

Top Trends in the Gartner Hype Cycle for Emerging Technologies, 2017



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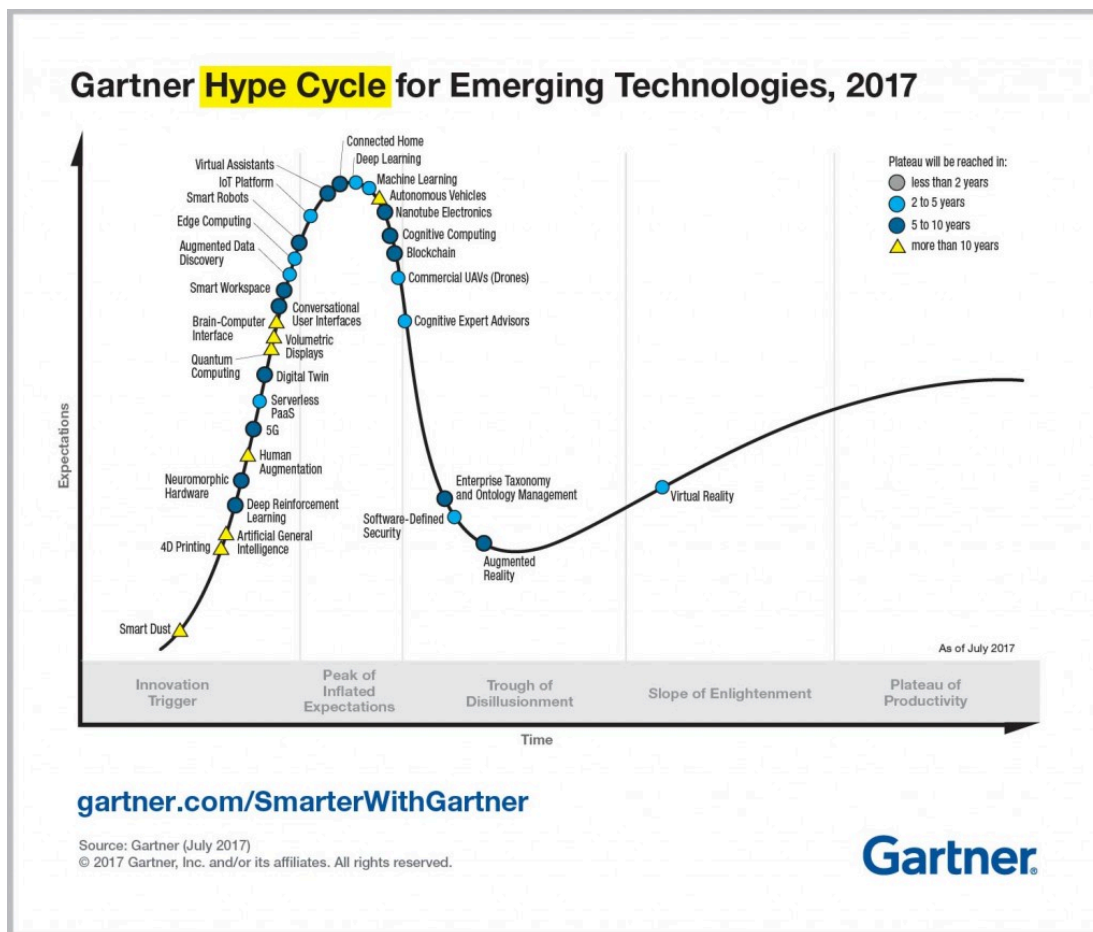
Enterprises should explain the business potential of blockchain, artificial intelligence and augmented reality.

Explore the latest: The 2023 Hype Cycle for Emerging Technologies (/en/articles/what-s-new-in-the-2023-gartner-hype-cycle-for-emerging-technologies)

Imagine a world where it is possible to implant a magnet that detects electrical current or utilize an exoskeleton to enhance strength. Now consider the potential abuses of requiring employees to have chip implants before they can work. Human augmentation has the potential to use technology to enhance bodies and minds, but also raises ethical and legal questions.

