

# Applying Artificial Intelligence to Drive Business Transformation: A Gartner Trend Insight Report

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Artificial intelligence technologies are dauntingly complex, even to the experts. But CIOs and IT leaders don't need advanced degrees to assess AI's business potential or to start working with AI capabilities. This Gartner Trend Insight Report offers practical guidance on what steps to take.

## Opportunities and Challenges

- AI technologies based on deep learning, are becoming more affordable, available and accessible to IT leaders through cloud services, APIs, new tools and vendor integration with existing software products and services.
- Early adoption AI for specific, targeted applications positions forward-looking organizations to create very high business value and, ultimately, to set the stage for transforming business models and processes.
- Initial AI projects may underdeliver, stall or fail, but the risk of businesses becoming noncompetitive or even obsolete by ignoring AI is high.

## What You Need to Know

- Determine whether AI advances can increase business value more than traditional analytics and rule-based systems by working with enterprise architecture leaders to evaluate the impacts of these disruptions for specific applications and processes.
- Maximize impact of AI initiatives by aligning strategy and deployment to address problems that have rankled the organization historically and where AI appears to present a novel opportunity.
- Factor in extensive experimentation, piloting and testing to your AI deployment, with the intent of learning lessons through the journey to tangible AI results.

## Insight From the Analyst

### You Don't Have to Be the Smartest Person in the Room to Use Artificial Intelligence; Just Smart Enough to Know How to Experiment

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[Whit Andrews](#), VP Distinguished Analyst

The bundle of emerging technologies that comprises artificial intelligence is driving the creation of new tools and practices, impossible to conceive of until now. Gartner's position is that any IT leader can apply AI as it exists today, without needing advanced degrees in AI's many disciplines. What CIOs and IT leaders need most is practical intelligence — they need to get smart to assess AI's potential and prepare their organizations to leverage it. And that's where this Gartner Trend Insight Report comes in: the research highlighted shows the way for organizations to begin, right now, to make sense of the AI opportunity for digital business and to take practical steps to realize it.

### Amazing Innovation and Amazing Hysteria

Breakthroughs in AI capabilities — especially in the area of deep learning — surface in weekly headlines describing frankly amazing innovations. In May 2017, Google DeepMind's AlphaGo defeated 19-year-old Ke Jie, the top-ranked human player of the complex Chinese board game, Go. AI is now used in defense against hackers — and by the hackers in offense. But justified amazement at real achievements is exceeded by our amazement at AI in the popular imagination: a potent blend of hype, hysteria, ignorance and misinformation. As an IT leader, you'll have to balance AI's practical utility today in the near term with the outsized expectations for its future. You'll also need to intensify your commitment to minimizing data bias and to ethically employing AI's power.

AI for now is limited. There is no "artificial general intelligence" that can "think and act like a human," and there's no reason to expect it soon. State-of-the-art AI relies on widely recognized technologies — machine learning, algorithms, neural networks, deep learning, natural-language processing and others — that now can exploit recent breakthroughs in compute power, parallel processing and massive data volumes (see "Smart Machines See Major Breakthroughs After Decades of Failure"). Further, AI implementations are discrete and specific. AlphaGo will not log into today's most popular online game, [League of Legends](#), and sweep the field.

### Narrow-Minded AI

These very limits clarify for IT leaders AI's practical applications. Today, AI functions best and has its greatest impact when its constituent technologies are narrowly focused on well-scoped problems. And that's great news, because these are the kinds of problems that confront your organization in the real world:

- "Reading" thousands of retina scans to identify, with better-than-human accuracy, the earliest signs of disease

- Analyzing loan payment activities, including timeliness, and factoring in other data to signal which borrowers are in danger of missing payments
- Scanning images of property to confirm that they match self-reported information about features in the buildings
- Real-time voice translation so that the international staff of a regional warehouse can understand each other
- Allowing new colleagues to find each other after a merger and to explain the processes of their formerly separate businesses
- Image processing to autoselect the proper box size for packing specific items for shipment

## Being Smart About AI

This report is intended to guide IT leaders in understanding how they can assess, adapt and apply today's AI capabilities to deliver business value to their organizations. These 49 research notes deal with acquiring and accessing AI capabilities; implementing AI within the organization; using AI capabilities in select, broad horizontal applications; and using AI in specific vertical industries or applications.

