

# Embracing the Internet of Everything To Capture Japan's Share of \$14.4 Trillion

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More Relevant, Valuable Connections Will Improve  
Innovation, Productivity, Efficiency & Customer Experience



To gain the most value from IoE, business leaders should begin transforming their organizations based on key learnings from use cases that are most applicable to Japan.

## Executive Summary

- The Internet of Everything (IoE) will create \$14.4 trillion in Value at Stake for the *private sector* worldwide – the combination of increased revenues and lower costs that is created or will migrate among companies and industries from 2013 to 2022. (Cisco's Value at Stake analysis does not include the public-sector or consumer segments.)
- Japan's share of the global Value at Stake is \$761 billion over the next 10 years. This represents 5 percent of the global total.
- The five main factors that fuel IoE Value at Stake in Japan are: 1) innovation (reducing time to market) of \$239 billion; 2) customer experience (addition of more customers) of \$213 billion; 3) supply chain and logistics (eliminating waste) of \$181 billion; 4) asset utilization (reduced costs) of \$82 billion; and 5) employee productivity (greater labor efficiencies) of \$46 billion.
- Technology trends (including cloud and mobile computing, Big Data, machine-to-machine computing, increased processing power, and especially fast and ubiquitous broadband access in Japan) and business economics (such as Metcalfe's law) are driving the IoE Economy.
- To gain the most value from IoE, business leaders should begin transforming their organizations and policies based on key learnings from use cases that are most applicable to Japan. These use cases include smart factories, connected marketing and advertising, faster time to market, and smart grid.
- Because the stakes are high – over 10 years, companies stand to lose more than a year of profits if they do not embrace IoE – the time to act is now.
- Robust security capabilities (both logical and physical) and privacy policies are critical enablers of the IoE Economy. The IoE Value at Stake projections are based on increasingly broad adoption of IoE by private-sector companies over the next decade. This growth could be inhibited if technology-driven security capabilities are not combined with policies and processes designed to protect the privacy of both company and customer information.

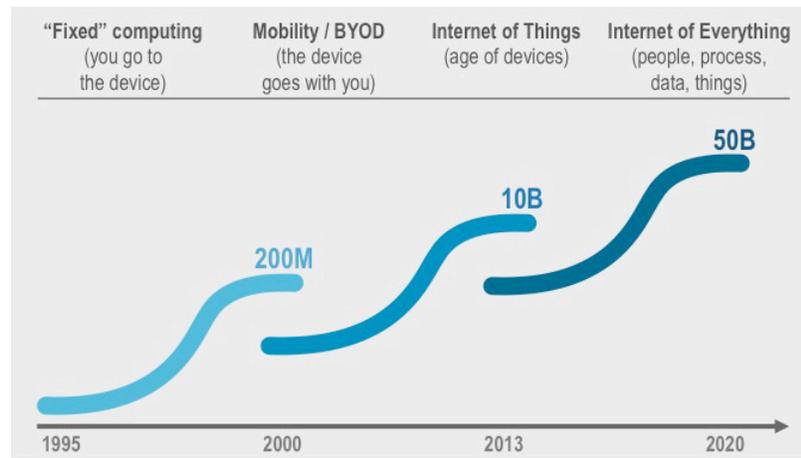
The next wave of dramatic Internet growth will come through the confluence of people, process, data, and things – the Internet of Everything (IoE).

## The Internet of Everything Is Happening Now

Cisco estimates that 99.4 percent of physical objects are still unconnected.<sup>1</sup> Conversely, this means that only about 10 billion of the 1.5 trillion things globally are connected.<sup>2</sup> At a more personal level, there are approximately 200 connectable things per person in the world today.<sup>3</sup> These facts highlight the vast potential of connecting the unconnected.

Even so, the growth of the Internet has been unprecedented (see Figure 1). Cisco estimates that there were about 200 million things connected to the Internet in the year 2000. Driven by technology advances such as mobile computing, this number has increased to approximately 10 billion today, putting us squarely in the age of the Internet of Things (IoT). The next wave of dramatic Internet growth will come through the confluence of people, process, data, and things – the Internet of Everything (IoE).<sup>4</sup>

Figure 1. Rapid Growth of the Number of Things Connected to the Internet.