Nevertheless, the technology would offer higher levels of performance from employees and offer businesses an edge. This technology is upwards of 10 years from mainstream adoption, but has the potential to create a multi-billion dollar human augmentation market.

While human augmentation is just at the beginning of the innovation trigger phase of the **Hype Cycle**, (<https://www.gartner.com/en/research/methodologies/gartner-hype-cycle>) complementary emerging technologies such as machine learning, blockchain, drones (commercial UAVs), software-defined security and brain-computer interfaces have moved significantly along the Hype Cycle since 2016.



([https://blogs.gartner.com/smarterwithgartner/files/2017/08/Emerging-Technology-Hype-Cycle-for-2017_Infographic_R6A.jpg?](https://blogs.gartner.com/smarterwithgartner/files/2017/08/Emerging-Technology-Hype-Cycle-for-2017_Infographic_R6A.jpg?_its=eJxVjOGSgyAUBe_y1hgFEZAbzGLOYCF8oIVGUkDGRSqefSqZ1Wz79eL1Ez9rgEXOMzINsZmlGRupF1xANV0q7noOhVFcJFnmrJ9eSC93xQZ6b28MpJq6kGqZCaRqdnzxs6iCiGbtBOeME19oYlWlwXoLB1ZrXVHXtMM-cX_M21oWyrC4pnTdCAwh3dy6w-l4jssfvfh0A0OmSDI_7KXWe7Ft-99pweAXt--OfQXyzzWGkv13Cu-CQgkvhrJWeu-y4z1_QIIZ1OK)

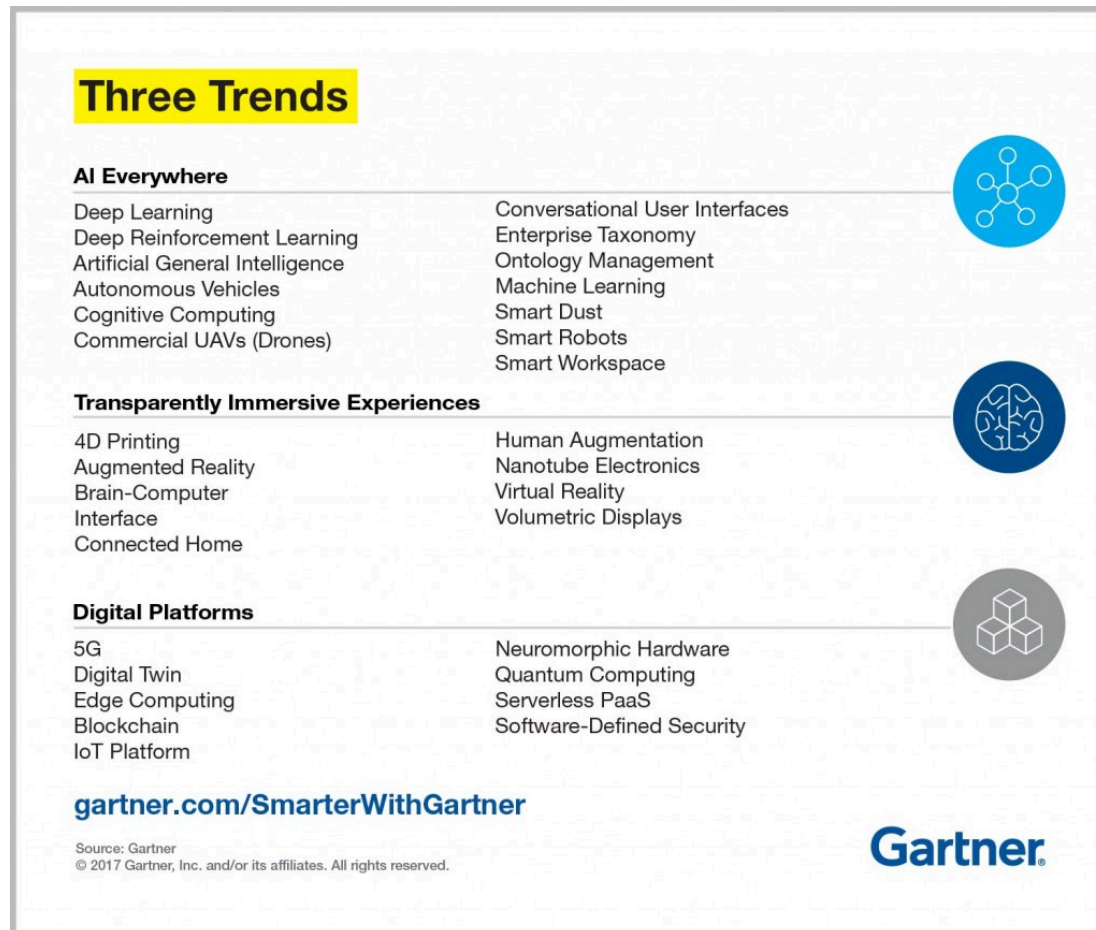
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The Gartner Hype Cycle for Emerging Technologies, 2017 focuses on three emerging technology mega-trends: **Artificial intelligence**

