

Powering Hotwire's New Site: www.travel-ticker.com *Leading Online Travel Agency Ventures Offshore*

Client:

Hotwire, Inc. is a world leading provider of online travel deals.

Summary:

Hotwire leveraged relationships with over 10,000 suppliers to launch an innovative new website, www.travel-ticker.com – creating an opportunity for rapid, expansive growth.

Challenge:

In order to build the new website, a complex back-end system for salespeople and suppliers had to be created, along with a brand-new Content Management System (CMS). With insufficient internal resources, Hotwire decided to outsource the project.

Why Luxoft?

- Luxoft was selected, based on a successful pilot project, involving two engineers over two years.
- Luxoft's commitment and dedication helped establish mutual trust.
- Luxoft's excellent track record and financial stability further reinforced Hotwire's choice.

Hotwire
travel-ticker

New Opportunity Brings Unexpected Challenges for Hotwire

By the summer of 2007, Hotwire.com's business was expanding so quickly that the company's IT resources came under strain. "The amount of work in our San Francisco office had gone up so much that it couldn't be handled locally anymore," says Roman Kaplun, Director of Engineering Services at Hotwire, Inc. "Outsourcing was a natural solution to this problem."

Hotwire, Inc. is a well-known operating company of Expedia, Inc. – the world's largest online travel agency. After its launch in 2000, Hotwire became a leading discount travel site by selling its suppliers' extra inventory with a unique provision: The exact airline, hotel or car rental companies are not named until after the purchase is made. This approach allowed Hotwire to avoid direct competition with its travel suppliers. At Hotwire.com, bargain-seeking travelers can find deep discounts on airline tickets, hotel rooms, rental cars, cruises and vacation packages.

After years of successful growth, Hotwire discovered a new opportunity. Leveraging its relationships with more than 10,000 travel companies, Hotwire began offering public access to insider deals that could not be found on other sites, including special limited-time offers, small hotels that don't usually sell online, exotic locations and more. A new website, www.travel-ticker.com, was created by the Hotwire team to offer this new service.

To ensure a successful launch, a state-of-the-art IT system was to be created that included the front-end for customers and back-end for Hotwire's salespeople and travel suppliers. However, all of Hotwire's internal IT resources were already working at full capacity. Hiring more staff was out of the question – in addition to being a lengthy process, such hiring made little sense for what would be a one-time effort. Outsourcing the creation of the back-end system and CRM seemed to be the right answer.

Think Big, Start Small

Hotwire began exploring outsourcing options and potential cost savings well before the anticipated business expansion. To minimize risk, Hotwire elected to outsource test automation as a qualifying pilot project for a provider. Vendor selection came next. Due to the pilot project's small scale, Hotwire's vendor search focused on Eastern European providers that were known for their engineering excellence and willingness to take on smaller projects. "When it comes to the software development outsourcing, the primary driver for us is not so much the cost cutting, but the quality of services," says Kaplun. "If we were driven by cost reduction only, we would likely go to the locales, such as China, Vietnam, or Latin America."

Solution:

Development of a state-of-the-art back-end system featuring front end, internal portal for salespeople and suppliers, and new CMS for entire website.

Implementation:

- Business requirements analysis and user needs elicitation
- Design and document front-end projects of various scope
- Creation and maintenance of the presentation layer of client's site
- Creation of the client's automated newsletters
- Integration with the client's web statistics and analysis tool
- QA and test automation

Outsourcing Benefits:

- Accelerated service launch for Hotwire customers
- Enhanced CMS's future-proof design allowed flexible upgrades and customizations
- Streamlined internal processes and improved service and on-demand information for sales people and suppliers
- Internal Portal implementation yielded ROI of almost 400%, compared to in-house customization of legacy CMS

When Kaplun visited the Russoft (Russian Software Developers Association) conference in Chicago in September, 2005, he shortlisted several companies whose capabilities impressed him – including Luxoft. Kaplun arranged for a trip to visit prospective vendors' headquarters. The pilot project would only involve two engineers, so Kaplun didn't exactly have great service expectations. To his surprise, at Luxoft Kaplun was given a facility tour and a detailed presentation attended by the company's top managers. These extra efforts for a seemingly negligible project made a strong positive impression. Another deciding factor was that other contenders, while possessing the right skills, couldn't match Luxoft's financial stability and proven track record.

