



Executive Summary

INDUSTRY: C-Store Retail

FOCUS: Energy

VYKON Integrator:

HVAC Concepts

- 550 stores in the Mid-Atlantic US, 202 that sell gasoline.
- HVACC developed a scalable, end-to-end Niagara Framework solution that connected each store's operational devices to the company enterprise network.
- Wawa has experienced savings across an array of systems and functions and is now expanding the program company-wide. and is expanding the program company-wide.

KEY BENEFITS

- Real-time reporting
- Increased Profitability
- Reduced operational costs
- Improved resource management
- Reduced downtime
- Maximized customer comfort

## Wawa, Inc.

### The Client

Wawa, Inc., a privately held company, began in 1803 as an iron foundry in New Jersey. Toward the end of the 19th Century, owner George Wood took an interest in dairy farming and the family began a small processing plant in Wawa, Pa, in 1902. The milk business was a success, due to its quality, cleanliness and "certified" process. As home delivery of milk declined in the early 1960's, Grahame Wood, George's grandson, opened the first Wawa Food Market in 1964 as an outlet for dairy products. Today, Wawa stores feature a wide variety of fresh foods including award-winning freshly brewed coffee and built-to-order Wawa hoagies. Wawa operates more than 550 stores in Pennsylvania, New Jersey, Delaware, Maryland and Virginia—202 of those stores sell gasoline.



### The Challenge



In keeping with one of the most important challenges for the retail sector—controlling and reducing costs—many retailers are beginning to realize that enabling data sharing between operational equipment and systems with business applications leads to paybacks in the form of expense savings, better productivity and improved operating performance. As a result, retailers are turning to technology to create "information networks across their entire enterprise" in order to share data-in real-time- with the right group of individuals-- who can evaluate it and optimize decision making.

From a technology perspective, retailers can strategically approach this challenge through asset monitoring to maximize cost savings and minimize investment. Since the assets being networked are typically in close proximity, they can often all be connected using the same wireless and/or wired local-area network. The same application infrastructure that's used for monitoring one type of asset can also be used for several others. That's because the framework or platform—middleware that takes data from the communication network and incorporates it into an enterprise application—serves essentially the same function regardless of the specific nature of the application.

Today's convergence retail stores, such as Wawa are dependent on a wide variety of intelligent systems and devices. These smart devices manage and control the equipment systems that are critical to store operations and customer satisfaction. Connecting to and communicating with these devices and systems enables the store to maximize operational efficiency and profitability. Because these devices talk using a wide range of communications formats it has been difficult to take full advantage of their capabilities and the information they contain.

From HVAC, lighting (interior and exterior), refrigeration, and irrigation, to the car wash, food preparation equipment, scales, security, utility meters, fuel tank monitoring and dispensing equipment, it is now possible to connect all of your systems together and take advantage of the valuable information they contain.



The VYKON C-Store Manager/Convergence Retail Application is a scalable, end-to-end solution consisting of hardware and software connecting individual store's operational devices, equipment and systems together and to the company's wide enterprise network. The application was built using the highly successful Niagara<sup>AX</sup> Framework and provides Wawa with the ability to monitor, control and archive data (locally, at the enterprise level and remotely) a variety of systems.

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## The Solution

In keeping with Wawa's commitment to use technology throughout every phase of its operations to maximize efficiency, control costs and enhance the customer experience, VYKON, in partnership with Wawa and system integrator HVAC Concepts, designed the "VYKON C-Store Manager/Convergence Retail Application," a scalable, end-to-end solution consisting of hardware and software that connects each individual store's operational devices, equipment and systems together and to the company's wide enterprise network. The application was built using the highly successful Niagara<sup>AX</sup> Framework and provides Wawa with the ability to monitor, control and archive data (locally, at the enterprise level and remotely) most major systems within a store.



## Results

After a very successful pilot program proved itself by combining savings across a wide range of systems and functions and delivered tangible ROI including the business justification, the solution is now being deployed company wide in 550+ stores.

WAWA is experiencing a range of benefits and ROI across multiple business functions that include:

### Financial/Business Management

- Real time reporting that is supporting more effective decision making
- Increased profitability at each store location by reducing operational costs and improving workflow and resource management
- Benchmarking performance and sharing best practices across their entire enterprise

### Energy Management

- Understanding individual store energy consumption patterns and trends
- Benchmarking energy performance at each store location
- Reduced energy costs

### Facility and Equipment Management

- Reduced downtime and response time to equipment failures
- Centrally and locally managing alarms and alerts
- Improvement in facility operation
- Maximizing customer comfort and enhancing the overall customer experience
- Visibility and access into the assets and systems that effect the company's operations each day

### Maintenance & Operations

- Reduced response time on maintenance issues
- Access to information to support preventive and predictive maintenance and the ability to prioritize equipment maintenance based on actual performance data

In addition, Wawa has the ability to easily support new vendors of equipment and to cost-effectively add new applications such as security and fire.

## The Integrator

Based in the DC metro area, HVAC Concepts has been in business over 19 years — concentrating on controlling and monitoring facilities. As an early advocate of interoperability, HVACC identified the change in the control industry from proprietary to interoperable systems. HVACC has maintained and supported all of its installed systems with over 99% of all systems ever installed in the company's history are still running at 100% capacity.