



Idea Storm

# Exponential Technology Call March 2020

Lance Peppler  
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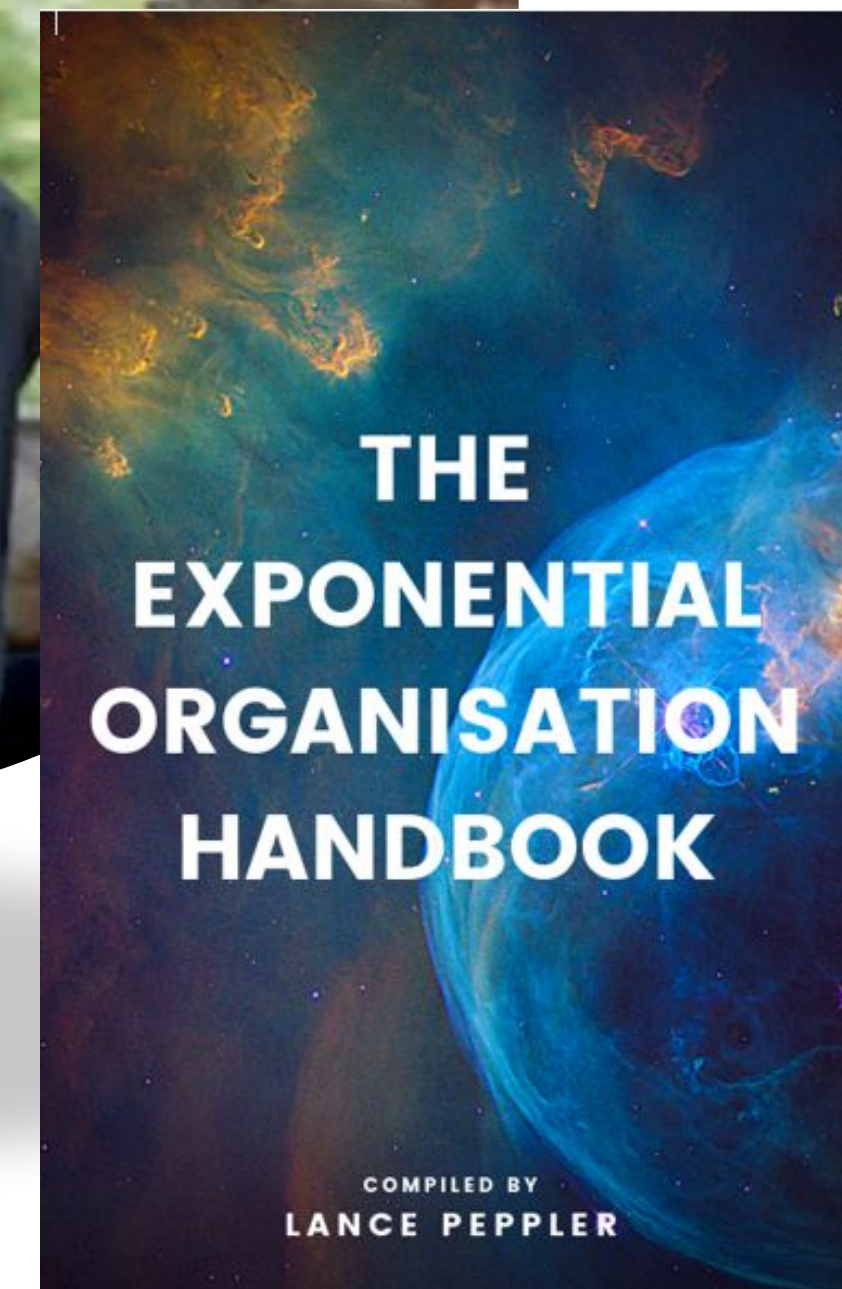
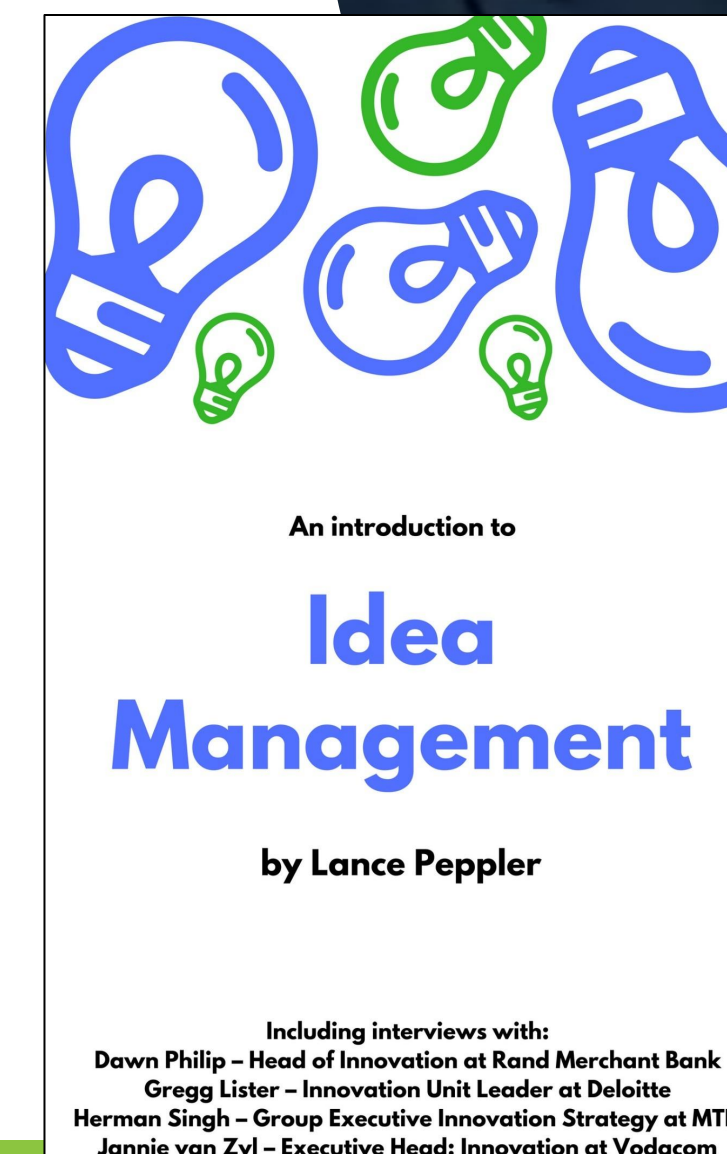
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Idea Storm

