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National Aeronautics and Space Administration



SPINOFF

2022

The spinoffs from space (and beyond)

With each new mission, NASA pioneers groundbreaking (or more accurately, lunar-terrain-breaking) tech that can be adapted for use here on Earth.

NASA showcased these adaptations in its new "[Spinoff 2022](#)" report: a 47-page roundup exploring how the space agency's discoveries have been applied over the years in unexpected ways, by all sorts of industries — even those completely removed from aerospace.

Some noteworthy NASA spinoffs from the report:

- **Vertical farming:** First developed by NASA, vertical farms are now being adopted by growers globally to harvest more produce, use less than 1% of the water of traditional farming, and ensure growth occurs regardless of weather.
- **Pollution sensors:** Lunar Outpost was recruited by NASA to develop tech that detects moon dust, and the firm then created the Space Canary air quality sensor for Earth.
- **The Pod+ water bottle:** Using the NanoCeram filter — developed to supply astronauts with clean drinking water — the Pod+ purifies water for consumers on the go.

But there's a key takeaway that goes beyond the numerous NASA-to-Earth developments, that's huger than an [SLS rocket](#):

The “spinoff” is an inherently sustainable approach to innovation.

After all, innovation takes time, money, and resources — both human and in materials. You can expend less of all three by identifying a fully-developed, ready-to-go technology (rather than trying to create one from scratch), exploring how your organization can leverage it, and innovating from there.

In other words, don't reinvent the wheel *if you don't have to*.

Get your wheels spinning (off)

To inspire you and your organization on how you could creatively (and sustainably!) “spin off”...

...we turned to the **dMASS AI** to find and share even more innovations demonstrating a novel reapplication of existing tech.

In case you didn't know, we developed an AI. The dMASS AI constantly scans the web, 24/7, to help you find potential solutions to your innovation challenges. Plus, it alerts you when new ones emerge.

Here's what the dMASS AI found:



From hot coffee to cold storage: Ember applies its drink-warming tech to vaccine solutions

The battery-powered mug company created the Ember Cube to keep COVID-19 vaccines between 2-8°C for up to three days.

[Read all about it](#)



This won't blow over: Axicle tests anti-rollover system for tractor-trailers with a Boeing 777 jet engine

Axicle's "fifth wheel" prototype, which builds upon a pre-existing semitruck component with an anti-rollover system, ensures the front cabins of 80,000-lb tractor-trailers won't roll over in the face of high winds – or a Boeing jet engine.

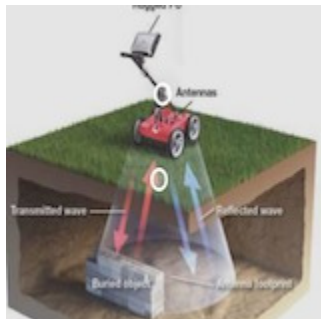
[Read all about it](#)



Home odor eliminator uses photocatalyst technology from the International Space Station

The Indiegogo project VentiFresh ECO uses a UV catalyst to break down foul home odors via photosynthesis.

[Read all about it](#)



Ground penetrating radar (GPR) used to identify 215 unmarked graves of indigenous children

In Canada, GPR machines – a noninvasive geology instrument designed to analyze contents of soil, that is typically used by archeologists – are being used to identify graves at former First Nations boarding schools.

[Read all about it](#)



Just for fun: Cats transform SpaceX's Starlink satellite dish into a heated bed

Five US cats determined how to leverage the Starlink's self-heating technology (which melts snow on the dish) to keep their undersides warm in the winter.

[Read all about it](#)

What's under your nose?

If you're looking to spin something new from innovations that are already out there... you *could* borrow from the innovation behemoths: the NASAs, the Googles, the Apples, etc.

But perhaps your next great idea is closer to home than you think.

Could the missing piece to your puzzle be right under your nose? A useful bit of tech that already exists within your organization's walls?

We hope you find it.

Get creative, get creating, and good luck.

The dMASS team

P.S. Have a colleague or friend that would enjoy this newsletter? [Here's the link to subscribe.](#)



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