

Why the Innovolt Management Cloud is Business Critical

EXECUTIVE SUMMARY

Big Data drives our business decisions every single day. As it continues to grow in both girth and in importance, we cast more and more of our reliance on the “Internet of Things” (IoT). This, of course, is the phenomenon we’re watching unfold—nearly in real time—where electronic assets are continually outfitted with the ability to connect to the Web. It moves way beyond smartphones and tablets and has the ability to connect nearly any electronic device.

Obviously, IoT’s steep trajectory coincides with the growing demand for Machine to Machine (M2M) technology. Currently, there are 10 billion devices in the market that are wirelessly connected and, according to ABI Research that number will rocket to 30 billion in the next seven years.

The combination of IoT and M2M has made an incredible impact on business. The lists of examples is never ending, but take for instance a device on the market that measures a user’s daily metrics, such as stairs climbed, quality of sleep and calories consumed and burned. This data is then uploaded to the company’s website so that it can be analyzed by the user. This is just one device. The M2M module market alone scaled to \$1.5 billion in 2012, its highest level to date and up 25 percent from the previous year.

More than 30 billion devices will wirelessly connect to the Internet by 2020.

– ABI Research

The global mobile M2M module market scaled to a new level in 2012, reaching \$1.5 billion – an increase of 25% from the previous year.

– M2M World News

On a much larger scale, a large and well known electric company in the U.S. announced last winter a rollout of nine new M2M technologies designed to help the airline, rail, manufacturing and utilities industries simultaneously reduce cost and increase productivity.

With these devices connected and interconnected via M2M and IOT, other issues arise, including the generation of an endless supply of digital information. This information needs to be stored in an easily accessible place that not only offers ample capacity, but also the ability to manage and analyze it.

Thus, we have the cloud, the most efficient and effective way for us to save all the data we’re gathering. To give you a bit of perspective on the cloud’s scope, research by Nasuni tells us that it currently houses over 1 exabyte of data, which translates to over 1 billion gigabytes, or—if you’ll indulge a somewhat archaic analogy—50,000 trees worth of paper. It is also swelling by the minute.

And to highlight the cloud's importance, cloud computing accounted for 25 percent of the world's annual IT expenditure growth in 2012 and will jump to a third of that growth in 2013.

We've established the significance and combined value of Big Data, IOT, M2M and the cloud. They have become crucial pieces of our business. They inhabit our reality. The challenge remains finding the best way to manage it all.

This challenge is met with a solution, the Innovolt Management Cloud (IMC). The IMC is a platform for offering a consolidated view of a company's electronic devices and the power - and environmental - related data they deliver. This allows a company to track the performance history of an entire fleet of devices—recording such data as power disturbances, etc.—and identify its trends. Rather than retrieving information piecemeal—device by device—the IMC presents a holistic perspective of how all devices are performing across a broader spectrum. While empowering a company to formulate a proactive plan for managing those devices, the IMC also provides the platform to manage distributed electronics from a central location.

Cloud computing spending will account for 25 percent of annual IT expenditure by 2012 and nearly a third of the growth the following year.

– The Tech Journal

DO YOU HAVE CONTROL?

Electronics in Volatile Environments

Because of how digitally sophisticated our electronic equipment has become they are fallible by nature and susceptible to a myriad of predators. The main cause of this vulnerability is that electronics are designed in clean room environments and tested in controlled labs – at this stage, they only experience “clean power” in the “perfect” setting. They are rolled off the line without having experienced any of the real-world’s environmental flaws. Once they are distributed, unreliable heating and cooling mechanisms as well as internal building disturbances—such as poor wiring and HVAC loads—can cause drastic fluctuations that can ultimately damage devices and present real service nightmares. And that’s just the environment. The antiquated power grid that we rely on daily also causes device vulnerability via a variety of power-related disturbances. Voltage sags, overvoltages, undervoltages, brown outs and surges can all cause equipment lock ups and resets, unexpected down time, service calls for unknown stoppages and communication problems.

Not only do environmental and power related disturbances cause frustration, they can be costly. According to the Electric Power Research Institute (EPRI), power disturbances alone cost U.S. industries as much as \$188 billion per year in lost data, material and productivity. But wouldn’t it be nice if we could have a better understanding of our electronics environments, so we could plan in advance?

Reactive Maintenance Vs. Proactive Monitoring

Let’s consider how things work in the real-world within the reactive maintenance model – the model most businesses have grown accustomed to. When a device goes down, a company deploys a service technician to assess the situation. After determining the problem, many times the technician must return to his headquarters to retrieve the necessary parts

or tools for repair and then finally go back to the device and work to get it up and running again. This is an expensive and shortsighted “band-aiding” technique—doing whatever it takes in the present with little regard for addressing what might be problematic in the future.