# Lance Peppler

- Worked at Oracle for 14 years
- Studied Design Thinking through Darden Business School and the IDEO method.
- Owner of Idea Storm – an exponential growth consultancy
- Member of OpenExO - +3400 consultants worldwide
- Certified ExO Consultant
- Creator of the “Exponential Organisation” podcast
- Written hundreds of blogs



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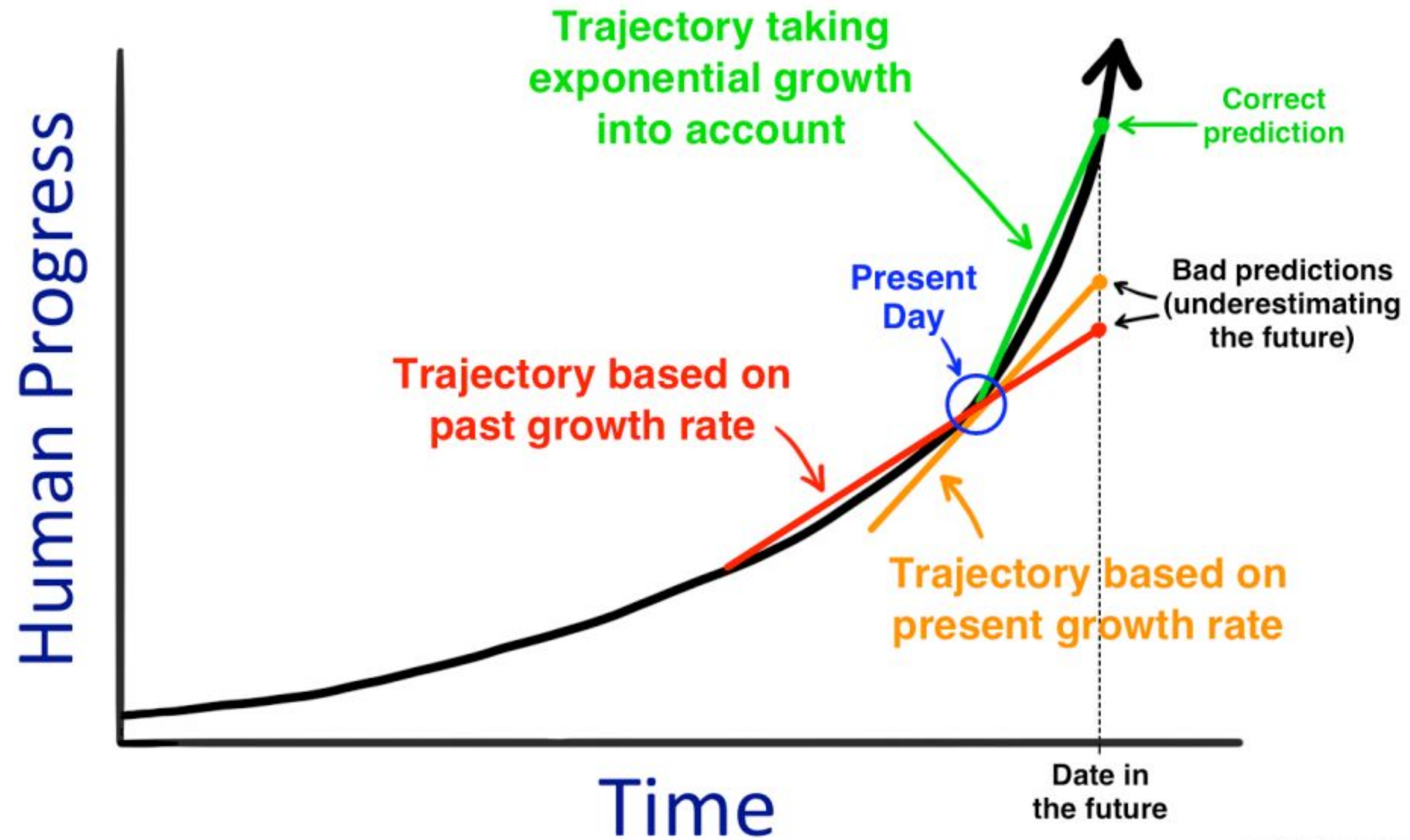
# Why this call?

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waitbutwhy.com

# The Exponential Technologies



- 3D printing and digital fabrication
- Artificial intelligence (AI)
- Augmented and virtual reality (AR, VR)
- Autonomous vehicles
- Blockchain
- Data Science
- Digital biology and biotechnology
- Digital medicine
- Drone technology
- Internet of things
- Nanotechnology
- Networks and computing systems
- Quantum computing
- Robotics
- Solar





3D Printing



# This village for the homeless just got a new addition: 3D-printed houses

Icon is printing full houses to give Austin's homeless a real home to live in.



For the last few years, Tim Shea has lived in an RV in a small community outside Austin that was designed for people who were once chronically homeless. In early May, he'll move from the RV into one of the community's first 3D-printed homes—a small house with walls made from a concrete-like material that were automatically extruded from a giant, 33-foot-long machine.







A modern, single-story house with a curved wooden roof and a covered patio. The house has white walls and large windows. The patio is furnished with outdoor chairs and tables. The background shows a blue sky with clouds and some trees.

# 3D Printed Homes





AM in the time of COVID-19 AM Industry Medical

# Italian hospital saves Covid-19 patients lives by 3D printing valves for reanimation devices

The supply chain was broken, people and 3D printing rose to the occasion

 Davide Sher · March 14, 2020

21 🔥 27,725 📖 2 minutes read



Many have been asking what the implications of the current COVID-19 pandemic are going to be on additive manufacturing as an industry. The relationship between coronavirus and 3D printing is not entirely clear, mostly because we are very far from understanding what the long, medium and even short terms implications of the pandemic are going to be on global supply chains.