Hotwire decided to move forward with Luxoft. Luxoft immediately dedicated two test engineers, based out of the Development Center in Moscow, who were interviewed onsite and fully met Hotwire's qualifications requirements. The engineers then proceeded to work remotely.

The project went on for more than a year, as planned, and produced excellent results. Using Borland SilkTest for the web application's test automation, the Luxoft team generated over a thousand efficient test cases, which represents almost 80% of the entire volume. This ensured that all vital aspects of the application were covered, and increased Hotwire's confidence in the quality of the code. As an added value, Luxoft provided KPI reporting services using Luxoft's proprietary software, SizeGauger, for code measurements. Each major automation task lasted about a month, and included creation of test cases and the actual pre-regression and regression testing. As a result of successful test automation, the release cycle time was kept at only three days, requiring no additional test engineers despite increased volume and complexity.

Partnering with an Outsourcing Provider

After this success, when the time came for Hotwire to create an internal portal, Luxoft was the logical outsourcing partner choice. Still, Hotwire reviewed a number of potential candidates to ensure the most qualified was chosen for the job. Once again, Luxoft was able to address all of Hotwire's concerns and offer what appeared to be a technically and economically feasible solution. Plus, their previous positive partnership had instilled mutual trust. As Kaplun puts it: "We first started working together in 2006, focusing on certain test automation tasks. In the beginning there were only two developers from Luxoft involved. We would set them the tasks, and watch the quality of their work closely. We continued operating in this fashion for about a year, till mid-2007, and then we entrusted them with the software design and development." As a result, Luxoft was selected as the vendor for this project.

Key Results:

New site was launched as planned within the budget. Luxoft contribution encompassed:

- Internal Web portal for use by both salespeople and suppliers
- Support of sales agents who can work with multiple suppliers in addition to the direct supplier's organizational scheme support
- Multiple reports generation and distribution, email notifications, newsletters, deals alerts and more
- Integration with Oracle Financials System
- Powerful and scalable CMS with user-friendly interface
- Future-proof design allowing easy upgrades and extensions
- Efficient test automation