Conversely, in a proactive monitoring model when a device goes down, a company has the ability to gather as much information as it can and to develop a calculated maintenance plan before ever deploying a technician. This streamlined approach saves time and money. In addition, proactive monitoring allows a company to forecast problems even before they arise and schedule repairs at their own pace. The benefits of being proactive vs. reactive are many, but the main advantage is that it puts the control into the hands of the business executive and takes it away from the environment or device.

There are platforms in place that aim to help heads of service and technicians proactively manage their suite or fleet of electronic assets. As we know, tracking trends, finding root causes of problems and preparing for device failures are much more cost effective measures than the “rushing to fix” and “band-aiding” procedures a company is forced to follow when in a reactive mode.

So what if there was a proactive monitoring model that harnessed all of the advantages of the cloud? What if this management dashboard was both accessible with an Internet connection and offered the aggregation of data from a broad spectrum while providing a platform to remotely manage devices from a central location? Enter Innovolt’s Management Cloud.

HOW THE INNOVOLT MANAGEMENT CLOUD (IMC) PROVIDES THE NECESSARY CONTROL

What is the IMC?

The Innovolt Management Cloud (IMC) is a platform for offering a consolidated view of a company’s electronic devices and the power-related data they deliver. This allows a company to track the performance history of an entire fleet of devices—recording such data as power disturbances, etc.—and identify its trends. Rather than retrieving information piecemeal—device by device—the IMC presents a holistic perspective of how all devices are performing across a broader spectrum and empowers a company to formulate a proactive plan for managing those devices.

Like all cloud technologies, the IMC is hosted on the Web. A user simply opens a browser to access the information from anywhere. There is no challenge of connecting to a server. The only requirement is an Internet connection

The IMC’s Easy Implementation

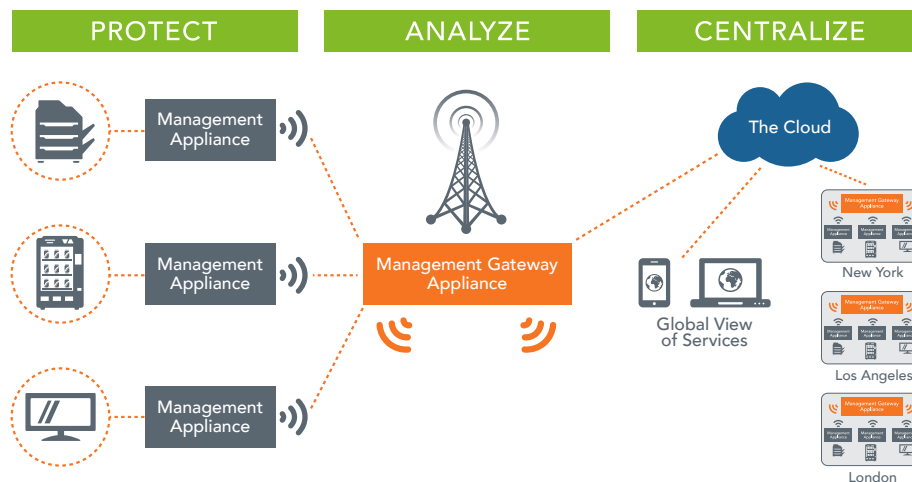
Let’s leap from the theoretical to the literal. A client operating a fleet of soda machines equipped with the IMC located in an Atlanta mall noticed that over a Thanksgiving weekend – the busiest shopping weekend of the year – the machines stopped working.

In a typical situation like this, standard operating procedure would be to roll out the machines that did not work and roll in new machines to see if they would work. They didn’t have to do that, however, thanks to the IMC.

The service technicians reviewed the information provided via Innovolt’s Power Doctor and cloud management platform and saw that there had been consistent power anomalies—nothing too abnormal—and then a total break associated with the environment and occurring in a specific couple of days.

They determined the culprit: Thanksgiving Weekend.

Because the mall plugged in its holiday lights at the same time on the same circuit breaker, any small power anomalies the soda machines experienced were exacerbated. But with the IMC in place, they were able to easily identify that the machines themselves were working fine and that it was the environmental change had caused the problem. The massive expense of rolling machines in and out was averted.



The Innovolt Management Cloud (IMC)

The Benefits of the IMC

While vending is one example of the IMC at work, the platform is developed to benefit service and support industries and the growing number of businesses that leverage M2M. By “growing,” we simply point to new research from Frost and Sullivan that North America’s M2M software and services market is expected to generate revenues of \$788.4 million in 2018, which is up \$600 million over revenues in 2012.

North America’s M2M software and services market is expected to generate revenues of \$788.4 million in 2018, up from just \$175.4 million last year, according to new research from Frost & Sullivan

– Telecom Engine

To drill down, we see the IMC’s benefits extending to companies who provide service and support for remote electronics equipment—from ATMs to self-service kiosks to gaming devices to office equipment.

