The Internet of Things: Why Companies Are Leaving Trillions on the Table
Executive Summary

The Internet of Things (IoT), a term for the skyrocketing number of devices that collect and transmit data via the Internet, is a game changer – but probably not in the way your company has considered.

As more devices become connected – and the services and platforms created around them continue to expand – global spending on IoT will grow to $1.3 trillion in 2019, according to research firm IDC. Because so many connected “things” are involved, many companies are understandably centering their IoT strategies primarily around technology.

Yet, IoT is not a technology solution, but rather a technology enabler for companies to create new business models and become more operationally efficient. As the dynamic environment of digital technologies grows larger and increasingly complex, the most successful organizations will be those prepared to capture, analyze and leverage the colossal amounts of data from their connected technologies – and as a result, make better informed business decisions that open the door to vast operational savings and new revenue-building opportunities.

Over the next decade, IoT will create $14.4 trillion in what Cisco calls “Value at Stake” and defines as the total economic value that could be impacted by IoT, including cost reductions, improved employee productivity, more efficient supply chain and logistics operations, and customer growth and innovation. Yet, many companies today are leaving most of that money on the table. Why? The reasons vary, but they typically boil down to these:

- **The risks appear greater than the rewards:** By and large, companies today are using IoT primarily as a way to improve operational efficiency and not looking at ways to create new service revenue streams through IoT. In fact, 70 percent of organizations do not currently generate service revenues from their IoT solutions, according to a recent Capgemini survey.
- **Disruptive change is needed:** Especially as nimble startups and other new forms of competitors disrupt traditional markets, success in the IoT environment requires new ways of thinking, new business processes, risk-taking and learning from failure – all of which tends to make established organizations uncomfortable.

To cash in on the $1.3 trillion jackpot, companies must be ready, willing and able to transform themselves by questioning long-held beliefs about their organizations and rethinking their go-to-market strategies. They must understand that gaining the true value from IoT means disrupting existing business processes, roles and responsibilities, and the culture of the business in ways they have not imagined.

Although most companies today recognize that intellectual property (IP), which includes the proprietary data amassed by their connected technologies, is one of their most powerful assets, many are struggling to find ways to use IP to improve their customers’ experiences with their products and the company – all of which opens the door for nimble startups to leap in to their markets, upend their IP and disrupt their business models.

We have heard fail fast in the evolving IoT environment, but companies must have the courage to question their own assumptions about their business; fail and then have the ability to really learn from failure – and change course quickly when it occurs. This means complementing their efforts with strategic options that serve as a buffer against uncertainty. It also means testing opportunities in volatile markets and investing in short-term options that can be quickly unwound.

Above all else, IoT success relies on having the right leaders to guide the digital transformation. This requires finding senior-level executives who recognize that IoT is much more than just another technology initiative and that to “Let IT handle it” is the wrong approach. In helping companies all over the world move forward in their digital journeys, Capgemini has found that their success invariably stems from senior-level executives who are:

- **Visionary:** Able to look beyond the technology and understand that behind every connected device, there’s a customer.
- **Business-driven:** Skilled at finding and creating opportunities to generate service revenues.
- **Tech-savvy:** Understands the potential value of the massive amounts of Big Data generated from connected machines – and recognizes that data is the new currency.
- **Agile:** Not afraid to take risks and ready to go in a new direction when failure strikes but knows how to pivot and move on.
- A champion for collaboration: Able to gain support and enthusiasm for IoT across the entire enterprise, as well as its partners and customers.
As they begin their digital transformation journeys, companies are discovering that meaningful and measurable results from improving operational efficiency are within their reach. This is especially true in the manufacturing and energy sectors, where companies are optimizing their operations with Smart Service technologies.

Using sensor technologies, even the most conservative organizations can boost their operational efficiency in ways that enhance their bottom lines. For example, industrial companies can use sensors to monitor the real-time condition of their machinery, and as a result, they are not only able to take preventative measures to avoid expensive repairs but also lower the cost of retiring the parts and machines prematurely.

Other areas where sensors can help companies increase operational efficiency include:

- **Fuel costs and carbon emissions:** By monitoring tire pressure and other vehicle performance in real time, a company can ensure that its fleet is properly maintained, and decrease its environmental impact, as well as its fuel costs.

- **Workforce safety and decrease accidents:** Tracking machine performance and worker behavior enables companies to identify the causes of a workplace injury early and take immediate preventative action.