~ Whit Andrews, Vice President, Distinguished Analyst

## Executive Overview

### Definition

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In 2016, Gartner saw unprecedented progress with AI and machine learning technologies. The most important advances are in "deep learning," which is a rapidly evolving variant of machine learning and the main driver of enterprise interest in AI today. Deep learning systems are "trained" using extremely large datasets, large-scale, interconnected computational layers and compute- and data-intensive heuristics and numerical optimization techniques. The resulting deep neural network can, and has, dramatically outperformed conventional approaches to natural-language processing, computer vision and speech recognition.

These capabilities are being widely applied in real-world applications, including healthcare diagnoses, predictive maintenance, legal applications, customer service, digital oil fields, automated data centers, self-driving cars and smart homes. Gartner rates 41% of AI technology profiles as transformational, with another 44% rated as offering high benefits.

Artificial intelligence is a set of related technologies that seems to emulate human thinking and action. It does so typically by

being able to learn from experience, arrive at its own conclusions, appear to understand complex content, participate in natural-language dialogues with people, enhance human cognitive performance or replace people in executing nonroutine tasks. By its nature, AI is applicable in a wide range of business use cases, such as conversational commerce, customer service, fraud detection and virtual assistants.

There are practical and proven actions that IT leaders can take to cut through the AI confusion, complexity and hype and to position their organizations to successfully exploit AI for real business value. This Trend Insight Report maps out the four main AI action areas:

- Orienting IT and business thinking and practice around the potential, and the challenges, of AI
- Implementing AI through developing strategies, addressing the skills gap, assessing infrastructure requirements and more
- Identifying broad areas where AI impacts organizational behaviors
- Developing AI initiatives for specific vertical market segments

Artificial Intelligence will embed in business processes, learning from its experiences, analyzing and predicting and bringing surprising insights to light.

Figure 1. Artificial Intelligence Embeds in Business Processes



Source: Gartner (August 2017)

## Research Highlights

### Orient IT and Business Toward the AI Opportunity

Digital business is already disrupting organizations. AI and machine learning will add to the disruption. By 2020, AI technologies will be a top-five investment priority for more than 30% of CIOs. They should be preparing their organizations to get the optimal return on that investment. They should understand what they're getting, and what they're getting into, with AI if they and their organizations are to be successful. Then they can orient the organization's thinking and practices toward exploiting AI's capabilities.

The range of activities toward this end are broad. Organizations need a basic understanding of the core AI technologies (especially those around deep learning), their implications and limitations. At the same time, baseless fears, cultural anxieties, misinformation and myths need to be dispelled so the organization can evaluate AI objectively. IT leaders should lead the way in questioning vendors' vague or inflated promises about the AI capabilities their products have or will have.

The advent of AI tools, cloud services and embedded capabilities will disrupt software licensing and pricing. Organizations should understand how these changes will affect their price negotiations and software spending. AI technologies and the AI market are both rapidly evolving, influencing and

influenced by other relevant business and technology trends. IT leaders should ensure that the organization can track, understand and act on these changes.

The following Gartner research creates a starting point to orient both IT and the business toward the AI opportunity.

## Related Research

"A Framework for Applying AI in the Enterprise": This collection of Gartner research provides an introduction for IT and business units on the core AI technologies, their differences and how their capabilities can be applied in the organization.

"Lack of Focus on AI Licensing Will Result in Higher Costs, Risks and Long-Term Headaches": Organizations should understand how AI procurement differs from traditional software licenses or SaaS, and act to reduce risks and maximize AI's return on investment.

"Questions to Ask Vendors That Say They Have 'Artificial Intelligence'": Nearly every application/platform vendor is promising AI. This research guides IT leaders in questioning vendors that claim to have AI capabilities, to clarify what are the real AI capabilities and their value to the organization.

"Hype Hurts: Steering Clear of Dangerous AI Myths": Success is almost impossible without promoting AI, but hyping it sets false expectations, exaggerated assumptions, delusion, confusion and fear. Technology innovation leaders should require solid reasons for AI investments and clear proof of their viability, and create a small center of AI expertise to test its real-world benefits.

"Prepare for Big Changes in Software and SaaS Pricing, Driven by AI and IoT": AI (and the Internet of Things [IoT]) will drive a big drop in device-based and named-user software and SaaS pricing. Sourcing and vendor management leaders should plan now to capitalize on this change, preserve investments, and negotiate pricing metric protections and exchange clauses into contracts.

