

## Kepware and ZPI: The Quest for Data Perfection

### The Customer

ZPI, Inc., delivers enterprise manufacturing diagnostic software that enables companies to improve top-line performance, reduce waste, and produce a greater number of products in less time. Their full-service software empowers modern manufacturers to accelerate and refine their business through a process of continuous improvement.

Based in Ontario, Canada, ZPI has earned an excellent reputation for their accurate and comprehensive data collection and analytical product, which provides packaging, manufacturing, and processing facilities with the tools necessary to increase availability, improve performance, reduce quality defects, and drive profit margins. Currently, the company collects data on more than 5,000 assets worldwide.

### The Challenge

With the lingering global economic crisis, manufacturers are under pressure to run leaner. As such, industries ranging from food and beverage to pharmaceuticals are exploring new ways to achieve continuous improvement in their manufacturing processes. The key to achieving this goal is obtaining reliable data on all aspects of the manufacturing infrastructure. The better the data, the more accurately manufacturers can make real-time decisions about improving business operations.

"The global economic crisis has put a premium on real-time, business-critical information. For many, this means the difference between success and failure," said Paul Mancini, Vice President of Marketing and Innovation at ZPI, Inc.

When dealing with customers, ZPI soon found that the need for data is contagious: greater access to real-time data drives demand. The sources are growing as well, with metrics now available on thousands of machines polling from several hundred points at a time.

"Data is changing the dynamics of how we conduct business. Customers realize the best performing businesses are those with the richest data experiences," Mancini commented.

### Organization:

Software Provider

### Industry:

Manufacturing

### Sales/Service Area:

United States

### Solution:

KEPServerEX®, Dashboard Views, High-level reporting on overall and individual plant performance

As a result, customers are turning to solutions from companies like ZPI. Based on a homegrown fact collection and reporting engine, their product gathers details straight from Programmable Logic Controllers (PLC) on a manufacturing plant's floor. It collects accurate facts for the entire organization, from operators to upper management. The system applies business rules to raw metrics and then stores it in an SQL database that can be accessed from anywhere in the world and used as the foundation for continuous improvement.

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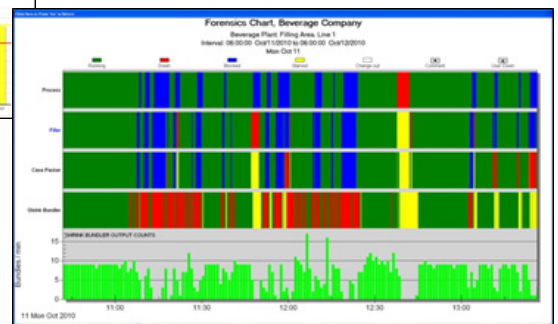
**— Paul Mancini**

**Vice President of Marketing and Innovation  
ZPI, Inc.**

The key to ZPI's success is the accuracy and relevancy of data that is delivered to customers. The company initially leveraged industrial automation and control solutions from the PLC manufacturer, but soon found that the solution had several key flaws. In addition to dropped data points, proprietary drivers often latched onto incorrect numbers. This was extremely damaging, as customers soon became accustomed to receiving bad information.

ZPI recognized that this situation was unacceptable and potentially damaging to customers' reputations. "If you look at the food production industry, for example, bad data could cause such problems as not having an accurate read on oven temperatures across the facility. This potentially results in production of food that's either cooked too much or too little. It all speaks to quality control," said Mancini.

Other contractors that connected equipment to the network without regard to how it would affect overall performance exacerbated the problem. "Some contractors come in and simply add another piece of industry equipment to the network without giving any thought to how it affects performance. This puts companies into pure 'reactionary mode' when industrial equipment issues arise," Mancini said.



## The Approach

ZPI began to explore other options, including those from Kepware. KEPServerEX® is specifically engineered to connect disparate devices and applications, from plant control systems to enterprise information systems. The flexible and scalable software can easily manage, monitor, and control diverse automation devices and software applications. Communications are managed through a robust platform that supports an array of open standards.

The ZPI team put Kepware and the PLC manufacturer's drivers in a head-to-head test. Upon simple testing, they found the PLC manufacturer's own software drivers were providing bad metrics. Mancini reports this is especially damaging for high-load or poorly designed networks, stating "Many of our clients' networks simply weren't designed right from the get-go; some were even token-ring environments. And when you layer drivers gathering data on an inferior network, it rapidly gets overloaded, causing lost and incorrect metrics."

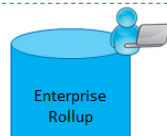
ZPI found that Kepware was the only solution getting it right the first time. Upon rigorous testing, KEPServerEX not only harnessed the correct statistics, but also kept them continuously up-to-date. With that in mind, ZPI selected Kepware as their OPC server provider.

KEPServerEX's rich feature set allows ZPI to attain consistent, reliable data. In typical installations, ZPI creates a Kepware channel for each individual production asset, thus providing insulation from communications failures that may occur in other channels. When combined with the auto-demotion functionality, this feature provides customers with near-perfect data.

### Modular and scalable server structure allows easy division and enterprise data rollup

#### Enterprise Reporting

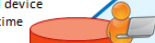
Compare data from plants across the enterprise  
Contextualizes data from multiple business systems  
Remotely access production data



View Production data from anywhere in the world

#### Division Reporting

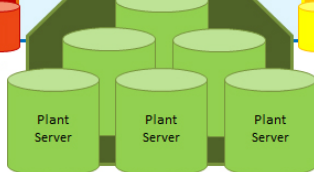
Compare like assets from the division  
View from any web enabled device  
Monitor production in real time



Use virtually any device, including phones & tablets

#### Plant Reporting

True shop floor visibility  
Run green room meetings  
Empower maintenance  
Drive six sigma initiatives  
Fuel continuous improvement



True real time plant floor visibility with your LCD display

**"Our switch to Kepware has made all the difference, and is a key component to our success globally. We've now driven more than \$500 million savings in performance improvements projects worldwide—none of which would have been possible without the help of Kepware,"**

## The Benefits

From the beginning, ZPI noticed immediate improvements in accuracy and reporting. The Kepware solution quickly provided customers with a highly effective interface that supports plant-level data, bottleneck analysis, and immediate problem identification. The new dashboard offered both operator and high-level reporting on overall and individual plant performance.

ZPI also experienced the solution's wide-ranging interoperability. "When we rolled out systems globally, we found a plethora of PLCs that would have previously required their own OPC servers to effectively communicate," continued Mancini. "Kepware offers a rich suite of drivers, permitting connection to almost any device. This dramatically shortened our time-to-market, lessened support requirements, lowered total project cost, and increased overall reliability of the data."

Today, Kepware continues to provide the robust set of OPC servers necessary to meet the ever-increasing data needs of lean six sigma, TPM, and continuous improvement programs. "Our switch to Kepware has made all the difference, and is a key component to our success globally. We've now driven more than \$500 million savings in performance improvements projects worldwide—none of which would have been possible without the help of Kepware," concluded Mancini.

## About Kepware Technologies

Kepware Technologies, established in 1995, develops a wide range of communication and interoperability software solutions for the Automation industry. Our flexible and scalable solutions are for connecting, managing, monitoring, and controlling diverse automation devices and software applications. Our industry endorsed software solutions improve operations and decision-making throughout all levels of an organization. Kepware Technologies' mission is to be "Your Standard for Connectivity."

