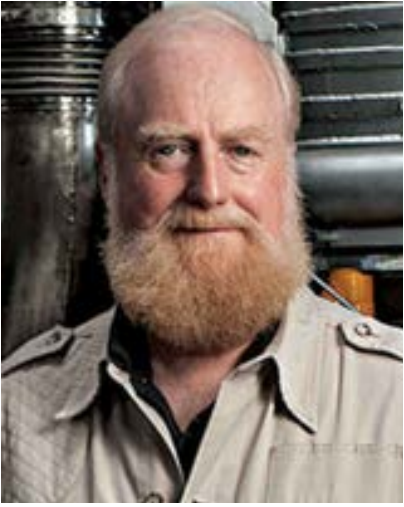# 10X دبي

WEEKLY SPEED READ

Vision: Be 10 years ahead of all other cities

June 4, 2017; Volume 11

10X WISDOM

"I believe there are at least five "miracles" behind every game-changing innovation. An innovator could count on having only "one to one-and-a-half" such insights himself or herself. The rare visionary is able to identify other emerging "miracles" when he/she sees them that bring the goal within reach."

-- *Bran Ferren, former President, Disney R&D; Co-Founder Applied Minds*

GOVERNMENT HACKS

Sweden
Listed its entire country on Airbnb

Singapore
First for blockchain diplomas, speeding up admission process

Japan
Going to the moons of Mars in 2024

Madrid
World's first 3D-printed bridge opens

Canada
Launches $950m job-creating innovation super clusters

Australia
$22m to produce solid waste fuel (2 waste-to-fuel plants)

DISRUPTIVE COMPANIES #TAGGED

 # DARPA
To build a launch-on-demand hypersonic space plane by 2020

#Google
AI AlphaGo beats grandmaster - decades ahead of schedule

#Yara and Kongsberg
To build world's first autonomous zero-emissions ship

#Paris Airport
Installs first autonomous parking valet service

#Helsinki Airport
Exploring operational potential of HoloLens

#WorldPay
Preparing for VR payments, when VR shopping becomes the norm

#IBM
Using AI and quantum computers against cyber crimes

#Northwestern University
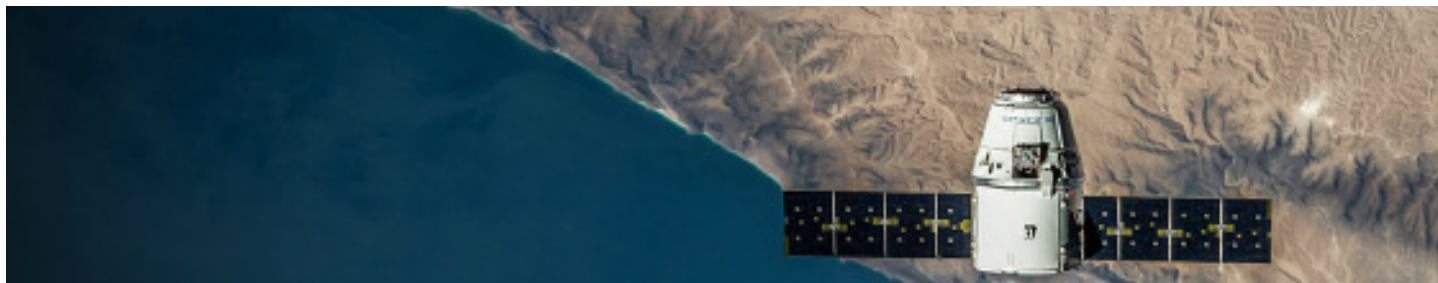3D-printed ovaries allow infertile mice to give birth

#Mapdwell Solar System
Reveals the solar potential of every building rooftop

Storing Data in Space Could Disrupt Data Security Challenges

#DataSecurity #Security #SpaceBusiness

Market Research Media forecasts the U.S. federal cybersecurity market will grow from $18 billion in 2017 to $22 billion by 2022, at a steady compound annual growth rate of 4.4 percent. Yet, the data breaches keep coming. Cliff Beek, President of Cloud Constellation Corp., proposes a concept of off-world data considering there are already satellites ringing the Earth that regularly receive and transmit information; why not develop a system for secure, internet-free data storage and transmission?

>> Read More

Pain point addressed	Growing data-security breaches
Key insights	Given Dubai's space travel industry development program, this could be another area of global leadership. A space-based cloud storage network would provide government and private organizations with an independent cloud infrastructure platform, completely isolating and protecting sensitive data from the outside world. In addition, a regulatory framework can also be considered. This could also supplement the fintech movement providing this as an innovative financial data security solution.

Digital Transformation Applications in the Real Estate Industry

While digital transformation has disrupted almost every business, the real estate industry has been slow to adapt - until now, according to the participants at a recent 2nd Asia Pacific Leadership Symposium in Hong Kong organized by the Urban Land Institute and WEF. We are now nearing a global tipping point.