"Develop Your Artificial Intelligence Strategy Expecting These Three Trends to Shape Its Future": Three major trends will push AI toward becoming a practical capability that enables business strategies: improved two-way communication via natural-language processing; deeper and broader integration with existing applications; and IoT projects and collaboration with other AI systems. This note describes what CIOs and IT leaders can do to anticipate these trends.

"How Enterprise Software Providers Should (and Should Not) Exploit the AI Disruption": Technology and service providers (TSPs) can help end-user organizations cut through AI confusion and hype and speedily evaluate AI options. Be clear about what differentiates your AI offering. Focus on the business problem it solves and provide case studies that show tangible ROI.

"Artificial Intelligence Primer for 2017": Gartner client requests to talk about AI-related topics tripled from 2015 to 2016. This research outlines for CIOs and IT leaders the key client challenges for AI and Gartner's current AI research directions, and provides links to an array of online resources including webinars and events.

"Artificial Intelligence and Application Security Vendors: Marketing Hype or Genuine Hope?": AI has begun to show up in many of the tools common to the secure DevOps environment, such as

application security testing (AST) and network traffic analysis. But security and risk management leaders should be ready to determine whether these tools deliver improved speed and accuracy compared to conventional products.

"Market Guide for Conversational Artificial Intelligence in China": Conversational AI, which creates contextual conversations via voice or text, is evolving rapidly in China, with strong government support. This Market Guide gives technology innovation leaders guidance on this fast-moving market's dynamics and players.

"Top 10 Strategic Technology Trends for 2017: Artificial Intelligence and Advanced Machine Learning": AI and machine learning require a willingness to experiment and "fail" so organizations can test these capabilities when applied to real business problems. IT leaders who use flexible, innovative and agile approaches to AI will make big gains. This research describes three such approaches.

"Invest Implications: 'Top 10 Strategic Technology Trends for 2017: Artificial Intelligence and Advanced Machine Learning'": The AI trend will have a major impact on specific IT vendors, identified in this one-page document aimed at institutional investors in two key areas: the Internet of Things and cloud services. All these vendors are racing to include these capabilities their core strategy.

"Invest Implications: 'Augmented Analytics Is the Future of Data and Analytics'": "Augmented analytics" leverages machine learning and natural-language generation to automate the analytics process and cut the time needed to get accurate and actionable insights. This one-page document aimed at institutional investors identifies key analytics vendors in this trend.

## Build the AI Foundation: Strategy, Skills, Organization, Technologies

The very nature of AI systems poses a challenge to most organizations. AI systems learn from their experience, improving their accuracy and reliability over time. They adapt and their behavior is expected to change. Organizations have to be able to manage that dynamism.

Machine learning initiatives can be a source of high organizational (and personal) anxiety if this reality is ignored or overlooked. CIOs and IT leaders need to address organizational structures and practices that could impede AI adoption and success. Managing the changes needed to facilitate AI and create the infrastructure to support it will be a key leadership responsibility.

Overhauling data strategy and leveraging existing organizational strengths and competencies will focus the organization's AI efforts. AI workloads and data requirements will require data infrastructure changes, especially for scalability. To marry AI with advanced analytics will require new data and analytics best practices. Human expertise and skills will be a major limiting factor for AI ambitions: IT leaders should address the human capital needs for AI at the outset.



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As organizations grapple with these early steps to create the AI foundation, they create experience and competence that will accelerate AI adoption in the future.

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### Related Research

"How to Start a Machine-Learning Initiative With Less Anxiety": Data and analytics leaders should respond to AI and machine learning by leveraging what they already have — business acumen, an analytics mindset and high-value data to master these technologies and include them in their data and analytics programs.

"Four Data Management Best Practices for AI": Managing data in support of AI is not a one-off project, but rather an ongoing activity that should be formalized as part of your data management and data governance strategies.

"Market Insight: Getting Started With Conversational Platforms": Technology and service providers must both develop for and use the emerging conversational platform ecosystem as consumers and organizations shift to voice and virtual personal assistants (VPAs). Aimed at TSPs, this research gives IT leaders insight into vendor dynamics in the conversational market.

"A Chief Data Officer's Guide to an AI Strategy": To exploit AI, data and analytics leaders, especially chief data officers (CDOs), must broaden their strategy, assess the impact on both business models and customer experiences, and prepare for an array of other strategic challenges.

