IoT MATURITY: BRIDGING THE GAP BETWEEN DEVICES AND VALUE

COMMISSIONED BY

IoT WoRKS
by HCL Technologies

www.hcltech.com/iot

EXECUTIVE: With business success increasingly reliant on data—and customers demanding more personalized and intelligent products and services—the Internet of Things (IoT) is a hot topic today. Although IoT began as a consumer technology, with a focus on "cool gadgets," industrial IoT is destined to take center stage. In this form, IoT is poised to transform businesses.

Many companies have made inroads into use-case-based IoT projects, but very few have embarked on transformative programs. It is only by doing so that these firms will reach the intended IoT goals: efficiency, more profitable business models and a competitive edge.

In our recent global IoT survey of 263 IT and business decision-makers, 81% of respondents said they have either begun their IoT journey or plan to in the next 12 months. But over 50% of respondents felt they are already behind in fully harnessing IoT capabilities, and 43% said this failure negatively impacted customer satisfaction.

Sukamal Banerjee, Corporate Vice President, Hi-Tech & Communications and Global Head, IoT WoRKS, HCL Technologies

For businesses seeking transformative IoT benefits, we offer two insights: Recognize the three stages of IoT maturity; and understand that moving to the third requires a strategy that includes an IoT platform. The platform needs to centralize data from all instrumented assets, be integrated with enterprise IT systems and make data visible to key stakeholders so they can make better, faster decisions.

//

Without a centralized IoT platform, businesses lack full visibility into the data that sensor-enabled assets generate.

- **Maturity Level 1: Process efficiency.** The low-hanging fruit of IoT involves gathering information from connected devices to improve operations. In this stage, IoT use is limited to a single business function, not a formal business-wide program. For example, fleet operators can sensor-enable vehicles to detect and fix mechanical failures before a malfunction.

- **Maturity Level 2: New revenue streams.** Leading-edge companies are leveraging IoT data to generate new revenue streams. This is when a centralized IoT platform is essential. An example is building a platform to remotely monitor office equipment around the globe, orchestrating automated replenishment.

- **Maturity Level 3: Business transformation.** Full maturity entails shifting the business model from selling products to selling services. For example, carmakers may enter the insurance business as instrumented automobiles generate data on driving habits.

Without a centralized IoT platform, businesses lack full visibility into the data that sensor-enabled assets generate. The platform democratizes data from R&D, manufacturing, supply chain, remote operations, etc., to achieve business and process synergies across multiple value chains. Consider one of our customers, which makes elevator components for use in airports. Separate business units sell and service the motors and drives, even though both functions tend to serve the same clients. Only by integrating this information could the manufacturer provide new service offerings that increase its value to customers.

Four Factors for Realizing Full IoT Value

Stephanie L. Woerner, Research Scientist, MIT Sloan Center for Information Systems Research

SCHOLAR: Realizing value through the Internet of Things (IoT) may begin with simple goals, but it can also catapult a business toward new horizons. The level of commitment to completing the journey really depends on the presence of four factors, according to the MIT Center for Information Systems Research (CISR):

1. Translating Threats Into Opportunity.

A major driver in IoT initiatives is finding a new source of revenue in the face of changing industry trends. In CISR's survey of 352 CIOs, respondents with the highest levels of IoT commitment generated 50% of their revenues from products introduced in the past three years. These CIOs see firsthand how quickly disruptive change can occur.

Consider Schindler Holdings AG, which manufactures, installs and maintains escalators, elevators and moving walkways. In this increasingly price-sensitive industry, maintenance accounts for 75% of operating profits. This prompted Schindler to use IoT to not only improve equipment maintenance through the data generated by its elevators but also reposition itself as a service provider that helps customers with building management using this data. To move in this direction, it developed a Web-based customer portal and a mobile app to provide real-time insights.

Evaluating Platform Needs

So far, most businesses (six in 10 survey respondents) are at the preliminary stages of exploring and defining an IoT platform strategy. This is a crucial inflection point; the right platform can address the biggest concerns respondents identified for implementing IoT:

- **Security:** The platform sits inside the network, but external assets that generate data increase vulnerability. By extending security to all levels, the platform architecture can minimize cyber risk.

- **Data analytics:** The platform should support the full range of analytics capabilities, including visualization, analytics and predictive, autonomous analytics that enable fast response to opportunities and issues in real time.

- **Scalability:** Many types of data need to be ingested and stored from a wide array of assets spread across the globe. The platform needs to support large data volumes, a high but intermittent data rate, different types of communication protocols and non-linear data growth.

- **Agility:** Because IoT initiatives are fluid, with new requirements and opportunities arising over time, the platform must enable the quick launch of new data services and applications.

With aggressive technology selling going on in the name of IoT, it is extremely difficult for businesses to view a clear—and fast—path to full value. But this is not the time to sit on the sidelines. Our study shows that investment has begun, and it is expected to increase in the next three years. To avoid falling behind, the vast majority of survey respondents (98%) plan to work with partners.

We firmly believe that in the digital-driven economy, the gap between innovators and followers lies in their ability to democratize IoT data, host enterprise-wide IoT applications, make better decisions and create new forms of value. All these capabilities will enable unforeseen efficiencies, as well as brand-new revenue streams and business models. ■

COMMISSIONED BY

IoT WoRKS
by HCL Technologies

IoT WoRKS™, the dedicated Internet of Things business unit of HCL Technologies, enables organizations to leverage best-in-class IoT solutions for maximizing returns from their asset investments and creating entirely new services that deliver measurable business outcomes. Recognized as a market leader in IoT consulting & services by four leading analyst firms— IDC, Everest Group, HfS and Zinnov—IoT WoRKS™ offers end-to-end IoT services across the define, build and run phases to help design enterprise IoT programs, as well as to develop and implement IoT systems for realizing business value. For more information, please visit www.hcltech.com/iot.

2. Turning to the CIO for Innovation.

At companies realizing the biggest IoT benefits, CIOs spend 52% of their time on innovation, CISR research found. They probe for areas within—and outside of—the company that offer new digital opportunities. Strong governance mechanisms free these CIOs from day-to-day technology duties to focus on innovation. They also have strong support from top executives, who themselves spend a significant amount of time focused on industry disruption.

//

The sweet spot is not simply IoT but the ability to link IoT data with mobile apps and real-time analytics to drive faster decision-making and boost revenues.

3. Investing in IT Underpinnings.

Companies further up the IoT maturity curve have a large percent of IP-addressable assets. They also devote a higher percentage of revenues to digital infrastructure than those receiving a minimal IoT payback.

CIOs at these top-performing firms work to develop key IoT capabilities, such as miniaturization and human-computer interfaces. If companies lack these capabilities internally, CIOs seek out partnerships or acquisitions that can fill the gaps—from connectivity to analytics— necessary to succeed in a connected world.

4. Ensuring Organizational Readiness.

When companies change their business model, the impact goes beyond technology. For example, using IoT data to shift from one-time product sales to subscription- and service-based pricing requires training employees— from sales to customer service—to support these new revenue streams.

Business commitment to IoT varies significantly from industry to industry, as well as within subsets of specific industries. This area of study is crucial, because it can show us how next-generation enterprises are finding competitive advantage. Already, it is evident that the sweet spot is not simply IoT but the ability to link IoT data with mobile apps and real-time analytics to drive faster decision-making and boost revenues.

Reaching full IoT maturity depends on cross-organizational commitment to identifying new revenue sources, spurring innovation, investing in supporting technology and nurturing relevant skills. With these capabilities in place, businesses can reap the full set of IoT rewards. ■