Source: Cisco IBSG, 2013

Worldwide, IoE is being driven by several factors. First, powerful technology and business trends – including the dramatic increase in processing power, storage, and bandwidth at ever-lower costs (Moore’s law still at work); the rapid growth of cloud, social media, and mobile computing; the ability to analyze Big Data and turn it into actionable information; and an improved ability to combine technologies (both hardware and software) in more powerful ways – make it possible to realize more value from connectedness. In Japan, an important factor in the possible effectiveness of IoE is the country’s nearly ubiquitous ultra-high-speed broadband connectivity. Japan, for example, is planning 10-gigabit Internet speeds into the home, hundreds of times faster than what is typically available in the United States.<sup>5</sup> This high-speed connectivity is important because it could speed the proliferation of IoE, allowing Japan to reap the benefits more quickly than other countries.

Value at Stake . . . is the potential bottom-line value (higher revenues and lower costs) that can be created or will migrate among companies and industries based on their ability to harness IoE.

Second, barriers to connectedness continue to drop. For example, IPv6 overcomes the IPv4 limit by allowing 340,282,366,920,938,463,374,607,431,768,211,456 more people, data, and things to be connected to the Internet. Amazingly, IPv6 creates enough address capacity for every star in the known universe to have 4.8 trillion addresses.

Third, form factors continue to shrink. Today, a computer the size of a grain of salt (1x1x1 mm) includes a solar cell, thin-film battery, memory, pressure sensor, and wireless radio and antenna. Cameras the size of a grain of salt (1x1x1 mm) now have 250x250-pixel resolution. And, sensors the size of a speck of dust (0.05x0.005 mm) detect and communicate temperature, pressure, and movement. These developments are important because, in the future, things connected to the Internet may be hard for the human eye to even see.

Finally, IoE reflects the reality that business value creation has shifted to the power of connections and, more specifically, to the ability to create intelligence from those connections. Companies can no longer rely solely on internal core competencies and the knowledge of their employees; instead, they need to capture intelligence faster, from many external sources. This will occur through connections enabled by the Internet of Everything.

## IoE Creates \$14.4 Trillion of Value at Stake for Companies and Industries

Value at Stake, according to Cisco, is the potential bottom-line value (higher revenues and lower costs) that can be created or will migrate among private-sector companies and industries based on their ability to harness IoE. Cisco predicts that the IoE Value at Stake will be \$14.4 trillion worldwide in the next decade (see Figure 2).<sup>6</sup> More specifically, over the next 10 years, the Value at Stake represents an opportunity to increase global corporate profits by about 21 percent.<sup>7</sup>

In other words, between 2013 and 2022, \$14.4 trillion of value (net profit) will be “up for grabs” for enterprises globally – driven by IoE. IoE will both create new value and redistribute (migrate) value among winners and laggards, based on how well companies take advantage of the opportunities presented by IoE.<sup>8</sup>

Globally, Cisco’s analysis shows that most of the potential Value at Stake (66 percent, or \$9.5 trillion) comes from transformation based on industry-specific use cases such as smart factories, smart grid, and smart buildings. The other 34 percent, or \$4.9 trillion, is produced by cross-industry use cases such as faster time to market and business process outsourcing.

The IoE Value at Stake for Japan is \$761 billion over the next 10 years. From this amount, \$581 billion will come from industry-specific use cases, while \$180 billion will result from cross-industry use cases.

Japanese companies that harness loE best will reap this value in either of two ways: by capturing new value created from technology innovation, or by gaining competitive advantage and grabbing market share against other companies less able to transform and capitalize on the loE market transition.

Figure 2. In Japan, How Much Value Is at Stake in the loE Economy?