"Seek Diversity of People, Data and Algorithms to Keep AI Honest": To counteract inherent bias-rooted errors in AI systems, data and analytics leaders should diversify their AI teams, data sources and problem selection. This research describes how.

"Three Elements of a Scalable Enterprise Machine Learning Infrastructure Strategy": Machine learning infrastructures and workloads are vastly different from traditional enterprise applications. IT leaders can use three best practices to create the high-performance, scalable infrastructures needed for these technologies.

"Survey Analysis: Enterprises Dipping Toes Into AI but Are Hindered by Skills Gap": More than two-thirds of respondents in a 2016 Gartner client survey are prioritizing AI initiatives to improve decision making and automate processes. But the chief limiting factor is the lack of necessary staff skills. This survey outlines what IT leaders are doing to address AI challenges in the near term.

"Find the Right Accelerator for Your Deep Learning Needs": The infrastructure needed to support deep learning is far more compute- and data-intensive than that needed by traditional machine learning models such as logistic regression or data trees. IT leaders should evaluate available "accelerator technologies" to speed the shift to efficient AI infrastructures.

"Market Insight: How to Exploit Conversational Artificial Intelligence to Drive Digital Commerce": Digital commerce is embracing AI to enhance the user experience, especially through



conversational AI. Technology product management leaders for digital commerce vendors should pilot AI-based, voice-driven customer experiences to build new revenue opportunities.

## Using AI in Broadly Applicable Cases

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One aspect of AI's promise is how its related technologies act as application enablers when applied in broad areas, such as the Internet of Things. IoT is able to harvest a lot of data, even more when IoT applications approach real time. But organizations struggle to analyze and understand that data, to sift it for insights and to discover new relationships. Analytics powered by AI, and intimately linked with not only IoT but other systems as well, will make this possible.

The dramatic improvements to smartphone "personal assistants," such as Apple's Siri and Microsoft's Cortana, are due to AI and machine learning advances. They point the way to AI-powered conversational platforms that will be adapted for IT service desks, digital commerce, customer service and office productivity suites such as Google G Suite and Microsoft Office 365.

The following group of research reports focuses on this wide-ranging aspect of AI, where its capabilities can be, in a sense, leveraged once and applied in many areas. But in almost every case, these same reports stress the importance of IT leaders approaching AI from the viewpoint of business problems and business objectives.

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Having a clear view of the relevant business issues will guide these leaders in separating hype from reality, setting realistic goals and proving that AI is able to deliver value for the organization.

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## Related Research

"AI on the Edge: Fusing Artificial Intelligence and IoT Will Catalyze New Digital Value Creation": Artificial intelligence and the Internet of Things strongly complement each other, with each technology's strength addressing the other's weakness. Forward-thinking CIOs responsible for strategic IoT programs can bring these technologies together to create a powerful new platform for digital business value.

"AI Will Alter Application Development — Things to Do Now": Application leaders need to incorporate AI tools and services to understand how AI will impact application development.

"The Business Case for Buying Application Management Services With Intelligent Automation": Application management consumes 52% of application spending. Intelligent automation, borrowing from AI-related technologies, can introduce new efficiency and effectiveness in this vital process. Sourcing and vendor management leaders should exploit service providers' investment in intelligent automation by requiring it in vendors' application management service proposals.

"Architecture of Conversational Platforms": Conversational interfaces via chatbot frameworks and virtual assistants (virtual customer assistants [VCAs], VPAs and virtual employee assistants [VEAs])

will revolutionize how humans relate to machines. These seemingly different platforms share many common elements. Enterprise architecture and technology innovation leaders should plan to consolidate conversational technologies into a platform that can serve multiple enterprise use cases.

"Digital Customer Service Part 3 — Update Process Mastery by Selectively Introducing RPA, Bots and AI": Customer service operations are being revolutionized by new technologies such as robotic process automation, chatbots and artificial intelligence. This research helps supply chain leaders responsible for customer service to explore these options, build an automation roadmap and develop digital dexterity skills to apply these technologies.

"Begin Investing Now in Enhanced Machine-Learning Capabilities for Fraud Detection": Security and risk management leaders must cut through the hype about machine learning and AI to understand the emerging types of machine learning available and the use cases appropriate for each method. This research will help guide sound investment decisions that can improve overall fraud results.

