

TECH-NEWS

(An initiative of SCIENCE CLUB & PROJECT COMMITTEE, MITS-JADAN)
Presents Technological Update On

Emerging Technology in India (2017)

BY

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Introduction:-

Emerging technology is a relative term, because someone may see a **technology** as **emerging** and others may not see it the same way. According to Business Dictionary, **emerging technology** is a new **technology** that is currently being developed, or will be developed within the next five to ten years. An **emerging issue** is something we haven't thought about, but need to, or it's something we already know, but is changing. The Institute for **Emerging Issues** works collaboratively to mine these **emerging issues** for their opportunities.

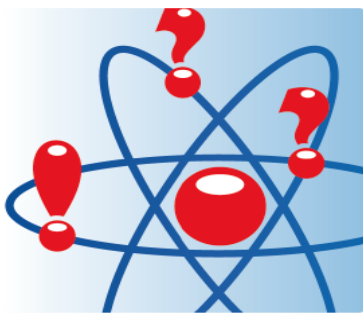
Emerging technologies are **technologies** that are perceived as capable of changing the status quo. Emerging technologies include a variety of technologies such as educational technology, information technology, nanotechnology, biotechnology, cognitive science, psycho technology, robotics, and artificial intelligence.

Keywords: - Emerging, technology, Quantum Computing.

Here are the 10 technologies comprising the 2017 list, along with the reasons cited in this news article report for their selection:

- 1. Blood Tests Allow for Scalpel-Free Biopsies** - Ultrasensitive blood tests known as liquid biopsies promise to improve cancer diagnosis and care.
- 2. Off-Grid Devices Draw Drinking Water from Dry Air** - Sunlight-powered moisture-absorbing technologies are becoming economical.
- 3. Deep-Learning Networks Rival Human Vision** - AI now matches or exceeds the ability of experts in medicine and other fields to interpret what they see.
- 4. Artificial Leaf Turns Carbon Dioxide Into Liquid Fuel** - Artificial-leaf technology converts carbon dioxide to fuels and more.
- 5. Human Cell Atlas Opens a New Window to Health and Disease** - An international project is set to detail how every cell type in the body functions.

- 6. Precision Farming Increases Crop Yields** - Combining sensors and imaging of every plant with real-time data analytics improves farm outputs and reduces waste.
- 7. Affordable Catalysts Give Green Vehicles a Push** - Reducing the platinum in fuel-cell catalysts could help bring hydrogen-powered vehicles to the mass market.
- 8. Genomic Vaccines Fight Disease in Ways Not Possible Before** - Vaccines composed of DNA or RNA, instead of protein, could enable rapid development of preventives for infectious diseases.
- 9. Sustainable Design of Communities Dramatically Reduces Waste** - Moving beyond the green-home level, ambitious projects are attempting to join blocks of buildings into a single sustainable unit.
- 10. Quantum Computing Becomes More Accessible** - Increased testing of quantum computing techniques will open the door to solving new kinds of problems.



Quantum computers' almost limitless potential has only ever been matched by the difficulty and cost of their construction. Which explains why today the small ones that have been built have not yet managed to exceed the power of supercomputers. But progress is being made and in 2016 the technology firm IBM provided the public access to the first quantum computer in the cloud. This has already led to more than 20 academic papers being published using the tool and today more than 50 start-ups and large corporations worldwide are focused on making quantum computing a reality.

“There are still many obstacles. Coherence times must improve, quantum error rates must decrease, and eventually, we must mitigate or correct the errors that do occur. Researchers will continue to drive innovations in both the hardware and software. Investigators disagree, however, over which criteria should determine when quantum computing has achieved technological maturity. Some have proposed a standard defined by the ability to perform a scientific measurement so obscure that it is not easily explained to a general audience. I and others disagree, arguing that quantum computing will not have emerged as a technology until it can solve problems that have commercial, intellectual and societal importance. The good news is, that day is finally within our sights.” We truly hope so.

Goal:-

These technologies - selected by a **global panel of experts** - “are expected to become increasingly commonplace in the next few years,” and are “attracting increased funding or showing other signs of being ready to move to the next level.”

After all, with such progress behind Quantum Computing, the word on people’s lips now is “Quantum Ready.” A statement is introduced in the supporting of this emerging technology, i.e. a few weeks ago, the *Wall Street Journal* published an interview with Microsoft’s co-founder and first **CEO Bill Gates** and its current **CEO Satya Nadella** that added fuel to my doubts about the maturity of quantum computing. This marvelous interview covered a variety of topics, including the value of empathy in business, the perils of automation, immigration policy and even cricket. But perhaps the most intriguing question they were asked was “**Can you explain in one sentence to my 72-year old mother: What is quantum computing?**”