IDC FutureScape

IDC FutureScape: Worldwide Internet of Things 2017 Predictions

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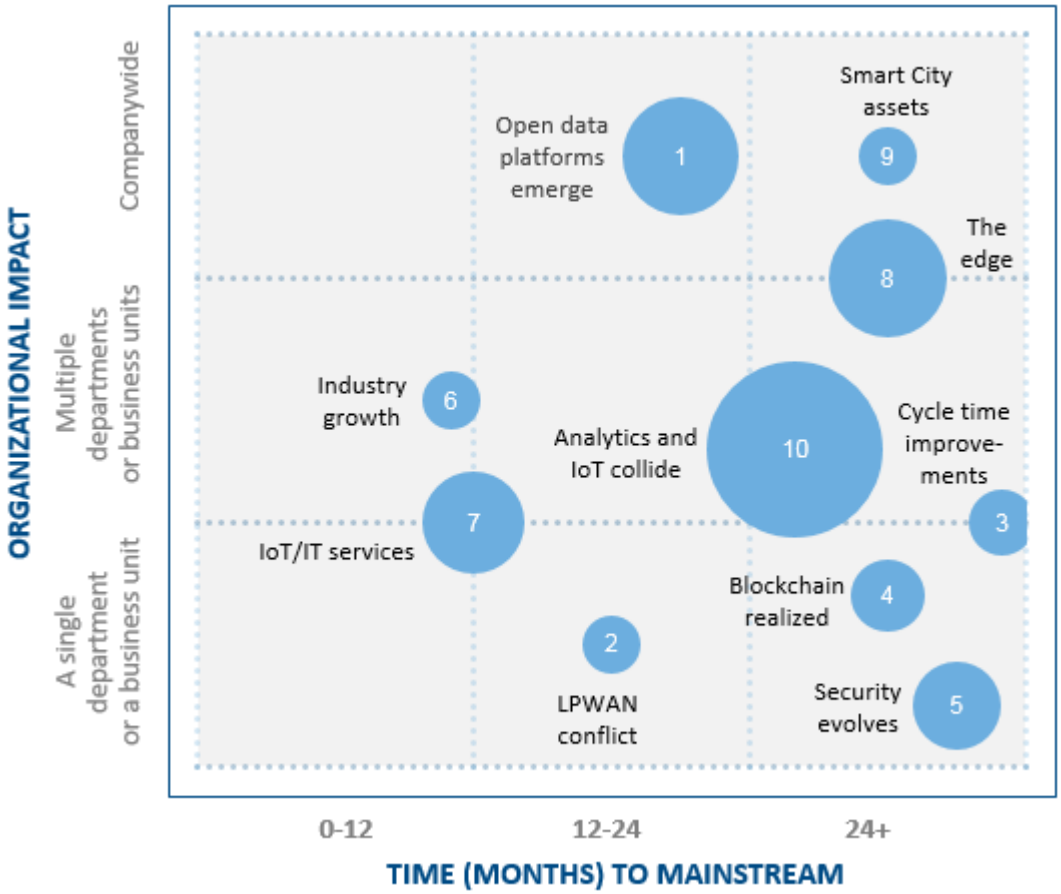
IDC FUTURESCAPE FIGURE

FIGURE 1

IDC FutureScape: Worldwide Internet of Things 2017 Top 10 Predictions



Note: The size of the bubble indicates complexity/cost to address.

Source: IDC, 2016

November 2016, IDC #US40755816e

Figure 1 presents IDC's worldwide Internet of Things (IoT) top 10 predictions in terms of their likely impact across the enterprise and the time it will take for the predictions to reach mainstream. By mainstream, IDC means the broad middle of the bell curve of adoption (i.e., the 40-60% of enterprises that are neither the first movers and early adopters nor the last to act). Each bubble's size provides a rough indicator of the complexity and/or cost an enterprise will incur in acting on the prediction.

IN THIS EXCERPT

The content for this excerpt was taken directly from IDC FutureScape: Worldwide Internet of Things 2017 Predictions (Doc #US40755816). All or parts of the following sections are included in this excerpt: IDC FutureScape Predictions, Advice for Technology Buyers, and Learn More. Also included is Figure 1.

