



“We wanted the latest and best technology underpinning our second-generation kiosk. We chose the .NET Framework 3.0 because it highlighted our commitment to our solution being the best in the market.”

Steffen Lerm, Managing Director, HC Global

## Situation

In the competitive market for consumer services, companies need to evolve their products continually. Otherwise, people can easily look elsewhere for a more convenient or up-to-date offering. Many companies, however, must balance the need for development against cost. For these companies, avoiding lengthy and expensive development life cycles that impact returns and erode competitive advantage is crucial.

Germany-based HC Global wanted to update a digital-photo-processing kiosk that operates in retail stores across the country. The business—which also controls the high-speed data connections between the kiosks and a server farm where photo data is collated—competes in an unforgiving marketplace. The company knows that, if consumers have a single less-than-favourable experience, they will quickly go elsewhere.

In March 2006, the company released the first generation of its kiosk, which ran on a Java-based software environment. However, with the speed of evolution around kiosk technology, the existing platform would have a limited shelf life and need to be updated regularly.

Experience at HC Global suggested the underlying Java technology could not meet the company's development aims. Steffen Lerm, Managing Director, HC Global, says: “We had experienced trouble implementing the features we wanted on the Java platform. We also found that the Java platform did not really meet our business needs in general.”

HC Global's list of criteria for a replacement platform included:

- A flexible graphical user interface (GUI)—making it easy for customers to rebrand the kiosk without having to use

programming languages such as HTML or rebuild the application.

- Support for all picture file formats, including JPEG, BMP, GIF, PNG, and TIFF.
- Editing features for consumers to perform light editing and processing functions on the fly, such as automatic red-eye removal and colour adjustments.
- The ability to read metadata from picture files and apply it to pictures.

Beyond this list, there were other pressing issues around the development of the new kiosk. The first involved the company's core competencies. The company's strength lies in transporting photo data from the kiosks to the server farm and then to the print laboratories, not in developing software platforms.

The second issue involved timeliness—the company needed to deliver the kiosk in less than a year. If implementation took more than 12 months, the kiosk's future would be in doubt.

## Solution

HC Global assessed software based on Linux or Windows® as replacements for the Java-based environment. Because Linux technology was already a strong feature of the HC Global enterprise infrastructure, it seemed an obvious choice. However, after a detailed review, the company saw the clear business advantages of creating a software platform based on the Microsoft® .NET Framework, with Windows XP Embedded with Service Pack 2 as the operating system.

“With Windows technology and the .NET Framework, you gain incredibly stable drivers for USB connections,” Lerm says. “There are also a greater number of software add-ons available for Windows-based infrastructures. For instance, it would be quick and simple for us to find a tool for red-eye reduction. We are not developer gurus. It makes better business

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sense for us to take these add-ons from the marketplace.”

HC Global then consulted with Microsoft Certified Partner Exigen Services, based in Russia, to create the new kiosk’s core environment. At the time, Microsoft had released a beta version of the Microsoft .NET Framework 3.0, which focused on rapid application development, platform independence, and network transparency.

The partner recommended the new version of the framework. Peter Vaihansky, Senior Director at Exigen Services, says: “There are no available technologies to offer the same capabilities. Plus, we knew that our local Microsoft subsidiary in Russia would provide all the support we needed with the beta version.”

Crucially for HC Global, the new framework provided the opportunity to develop using the Windows Presentation Foundation application and XAML. With XAML, programmers can develop graphically rich user interfaces rapidly in the .NET Framework 3.0. Using Windows Presentation Foundation (WPF), they can define 3D objects, rotations, animations, and a variety of other effects and features.

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In October 2006, Exigen Services delivered an environment built in Microsoft Visual C#® and Microsoft Visual Studio® 2005. The infrastructure’s finished design also included Microsoft SQL Server™ 2005 Express Edition embedded database. HC Global then rolled out the environment across its 400 kiosks in the field.

## Benefits

HC Global has developed a next-generation digital kiosk cost effectively and minimised the product’s development life cycle, maximising its impact in the marketplace and helping secure the company’s future.