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Artificial Intelligence



## Why AI might be the most effective weapon we have to fight COVID-19



Most popular

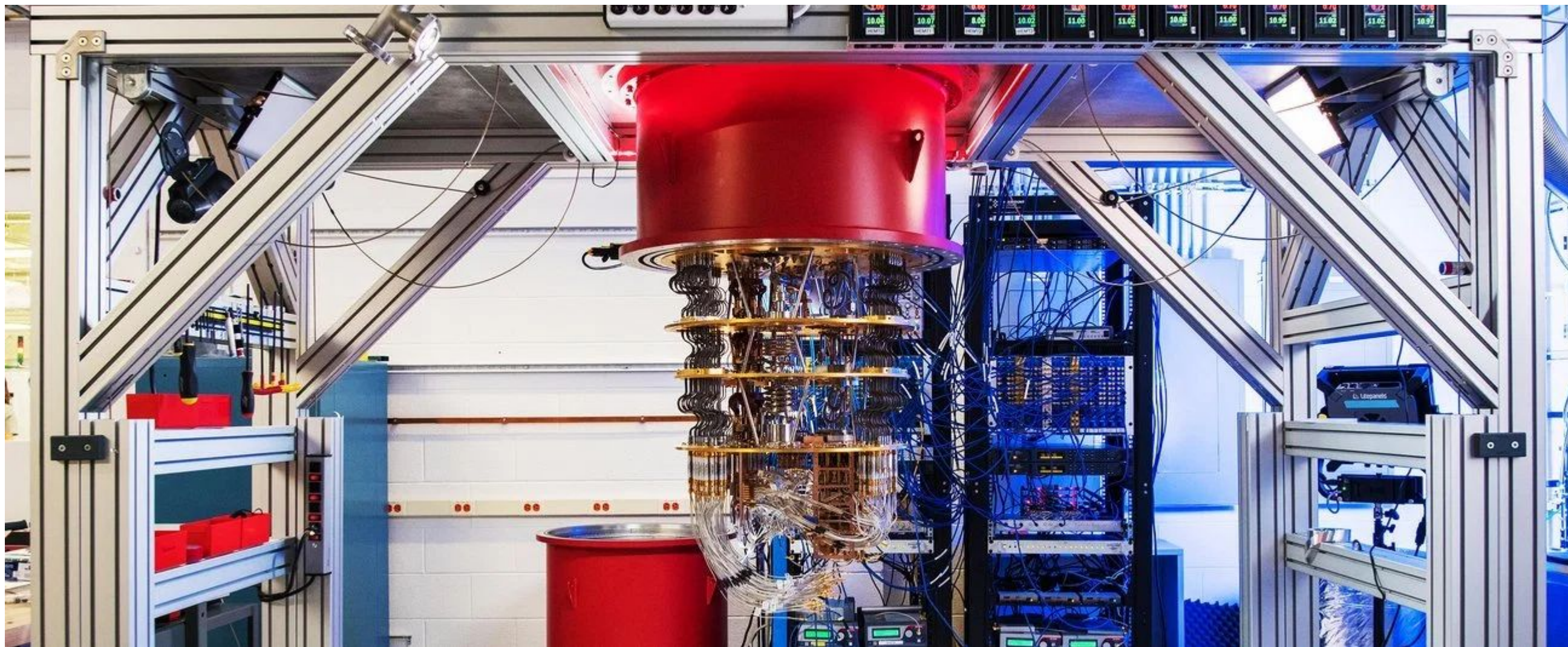


Why AI might be the most effective weapon we have to fight COVID-19

As governments and health organizations scramble to contain the spread of coronavirus, they need all the help they can get, including from artificial intelligence. Though current AI technologies are far from replicating human intelligence, they are proving to be very helpful in tracking the outbreak, diagnosing patients, disinfecting areas, and speeding up the process of finding a cure for COVID-19.



# TensorFlow Quantum



With the recent **progress in the development of quantum computing**, the development of new *quantum* ML models could have a **profound impact on the world's biggest problems**, leading to breakthroughs in the areas of medicine, materials, sensing, and communications.





Augmented and Virtual Reality





Wanted to visit the zoo, but can't due to the movement control order (MCO)? You can experience animals in your living room using Google's Augmented Reality (AR) instead. Users can find the animals right on top of the Google search panel. For example, searching for a panda, tiger or even hedgehog will produce an explanation about the animal and a prompt to meet a life-sized version up close.