- **Loss and theft:** In today’s global economy, manufacturing occurs in one part of the world while the finished product is consumed in another. Using IoT technologies, the location and condition of a shipment can be tracked worldwide – preventing loss and thefts.

- **Customer satisfaction:** Instead of waiting for customers to request assistance or complain about a product or service they’re using, IoT can trigger a customer service interaction (call, text, email, etc.) when behavioral data indicates the customer is frustrated with a product or using a service inefficiently.

These types of operational efficiency improvements help build a strong business case for IoT, and for some companies, the digital journey ends here. But the most progressive enterprises today are those with leaders eager to reinvest the savings their companies gained from operational improvements into creating entirely new revenue streams.

Consider, for example, the case of a major US automaker that learned that 40 percent of its customers were taking their vehicles to independent car repair shops to be serviced instead of the dealerships where they had purchased their cars. As a result, each dealership was losing about $1.3 million in service revenue to local, independent competitors. To recapture the revenue, the manufacturer equipped its cars with sensors that monitor the cars’ condition in real-time, identify performance issues that pre-empt a dashboard warning light and proactively contact the owners to suggest they order parts and schedule service – before the owners are even aware that service is needed. Initially, some owners considered the alerts from their dealers to be a sales trick, but when the warning light eventually came on and their mobility was compromised, they learned to quickly trust the system and schedule the suggested service.

In Capgemini’s viewpoint, the most successful organizations in the IoT arena will be those that move beyond the traditional product focus and take on a service orientation. With senior-level IoT champions at the helm, these service-focused companies can leverage digital technologies and advanced data analytics to transform their business models and create entirely new revenue streams.

Worldwide spending on IoT – which totaled just under $7 billion in 2015 – will leap to nearly $1.3 trillion in 2019, according to a new IDC Spending Guide. To monetize their IoT investments, companies need a senior-level business executive adept at exploring and defining the opportunities IoT offers. In other words, companies need leaders who are able to look beyond the sensors, modules and other technological components of IoT to identify the business outcomes the technologies can enable.

As Capgemini has observed in collaborating with many of the world’s leading enterprises, an IoT initiative that tackles a core business problem, centralizes ownership, cross-departmental collaboration and agility will invariably fall short of expectations.

In the IoT arena, the most visionary – and profitable – organizations are those with senior leaders who are champions for collaboration, can tear down silos and understand IoT won’t succeed if the cultures, data and devices are disconnected or operating in a vacuum.
To get a piece of the $1.3 trillion IoT prize, organizations must be open and eager to explore new service revenue models. To do so, there is no magic bullet, but as Capgemini has found in guiding organizations in their IoT journeys, there is a process.

The process begins with a conference room proof-of-concept workshop, where the company’s senior-level IoT leaders, along with a cross-functional group of internal IoT champions from all levels of the organization, gather to explore new ideas. For example, a company that manufactures street lights might consider equipping the lights with motion sensors and selling the sensor data to advertising agencies to help them determine the cost-per-impressions for their billboards. Or a company that sells bottling equipment might contemplate offering a bottling service and charging customers on a per-bottle basis. An automaker might think about developing a mobile app that enables their customers to track their car’s performance, location and fuel consumption and delivers incentives when maintenance and other added-value services are needed.

From this exploration of new ideas, an IoT roadmap is developed. Using the roadmap, companies assess their risks and design pilot deployments. Along the way, concepts are continually tested – and then accelerated when they work and addressed quickly when they don’t.

The next step, production roll-out, is where companies cash in by implementing new business processes and generating revenues from the new services they create.

With literally trillions of dollars at stake, the revenue potential of IoT is enormous. As IoT continues to grow and develop, your organization needs a senior level champion to help accelerate its adoption and guide your success down the road.

While technology certainly has a role in IoT, widgets, components and modules are not an IoT solution. Rather, technology is enabler for your company to not only improves your operational efficiency but also to transform your organization and create new service revenue streams.

Digital transformation doesn’t happen overnight. Nor is it easily accomplished. To guide you on the path to digitization, Capgemini has developed a unique methodology for anywhere on your IoT journey. From strategy to implementation, our digital transformation experts offer solutions based and an accelerated program built on a “test and learn” approach.

Collaborating with your IoT champions, we leverage our global expertise to enable you to design a tailored and effective roadmap. Our objective is straightforward: To help you understand the key issues – and unlock the revenue-building opportunities – that IoT offers.

The path to value: How to go from Post-It to Balance Books

The bottom line: There is money to be made
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