

IDC PERSPECTIVE

Eat, Drink, and Flourish: WaterBit's Precision Irrigation Is Digitally Transforming Agriculture Through VANTIQ's Platform

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EXECUTIVE SNAPSHOT

FIGURE 1

Executive Snapshot: WaterBit's Precision Irrigation Services Leverage VANTIQ's Digital Platform

WaterBit has made the strategic decision to deploy its distributed network of precision irrigation IoT technology using VANTIQ's real-time, event-driven application development platform. Its solution enables a real-time moisture monitoring and water management execution system for farmers who want to improve crop performance and reduce operating costs.

Key Takeaways

- Networked real-time, mission-critical operational IoT data across a distributed physical environment is easily collected, coordinated, and available for semantic models and analytics.
- Dynamic insight for in-time interventions decisions are achieved through multidirectional data, information, and automated action prompts.
- VANTIQ's coding approach supports rapid prototyping and iteration cycles. This is a critical part of creating innovation cultures and competencies.

Recommended Actions

- Platforms are the optimal way to integrate distributed operating environments, so partner and invest in a platform provider best suited for your digitally enabled business and operational goals.
- Low-code/no-code approaches should be used to build operational workflows; this approach creates a force multiplier effect and increases your organization's coding literacy while reducing time to benefit for implementing real-time digital capabilities.
- As-a-service vendor business models enable cost-effective pilot and operating scale while preserving capital budgets and operating cash flows.

Source: IDC, 2020

SITUATION OVERVIEW

WaterBit, a California-based company, is a company whose mission and business centers around smart irrigation capabilities for automating, monitoring, communicating, and analyzing farmer field moisture performance. The company describes the scope of its solution capabilities for "precisely monitoring and controlling irrigation, optimizing crop quality and yield while delivering significant cost savings on inputs and labor with high-mark reliability." Today, wine grape, almond, berry, and vegetable farmers all use WaterBit's intelligent irrigation solution.

WaterBit initially worked with VANTIQ to develop a prototype ahead of scaling a full-stack IoT environment for threading together WaterBit's advanced and distributed environment including moisture sensors and valve actuators. WaterBit and VANTIQ developed the prototype in a week and were production ready in eight days, according to company representatives.

WaterBit has even gone so far as to incorporate the VANTIQ technology into the company's sensor devices during the manufacturing process to ensure quality, completeness, and accuracy for its field sensor hardware ahead of field deployments. Currently, 17 different data elements are captured and regularly monitored as part of its irrigation management services. Of these, 12 elements are customer facing. The remaining 5 elements are used by WaterBit for its sensor-asset reliability validation.

The seasonal nature of fixed growing seasons each year means getting field performance to optimize crop yield and return on investment is the most critical performance dimension for farming success. Unlike other manufacturing or production sectors where poor quality can be remediated through a second production run or additional production in a relatively short time frame, poor crop performance in a particular season is opportunity lost to time without recourse or recovery in that same crop cycle. WaterBit's commitment for such an integrated relationship is representative of the company's belief in VANTIQ's capabilities and trust for delivering time-sensitive and time-critical capabilities with quality and consistency.

The VANTIQ Platform

VANTIQ is "a next-generation, high-productivity, platform" that allows developers to quickly and flexibly build end-to-end solutions with an emphasis on event-driven architecture over traditional, database-centric system architecture. VANTIQ touts a low-code/no-code visual UI for rules processing coupled with secure, scalable, and reliable event broker capabilities. It supports distributed multicloud, multiedge deployments, in both managed and private cloud configurations, as well as human-machine collaboration to simplify the development, deployment, and management of large-scale, real-time business operations.

In addition to being used by the agricultural sector, VANTIQ was recently recognized by the oil and gas industry as a top 10 technology provider.

ADVICE FOR THE TECHNOLOGY BUYER

IDC's own Kevin Prouty defines and describes the future of operations (FoO) as "a shift in operations from efficiency to resiliency to support the increasing market demand for customization. Today, organizations employ Six Sigma, continuous improvement, and business process optimization programs to gain organizational efficiency. They focus on how to establish a process and optimize that process."

Prouty further states:

In the digital economy, more custom products, services, and experiences are demanded by customers. To respond, organizations are pivoting from a focus on throughout and efficiency of operations to a market-driven focus as they manage increasing complexity. They are focused on using technology to build a resilient organization – one that adapts to changing circumstances while maintaining its central purpose. The operation must embrace complexity while minimizing complications.

Digitally transformed real-time operations use both operational knowledge and technology skills to optimize and manage their operational framework: ingesting operational data; providing analytical insights to operations; supporting real-time, resilient decision making; and delivering automation for the market-driven operation. Correspondingly, these digital leaders achieve a significantly higher level of on-time fulfillment with an ever-improving ability to deliver on market-facing demands. Simultaneously, they achieve higher levels of efficiency and efficacy than their legacy Six Sigma, continuous improvement, and business process optimization programs have by embracing step-change betterment competencies over traditional incremental approaches.

For those businesses looking to develop resilient operations as a part of becoming competitive in the digital economy, especially where you have mission-critical applications with dynamically changing asset sets that work over physically and geographically distributed environments, WaterBit has demonstrated this capability through its use of the VANTIQ platform.

Our advice is:

- Take a platform approach to build-out and develop repeatable, scalable, integrated digital capabilities.
- Look to low-code/no-code approaches. They create programming talent force multipliers where technology effectively upskills your workforces' ability to develop code across nontechnical personnel.
- Leverage the platform benefits for enabling real-time monitoring, intervention, and remediation. A real-time, event-driven digital platform best informs the business and enables key aspects of resilient operations.

LEARN MORE

Related Research

- *Operational Data: From Sideshow to Main Event* (IDC #US45813220, January 2020)
- *IDC MaturityScape Benchmark: Future Enterprise Worldwide, 2020* (IDC #US45863318, January 2020)
- *IDC MaturityScape Benchmark: Future Enterprise in the United States, 2020* (IDC #US45647618, November 2019)
- *IDC MaturityScape: Digital Transformation Platforms 1.0* (IDC #EUR145200419, July 2019)
- *IDC MaturityScape: The Future Enterprise 1.0* (IDC #US43646819, April 2019)

Synopsis

This IDC Perspective discusses WaterBit's intelligent irrigation solution.

According to IDC's Shawn Fitzgerald, research director, Worldwide Digital Transformation Strategies, "Platform-based digital capabilities at scale are rapidly becoming a must-have for digital transformation. Our research shows over 65% of digitally determined organizations are developing their own integrated enterprisewide digital platform versus 20% for the digitally distraught. Businesses looking to develop resilient operations as a part of becoming competitive in the digital economy, especially where you have mission-critical applications with dynamically changing asset sets that work over physically and geographically distributed environments, should be looking at a digital platform; WaterBit's use of the VANTIQ platform is a great example of platform-based value creation."

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