

Top 10 Emerging Technologies That Will Reshape the Future

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- Smarter drugs, super-light cars and computers operated by thought among 10 breakthroughs highlighted
- The World Economic Forum 's Global Agenda Council on Emerging Technologies is composed of top experts on new technologies around the world, representing both the academic and business world
- Download the full list <http://wef.ch/et2014>

Geneva, Switzerland, 26 February 2014 – From super-light cars to smarter drugs, the World Economic Forum 's Global Agenda Council on Emerging Technologies has identified the [top 10 emerging technologies of 2014](#) that could reshape the society of the future.

Comprised of leading thinkers from academia and industry, the Council selected the innovations with input both from experts within the Network and after discussions with industry leaders gathered at the World Economic Forum 's Annual Meeting 2014 in Davos-Klosters. Each innovation was selected for its potential to have a real and positive impact on the world.

The list includes a new technique for extracting metals along with drinking water from the sea, new ways of treating cancer using microbes found naturally in the human body and computer interfaces operated by the power of thought.

“ These breakthroughs show the boundless potential for technology to have a positive impact on society, from

finding cleaner energy to new cures for disease. For these gains to be realized, we need the right regulatory

frameworks, strategic alliances among innovators and market leaders, investment capital, as well as greater public

awareness, ” said Noubar Afeyan, Chair of the Global Agenda Council on Emerging Technologies and Chief

Executive Officer of Flagship Ventures.

“ 2014 will be a crucial year for these technologies, ” said Martina Larkin, Senior Director and Head of the Network of Global Agenda Councils, World Economic Forum. “ Close cooperation between governments, industry and academia is essential to harness their potential ” .

The ten emerging technologies are:

Brain-computer interfaces: It is already possible to type just by monitoring the electrical activity of your brain, but as the technology advances, it could be possible for people with disabilities to operate wheelchairs using only their thoughts.

Mining metals from desalination brine: Large-scale desalination is becoming economically feasible for the first time because of new chemical processes that enable the mining of metals from waste water, or brine.

Nanostructured carbon composites: Cars made from carbon-fibre reinforced composites are as much as 40% lighter than older models, stronger, and more easy to recycle, offering the prospect for huge energy savings.

Grid-scale electricity storage: A fundamental breakthrough is close that would allow the saving of surplus energy from fluctuating renewable sources such as sun and wind within the electricity grid.

Body-adapted wearable electronics: Whether worn on the body, embedded in clothes or even under the skin, these devices can track information, such as heart rate and stress levels, giving people real-time feedback about their health.

Nanowire lithium-ion batteries: New batteries based on silicon – using tiny silicon nanowires – could have a longer life, charge more quickly and hold up to three times the power of existing batteries.

Screenless display: A 3D image projected into space – a “ screenless display ” – can convey information that a 2D

image presented on a screen cannot, and is close to becoming a practical reality.

Human microbiome therapeutics: Drawing on knowledge gained from the Human Microbiome Project in 2012 and other research, human microbiome technology is increasingly seen as an important source of treatment for serious diseases as well as for improving health.

RNA-based therapeutics: RNA, like DNA, plays a part in protein synthesis and, to a lesser extent, the transmission of genetic information. Scientific advances are combining to enable a new generation of targeted, RNA-based drugs that could help find new treatments for cancer and infectious diseases.

Quantified self (predictive analytics): Using data and specialized machine-learning algorithms, we can now build detailed and predictive models about people and their behaviours, which can help in areas such as urban planning and medical diagnosis.

The Network of [Global Agenda Councils](#) is a unique, global community of over 1,500 premier thought

leaders who are the foremost experts in their fields of academia, business, government, international

organizations and society. The top emerging technologies and their impact will also be featured in the Global

Technology Leadership course of [Forum Academy](#), a non-profit initiative of the World Economic Forum aimed at

helping professionals and organizations enhance their strategic knowledge in a fast-changing world.

Notes to Editors

Read the Top Ten in full: <http://wef.ch/et2014>

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