Source: Cisco IBSG, 2013

Japanese companies that harness loE best will reap this value in either of two ways:

- By capturing new value created from technology innovation
- By gaining competitive advantage and grabbing market share against other companies less able to transform and capitalize on the loE market transition<sup>9</sup>

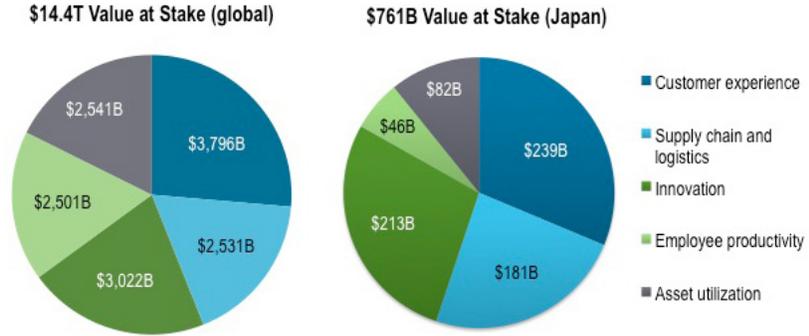
## 5 Drivers Fuel loE Value at Stake

Worldwide, there are five main drivers of Value at Stake (see left side of Figure 3). These are the same drivers for Value at Stake in Japan (see right side of Figure 3). The amount of Value at Stake for each driver in Japan is listed in parentheses. With this information, business and political leaders can begin planning how to benefit from the loE Economy.

- **Innovation, including reduced time to market (\$239 billion)** – loE increases the return on R&D investments, reduces time to market, and creates additional revenue streams from new business models and opportunities.
- **Customer experience, including the addition of more customers (\$213 billion)** – loE increases customer lifetime value and grows market share by adding more customers.
- **Supply chain and logistics, including waste elimination (\$181 billion)** – loE eliminates waste and improves process efficiencies.
- **Asset utilization, including reduced costs (\$82 billion)** – loE reduces selling, general, and administrative (SG&A) expenses and cost of goods sold (CoGS) by improving business process execution and capital efficiency.
- **Employee productivity, including greater labor efficiencies (\$46 billion)** – loE creates labor efficiencies that result in fewer or more productive man-hours.

By definition, IoE includes three types of connections – machine-to-machine (M2M), person-to-machine (P2M), and person-to-person (P2P).

Figure 3. Japan’s Value at Stake Compared with the Global Total.



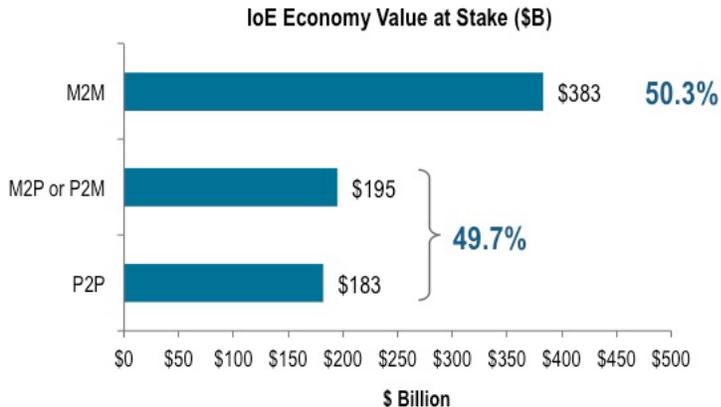
Source: Cisco IBSG, 2013

In addition, to benefit from IoE, firms must combine technology-enabled security capabilities (both logical and physical) with policies and processes designed to protect the privacy of company and customer information. IoE’s growth potential in the private sector over the next decade will rely heavily upon the success of companies’ security and privacy efforts.

### Which Connections Matter Most?

By definition, IoE includes three types of connections – machine-to-machine (M2M), person-to-machine (P2M), and person-to-person (P2P). Combined, P2M and P2P connections will constitute 55 percent of the total IoE Value at Stake by 2022 while M2M connections make up the remaining 45 percent (see Figure 4). It is important to note that while M2M connections are fast becoming a sizable source of value, the end result of these connections is ultimately to benefit people. The bottom line is that the IoE Economy is about enabling people to be more productive and effective, make better decisions, and enjoy a better quality of life.

Figure 4. In Japan, M2M Connections Will Play a Bigger Role than in the Rest of the World.



Source: Cisco IBSG, 2013

Interestingly, the relative contributions of use cases to the Value at Stake for Japan differ widely from those of the rest of the world.