Autonomous vehicles



# Coronavirus highlights strengths of self-driving delivery vehicles

With quarantines across China, one company flexed its tech muscles to show the usefulness of autonomous vehicles.



Sean Szymkowski March 9, 2020 11:48 AM PDT



Neolix, a self-driving delivery vehicle startup in China, has been working overtime to usher more of its autonomous delivery vans onto empty Chinese roads amid quarantines. According to a Bloomberg report last week, Chinese companies have booked orders for 200 of the tiny robotic vehicles, including online megaretailers Alibaba and JD.com. Before the coronavirus outbreak in China, Neolix had just 125 orders since last May.



***SELF-DRIVING  
CARS HELP  
CORONAVIRUS  
PATIENTS***

**M**







Blockchain





By Samuel Haig

5 HOURS AGO

## Dutch Govt to Embrace Blockchain in Fight Against Pandemic

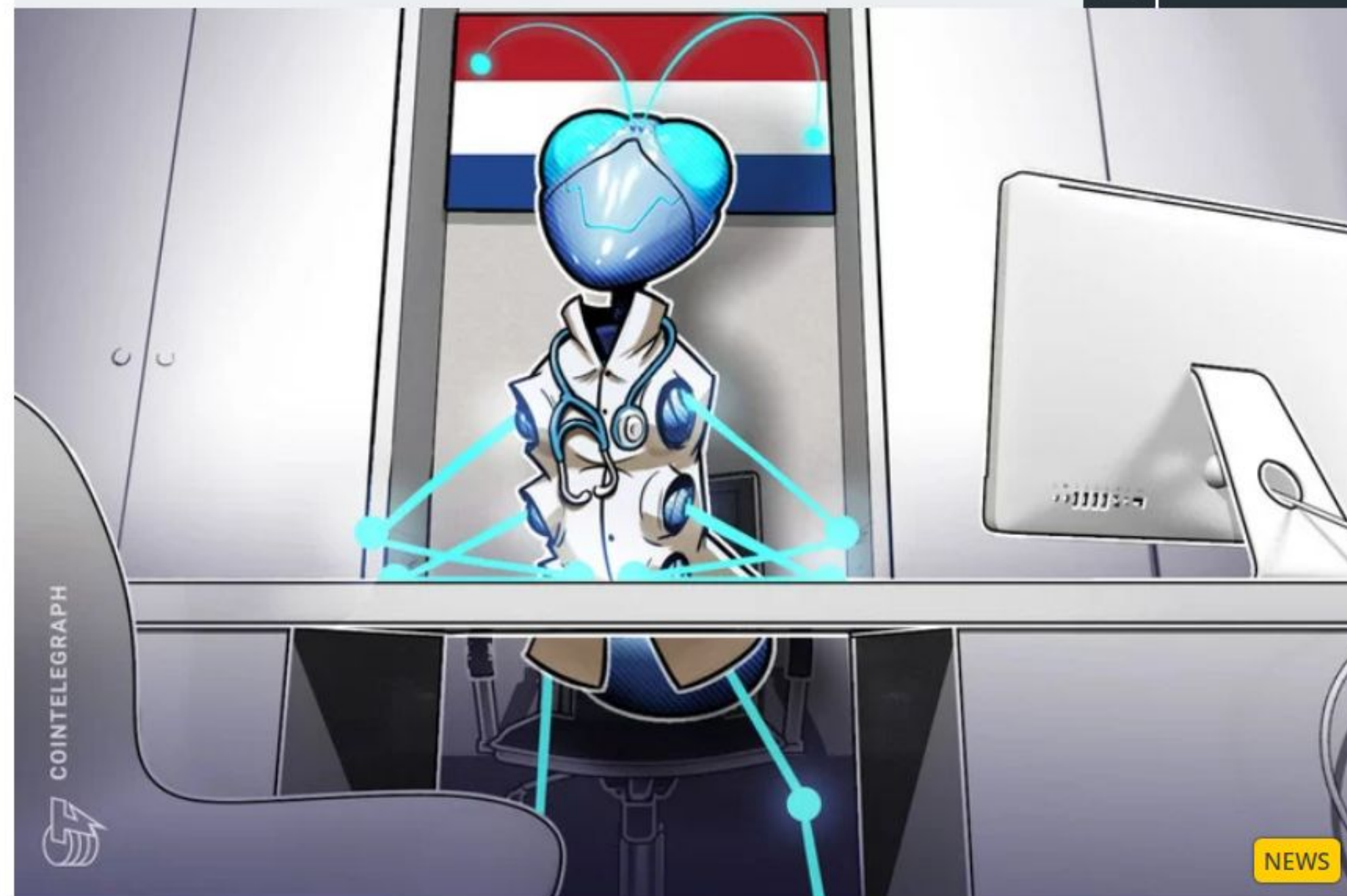
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1:48