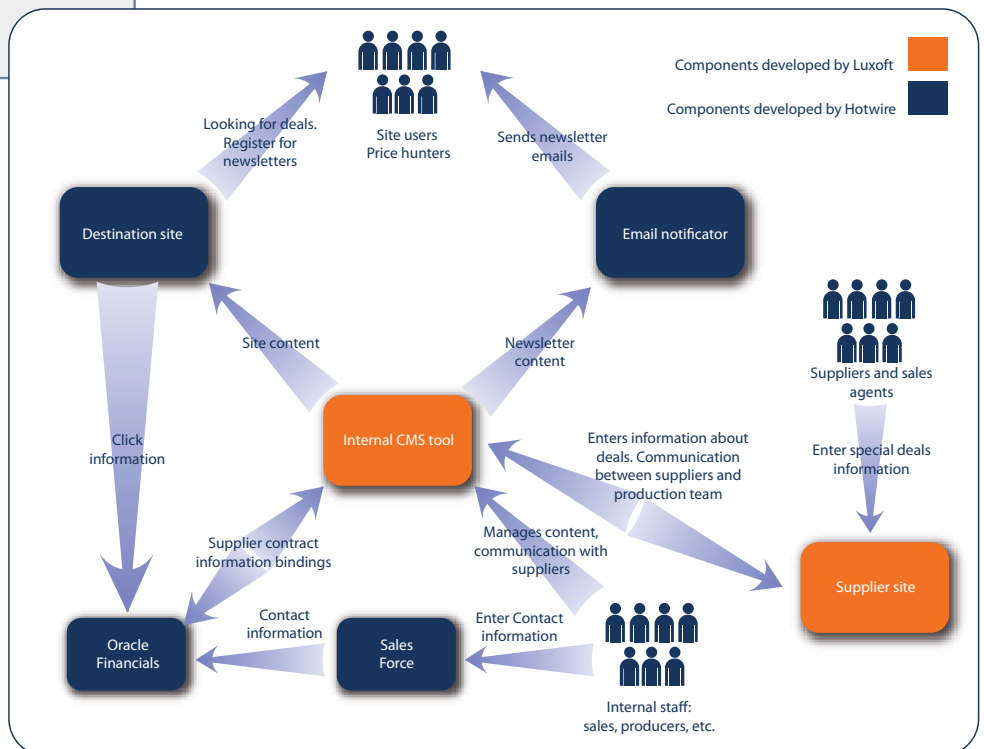
Back-End System / CRM Project's Scope

Hotwire's new project goal was creation of a specialized website for Travel Ticker. Luxoft was entrusted with the full-cycle development of the following major components:

- Sophisticated back-end systems to manage deals and other business-related data;
- Interface for the suppliers to fill in their offers.

The back-end system featured web-based portal that would provide both salespeople and suppliers with functionality for managing their deal advertisements hosted at travel-ticker.com. The portal's functionality had to extend to support the internal Deal Management, and was designed to work as a strong operational leverage and a way to increase ad sales volume. Luxoft was also asked to create a new Content Management System (CMS) that would replace Hotwire's existing legacy system.

Website Development Project



Technologies Utilized:

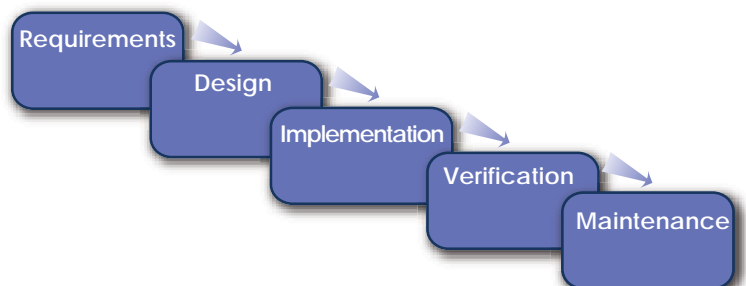
- **J2SE 1.5:** Xalan 2.7.0, Apache Commons (Pool, Collections, POI, BeanUtils, Math, Logging, etc.), ILOG JRules 6.7.1
- **J2EE 1.4:** Weblogic 10.0mp1, EJB 2.1, JMS 1.1, JTA 1.0.1
- **Integration:** Oracle Coherence 3.3.1, SOAP 1.2, JAX-RPC 1.1 / JAXB 2.1, JWS DP 1.6, Ant 1.6.5, Runway 2.4.2, LiveProcessor 4.3
- **User Interface:** Struts 1.3.8/Tiles, AJAX, JSP 2.0/Servlets 2.4, JSTL 1.1.2, XSLT/XML, Yahoo UI
- **Database:** Oracle 10g, Toplink 10.1.3, Oracle Financials
- **Servers/OS:** Sun / Solaris
- **Security:** Ingrian JCE 4.2, Bouncy Castle 1.30
- **QA & Testing:** Segue SilkTest, MockEjb 0.6, TestNG 5.7, Dbunit 2.2hw, jDepend 2.9.1, QALab 1.0, Selenium Remote Control 1.0, Checkstyle 4.4, Smartbear 4.0

Luxoft's Approach

In order to achieve optimum efficiency for the Travel Ticker's back-end system project, Luxoft engaged its North American Development Center in Vancouver, British Columbia. The nearshore team handled business analysis and requirement development. This approach guaranteed a high level of cooperation with the local business team and specific system suppliers. Throughout these initial project development stages, Luxoft demonstrated a deep understanding of Hotwire's industry and business processes. Luxoft engineers produced a detailed system design for the web application projects. The client was pleased with the resulting high quality of the delivered conclusion and the requirements' clarity.