In Japan, M2M connections will play a more important role than in the rest of the world. This is because M2M connections will allow Japan to address its unique challenges. According to the Ministry of Internal Affairs and Communications in Japan, M2M is helpful in addressing the following needs<sup>10</sup>:

- Higher efficiency of services and manufacturing by automation
- Stronger industrial competitiveness through tech innovation
- More elderly-friendliness in transportation, housing, and utilities
- Faster decision making and information sharing in disasters
- More effective responses to energy blackouts

These can be accomplished by delivering the following capabilities:

- Creativity, flexibility, and diversity for services and manufacturing
- Observability and controllability of social and environmental impacts
- Timely analysis and decision making in handling disasters
- Self-adapting and self-healing for vital infrastructures (for example, energy and transportation)

## Real-World Use Cases Show the Impact and Potential of IoE

To receive the most value from IoE, business and political leaders in Japan should begin transforming their organizations and policies based on key learnings from use cases that show how IoE works in the real world. The four use cases featured in this paper represent \$375 billion of the \$761 billion total Value at Stake for Japan. The use cases are listed in order of the amount of Value at Stake delivered (highest to lowest).

Interestingly, the relative contributions of use cases to the Value at Stake for Japan differ widely from those of the rest of the world. This is due to the unique challenges and opportunities companies and industries face in Japan, including the country's aging population, a deflationary economy, large government deficits, energy supply disruptions, and a predominantly export-based economy.

Each of these use cases includes a general description, the amount of contribution to Japan's total Value at Stake, and a comparison of the key use-case attributes in both 2013 and 2022 to highlight the impact of IoE. In addition, each use case describes the value of connections, top IoE drivers, types of connections, IoE technology enablers, and whether value is created or migrated.

While smart factories represent one of the two largest use cases in terms of Value at Stake worldwide, the amount of value for Japan is lower than that of the rest of the world.

**1. Smart factories: \$139 billion of total Value at Stake**

Adding connectivity to manufacturing processes and applications increases factory productivity, reduces inventories with real-time inventory supplies, and cuts production and supply-chain costs. The value from smart factories is largely derived from more intelligent machines that incorporate better sensors, improved connectivity to other machines, and more intuitive interfaces with people. These new capabilities allow machines to be programmed more easily and make them more adaptable to their conditions so they can be more efficient at doing their work. In addition, back-end connections to the cloud for analytics enable more effective integration of labor, capital, and technology.

While smart factories represent one of the two largest use cases in terms of Value at Stake worldwide, the amount of value for Japan is lower than that of the rest of the world. This is because Japan already has one of the most advanced manufacturing industries in the world. Gains from smart factories in Japan will come largely from improved processes that build on the country’s already impressive manufacturing infrastructure.

Overall, the value from smart factories is largely derived from more intelligent machines that incorporate better sensors, improved connectivity to other machines, and more intuitive interfaces with people to make them more effective at their jobs. These new capabilities allow machines to be programmed more easily and make them more adaptable to their conditions so they can be more efficient at doing their work. In addition, back-end connections to the cloud for analytics enable more effective integration of labor, capital, and technology.

2013 Current state (without IoE)	2022 Potential with IoE
Automated assembly machines are expensive and complicated to create and install	Reduced costs as automated tools become less expensive to manufacture and implement
Often inflexible and costly product-line changes	Revenues increase with ability to produce multiple products with variations in inputs. Allows for greater customization of products and smaller product-line runs.
Quality controls rely on human perception and dexterity	Sensors help workers improve product quality
Reliance on low-cost manufacturing countries. Employees with IT and data interpretation skills are costly, scarce.	Socialization of knowledge flattens the skills curve; IoE maximizes access to human talent pools at lower cost
Inefficient use of key inputs for production. Lack of flexibility among assembly locations.	Reduced waste (materials, energy). Greater freedom and agility to reallocate production and optimize inputs.

- **IoE value created:** More intelligent design of machines; greater control of instrumentation and production conditions
- **Main IoE driver(s):** Asset utilization, supply chain, and logistics
- **Type of IoE connection(s):** Machine-to-machine
- **IoE technology enabler(s):** Machine design tools, production sensors, employee training
- **Value created or migrated:** Migrated from inefficient producers and countries

IoE will enable companies to have a complete view of their customers (behaviors, preferences, demographic profile) and deliver individually targeted messages and offers to them on any device at the time and location where they will have the most beneficial impact.