Specifically, the benefits to the end-user include:

- Raising profitability
- Lowering service calls
- Elevating customer satisfaction
- Improving power flow management to electronic devices
- Increasing electronic devices’ productivity and performance
- Giving holistic view of electronic assets anytime, anywhere

INNOVOLT: INDUSTRY LEADER IN CLOUD MANAGEMENT

Who We Are

Innovolt is an award winning Atlanta-based technology company that is changing the way businesses manage their electronic assets. Founded within the Georgia Institute of Technology Venture Lab and backed by more than 25 years of scientific research, we offer a robust solution for sophisticated electronics management.

Our core leadership draws on more than 100 combined years of professional experience migrating among a diverse and dynamic range of sectors—from Wall Street to Global Technology to Telecommunications to IT to Corporate Development to Healthcare.

What We Do

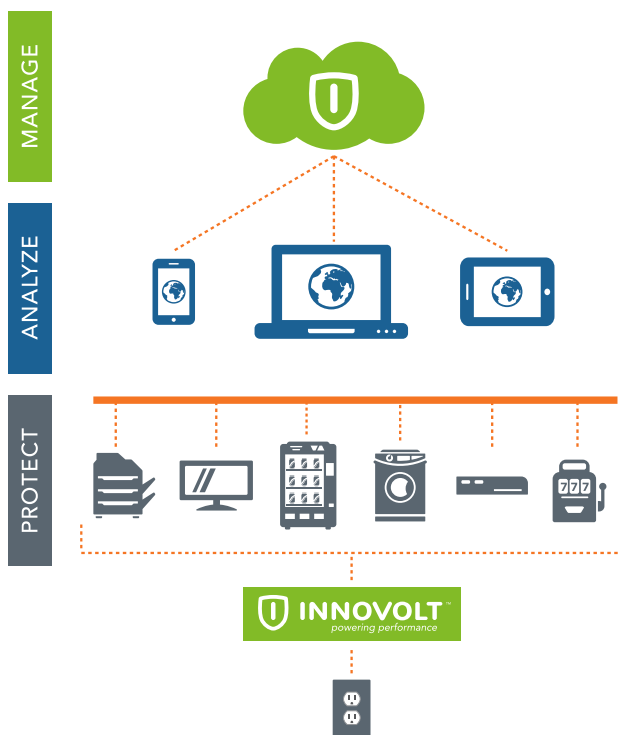
Innovolt’s proven solutions help customers of every size – from members of the Fortune 500 to individual consumers – safeguard expensive and sensitive electronic assets against the damaging effects of power and environmental disturbances. Its technology simultaneously gives businesses the tools they need to predict, measure, and maximize the performance of those vital assets.

The Development of Innovolt’s Cloud Management Platform

We have always had software that allowed us to read error information from Innovolt appliances via a servicer. About a year and a half ago, however, we began discussing the importance of being able to remotely assess those analytics from any place at any time of the day.

We worked with a partner to develop the IMC platform, which now extracts all data from our appliances and uploads it to the cloud. Now everyone, including the highest level members of an organization, get a view of their entire fleet of electronic devices. Additionally, they can see all of that on their own time, where ever they have an internet connection.

As the IMC evolves, the future of asset management will also evolve. Devices themselves will all be connected directly to the network. A person will not have to physically touch the device in order for it to be managed remotely. This will enable the company or user to collect data instantaneously from any device, analyze it and make decisions about it anywhere.



The Innovolt Management Cloud (IMC) provides the platform for analyzing data in multiple ways, thus ensuring a greater protection of distributed devices

ABOUT THE AUTHOR

Ben Grimes, Chief Technology Officer for Innovolt, has more than 20 years of experience in the IT industry, specifically in product development and infrastructure solutions. He possesses strong qualifications in the end-to-end delivery of complete systems, from early concept to design delivery. Ben also has a range of strategy development experience, which includes technical ambassador functions in support of sales and marketing. He brings long standing industry partner relationships with key industry leaders and community analysts as well as industry press. He has also served as a Corporate Strategy Officer and led a \$1.2B sale of Avocent to Emerson Electric. Additionally, Ben provided advisory services to several companies, from the start-up level to Fortune 100. He received his undergraduate degree in Electrical Engineering from Purdue University and holds an MBA from the College of William and Mary.

FOR MORE INFORMATION

If you'd like to discuss any of the approaches or insights in this white paper, we invite you to speak with our team.

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About Innovolt

Innovolt® combines patented electronics protection technology with comprehensive monitoring and analytics applications to deliver the leading Intelligent Asset Management platform. Significantly reducing the cost of electronics ownership, Innovolt intelligently protects and manages the productivity and usable life of the technology that powers today's digital world. The company's proven solutions guard expensive and sensitive electronic assets against the damaging effects of power disturbances while simultaneously giving businesses the tools they need to predict, measure, and maximize their performance across the distributed enterprise. For more information, visit www.innovolt.com.

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