

BOSS MOST INNOVATIVE COMPANIES



Smart thinking that keeps us all clean and green

Geofabrics' SORBSEAL clay liner, above, helps prevent soil contamination; Berger Ingredients' foods have been designed to use less water; and Sunpower Renewables' generators allow users to access electricity where they need it.

Manufacturing & consumer goods

Beverley Head

These are the top 10 innovations in the manufacturing and consumer goods sector.

Geofabrics

Innovation: SORBSEAL

Staff: 100-499

Geofabrics' SORBSEAL is a hybrid geosynthetic clay liner, blended with a high surface area powdered activated carbon to attract and trap toxic polyfluoroalkyl substances (PFAS) and prevent them from contaminating the environment. PFAS can contaminate sites for many years and when they leak from a landfill they can enter waterways and the food chain, posing significant risks. SORBSEAL has been designed to guard against that and has been used as a liner in two landfill cells in Queensland. It has the potential to guard against PFAS contamination in landfills and mining leachate ponds.

Winner of the Best Innovation in Manufacturing and Consumer Goods Sectors.

Ryco Filters

Innovation: Microshield N99 cabin filter

Staff: 20-99

Every day drivers and passengers come into contact with fine particles such as exhaust fumes, smoke, pollen and grit. Microshield N99 has been designed to bring "medical-grade" air filtration to a vehicle, using a fine particle filter designed to remove 99.7 per cent of 0.3 micron particles that might otherwise enter the lungs. It has been designed to suit most Australian vehicles.

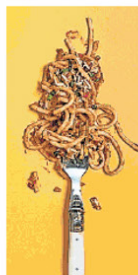
Brown & Watson International

Innovation: Rapid jump starter

Staff: 100-499

Lithium jump starters are generally designed to be compact, lightweight and with a high output (start) current to capacity (Ah) ratio. However, compared with lead-acid jump starters they do not last very long before needing to be recharged and there's always the risk that they won't be fully charged when they're needed.

Brown & Watson International's emergency jump starter program uses its Projecta Rapid Recharge technology that allows the user to keep their jump starter



Top 10 innovations

Manufacturing and consumer goods



Company	Staff	Innovation name
Geofabrics Australasia	100-499	Geofabrics SORBSEAL
Ryco Filters	20-99	Microshield N99 Cabin Filters
Brown & Watson Int'l	100-499	Emergency Jump starters with Rapid Recharge technology
Sunpower Renewables	20-99	Portable lithium solar generators
Zip Water	100-499	Zip HydroTap Touch-Free Wave
Carlton & United Breweries	500+	For The Love of Your Local
Berger Ingredients and Coco & Lucas' Kitchen	20-99	Earth Range
v2food	20-99	v2food
Pact Group	500+	Recycled Plastic RMP Freeway Noisewalls
Pharmako Bio-technologies	20-99	Applications of LipiSpense technology, and clinical validation

SOURCE: FINANCIAL REVIEW

connected to the vehicle after it has started and uses the vehicle's alternator to recharge the jump starter battery. It takes 40 seconds to fully replenish any charge lost during the jump-start process.

Sunpower Renewables

Innovation: Portable lithium solar generator

Staff: 20-99

Sunpower Renewables' portable renewable energy generation and storage devices allow users to generate and store solar energy and then release it to appliances based on user-programmed preferences. The Australian-made devices allow users to access electricity when and where they need it – in the home, when camping or on the move – and can also perform as an uninterruptible power supply. Three units are available for a variety of applications.

Zip Water

Innovation: Zip Water Touch-Free Wave tap

Staff: 100-499

The pandemic has prompted a rethink about workplaces and how people use them. To reduce the risk of person-to-person transmission of diseases, Zip Water has created a contactless version of its hot and cold water tap.

The Zip Water Touch-Free Wave tap uses proprietary smart sensor technology to detect hand motions for activation.

A wave of the hand within 1.5-5 centimetres of the smart infra-red sensor will activate the selected water option – touching the tap won't operate it.

Carlton & United Breweries

Innovation: For the love of your Local

Staff: 500+

Carlton & United Breweries and the Australian Hotels Association created a campaign to generate cashflow for venues which were shut down because of lockdown restrictions.

Customers could purchase a pint voucher now, providing immediate cashflow to the venue, that was redeemable for 2-for-1 beer vouchers once venues reopened.

The +\$2 million worth of beer for redemption was donated to venues by CUB. Voucher redemption is facilitated by Virtual Atoms technology in partnership with tech agency Because; this stores the beer vouchers in a digital wallet on a user's phone, redeemable at venues over the next three years.



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Berger Ingredients
Innovation: Earth Range

Staff: 20-99

The Berger Ingredients Earth Range comprises plant-based products intended to look, smell and taste like meat, with similar bite and mouth feel.