In Japan, value in smart factories is obtained from cost-cutting and revenue growth. With this in mind, manufacturing leaders should accelerate adoption of IoE technologies and consider initiatives that not only reduce costs, but add flexibility to the production process to improve customer responsiveness.

**2. Connected marketing and advertising: \$107 billion of total Value at Stake**

Broad IT and social applications for marketing and advertising transform the way companies engage with customers, analyze their behavior, and optimize the impact of their interactions. Examples include location-based services, viral marketing, and mobile advertising.

Today, it is very difficult to create and implement cohesive marketing and advertising strategies across numerous and disparate channels (TV, radio, Internet, point of sale). IoE will enable companies to have a complete view of their customers (behaviors, preferences, demographic profile) and deliver individually targeted messages and offers to them on any device at the time and location where they will have the most beneficial impact. Within this new paradigm, companies can react more quickly by assessing and reacting to their markets in real time; increase profits by offering pricing based on customers’ situation and ability to pay; and grow revenues by bundling their offerings with other products and services based on a holistic assessment of customers’ wants and needs.

2013 Current state (without IoE)	2022 Potential with IoE
Missed or unidentified sales opportunities	Increased sales from real-time market assessments and reactions
Inefficient geographical selling	Increased sales from location-based selling
Inflexible product lines	Increased sales from better use of Internet-driven “freemium” market segmentations
Lost sales due to shifting competitive pressures and poor timing	Increased sales by directly tying pricing to current selling situation and customers’ ability to pay
Little holistic assessment of customers’ wants and needs	Increased sales from improved coordination with other products and services (two-sided markets)

- **IoE value created:** Assimilation and analysis of customer demographic and purchase histories from multiple sources
- **Main IoE driver(s):** Customer experience, innovation
- **Types of IoE connection(s):** Machine-to-machine, person-to-machine, and person-to-person
- **IoE technology enabler(s):** Cloud computing, Big Data, real-time decision tools
- **Value created or migrated:** Both

Leaders should focus on loE initiatives that utilize Japan’s most important technology asset – the country’s ultra-high-speed broadband network.

Data-driven business agility is also at the core of achieving the Value at Stake from connected marketing and advertising. Leaders should focus on loE initiatives that utilize Japan’s most important technology asset – the country’s ultra-high-speed broadband network. In addition, business leaders should use Big Data and cloud computing to improve decision making across their companies. To succeed, every customer-facing department, including marketing, sales, service, and support, must be able to adapt more quickly to rapidly changing customer demands in the loE Economy.

### 3. Faster time to market: \$71 billion of total Value at Stake

loE helps product development teams collaborate better with all areas of production and delivery, enabling first-mover benefits and better customer relationships.

Faster time to market involves both goods and services. The value from this use case focuses on the discovery on unmet or previously unidentified consumer and business needs. To gain the most value from this use case, businesses should transform in two ways: 1) use Big Data to identify customer needs, and 2) increase agility to bring products and services to market more quickly than key competitors. This use case is especially important for Japan’s macroeconomic growth since it can bring new categories of consumer spending and/or growth in new export markets.

2013 Current state (without loE)	2022 Potential with loE
Inefficient meeting management	Automated management of available resources
Subject-matter experts (SMEs) unknown, unavailable, or hard to find	Easy access to stored SME knowledge; devices enable ubiquitous access
Random product development ideation	Product development ideation based on deep analysis of past successes and failures
Linear production and delivery processes with other departments (marketing, finance, etc.)	All key business departments brought early into product development process
Duplication of thought processes	Best practices stored for expedient reuse

- **loE value created:** Enables more effective collaboration among product development and R&D teams to drive more business agility and reuse of relevant information
- **Main loE driver(s):** Innovation
- **Types of connection(s):** Machine-to-machine, person-to-machine, and person-to-person
- **loE technology enabler(s):** Collaboration, video, and workplace tools
- **Value created or migrated:** Both. Value created through first-mover advantage, improved product quality, and more intimate customer relationships

Internal collaboration within firms’ R&D and production departments, and external collaboration with customers, will be necessary to achieve the innovations required to garner the Value at Stake. Smart grid and supply-chain processes will also need to be revamped since cost containment is essential to competing in markets for globally traded goods.