"Leverage Advanced Analytics for Smarter Adaptive Access Management": Advanced analytics techniques, including machine learning, improve real-time identity and access management. This document provides technical professionals with a perspective on vendor approaches to using technologies to make adaptive access management much smarter.

"Maximize the Effectiveness of Office 365 and G Suite With Everyday AI": Instead of focusing on targeted AI applications, this report introduces the idea of "everyday AI services" that become part of the normal flow of work within existing SaaS office suites such as G Suite and Office 365. Application leaders should monitor the inclusion and maturation of everyday AI to enhance the employee experience through improved personalization, recommendations, alerts and search.

"Start Preparing Now for the Impact of AI on Procurement": Procurement technology vendors are adding an array of machine-learning-based features to further automate procurement processes. But to leverage AI's full value, IT leaders in procurement need to drive better adoption of foundational procurement solutions.

"When Will AI Virtual Support Agents Replace Your IT Service Desk?": I&O leaders responsible for the IT service desk are keen to exploit AI technologies for virtual agents to optimize IT support. But a lot of preparatory work is needed before either the technology or the workplace is ready to depend on virtual agents.

"The Impact of Intelligent Automation on Managed Workplace Services": Intelligent automation, based in part on AI and machine learning, will transform the provision of managed workplace services. Sourcing and vendor management leaders should act now to be ready for restructuring these services and renegotiating contracts to leverage the full benefits of this capability.

"Augmented Analytics Is the Future of Data and Analytics": Augmented analytics is a next-generation data and analytics paradigm that uses machine learning to automate data preparation, insight discovery and insight sharing for a broad range of business users, operational workers and citizen data scientists. Data and analytics leaders should take action now to assess, adopt and optimize these capabilities as they mature.

"Add AI to Your B2B Sales Organization Now to Improve Revenue": Hype and misinformation about AI make it difficult for B2B sales organizations to set realistic goals and schedules for using it effectively. IT leaders for CRM and customer experience initiatives should start with the business case: identify the strategic business drivers and tactical use cases that have the greatest potential to be improved with AI.

"Use Analytics to Support and Enrich Your Information Governance Strategy": Machine learning, long used in information governance applications for specific use cases, is now becoming more widely integrated in vendor offerings. I&O leaders responsible for modernizing infrastructure for information governance should be ready to evaluate new AI capabilities for information governance, to leverage existing ones and to focus on reducing manual interactions.

"Impacts of Artificial Intelligence and Machine Learning on Human Capital Management": AI and machine learning are transforming how HR processes get done, through natural-language processing, conversational agents and decision support. IT leaders should invest in these three innovative techniques to drive efficiencies, adoption and improved employee experience.

"Innovation Insight for Conversational Commerce": Conversational commerce, powered by AI and machine learning, uses natural-language interfaces to enable customers to find and buy goods and services via a dialogue. IT leaders responsible for digital commerce technologies should take specific actions now to ensure their organization is ready to introduce this major paradigm shift in the customer experience.

## Applying AI in Vertical Markets

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As an enabling technology, AI is already having a big impact on vertical market segments, where some of the most advanced uses of AI and deep learning can be found. The specificity of the business requirements in these areas lends itself to AI optimization and even breakthroughs. But the potential benefits of AI in a given segment are just that: potential. AI initiatives should be linked to specific, well-scoped opportunities, problems and issues to have maximum impact.

As with broad applications, IT leaders should assess AI's potential in vertical segments by comparison with the capabilities of existing, better-known advanced analytics and rule-based systems. This group of research notes explores a range of verticals — including government, consumer goods, capital markets, wealth management, other financial services, healthcare, digital commerce and retail — and guides IT leaders in starting to assess how AI can be applied in each for business value.

The AI potential lies in intelligent automation of key processes — such as improving service and personalization with virtual assistants and chatbots and giving intelligent advice and recommendations — in areas that were formerly the domain of human experts.

## Related Research

"Is Your Digital Government Platform Ready for Virtual Assistants and Chatbots?": Chatbot and conversational AI platforms open new government service delivery channels. Government CIOs

need to quickly determine the role of these channels, adjust their digital service delivery strategies and extend their digital government platform to exploit these new opportunities.