The foods have been designed to use less water, create less greenhouse gas emissions, and require less land use than conventional meat dishes. All packaging is also either compostable, biodegradable or recyclable.

Founded by Diem Kieu Fuggersberger, a butcher's daughter who advocates for some meat-free meals each week, the animal-protein-free products are used in the Coco & Lucas' Earth brand range of pre-prepared vegan meals.

V2food
Innovation: v2food
Staff: 20-99

When market research firm Roy Morgan last polled Australians about their vegetarian eating habits in 2019, about 2.5 million people said they had diets that were entirely, or mostly, vegetarian.

Even so, current levels of animal protein consumption aren't sustainable long term according to v2food, which has developed a range of plant-based products for people who enjoy the taste of animal protein but want to minimise the environmental impact of the food they consume.

V2 foods include protein from legumes, vegetable oils such as coconut and sunflower, and flavour that approximates those found in animal protein.

Pact Group
Innovation: Recycled Plastic RMP Freeway
Staff: 500+

Pact Group has transformed about 600 tonnes of hard-to-recycle plastic waste into noise-wall panels spanning 32,000 square metres of the Mordialloc Freeway.

Each noise-wall panel comprises 75 per cent recycled materials, including hard-to-recycle soft plastics such as stretch wrap and post-consumer milk bottles, providing a second life for single-use plastics, says the company.

The panels themselves will also be recyclable at the end of their 40-year design life-

span. According to chief executive Sanjay Dayal: "This world-first innovation demonstrates how Pact Group is transforming Australia's waste challenges into solutions to solve Australia's infrastructure needs."

"This innovation aligns with the Group's vision to lead the circular economy through packaging, reuse and recycling solutions," says Dayal.

Pharmako Biotechnologies

Innovation: LipiSpere
Staff: 20-99

Lipophilic substances such as curcumin do not mix with water, which challenges the way they can be used. LipiSpere is a patented technology that allows lipophilic particles to disperse (rather than clump together) in the gastrointestinal tract, promoting better absorption. Pharmako says there are applications in sports nutrition, to enhance the absorption and tolerance of iron, and in brain and joint health. **AFR**

GEOFABRICS' WINNING STRATEGY

Per- and poly-fluoroalkyl substances – known as PFAS chemicals – pose a health risk to humans and the environment.

In the past, they were widely used in fire-fighting foams, non-stick pans and textiles. While many of the chemicals' applications have been phased out more than a decade ago, they are still in limited use to fight petrol and oil fires. When used they don't readily degrade or decompose and can travel long distances when carried in ground or surface water.

It was a situation that concerned Daniel Gibbs, general manager, technical research and innovation at Geofabrics which manufactures geosynthetic products used in civil infrastructure work for filtration purposes.

"Daniel didn't like what was happening with PFAS in the environment and getting into the

food chain – he was passionate about this," said Murray Sutton, Geofabrics' tax and compliance accountant.

When Gibbs said he wanted to work on a product to tackle the issue it made sense. "This is a company with a continuous innovation focus," says Sutton.

Gibbs says the fundamental driver of innovation should be: "You need to help people – if you are helping someone they will come back. People will buy from those they trust. The reason I do what I do is

Daniel Gibbs of Geofabrics.



more from an environmental view and it has been great to guide people in the correct use of our products."

Gibbs' research led to the creation of SORBSEAL, a hybrid geosynthetic clay liner released in 2021 and designed to act as a hydraulic barrier to contaminants such as PFAS. The company describes it as laying at the base of and over contaminated landfill sites like a blanket to stop leaks. Geofabrics manufactures many of its materials in NSW, but also at its R&D lab established in Queensland in 2009.

Gibbs explains the genesis of the lab: "We didn't know enough about our materials – that was the impetus for the concept of the R&D lab – to look at our manufactured products. We've got a duty of care and have to do due diligence to say where they can and cannot be used – so people buying our products can make an

educated guess about whether they are the right products."

The company invests about 2 per cent of its revenue per year in R&D, with 50 per cent focused on its own internal needs, and the rest allocated to support client inquiries. Geofabrics recently expanded its team to conduct geotechnical analysis about how its products perform in different environments, for example in soils that are alkaline or acid, or when they come into contact with liquids of different temperatures.

Geofabrics is also about to launch its Geotechnics University Online – sharing what the organisation has learned from R&D in the last 12 years – providing a way for engineers to extend their understanding and clock up some important professional development hours at the same time. **AFR**

Leading the Circular Economy through innovation. Again.

At Pact Group, we're delighted to be recognised as one of Australasia's most Innovative Companies for the ninth consecutive year. But what we're most proud of is leading the Circular Economy through innovative Packaging, Reuse and Recycling solutions.

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