IoT Monetization Starts with a Vertical Approach

By: Paul Hughes

The heyday of the dot com era was a great time to be in IT. Endless venture capital firms flooded the sector, Internet startups seemed to emerge on a daily basis, and they were offering all sorts of applications and services, and there seemed to be an endless stream of new technology options for the enterprise and the consumer. There was one inherent problem with the majority of those businesses: When asked the question, "What is your revenue generation strategy?" more often than not, the question would elicit either a blank stare or answers such as "our technology is revolutionary" or "we'll worry about that when the time comes."

Well, the time has come and gone, and we all know what ended up happening, as no business case meant no business. Will it happen again with newer technology trends, like the Internet of Things (IoT)? The time for a reality check is here.

IoT is still a relatively nebulous topic that will eventually touch most aspects of everyday life, from connected cars to smart watches to the ships, containers, planes, and trucks that bring goods to market. Cities are connecting, agriculture is connecting, as is the much-anticipated connected health that involves health sensors and devices or various other tracking tools to monitor and gather data on a multitude of health events. And these billions of devices — up to 27 billion, according to Machina Research — will need to communicate with other devices, as well as other parts of the network and the wider Internet in order to truly provide a web of always-on services and capabilities.

The transformative nature of IoT also translates to a market opportunity for the communications service provider (CSP) community. Machina Research has forecasted that the IoT market will rise to as much as $3 trillion (USD) by 2025. By that time, those 27 billion things will be connected to the network. CSPs will be a critical part of the IoT ecosystem, delivering the wide area connectivity that will serve as the key foundation for connected devices.

Leveraging traditional CSP voice and data, business having matured in most markets. And now, IoT is evolving for an expanding number of CSPs across the globe as an important avenue for new revenue streams and growth. As billions of devices begin to trigger trillions of transactions and generate huge volumes of data that will need to be processed, the CSP will sit in the middle as the enabler, playing a critical role in the ecosystem and empowered to build a profitable model from it. However, jumping straight into the IoT and hoping to find success will be a sure recipe for disaster. Instead, CSPs should take a closer look at the opportunities before deciding how to tackle this market.

Finding the Right IoT Business Case

The greatest business potential for CSPs will likely grow out of enterprise sector needs and would be best focused on specific verticals. Connecting assets or related products and services at scale to the Internet would give enterprises a greatly expanded level of operational efficiency and product awareness, tied in to the newfangled connectivity becoming available via low power wide area (LPWA) or upcoming 5G-related capabilities. Many CSPs are already creating entirely new business lines.

From the onset, the benefits of the CSP implementing IoT included building business models around improving operations and consequently reducing operational costs for the enterprise. For many enterprises, the benefits of adopting IoT would become an added way to provide a new layer of knowledge around service quality, increased service protection, and issue prevention. This would come via IoT end point devices that closely monitor enterprise assets in order to minimize downtime and maximize output. Predictive maintenance, as well as automation, would provide additional factors that would increase production and further reduce per-unit costs.

Take the example of a water utility. One of the greatest issues for any water company is leakage, either at a reservoir/storage facility or along the delivery pipelines that carry water to homes and businesses.

Let us consider a hypothetical IoT strategy to help prevent problems and to foster a worthwhile partnership with a CSP. A recent article in the *Los Angeles Times* highlights this issue, as the Los Angeles Department of Water and Power (LADWP) faces an aging infrastructure, constant repair requirements, and most importantly, an increasingly scarce natural resource attributable to five years of drought conditions. According to the article, LADWP has 6,730 miles of pipes, of which 435 miles need immediate replacement. Over the past eight years, the company has spent $750 million on water main break repairs, and that does not even count the cost of the water lost through each breach and damages paid via insurance due to water intrusions on homes and businesses.

A recent water main break near the University of California, Los Angeles spewed 75,000 gallons per minute into the campus, with more than 10 million gallons lost until the utility shut off a valve to close the rupture. This three-hour event caused millions of dollars in damages to existing road and pipe infrastructure, university property, and personal property (i.e. cars parked in an underground garage). For situations like this, an IoT-centric enterprise crisis prevention strategy aligned with device connectivity provided by a CSP would make perfect sense for both parties.

For the utility, real-time and accurate information on pipeline integrity would be a usage-based transaction provided by an IoT solution that would become a critical part of its existing infrastructure management — crucial to keeping relevant parties informed about the state of their infrastructures. Each end point in the IoT ecosystem would represent a critical piece of disaster prevention strategy and a monetizable part of IoT that would become a valuable preventative tool, potentially creating significant savings and cost benefits over time for the utility, and for the CSP, creating monetizable business models, which is paramount, and here's why:

If You Can't Bill for It, It's Charity

For the CSP, IoT as a service is "the" next generation of a value-added service, and must be provisioned, fulfilled, and billed as one. The implementation and revenue generation of such an IoT service must be become quantifiable based on the levels of device interactions, data management needed, and the changing scale of services over time. As such, contracts with enterprises should be set up to capitalize on the value of each transaction. CSPs must ensure that their billing infrastructure supporting IoT can collect, process, and bill for real-time

usage information. For the water utility use case, daily, weekly or monthly readings, as well as unintended triggered events, would become the primary source of revenue.

The move to real time and the use of next-generation BSS would become critical factors not just for IoT relevance and long-term success, but for a greater and more holistic customer relationship across the entire delivery chain. For a CSP, greater granularity, more personalization and greater accuracy in billing, particularly outside the traditional intervals of a typical batch 30- or 60-day billing cycle, would create more flexible revenue-generating opportunities.

Additionally, real-time data management would improve the customer experience with enterprise customers. Real-time transaction management would also give customers the potential to access up-to-date levels of IoT activity electronically — something many have come to expect from their CSP for other services. For enterprises, the cost of IoT services from the CSP would hopefully be recooped many times over, thanks to real-time disaster prevention capabilities that would now become available in real time.

This B2B IoT monetization process would represent just one direct CSP/enterprise partnership engagement model. For many other enterprises, the use of an intermediary "enablement" partner might prove a better fit, particularly in cases where dedicated enterprise resources may not be available to help manage the IoT ecosystem. In those cases, IoT assets would be enabled using a third party who, in turn, would set up the relationships with the CSPs, and thus create a three way value-added relationship. This use case would work for the water utility example or a wide range of other opportunities, such as management of sensors on construction equipment, logistics-related components for shipping, cameras, or devices used in a security offerings, and so on.

As IoT represents a big opportunity for service providers, CSPs thankfully know how to bill for services and should make sure that every vertical-centric IoT business model is designed around a core monetization process. In cases where CSPs could successfully work with verticals, owning the IoT monetization models and processes would make sense. For business cases where vertical knowledge may be limited, it would make more sense to capitalize on using partners that provide isolated technology elements, support and customer management, with CSPs providing the BSS infrastructure to monetize the IoT services for themselves and any enabling partner.

For CSPs to be successful enough to capitalize fully on IoT, cloud and other network trends transforming the communications industry, they will need to identify and collaborate with partners that can enable innovation across all channels, product lines, and customer segments. The construction and management of a diverse, open strategy around vertical IoT offerings and a rich partner ecosystem has never been more important than now. This strategy will better guarantee success for emerging services, as well as mitigate the need for blank stares or avoided conversations about where the money will be coming from.