>> Read More

Pain point addressed	Enabling the disruption of the real estate industry.
Key insights	Areas ranging from computer-aided design, construction materials and tech, to AR marketing solutions, the innovative technologies are starting to gain traction. Some examples: 1) Transformative advances in materials, e.g. prefab tech, or those that allow buildings to be 'grown' or repaired. 2) The rise of Building Information Modeling (BIM) to manage complex construction work, e.g. Karolinska Hospital in Sweden.

Envisioning a City that Produces More Energy Than It Uses

Visions of future cities were presented from leaders across the world, at last week's Renewable Cities Global Learning Forum in Vancouver, to break out of the current mindset of slow, incremental change and jump forward to the idea of cities powered by 100% renewable energy.

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Pain point addressed	Making bold energy goals for the city.
Key insights	Highlighted ideas included: 1) All vehicles powered by electricity. 2) Food from local gardens. 3) Smartphones tell people how much energy they have produced from their homes and vehicles, not how much they have used. For this to happen, we need to have a 100% renewable energy focus as a community, and stop settling for net-zero emissions and move to a net-positive goal as a city, where we can export energy.

Get Ready For Low-Cost Jet Engines To Space without Fossil Fuels

Now, researchers from Technical University of Berlin are working on a plasma jet engine that could propel an aircraft faster than a traditional engine, taking it all the way to the edge of the atmosphere all on air and electricity alone - without burning fossil fuels - and for a low cost.

>> Read More

Pain point addressed	Low operational costs for commercial space flights.
Key insights	This development would mean lower operational costs, extended range, and a clean power source for commercial flights. A plasma jet engine mimics a fusion reactor of a star, creating electricity. However, like anything that runs on electricity, the biggest problem is the need for batteries. Improvements in solar panels or compact fusion reactors could be what the system needs, so for now they will run a hybrid craft.

Half of This College's STEM Graduates Are Women. Here's What It Did

Just 18% of computer science graduates across the USA are women - but at Harvey Mudd College, President Maria Klawe is beating the odds. Half of graduating students in computer science, engineering, and physics are women, and her faculty is 40% women. Here's how she did it.

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Pain point addressed	Dramatically increasing the number of female STEM graduates.
Key insights	After diversity became part of the strategic plan at all levels, here are the three steps she took: 1) Separating sections in the introductory classes by experience, so students are with people like them. 2) Professors set the expectation that student success depends on hard work and asking for help (also eliminating macho behavior or innate ability mindset). 3) Ensure all students were encouraged to take the second computer science course.

Mind-Reading Technologies Raise Privacy Concerns

Learning from the Dutch on How to Battle High Seas, from Climate Change

Machine Learning to Support Responsible Investing

Could Your Next Peer Review Be Done By ... A Robot?

Want a Resilient city? Ask for Microgrids with These 7 Features

Using Virtual Reality Scenarios for Prototyping City Initiatives

Virtual reality can be used as a prototyping tool to engage directly with affected residents of new city initiatives. VR goes beyond watching something on a screen and connects with users in a deeper way.

- **Address Objections**: The idea is to meet real people who may potentially be hurt by a proposed initiative (e.g. construction of high-speed rail).

- **Validate Designs:** These can be utilized for better design and user experience of solutions before investing in its actual development.

- **Educate:** Also, VR can be used to educate the public of what is now and what could be in a future project.

Reference: The Guardian

150% renewable energy city goal, exporting the rest: Go beyond 100% renewable energy goal, and export the rest. Get the community involved by having an app tell them how much energy they have produced via their home or vehicle.

Use quantum computing against cyber crimes: In efforts towards the newly released Dubai Cyber Security Strategy, partner with IBM in using AI and now quantum computing to stop cyber crimes, and autonomous vehicle hacking.

Enabling disruption in the real estate industry: Regulation moving from the current specifications-based mindset towards a more performance-based approach, enabled by tech that can monitor building performance.

Blockchain diplomas: Part of the smart city goal, these certificates will speed up the admission and job hiring process. The technology enables potential employers and universities to spend less time manually verifying a candidate's academic credentials.

LATERAL THINKIN'

helps build the innovative mindset

How can you throw a ball as hard as you can, and make it stop and return to you, without hitting anything and with nothing attached to it?

Source   Solution

ABOUT this *WEEKLY SPEED READ*

- This Weekly Speed Read is to inspire and inform Dubai's 10X teams on latest disruptive developments and enablers from around the world

How satisfied are you with this newsletter?

Extremely Unsatisfied   Unsatisfied   Neutral   Satisfied   Extremely Satisfied

- **Contact:** For any questions or feedback on this newsletter please email: Dr. Sayd Farook