efficacy and efficiency because of the systems and applications as it is a technology "team player". It is potentially one of the greatest enablers for decentralised energy, as well as further speedy and affordable development potential for all transport applications.



Universal applications.

The air solutions herein are far more universal (what is referred to by the IPCC and COP climate bodies as Justice for All). For our Australasian Showcase, with distributed regional manufacture and employment, this is game changer for the neighbouring Pacific Islands.



How we address solutions

At the core of all climate mitigation and abatement solutions are the five key necessities:

- **Scale** – how much impact on climate and on customers
- **Time line** – how soon can this technology's impact be felt
- **Affordability** – relative both to the provision and the purchase
- **Security** – will it guarantee the lights stay on
- **Sustainability** – how clean is it “cradle to grave”

Currently no technology is providing all these characteristics to the extent required. A managed portfolio of solutions at a macro level is needed to provide balance. This paper seeks to explain how the innovative micro compressed air technology, its multiple industry applications, and its enabling of other technologies, meets all the criteria above. This it does through a stepped explanation as follows.

Australasian Showcase & Global Replication

This flyer introduction is just a stepping stone to the full micro compressed air showcase document containing the following contents.

TECHNOLOGY & PRODUCTS – micro compressed air solutions

The first section introduces the core elements of the compressed air technology, the unique air engine, and how components are integrated into a storage unit (a “compressed air battery”). It then evolves the design of vehicles using the compressed air storage for new age transport, and spans the huge potential for energy storage to meet essential climate needs. Distributed manufacture adds a whole new level.

- ▶ **Technology** – It has been clear in early company dialogues the new technology is a revelation.
- ▶ **Transport** - In addition to existing, new vehicles can be designed and built very quickly.
- ▶ **Energy storage** – This is the holy grail for renewable intermittency and enabling energy transition.
- ▶ **Manufacture** – Legacy manufacture needs a shake-up. It's an attempt at integrating the old and new.
- ▶ **Showcase** – We use Australasia as a discrete geography to quickly show the world the technology.

ENERGY & CLIMATE FUTURE – a decentralised platform

The second section addressed the whole new world potential for decentralised energy, and some of the climate considerations that essentially need to be addressed and how air solutions seek to address them.

- ▶ **Energy storage** – The potential for change here rivals all other solution areas of climate change.
 - **Micro Compressed Air Energy Storage** – To now understand the MCAES in more detail.
 - **Thermal Energy Storage** – And why a holistic approach such as TES becomes a game changer.
 - **Decentralisation** – The huge future for decentralisation and the conflicts with centralisation.
 - **Microgrids** – The structures for decentralisation and why air solutions are so appropriate.
 - **Virtual Power Plants** – The solutions herein open up a whole new level for VPP progress.
- ▶ **Climate solutions** – To appreciate why the above is so critical one needs to appreciate the problems.
 - **Trilemma** – The three core problems that the world and current technologies face.
 - **Transition** – What is at the core of slowing a speedier solution to climate transition.

MCAES subsystems below are completely modular and enable power and energy decoupling:

- **The compression subsystem** uses external electricity such as solar to drive compression
- **The air storage subsystem** stores compressed air in man-made tanks or other facility
- **The air expansion subsystem** releases the expanding air to drive generation or transport
- **Optional air entry heating subsystem** heats the entry air to improve the enthalpy
- **Thermal energy storage subsystems** capture and apply heating and cooling
- **The electricity generation subsystem** producing electricity
- **The mobility subsystems** the air now powers a vehicle driving mechanism.

In addition innovative technologies enabled the unique construction and distributed manufacture.

ONE TECHNOLOGY FOUR APPLICATIONS – thumbnails from full document

MOBILITY	STORAGE	ENERGY	HEATING/COOLING
<p>Generate movement</p>	<p>Store energy</p>	<p>Generate electricity</p>	<p>Refrigerate</p>
Vehicles & Transport	Storage Systems	Electricity Markets	Air temperature & Trigenation

Commercial air vehicles – World Expo Air Train, Veolia waste vehicle, AirPod commercial version



Mass air vehicles & energy storage – GreenAir, AirPod, AirPower, AirWall



Micro manufacture – Turnkey factory, CNC machines, Air Train production, panels, engines & electronics outsourcing



This document is not stand alone and interested parties should obtain the full 'Showcasing Australasia' document. For the Australasian showcase, and for the products and projects, we will be seeking investors and funding, markets and channel roll-outs, geographical relationships, manufacturing partners, future product development ventures, and essential Government relationships. If you feel you may be a potential relationship in any these areas we invite you to reach out and express that interest. There is a broad range of investor and funding sought.