



# Carlo Gavazzi Automation Relies on PHP & Zend Solutions to Modernize Enterprise Applications

## CUSTOMER:

Carlo Gavazzi is an internationally active electronics group designing, manufacturing and marketing electronic equipments targeted at global markets of industrial automation. Carlo Gavazzi's products are marketed across Europe, the Americas and Asia-Pacific through a network of 21 own sales companies and through more than 40 independent national distributors.

## CHALLENGE:

- Respond faster to growing business requirements that demand a Web infrastructure
- Modernize existing 5250 applications by implementing Web capabilities while continuing to enjoy the existing application's code as the backbone of business methodology
- Find reliable and readily-available PHP tools to integrate seamlessly with the many i applications that support operations

## SOLUTION:

To modernize legacy applications and Web-enable existing i applications, Carlo Gavazzi migrated its automation system from ASP to PHP and adopted the Zend PHP solution for IBM i. Gavazzi's IT department implemented Server for IBM i to achieve full integration with their existing server system, Zend Studio and Zend Framework to standardize Web application development and Zend Training to enable RPG programmers improve their PHP skills.

## BENEFIT:

By integrating PHP and Zend Solutions for IBM i, Gavazzi Automation is able to leverage existing i application business methodologies, while reducing application development time and offering a user-friendly modernized Web interface.

## Introduction

Carlo Gavazzi Automation ("Gavazzi") is a global electronics group focused on the design, manufacture and marketing of electronic equipment for industrial automation and information processing. Gavazzi components are installed all over the world in a huge variety of state-of-the-art, hi-tech products and processes.

Gavazzi employs over 1100 people over multiple sites in Europe, North America and Asia where effective business unit integration plays an important role in day-to-day operations. Accordingly, Gavazzi Automation relies on a centralized IT department, the heart of which is based on IBM Power Systems running the i operating environment. To meet customer demands, Gavazzi must continuously adapt processes to market needs so they can provide technologically innovative, high quality, competitive solutions.

Web-based applications offer more functionality and more user-friendly interfaces than the traditional 5250 green screen. This is particularly true with Web 2.0-style applications (AJAX). Taking into consideration that PHP powers over 45% of AJAX applications, Gavazzi decided to expand their development capabilities to include PHP. This allows them to respond faster to growing business requirements that demand a Web infrastructure. They are currently adopting Web procedures that will co-exist with their commercial procedural languages, such as RPG.

Gavazzi's IT department is using PHP to modernize their legacy 5250 applications. Implementing PHP to Web-enable their existing i applications improves both their response time and information consistency.

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**Ivano Mangiarotti - IT Manager, Carlo Gavazzi Automation**

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One such application is their DB2 database-backed Intranet which provides a global analysis of company sales. Additionally, Gavazzi has implemented Web capabilities in their CRM which contains crucial document-management features and is mission-critical for their sales force automation processes. Also web applications are now present in the production department, helping the workers to easily understand the production flow. Developments include a steady flow of new Web interfaces for additional applications, extending the existing ERP system with new features and developing a Business Intelligence application, new accounting reports and a production plan in order to manage workers in the production department.

For these transitions, Gavazzi searched for reliable and readily-available PHP tools to integrate seamlessly with the many i applications that underpin their business operations. Their goal was to facilitate a swift conversion to the Web model while at the same time continuing to leverage the existing application's code as the backbone of their business methodology. The IT team at Gavazzi chose Zend Solutions as their toolkit.

## The Zend Solution

"We chose PHP because we can achieve full integration with our existing server system via Zend Server for i. We previously developed in ASP, however ASP required an external server to integrate the application with i. Removing the external ASP server has significantly improved integration and performance." said Ivano Mangiarotti IT Manager at Carlo Gavazzi Automation

"For users, the initial impact is enhanced application usability and a better user experience as a result of extensive use of AJAX and SOA components for an improved interface" added Mangiarotti.

"For our programmers who come from languages such as RPG or Visual Basic, PHP is easy to learn. With Zend's professional training program, our programmers were able to quickly and easily improve their expertise and gain new skills. Although we are still learning PHP, I have already observed an expert programmer developing something in 10 days using PHP that previously would have taken two months – this is obviously a major advantage for us." Another fundamental reason Gavazzi chose PHP is the close Zend-IBM partnership, which is oriented towards improving and innovating development tools for the i operating environment. "Our entire business is based on IBM hardware and we feel safe in the knowledge that we are running applications supported by two well known and professional companies who provide tools which have been extensively tested for interoperability and performance. This gave us the confidence we needed in our decision to migrate our applications," said Ivano Mangiarotti.

Gavazzi have standardized on Zend Framework as the basis for Web application development. One of the major benefits experienced from using framework is shortened development time when writing fixes and new features. They have implemented Zend Framework's MVC pattern in their applications so that the projects are organized dividing business logic from presentation logic. This structure leads to quick and easy problem identification and correction. Zend Framework also offers Gavazzi's developers the advantages of learning PHP from well written code and the opportunity to write complex features without extensive PHP experience.

The Zend Studio development environment has been essential for Gavazzi during their migration process. Zend Studio operates perfectly with Gavazzi Automation hardware systems that are based almost exclusively on the i operating environment. In fact, typical functions of these systems, such as database calls, can be launched directly from Zend Studio due to the built-in integration between i and Zend Studio.

"This is extremely practical and saves time," says Ivano Mangiarotti, Gavazzi Automation IT manager.

"The code-completion feature of the Zend Studio is also very beneficial as it helps us complete the PHP code correctly, even for those programmers who don't have extensive experience. We also appreciate the fact that we can launch SQL commands to extract data from the DB2 database. In addition we utilize the FTP connection to i and PHP manual integration."

## Looking forward

Gavazzi plans to develop additional applications using PHP, including a responsive intranet area that can be used on mobile devices, and

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Zend Framework 2. They are releasing the Carlo Gavazzi Automation website based on Zend Framework, and plan to integrate their CRM with Lotus Domino to synchronize company calendars and email. The company has allocated resources to train their developers in PHP, and rely on Zend's professional training curriculum to educate the team.