

Everywhere Analytics

How the Internet of Things Helps Provide Deep Insights and Real-Time Business Process Transformation

The emerging Internet of Things (IoT) represents a world in which nearly any item — whether it's an athletic shoe, an auto part, a medical device, or an industrial gauge — can be equipped to share data on its status. But how does this affect the business? In the IoT vision, individuals can take action based on that data and related alerts to adjust exercise habits, service cars, treat patients, manage assembly lines, and so on all in real time.

But IoT is about more than just things, and it's about more than making informed decisions: It's about enabling organizations to track, count, observe, identify, evaluate, and act in circumstances that in the past were beyond reach.

IoT-Driven Analytics Throughout the Organization

In the full IoT vision, sensor-equipped items don't simply display data and alerts. They interact and share data with a variety of other IoT-enabled devices to create scenarios in which devices can communicate in context and in real time with processes, such as sales, regulatory, customer service, or production processes.

The ability to gather and analyze data from virtually anywhere via IoT — known as “everywhere analytics” — offers the opportunity to generate instant, actionable insights. The ramifications for the supply chain can be profound, as is the potential for apps and monetization opportunities at various touchpoints in the supply chain as data and insights roll through the process.

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The Power of a Platform

At the same time, organizations are increasingly seeing SAP HANA Cloud Platform as a tool for enhancing the supply chain to drive efficiencies, improve processes, elevate service quality, and deliver value. SAP HANA Cloud Platform offers businesses the ability to leverage an SAP platform-as-a-service (PaaS) offering to develop and run powerful cloud-based applications that use in-memory analytics capabilities to enable fast decision making, and to extend and integrate those capabilities through a variety of channels.

As IoT continues to take shape, and as SAP HANA Cloud Platform opens up new pathways to value-based insights, organizations up and down the supply chain have a prime opportunity to transform their businesses into real-time, insights-driven powerhouses — organizations that can act on previously unimagined and unexplored relationships among countless numbers of products, devices, people, and processes.

When it comes to the supply chain, SAP HANA Cloud Platform can address the challenges of developing an everywhere analytics capability in the IoT era. And with SAP Business Suite 4 SAP HANA (SAP S/4HANA), petabytes of data can be searched and analyzed, even when populated with unstructured data sets at the point of action. These technologies can enable organizations to benefit from automated business processes that can, in some cases, substitute for human analysis and judgment. But a solution is only as good as the plan behind it.

Developing a Strategy for Instant Everywhere Analytics

Businesses exploring the promise of instant everywhere analytics will require a plan. The value of IoT with SAP HANA Cloud Platform is not automatic; it's not simply a matter of turning a tap and having instant insights flow into an automated process. Developing a new SAP-enabled IoT strategy requires first determining the processes and functions that matter most for your organization — now and in the future — and



Jagadish Bandla
Principal
Deloitte Consulting LLP



Christopher J. Dinkel
Director
Deloitte Consulting LLP

then determining how they can be improved to enhance the business and to monetize new activities. It also requires focusing on four key questions for each specific process.

1. Is the Data Dynamic and Generated in Real Time?

Data matters, but real-time data matters more. Much of the frontline data generated from IoT processes might not flow in real time directly to your organization. The data might be hours old by the time it gets into your information chain, making it less useful for instant action. If one IoT touchpoint in the supply chain isn't refreshing data on an almost live-streaming basis, the data typically holds less value for the organization. In the increasingly fast-paced world of business, asset downtime can affect the top line. Using sensor data to monitor the health of machinery in use, for example, companies can shift to a condition-based maintenance model rather than relying on scheduled maintenance or repairing equipment only when it has already broken down. But the data organizations rely on to do that might be old and out of date — even if it's only a few minutes old.

2. What Is the Value of Real-Time Analysis?

An organization can spend a lot of time and effort developing real-time analytics capabilities. With IoT and everywhere analytics offering an infinite web of interactions and relationships to analyze, the possibilities can be paralyzing. To deliver a return on investment (ROI) effectively, organizations should make the business case for real-time analysis for each process, and prioritizing is essential. Some activities might demand real-time analysis and the delivery of actionable insights. Monitoring the status and condition of perishable goods in real time, for example, might matter more to an organization than monitoring the age of supermarket shopping carts in real time.

3. How Do You Engage the User?

As systems of systems create webs of data and as users interact with a variety of data devices, from mobile to social, how do you determine the best method for getting real-time insights to the right user and to the right decision-making point, whether it's a person or an automated process? If insights are critical, it's critical for a user to take action. Meaningful alerting capabilities represent the important "last mile" between the data source and the actual action.

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4. What Action Needs to Be Taken?

IoT information typically creates value when it is used to modify future action in beneficial ways. Ideally, this modified action gives rise to new information, allowing the learning process to continue. Information, then, creates value not in a linear value chain of process steps, but in a continuous value loop. Having new forms of data from new sources — presented in context with other new data sources via IoT — can allow your organization to conceive and take new actions that previously were not possible. Have you determined all the possible action options for a new type of insight that might be generated? Have you selected the right one? Do you have the right business rules in place to put the action into play?

An Action-Oriented Focus

Beyond the challenge of answering these key questions, organizations should incorporate their answers into a cohesive, holistic strategy that makes sense — one that leverages SAP HANA Cloud Platform and IoT capabilities to address current business challenges as well as future needs.

As an SAP global services partner, Deloitte can help. We have extensive experience assisting organizations in their move to solutions such as SAP HANA Cloud Platform as well as other SAP solutions for the supply chain. We understand the value of actionable insights — and the value of acting fast. If you're ready to act on the evolving challenges of IoT and the supply chain, Deloitte's ready to talk. To get the conversation started, email jbandla@deloitte.com or cdinkel@deloitte.com, or visit www.deloitte.com/sap. ■

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