(<https://www.gartner.com/smarterwithgartner/the-disruptive-power-of-artificial-intelligence/>) (AI) everywhere, transparently immersive experiences and digital platforms. Enterprise architects and technology innovation leaders should explore and ideate these three mega-trends to understand the future impacts to their business.

“Organizations will continue to be faced with rapidly accelerating technology innovation that will profoundly impact the way they deal with their workforces, customers and partners,” says **Mike J. Walker** (<https://www.gartner.com/analyst/49943/Mike-J.-Walker>), research director. “Our 2017 Hype Cycle reveals three distinct technology trends that profoundly create new experiences with unrivaled intelligence, and offer platforms that propel organizations to connect with new business ecosystems in order to become competitive over the next five to 10 years.”

This Hype Cycle looks at technologies that show promise in delivering a high degree of competitive advantage.



(https://blogs.gartner.com/smarterwithgartner/files/2017/08/PR_296373_INFORGRAPHIC_TRENDS_R4
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Artificial Intelligence (AI) Everywhere

Consider the potential impact of AI-enabled **autonomous vehicles**

(<https://www.gartner.com/smarterwithgartner/the-road-to-connected-autonomous-cars/>). They could reduce accidents, improve traffic, and even slow urbanization as people can use travel time and won't need to live near city centers. "When autonomous vehicles, AI, IoT and other emerging technologies are combined with economic trends like the sharing economy, we truly see different business designs that profoundly disrupt the market," Walker says.

Uber is a prime example of how a business is fundamentally shifting an industry dominated by private vehicles to potentially upending the industry with transportation as a service. The media has been consumed with hype stories about autonomous vehicles,

and it has led to inflated expectations for the technology. However, given that AI is critical for the technology, this has led to an increase in the development of machine learning algorithms.

While continued advancements in sensing, imaging and mapping — as well as AI and computing — are helping to evolve the technology, the reality is that the complexity and cost requirements are presenting challenges. “AI technologies will be the most disruptive class of technologies over the next 10 years due to radical computational power, near-endless amounts of data and unprecedented advances in deep neural networks,” Walker says. “These will enable organizations with AI technologies to harness data in order to adapt to new situations and solve problems that no one has ever encountered previously.”

Also in the realm of AI, **machine learning**, (<https://www.gartner.com/smarterwithgartner/let-machine-learning-boost-your-business-intelligence/>) one of the hottest concepts in technology, has the potential to benefit industries from supply chain to drug research. It will soon become impossible for conventional engineering solutions to handle the increasing amounts of available data. Machine learning offers the ability to extract certain knowledge and patterns from a series of observations.