IDC FUTURESCAPE PREDICTIONS

This study provides IDC's top 10 predictions for the 2017 IT buyer when it comes to evaluating and investing in IoT solutions and initiatives. The topics addressed are necessarily broad, as IoT touches many aspects of the technology ecosystem. Nevertheless, in most cases, IDC's global IoT team has focused on current and future considerations surrounding Internet of Things investment and deployments.

IDC covers IoT across a large number of dimensions including the hardware, software, services, and connectivity domains. This document contains detailed inputs from IDC's global IoT team on major trends, with advice for IT buyers to consider in their IoT-related planning.

We advise decision makers to approach each prediction in three steps:

- **Assess its relevance.** Should I pay heed to this prediction? Does this prediction apply to my business? Can I reasonably enough ignore it? What do I risk if I ignore it? Strategy is, after all, as much about what you decide to do as what you decide not to do.
- **Assess its urgency.** Does it apply to me now or in the future? If it applies in the future, when do I have to get started to deliver enabling capabilities as needed?
- **Assess its resource requirements.** What resources do I need and at what costs? What would I have to forego or postpone to achieve the capability? What do I have to speed up to achieve it?

Table 1 provides the key elements behind IDC's FutureScape predictions.

TABLE 1

Key Elements of an IDC Prediction

Element	Description
Driver	Drivers include external factors that set conditions for each decision imperative. Drivers must directly influence the decision and typically fall into the following categories: political, economic, social, technological, environmental, legal, and business. Decision makers do not have control or influence over such factors.

TABLE 1

Key Elements of an IDC Prediction

Element	Description
Prediction	Predictions are written from the technology decision maker's perspective and describe either actions taken in response to a set of drivers to achieve a business or technology outcome or market condition or vendor actions or policies.
IT impact	IT impacts describe internal forces relevant to actions compelled by the imperative, IT actions in response to compelling internal forces, and the consequences of internal forces and actions taken.
Guidance	Guidance is specific, practical, and actionable advice provided within IDC's direct sphere of technology and industry expertise.

Source: IDC, 2016

Summary of External Drivers

Many external factors have a direct or an indirect impact on the future of the IoT landscape and on IDC's predictions for the future of IoT as a key enabler of digital transformation. These drivers come from business, social, economic, and technological realms. IDC has identified seven drivers that represent significant forces affecting the evolution of IoT within the enterprise. Collectively, these drivers lead to the 10 predictions discussed in the sections that follow.

The drivers for IDC's 2017 top 10 IoT predictions are:

- **DX:** Technology-centric transformation altering business and society
- **New funding models:** Accelerating disruption and innovation
- **Everything, everywhere:** The rise of computer-based intelligence
- **Disruptive fault lines:** Security, privacy, and regulation
- **Shifting economics:** Data as digital capital
- **Materialization:** Revolutionizing industrial and commercial processes
- **Platform economy:** The ecosystem battle for scale

Predictions: Impact on Technology Buyers

Prediction 1: By 2018, the "Open Data Platform" Will Emerge as the Next Frontier in Platform Discussions, Causing Confusion for Enterprises That Already Invested in IoT Platform Solutions

Prediction 2: Despite Hype on the Benefits of Low-Power Wide Area Networks, such as LoRa and Sigfox, Its Unlicensed Spectrum and Lack of Quality of Service Will Cause Companies to Focus It on Noncritical Applications — with 3% Deploying by 2018

Prediction 3: By 2018, Investments in Operational Sensing Through IoT and Situational Awareness Via Analytics Will Deliver 30% Improvement in Critical Process Cycle Times

Prediction 4: By 2019, as IoT Adoption Grows in Major Industry, Government, and Consumer Sectors, 20% of All IoT Deployments Will Have Basic Levels of Blockchain Services Enabled

Prediction 5: By 2019, More than 75% of IoT Device Manufacturers Will Improve Their Security and Privacy Capabilities, Making Them More Trustworthy Partners for Technology Buyers

Prediction 6: In 2017, Connected Vehicles, Insurance Telematics, Personal Wellness, and Smart Buildings Will Be Four IoT Use Cases in the Spotlight Across All Worldwide Regions, Accounting for $96 Billion in Spending

