

Weekly Discovery

We SHARE to inspire and ignite ideas!

26 September 2016 – 30 September 2016



SPECIAL HIGHLIGHT

On Demand Economy

The On-Demand Economy is rapidly expanding across the global economy. This is defined by on-demandeconomy.org as economic activity created by technology companies to fulfil consumer demand via the immediate provisioning of goods and services. Prominent on-demand companies are Uber and Airbnb but larger firms are also starting to enter these markets through partnerships or acquisitions.

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ARCHITECTURE

Zaha Hadid Architects sits rippling glass lump on top of Antwerp port building



After almost a decade of planning and construction by Zaha Hadid Architects, the newly opened Port House in Antwerp has been lauded as a monumental structure in the Belgian city's crane-covered skyline.

Source: [Dezeen](#) (22 September 2016)

CLEAN TRANSPORTATION

Germany Unveils World's First Zero-Emissions Hydrogen-Powered Passenger Train

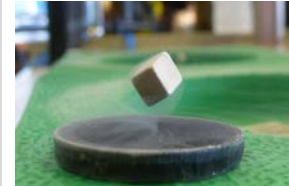


The world's first electric passenger train purely powered by hydrogen offers a zero-emissions. The Coradia iLint train will provide an alternative to clean transportation and will be put on its first run by the end of 2017.

Source: [Inhabitat.com](#) (24 September 2016)

ENERGY TRANSMISSION

New superconductive material for long-distance energy transmission



Magnesium diboride (MgB_2) is a new material can transmit energy over vast distances. Its can avoiding transmission losses due to electrical resistance of existing wires, which happens when cooled close to absolute zero temperature.

Source: [Phys.org](#) (23 September 2016)

HOLOGRAMS

3D-Printed Acoustic Holograms Could Move Objects in Midair



Scientists believe these [acoustic holograms](#) bring new frontiers in beam-steering and the contactless transfer of power could provide advances in ultrasound and medical imaging. Read more on their findings - [NATURE Article](#)

Source: [Livescience.com](#) (21 September 2016)

INNOVATION

The 2016 Breakthrough Awards



Be impressed by some technology breakthroughs this year. A billboard, where you can find notable VR headset, intelligent railway system, solar panel that follows the sun, and more.

Source: [Popular Mechanics](#) (October 2016)

INTERNET OF THINGS (IoT)

IoT Security: The Impossible Mission

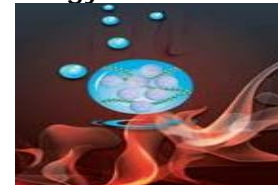


Source: [www.clearlogin.com](#)
2015 was the year for Internet of Things (IoT) in term of positive perspectives, growth potential, industry impacts, and new revenue sources. Frost & Sullivan revealed that by 2020, the total global market will reach over \$200 billion and every household will have at least 10 connected devices. Read this detailed report to find out more.

Source: [Frost & Sullivan](#) (26 September 2016)

MATERIALS

Lowering the heat makes new materials possible while saving energy



Penn State researchers have developed a new process, cold sintering process, using a low temperatures method which can use incompatible materials to form new functional materials.

Source: [Sciencedaily](#) (26 September 2016)

PRODUCT DESIGN

This Clever Backpack Can Keep Vaccines Refrigerated Miles Off The Grid



This backpack, can store vaccines in a steady cool temperature for up to 6 days to safely transport to remote areas. If more time is needed to transport, this can be recharged with electricity or propane. Other potential applications include medical deliveries such as transporting of organs or blood.

Source: [Fastcoexist.com](#) (23 September 2016)

SENSORS

New device detects hazardous substances in water



A Russian university has designed a device that can alert the presence of dangerous substances, such as heavy metals, in water. It is mobile, is capable of working at low temperatures and is less expensive than a spectrophotometer.

Source: [Sciencedaily](#) (22 September 2016)

STEM TECHNOLOGY

How STEM Skills Are the Next Great Equalizer



Demands for people with STEM (Science, Technology, Engineering, and Mathematics) skills are increasing in the world. These people will play significant roles in technology breakthroughs for the coming decades.

Source: [Fortune](#) (26 September 2016)

TRENDS IN TECHNOLOGY

Tech Trends 2016: Innovating in a digital era



Deloitte presents the [7th tech trends report](#) exploring eight technology trends that could shape the future. In particular, blockchain, augmented reality, the Internet of Things and the social responsibilities that accompany these technology applications are areas covered in-depth. Read this article also on [Frontier technologies, the next big leap](#).

Source: [Deloitte University Press](#) (2016)

WOODEN ARCHITECTURE

Would you live in a wooden skyscraper?



This article looks at how wood is being used increasingly in urban construction as an alternative to traditional materials to reduce the negative effects construction has on the environment. Architects are pushing the limits of height for wood construction and garnering support for its use.

Source: [Science](#) (22 September 2016)

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