### Reduced Development Life Cycle

By using Microsoft software and the .NET Framework 3.0, executives at HC Global have been able to deliver the new kiosk in six months. Using a non-Microsoft solution, HC Global would have faced a development life cycle of one year. Lerm believes a 12-month life cycle for the kiosk would have jeopardised the future of the company.

“If we couldn’t start rolling out the new kiosk before the end of 2006, we would have been out of business,” he says. “People are demanding greater features and functionality, so there was massive pressure to bring out a new version. We understood that, with Java, we were at the end—and that, with Microsoft technology, we had a future.”

### Unique, Cutting-Edge Tools

HC Global focuses on transporting photo data from the kiosks to the server farm and then to the print laboratories. Its core competencies don’t include platform development. Yet, with Microsoft software, the company gains peace of mind that third-party organisations will meet this shortfall in knowledge—providing platform development and all the software add-ons to ensure the kiosk is the most up-to-date in the marketplace.

Lerm says: “If we had chosen Linux software, we would have needed to develop the tools that we wanted ourselves. Perhaps we could have developed those tools, but we wouldn’t have been able to do so within the timetable we created.”

## For More Information

For more information about Microsoft products and services, call the Microsoft Sales Information Center at (800) 426-9400. In Canada, call the Microsoft Canada Information Centre at (877) 568-2495. Customers who are deaf or hard-of-hearing can reach Microsoft text telephone (TTY/TDD) services at (800) 892-5234 in the United States or (905) 568-9641 in Canada. Outside the 50 United States and Canada, please contact your local Microsoft subsidiary. To access information using the World Wide Web, go to: [www.microsoft.com](http://www.microsoft.com)

For more information about Exigen Services products and services, visit the Web site at: [www.exigenservices.com](http://www.exigenservices.com)

For more information about HC Global products and services, visit the Web site at: [www.hc-global.de](http://www.hc-global.de)

## Kiosk GUI Can Be Tailored Inexpensively

One of the kiosk's selling points is that customers who operate the devices in their stores can brand the GUI. As a result of using the .NET Framework 3.0 with XAML and WPF, the kiosks have the flexibility built in to tailor the GUI without the cost of additional coding. At a deeper technical level, Exigen Services has created the business logic, while at the same time ensuring that designers can change the GUI independently.

Vaihansky says: "In just a few months, we successfully developed a product that completely met the client's specifications—enabling 100 per cent control over the GUI through a simple editor without recompilation of the application."

## Extended Return on Software Investment

When the company launched the digital kiosk, it chose a Java-based software platform. However, when it came to updating the platform, executives found the existing solution did not meet their business needs. They found Microsoft software met all the criteria to create a second-generation kiosk and, crucially, deliver a roadmap to ensure the kiosk remained a class-leading service.

Lerm says: "With Microsoft software, we will continue to have the business tools that keep us ahead in the market. Our work with Exigen Services and the .NET Framework 3.0 represents a long-term commitment to the software provider and Windows technology."

## Microsoft .NET

Microsoft .NET is software that connects people, information, systems, and devices through the use of Web services. Web services are a combination of protocols that enable computers to work together by exchanging messages. Web services are based on the standard protocols of XML, SOAP, and WSDL, which allow them to interoperate across platforms and programming languages.

.NET is integrated across Microsoft products and services, providing the ability to quickly build, deploy, manage, and use connected, secure solutions with Web services. These solutions provide agile business integration and the promise of information anytime, anywhere, on any device.

For more information about Microsoft .NET and Web services, please visit these Web sites: [www.microsoft.com/net](http://www.microsoft.com/net) [msdn.microsoft.com/webservices](http://msdn.microsoft.com/webservices)

## Software and Services

- Products
  - Windows XP Embedded with Service Pack 2
  - Microsoft SQL Server 2005 Express Edition
  - Microsoft Visual Studio 2005
- Technologies
  - The Microsoft .NET Framework 3.0
  - Microsoft C#