IoE will improve the electric grid by automatically detecting and repairing problems, controlling electrical flows based on real-time demand, improving generator utilization, and enabling more sustainable energy sources such as wind and solar power.

#### 4. Smart grid: \$58 billion of total Value at Stake

An effective smart grid uses network connections – from production to customers – to better understand user behavior and improve the reliability, economics, and sustainability of the production and distribution of electricity.

Utility companies today typically operate on a “best effort” infrastructure: they generate and place energy on the electrical grid without taking full advantage of their assets. This makes the grid vulnerable to faults and allows only for a one-way flow of electricity – from producers to consumers. In addition, the system is inefficient because power generation cannot be easily adapted to fast-changing energy usage cycles. Finally, energy infrastructures are vulnerable to natural disasters, as evidenced by the tremendous devastation caused to Japan’s nuclear power facilities due to the 2011 earthquake and tsunamis.

2013 Current state (without IoE)	2022 Potential with IoE
Vulnerable to breakdowns, security threats, and natural disasters	Automated detection and self-healing improves reliability of the electricity network
One-way electricity flow	Ability to shape the flow of electricity enables more flexibility and distributed power generation capabilities
Production calibrated only for peak demand, requiring reserves and causing inefficiencies	Demand-side management improves generator utilization and grid efficiencies
Variability in renewable energy sources prevents widespread adoption	Enables more sustainable energy sources such as wind and solar to contribute to the power grid

- **IoE value created:** Connects sensing, measurement, and controls in real time to improve supply and demand alignment, increase reliability, and reduce costs
- **Main IoE driver(s):** Supply chain and logistics efficiency
- **Type of connection(s):** Primarily machine-to-machine
- **IoE technology enabler(s):** Integrated network architecture, smart sensors and meters, private cloud computing, and security technology
- **Value created or migrated:** Net reduction in energy costs for all private sector stakeholders

IoE will improve the electric grid by automatically detecting and repairing problems, controlling electrical flows based on real-time demand, improving generator utilization, and enabling more sustainable energy sources such as wind and solar power.

For Japan to capture the promise of IoE, access to capital markets must be widened (especially for newer and smaller businesses), and labor market reforms need to be put in place to encourage the movement of employees with key skills.

## How To Get Started

While the scope of IoE may seem daunting, there are actually some very simple steps you can take to begin capturing your share of the IoE Value at Stake:

- **Determine where your business is today with regard to IoE.** With the huge number of connections that need to be made among people, data, and things, companies must have an advanced IT infrastructure and analytical skills.
- **Understand the role of IT in enabling your company to benefit from IoE.** Using IT to reduce costs has diminishing returns. On the other hand, investing in IT to strengthen and grow the customer base has nearly limitless upside potential.
- **Take steps now to maximize your firm's capabilities in the areas of security and privacy:** As mentioned previously, security and privacy are essential enablers – and potential inhibitors – of IoE's Value at Stake. IoE security will be addressed through network-powered technology: devices connecting to the network will take advantage of the inherent security that the network provides (rather than trying to ensure security at the device level). Privacy, on the other hand, will require that companies combine technology with effective processes and policies. To benefit from IoE, firms will need to identify new privacy models that meet company and customer expectations.

Most important, firms will need to consider their own internal cultural changes that are necessary to embrace IoE. The value of any IT investment will be determined by the capabilities it enables outside the IT department. IoE Value at Stake emanates from the marketing, HR, finance, production, sales, and other corporate departments. Therefore, a company's IT decisions must consider the requirements of these departments. Corporate policies on employment, input-sourcing, and in customer-facing areas may need adjustment to embrace these IoE-driven best practices.

Japan will need to make the investments required to achieve IoE-driven economic growth as means of coping with its deflation and to spur revenues that can help reduce the country's large government deficits. It is imperative, therefore, that companies and industries make productivity-driven investments that result in new products and services that provide a competitive advantage and increase customer demand. In addition, increased amounts of technical education, including language skills, will be a prerequisite for this economic shift to occur.

Despite Japan ranking as the top country in many of the World Economic Forum Global Competitiveness business sophistication indexes, Japan ranks 42nd for venture capital availability and 134th for hiring and firing practices.<sup>11</sup> For Japan to capture the promise of IoE, access to capital markets must be widened (especially for newer and smaller businesses), and labor market reforms need to be put in place to encourage the movement of employees with key skills.