Prediction 7: As Adoption of IoT Grows, 75% of IoT Adopters Will Turn to Outside Firms for Help in Strategy, Planning, Development, Implementation, and/or Management of These Initiatives

Prediction 8: By 2019, at Least 40% of IoT-Created Data Will Be Stored, Processed, Analyzed, and Acted Upon Close to, or at the Edge of, the Network

Prediction 9: By 2019, 40% of Local and Regional Governments Will Use IoT to Turn Infrastructure Like Roads, Streetlights, and Traffic Signals into Assets Instead of Liabilities

Prediction 10: By 2019, All Effective IoT Efforts Will Merge Streaming Analytics with Machine Learning Trained on Data Lakes, Marts, and Content Stores, Accelerated by Discrete or Integrated Processors

ADVICE FOR TECHNOLOGY BUYERS

The Internet of Things is no longer a future strategic initiative for many organizations. It is a reality for many — with 56% of organizations seeing it as strategic, according to IDC's *2016 Global IoT Decision Maker Survey.* However, as the vendors and service providers continue to develop and refine their offerings, organizations need to be prepared to ask the right questions to ensure the right solution is delivered and meets the needs of the business. IDC suggests the following actions for CIOs and decision makers when considering their Internet of Things investment(s):

- **IoT and the open data platform.** Work with the lines of business to ensure they are planning not only for the current needs of their IoT mandate but the longer-term use of the data collected and how it could be integrated with other enterprise (or external) datastreams to create more value.
- **IoT and connectivity.** Conduct due diligence against the various connectivity options that could be used for wide area (outside the four walls of the enterprise) IoT deployments. If looking to LPWAN solutions, it is critical to investigate multiple providers and technology types — look at Sigfox, LoRa, NB-IoT, or even other cellular options like 3G and 4G and the promise of 5G.
- **IoT and operational sensing.** All continuous improvement programs, whether Lean, Six Sigma, and so forth, must have an IT component and IT support to make sure the foundation is laid for operational sensing and cognitive-based capabilities.
- **IoT and blockchain.** Seek out vendors that can provide continuous *authentication services* as a way to make sure that only the right party has access to the right data, in the right context.
- **IoT and security.** Examine IoT identity threats to data collection and transmission. Be aware of both eavesdropping and data manipulation risks, especially if the transmission includes compute instructions.
- **IoT and industry.** Examine the emerging successful IoT use cases and determine what lessons can be taken and applied to your own organization.
- **IoT and IT services.** Consider partnering with an outside firm on the strategy work in particular but make sure that the firm is also capable of — or part of an ecosystem — involving implementation partners if needed.
- **IoT and the edge.** Seek out IT hardware vendors that have the ability to deliver a robust IoT gateway platform that is based on open standards, thus enabling a wide array of sensor protocols to be connected.
- **IoT and Smart City assets.** Focus on ROI calculations of smart infrastructure projects to prove financial value and begin to include ROA as it is important for the business case. Political, resident, and environmental impact should also be called out as key factors in value calculations.
- **IoT and analytics.** Make evaluation and experimentation with machine learning for IoT use cases a top priority in 2017. Begin to implement training and education programs to increase skills of existing developers as coding is replaced by statistics, algorithm development, and machine learning.

LEARN MORE

Related Research

- *Market Analysis Perspective: Worldwide IoT Ecosystem and Trends, 2016* (IDC #US40757416, September 2016)
- *IoT Talks: IDC's 2016 Global IoT Decision-Maker Survey Launch* (IDC #WC20160922, September 2016)
- *2016 IoT Mid-Year Review: A Report Card for Everyone* (IDC #WC20160804, August 2016)
- *Worldwide Internet of Things Forecast Update, 2016-2020* (IDC #US40755516, May 2016)

About IDC

International Data Corporation (IDC) is the premier global provider of market intelligence, advisory services, and events for the information technology, telecommunications and consumer technology markets. IDC helps IT professionals, business executives, and the investment community make fact-based decisions on technology purchases and business strategy. More than 1,100 IDC analysts provide global, regional, and local expertise on technology and industry opportunities and trends in over 110 countries worldwide. For 50 years, IDC has provided strategic insights to help our clients achieve their key business objectives. IDC is a subsidiary of IDG, the world's leading technology media, research, and events company.

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