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*Welcome to the June edition of What's Emerging.*

*We hope that all the Australians managed to get through their end of financial year issues and we hope you continue to find the newsletter entertaining and valuable.*

*Cheers*

*Paul Higgins, Sandy Teagle, Syed Ahmed Muqthar and Samantha Kyle-Little*

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### **Business Tip**

There are two business tips this month:

#### A browster in your browser

Browster is a plug in for Firefox or Internet Explorer that preloads the web pages of links on a page you are viewing. By putting your mouse over the icon that is created you can see the web page that the web link takes you too and see if you want to go there. It is an easy and quick way of looking at web links when browsing.

#### Security for USB drives

USB drives are ubiquitous these days and if you do not secure them then anybody can plug them in and look at the files that you have transferred there. This website provides free software that you can download and encrypt your USB drives so they are protected for your use only.

### **Emerging issues from around the world**

**Click on the titles to read the full stories.**

#### Extreme commuters

Newsweek published this article on how the number of extreme commuters (those traveling more than 90 minutes one way) in the USA has doubled to 3.4 million. This is having an effect on the number of people available for community activities. Will high oil prices fundamentally alter this trend or push it towards public transport systems?

#### Zero energy homes

A company in the USA has built a net zero energy home for under US\$200,000. The house uses a combination of insulation, construction methods to seal the house, energy efficient appliances, ground pump heating and cooling, and solar panels. The web article has a link to a pdf file which presents the information in great detail for houses in

different climates.

### Australian investment in alternate fuel vehicles

The Australian Federal government has announced the investment of almost \$100 million to Ford and Holden from the industry technical assistance fund. The Holden money will go towards research on hybrid power trains while the Ford money is for money on diesel motors for the Ford Territory.

### CSIRO wireless record

The CSIRO has reached 600mbps of data transmission on its new wireless network systems, again increasing the competitiveness of wireless systems with wired systems.

### Reverse seachange

Insurers in the US are pulling back from insuring houses in some coastal areas in response to Hurricane Katrina and the possibility of increased storm activity with climate change. This could be an early signal for massive changes in property values and population demographics.

### Can we live for a thousand years?

The technology review journal from MIT Boston has set a challenge for scientists to dismantle Aubrey de Grey's arguments that the first humans to live to a thousand years of age could be alive today. Go to this link for a detailed argument and counter response on the issues – for the scientifically minded only.

### Mice super resistant to cancer

Researchers at Wake Forest Medical research centre have accidentally discovered a strain of mice that are highly resistant to cancer. The resistance is genetic and is related to white cells aggressively attacking cancer cells. The information has no immediate application but understanding the mechanism may lead to treatments for humans.

### Super sensitive robots

Researchers have designed a tactile sensor that has the sensitivity of human touch, a major breakthrough for robot assisted technologies such as surgery that require this type of sensitivity.

### Six jobs that won't exist in 2016

Fast Company magazine has listed 6 jobs that they think will not exist in 2016 and the reasons why. Is your job there?

### Hydrogen from pig poo

Research is being carried out in Minnesota on the production of hydrogen from liquid pig manure in a biological fermenter. There are still obstacles to overcome to produce

hydrogen of the right purity but the initial work is promising.

### **Car changes shape in anticipation of a crash**

Researchers in Germany are working on a car that can anticipate a side on crash and activates shape changing metal in that side of the car. The change reinforces the weak spot between the door and the frame and more evenly distributes the force of the impact reducing injuries.

### **New search engines to harvest hidden information**

A variety of new approaches to internet search engines will soon have the ability to find information, and relationships between information that currently remain hidden.

### **Nano particle toxicity**

This article from MIT Technology Review looks at some of the possible toxic side effects of nano particles, an important consideration for this emerging industry.

### **Two electrons for one photon**

Generally one photon of light generates one electron in a solar panel. Researchers at Los Alamos laboratory and the National Renewable Laboratory have been able to move this relationship to one photon producing 2 electrons, potentially vastly increasing the efficiency of solar energy production.

### **Resource wars**

The British defense secretary has said in a speech that climate change is ushering in an era of "resource wars" with over dwindling natural resources. Is this one of the ways that climate change will affect our future?

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## **What Are We Writing About**

There is no article this month. Instead we invite you to go to the TED (Technology Entertainment Design) and download talks that were given to their annual conference this year. TED is a group that tries to inspire people to use their skills for the good of the globe. They have an annual conference that is by invite only, and at that conference they grant wishes to inspiring people and help them achieve them. The presentation from Majora Carter is a truly inspiring story about what passion, persistence and vision can do for a community. If you want to watch it on video the files are large (60-70MB), but they are also available as audio presentations. We commend them to you. Click on the link below.

### **Ted talks**