A consortium of Dutch companies has launched the “**Tech against Corona**” initiative. Participating firms will freely provide the Dutch government with access to innovative technologies that can be used in the fight against COVID-19.

Netherlands-based distributed ledger technology (DLT) firm, Tymlez, is one of more than 10 companies who are freely providing their services and technologies to the government.





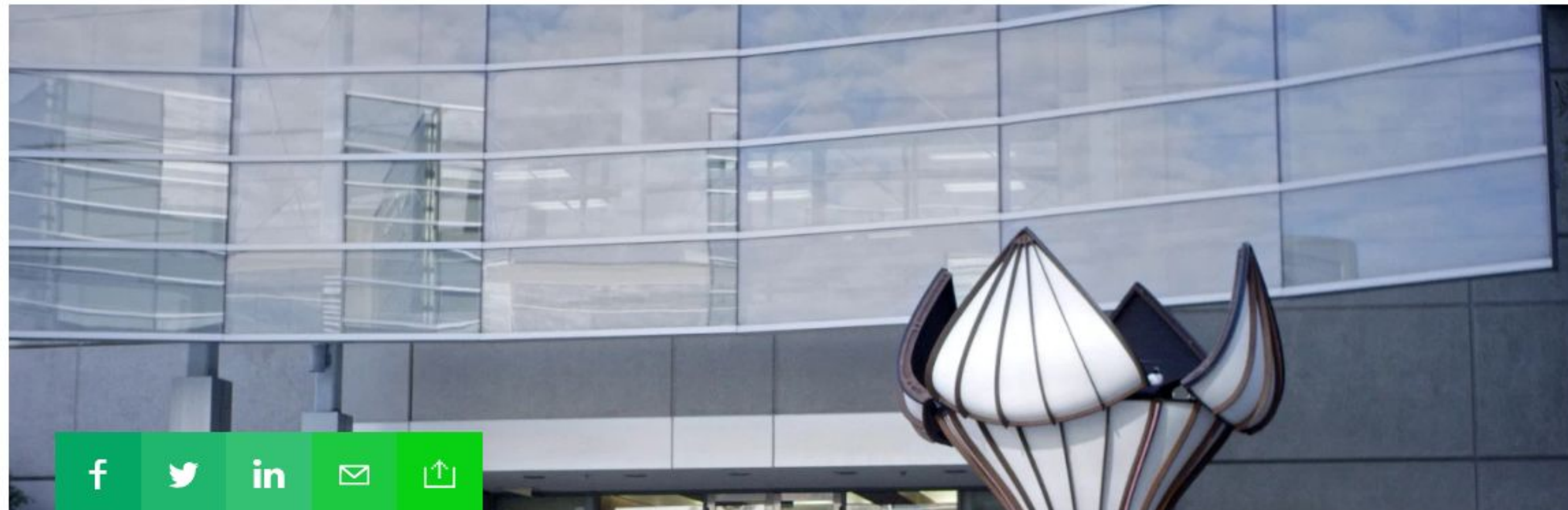
Drones



## Matternet's new drone landing station looks like a sci-fi movie prop

Devin Coldewey @techcrunch / 12:19 am SAST • March 11, 2020

 Comment



Drones making deliveries is of course the hot new hyperlocal tech play, but where are these futuristic aircraft supposed to land? On the lawn? **Matternet** has built a landing station for its cargo drones that looks less like a piece of infrastructure and more like a death ray from a '60s sci-fi movie.