With \$761 billion of Value at Stake in Japan over the next decade, IoE presents an important opportunity to overcome many of the country's challenges, including an aging population, a deflationary economy, large government deficits, energy supply disruptions, and a predominantly export-based economy by helping companies and industries increase market share, gain competitive advantage, improve efficiencies, and grow profitability.

## The Game Is on . . .

Challenges abound for today's leaders. The rapid pace of change creates confusion and misinformation, which often leads to poor decision making or, worse, inaction. When combined with price transparency and global supply chains, many of the same technology trends that are ushering in the IoE era are also enabling new entrants to become viable threats in just weeks and months rather than years.

In this environment, winners and losers are determined faster than ever before. With \$761 billion of Value at Stake in Japan over the next decade, IoE presents an important opportunity to overcome many of the country's challenges, including an aging population, a deflationary economy, large government deficits, energy supply disruptions, and a predominantly export-based economy by helping companies and industries increase market share, gain competitive advantage, improve efficiencies, and grow profitability. And because the stakes are high – over 10 years, companies stand to lose more than a year of profits if they do not embrace IoE – the time to act is now.

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## Endnotes

1. Source: Cisco IBSG, 2013
2. Ibid.
3. Ibid.
4. Cisco defines the Internet of Everything as bringing together people, process, data, and things to make networked connections more relevant and valuable than ever before – turning information into actions that create new capabilities, richer experiences, and unprecedented economic opportunity for businesses, individuals, and countries.
5. Source: Knowledge @ Wharton, May 2012.
6. Value at Stake differs from Internet Market Size, or total addressable market (TAM). Value at Stake is a forecast of the potential bottom-line value that can be created or will migrate among companies and industries globally based on their ability to harness the Internet of Everything over the next decade. Cisco estimates this value at \$14.4 trillion over the next 10 years. By contrast, the Internet Market Size, or TAM, is projected to reach \$4.1 trillion in annual revenue for all participating vendors by 2016. Beyond relevant information and communications technologies (ICT), it includes e-commerce and advertising. Cisco will address \$258 billion (6 percent) of this Internet market (source: Cisco SMO, 2012). Value at Stake

includes shifts of benefits among competing firms in an industry; shifts of benefits among different industries; new-to-the-world revenue growth from innovation; cost savings from more efficient processes; and allowances for implementation costs. Value at Stake *does not* include extent of losses at firms that don't transform; consumer or government benefits; social benefits; and value estimates for reduced risk of operations.

7. We selected a period of 10 years because it is a reasonable amount of time for companies to identify, design, and implement changes to capture their share of the IoE Value at Stake. The \$14.4 trillion number is the net Value at Stake. The gross Value at Stake is \$18.7 trillion. In other words, an investment of \$4.3 trillion is required to achieve the net Value at Stake of \$14.4 trillion over 10 years. In addition, Cisco estimates that the \$14.4 trillion in Value at Stake represents an increase in aggregate corporate profit of about 21 percent over 10 years.
8. To be as accurate as possible, Cisco calculated the Value at Stake by taking a bottom-up approach considering the value created by more than 50 use cases in the private sector only – both industry-specific and cross-industry – and consolidating them into the 21 most material and value-generating examples. Top-down analysis was also performed as a cross-check to validate the completeness and order of magnitude of the more thorough bottom-up approach. Finally, care was taken not to double-count value across use cases. We believe Cisco is the only company to take a bottom-up approach when evaluating the opportunity offered by the Internet of Everything. It is important to note that Cisco is focusing on the amount of private sector Value at Stake to make the findings and insights as applicable as possible for businesses and industries. While a significant number on its own, the \$14.4 trillion does not include potential Value at Stake from the consumer or public sectors, or from societal benefits that are beyond the scope of this analysis.
9. Cisco estimates that 59 percent of Value at Stake will be new value resulting from technology innovation, while 41 percent will be generated by companies capturing market share from the competition.
10. Source: Ministry of Internal Affairs and Communications (MIC), Japan, October 2011.
11. World Economic Forum Global Competitiveness Report, 2012-2013.



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