"Two Ways That Consumer Goods Companies Are Using Computer-Vision-Enabled AI Tech to Improve Their Unified Commerce Strategy": Computer vision is an AI technology that enables machines to capture, process and analyze real-world images and video to extract meaningful, contextual information from the physical world. Enterprise architecture and technology innovation leaders are starting to use this capability in creating personalized, actionable customer insights.

"Market Trends: How to Target Capital Markets With Artificial-Intelligence-Powered Solutions": AI tools will be a prerequisite for capital markets and will become pervasive. Technology business unit leaders targeting capital markets should assess and choose one of four key use cases to target these segments and gain success with capital market end users.

"Wealth Management CIOs Deploy AI to Create Amazing Insights by Augmenting Human Intelligence": AI provides wealth management (WM) firms with a lifeline that helps organizations to adapt to the rising threats to their business models. Wealth management CIOs should use Gartner's AI adoption framework for financial services to develop an AI strategy aligned with business priorities.

"Chatbots Can Transform PFM Into Digital Financial Advisory Services": Bank CIOs working to deliver the digital banking experience can deploy AI-based chatbots to improve customer experience, extend digital customer advisory capabilities via open APIs, and leverage personal financial management (PFM) data and analytics to create new sources of value.

"Disruptive Technologies in Transportation: The Impact of Artificial Intelligence and Machine Learning": AI will deeply disrupt the way companies execute and optimize transportation, and create business value, as it becomes vital to autonomous vehicles, delivery robots, drones and optimization engines for transportation planning. Supply chain leaders should take steps now to leverage AI for strategic advantage.

"Emerging Applications of AI for Healthcare Providers": A few healthcare analytics vendors already use AI to improve accuracy and precision in care delivery and outcomes. CIOs developing a healthcare enterprise analytics strategy should take steps now to build institutional AI competency and strengthen analytical capabilities for AI testing and adoption.

"How CSPs Can Exploit Artificial Intelligence": For communications service providers, AI could affect a variety of different problems, interactions and process automation opportunities. This research enables data and analytics leaders to know where to focus their efforts for optimal service, network and business impact.

"How to Apply Artificial Intelligence to Digital Commerce": Artificial intelligence and machine learning can improve digital commerce performance, but are not solutions to all problems. IT leaders for digital commerce technologies should be aware of the benefits and limitations of AI and use a pragmatic approach to deliver tangible results.

"Algorithmic Retailing: Using AI to Drive Smart Automation": This research explores how retailers can migrate from their current, constrained manual analysis to advanced analytics and then to AI, as a key enabler for decision and process automation and customer experience differentiation.

"Cool Vendors in AI for Legal Affairs, 2017": New legal sector technologies leverage AI's power to learn and understand the mass of digital content in work products and precedents. This research helps legal sector CIOs assess and apply AI to this content and drive innovations and efficiencies in legal services delivery.

## Related Priorities

Table 1. Related Priorities

Priority	Focus
<a href="#">Customer Relationship Management and Customer Experience</a>	CRM and customer experience are business strategies that optimize profitability, operational efficiency, customer satisfaction and loyalty by implementing customer-centric processes.
<a href="#">Analytics and BI Strategies</a>	The focus of this initiative is on the strategies, practices, technologies and products needed to create business value.
<a href="#">Internet of Things</a>	Internet of Things (IoT) is an ecosystem that includes things — communications, applications, data and analytics. Its uses range from transforming business operations to new revenue generation.

Source: Gartner

## Gartner Analysts Supporting This Trend



[Tom Austin](#)



[Alexander Linden](#)



[Svetlana Sicular](#)

## Related Resources

### Webinars

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["Develop Your AI Strategy With Three Trends in Mind"](#)

["Machine Learning/AI: Hard Facts, Conclusions and Actions"](#)

["What to Do and Not to Do With Artificial Intelligence and Cognitive Computing"](#)

["The Coming AI Tsunami in Vertical Industries"](#)

### Articles

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["Artificial Intelligence and the Enterprise"](#)

["4 Uses for Chatbots in the Enterprise"](#)

["The Disruptive Power of Artificial Intelligence"](#)

## Gartner Recommended Reading

*Some documents may not be available as part of your current Gartner subscription.*

["Predicts 2017: Artificial Intelligence"](#)

["Hype Cycle for Artificial Intelligence, 2017"](#)

["Cool Vendors in Data Science and Machine Learning, 2017"](#)

["Smart Machines See Major Breakthroughs After Decades of Failure"](#)

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