## DRONES

# "Pandemic drone" could help detect infections in crowds

By David Szondy  
March 26, 2020



VIEW 1 IMAGES 



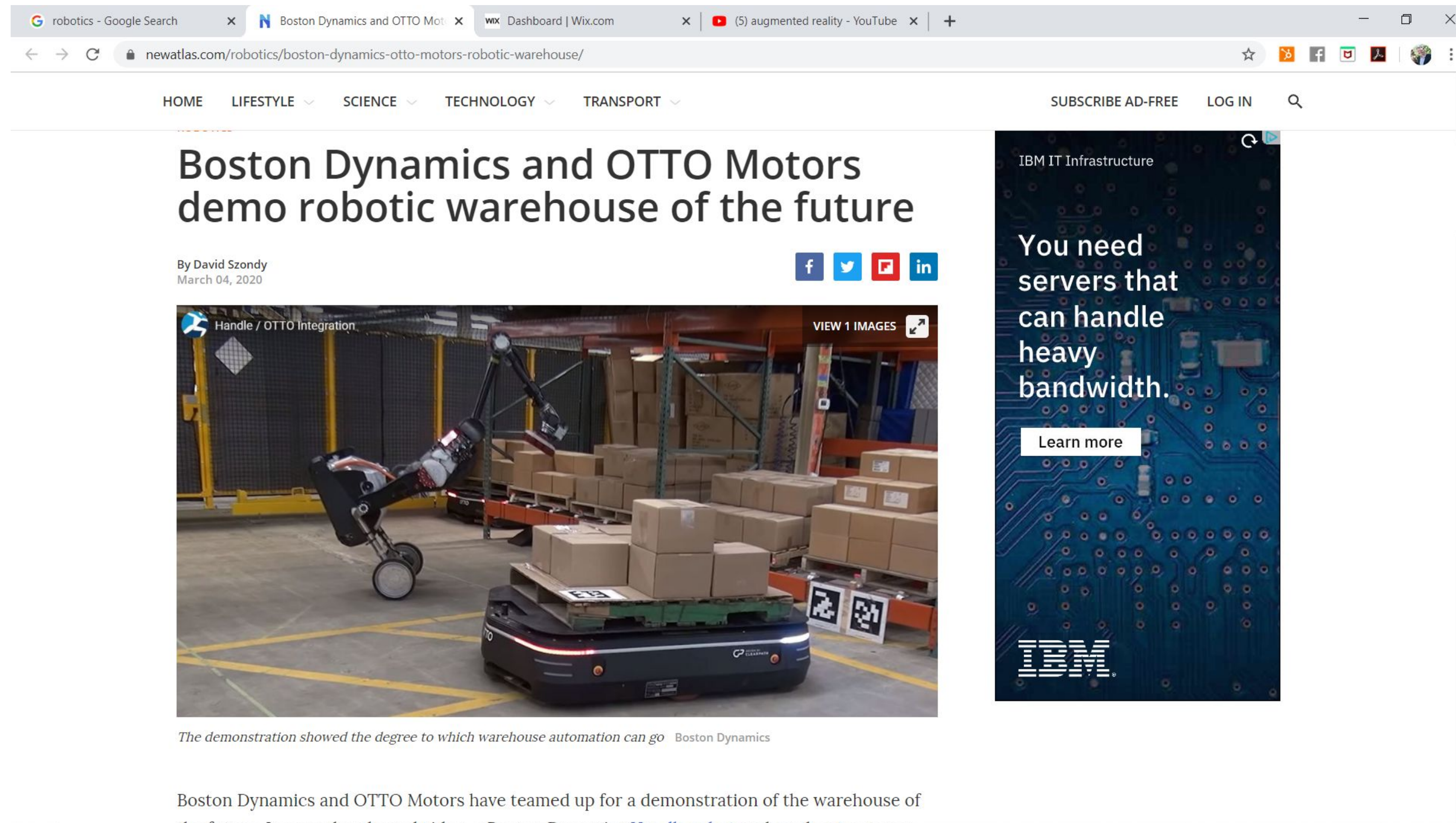
If you see a drone fly by in the future, it could be looking for evidence of [COVID-19](#). The University of South Australia (UniSA) and Canada-based drone technology specialist Draganfly Inc have teamed up to develop a "pandemic drone" platform that uses special sensors and computer vision to find people with infectious respiratory diseases.