Transparently Immersive Experiences

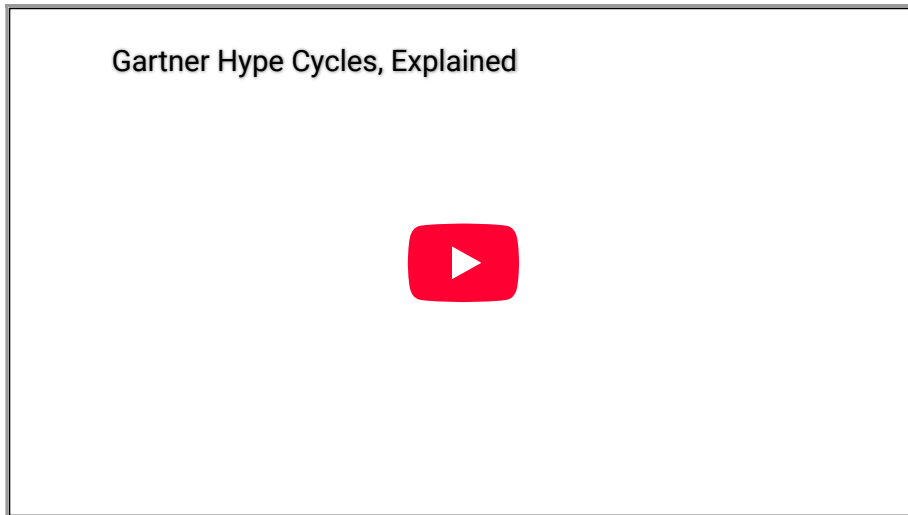
At **Facebook’s F8 Conference** (<https://www.fbf8.com/>) this year, the company introduced the Camera Effects Platform, launching a connection between **augmented reality** (<https://www.gartner.com/smarterwithgartner/exploring-augmented-reality-for-business-and-consumers/>) (AR) and social media. It ignited conversations about the potential for AR in the consumer world. However, the technology, which integrates virtual enhancements with real-world objects, could have big potential for industry.

For example, instead of relying on printed paper or separate screens, AR could overlay a maintenance schematic on a broken lamp post. Enterprises should create an AR strategy in the business with specific goals and tasks for trials and benchmarks. When it comes to transparently immersive experiences, technology is introducing transparency between people, businesses and things.

As technology evolves to be more adaptive, contextual and fluid, it will become more human-centric. Besides AR, companies should look to digital workspaces, connected homes, virtual reality and 4D printing in this realm.

Digital Platforms

With bitcoin and Ethereum constantly in the news, **blockchain** (<https://www.gartner.com/smarterwithgartner/the-cio-s-guide-to-blockchain/>) might seem like it's just around the corner. However, most initiatives are still in alpha or beta stage. Enterprises are still deciding how to navigate this technology, but the lack of proven use cases and the volatility of bitcoin have created concerns about the viability of the technology.



Long-term, Gartner believes this technology will lead to a reformation of whole industries. Of the two types of blockchain — permissionless-public ledgers and permissioned-public ledgers — enterprises should look toward the latter option. Permissioned-public ledgers have access controls owned/managed by rules, but still allow for a community. For commercial transactions, companies might look to permissionless-public ledgers such as bitcoin, which allows unknown or untrusted users to access the ledger.

Read More: Are You Ready for Blockchain? [Infographic]

(<https://www.gartner.com/smarterwithgartner/are-you-ready-for-blockchain-infographic/>)

As digital business moves away from siloed business ventures and toward interconnected ecosystems, technology is evolving from compartmentalized technical infrastructure to ecosystem enabling platforms. Businesses must think about how to create platform-based business models and what technology is needed to support that move. Other technologies in this area include 5G, **digital twins** (<https://www.gartner.com/smarterwithgartner/how-to-use-digital-twins-in-your-iot-strategy/>), IoT platforms and quantum computing.

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Recommended resources for Gartner clients*:

Hype Cycle for Emerging Technologies, 2017"

(https://www.gartner.com/document/3768572?cm_sp=swg_-_research_-_tail)

(<https://www.gartner.com/analyst/49943/Mike-J.-Walker>) by Mike J. Walker

(<https://www.gartner.com/analyst/49943/Mike-J.-Walker>)

*Note that some documents may not be available to all Gartner clients.

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