Robotics





Boston Dynamics and OTTO Motors have teamed up for a demonstration of the warehouse of the future. In a newly released video, a Boston Dynamics **Handle robot** rushes about a storage area at speed as it picks boxes and builds pallets atop an OTTO Autonomous Mobile Robot (AMR) platform.



## The Covid-19 Pandemic Is a Crisis That Robots Were Built For

Robots can help doctors distance from patients, and help those in isolation cope. But getting the machines into hospitals is fraught with difficulties.



We humans weren't ready for the novel coronavirus—and neither were the machines. The pandemic has come at an awkward time, technologically speaking. Ever more sophisticated robots and AI are augmenting human workers, rather than replacing them entirely.





Solar



## GCL to build world's biggest solar-panel plant

TECHNOLOGY

Monday, 30 Mar 2020



GCL System Integration Technology Co plans to build the world's biggest solar-panel manufacturing plant, with capacity to meet half of global demand. The Chinese manufacturer plans to invest 18 billion yuan (US\$2.54bil) to construct a facility in eastern Hefei province that will be able to produce 60 gigawatts of solar panels a year, GCL System said in a filing to the Shenzhen stock exchange on March 27. It didn't provide a timeline.



*XinhuaVideo*







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## Exponential Technology Report - 1 April 2020

There are amazing advances of exponential technology taking place all the time. Every week Idea Storm brings you the latest news stories in this easy to read report.

### News story 1 - 3D Printing

#### [Creality's 3D-printed buckle makes wearing face masks more comfortable](#)

Chinese 3D-printer manufacturer Creality is fabricating thousands of buckles that make face masks less painful to wear for medical workers treating coronavirus patients.

Small bars on either side of the plastic buckle hold the elastic taut behind the mask-wearer's head, so that it doesn't put painful pressure on their ears. Face masks are a key part of protecting front line medical workers from contracting coronavirus, but wearing Personal Protective Equipment (PPE) for an extended period of time can be very uncomfortable for the wearer.

### News story 2 - 3D printing

#### [7 Exciting Ways 3D Printing Is Changing the World Around Us in 2020](#)

The 3D printing industry has experienced consistent and stable growth over the past decade, disrupting multiple industries. Sometimes it is hard to keep track of them all. Innovators and the researchers in the footwear, fashion design, construction, automotive industry, and the aerospace industry have embraced 3D printing to make better products, faster. And that's just the beginning of the story.

### News story 3 - Artificial Intelligence

#### [10 Business Functions That Are Ready To Use Artificial Intelligence](#)

In the grand scheme of things, artificial intelligence (AI) is still in the very early stages of adoption by most organizations. However, most leaders are quite excited to implement AI into the company's business functions to start realizing its extraordinary benefits. While we have no way of knowing all the ways artificial intelligence and machine learning will ultimately impact business functions, here are 10 business functions that are ready to use artificial intelligence.



## Exponential Technology Report

The world is changing at an ever increasing rate. This Exponential Technology report is designed to help us stay in touch with developments in this space and will be updated each Wednesday.

The Exponential Technology categories are:

- 3D printing and digital fabrication
- Artificial intelligence (AI)
- Augmented and virtual reality (AR, VR)
- Autonomous vehicles
- Blockchain
- Data Science
- Digital biology and biotechnology
- Digital medicine
- Drone technology
- Internet of things
- Nanotechnology
- Networks and computing systems
- Quantum computing
- Robotics
- Solar

Download the report by right-clicking on the pdf image below







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Output power of new energy electricity generation exceeds 11 mln kW in...

Output power of electricity generated by new energy sources reaches 11.079 million kW i...



James Dyson explains the engineering behind our robotic vacuums

Powerful, intelligent robotic cleaning. Discover the Dyson 360 Eye™ robot vacuum.\* Dyson...



The Most Beautiful Drone Footage From The Baja Divide #BikePacking

This is a compilation of my favorite drone shots from two separate bike packing trips down th...







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