With the strategy in place, Luxoft engineers integrated seamlessly into Hotwire's development team, following their processes and matching their standards of quality and professionalism. The Luxoft global delivery model, spanning 14 time zones, proved to be working with clockwork precision. Luxoft's Engineering Manager and Lead Engineer visited Hotwire's San Francisco headquarters regularly, while Luxoft's Vancouver office was engaged in the initial requirements development phase. The actual development work was handled by Luxoft's team in Kiev, Ukraine, while the the testing team in Omsk, Siberia, was doing the regression testing. The total headcount reached 16 engineers – 12 in Kiev and 4 in Omsk.

The development process followed a sequential "waterfall" model where each phase (conception, initiation, analysis, design, etc.) is completed and perfected before the next one begins. This attention to detail at the early stages saves much time and effort later. Over the years, Luxoft has perfected this approach, which greatly helped the seamless integration with Hotwire's internal processes. The project progressed in the following sequence:



From an engineering perspective, this project required a highly detailed system design to cover all aspects of the external system: security requirements, financial traceability, functional requirements, technical knowledge transfer, etc. Luxoft generated over 300 pages of detailed project technical documentation where most of these aspects were covered. Right from the start, Luxoft decided to have a single web portal for use by both salespeople and suppliers, which eliminated the extra cost of developing two separate systems.

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Roman Kaplun, Director of Engineering Services, Hotwire, Inc.

“Developing the back-end system for Travel Ticker’s website was a very important project for us. We gave it our full commitment from day one, and we are pleased to have gained Hotwire’s full trust. It was an opportunity for Luxoft team to show its hallmark expertise in CMS development and in-depth knowledge of web technology, in combination with the strong client commitment.”

Michael Minkevich, VP Technology, Luxoft

Implementation & Results

The following important functionality was developed:

- Web portal for use by both salespeople and suppliers
- Support of sales agents who can work with multiple suppliers in addition to the direct supplier’s organizational scheme support
- Multiple alternative interfaces for supplier’s data management
- CSV/MS Excel files support
- Interactive “Web 2.0” interface
- Web Services interface
- Excel reports generation, distribution and filtering that increased system data flow visibility
- Email notifications
- Integration with Oracle Financials System
- WebDAV protocol utilized for secure file access and management

The newly developed CMS helps to expand the deal business significantly, starting from simplified newsletters distribution to another full-fledged site’s development. At the same time, CMS support costs are reduced. Different components’ delivery prioritization was essential for this project.

In addition, a new deal engine with a separate Intranet web application was created in order to better serve Hotwire’s rapidly evolving business needs. The separate web application included the following features:

- Deals, newsletters, deal packages and system user management tools – all unified under the same web interface concept
- Unique algorithms for deal processing
- Various search options that help find and access information quickly
- Multi-user transactional environment that prevents editing the same deal by more than one user at the same time
- Individual easy-to-change entries flow
- Email notifications of the deal status changes
- Active Directory integration meeting the security and usability expectations
- HTTPS

Beyond the full compliance with the client’s technical requirements, the CMS provides the following mission-critical benefits:

- Fully matches business processes requirements
- System’s user-friendly design eliminates the need for any special training
- High scalability simplifies the system’s future enhancements

About Luxoft

Luxoft, a member of the IBS Group, is an emerging global leader in application and product engineering outsourcing services for enterprise IT organizations and software vendors. Luxoft builds lasting partnerships with its clients, such as Boeing, Deutsche Bank, UBS, Dell, IBM, Sabre and other global leaders, based on the culture of engineering excellence, innovation, and deep domain expertise. Luxoft offers global delivery capability through its network of state-of-the-art delivery centers in North America, Central & Eastern Europe, and Asia. Luxoft's customers benefit from the right mix of technology skills, industry knowledge, best-of-breed processes and methodologies, and a choice of engagement models.

Luxoft is the recipient of the 2007 Frost & Sullivan Global Outsourcing Growth Excellence & Customer Value Leadership Award, as well as the Applied Innovation Award from the IAOP and Wipro, ITAA and Forbes (together with Deutsche Bank).

Peace of Mind - Benefits Beyond Cost Savings

While working on Travel Ticker's back-end system project, the Luxoft engineers seamlessly integrated into Hotwire's onshore team. Their cooperation yielded significant cross-the-board enhancements, empowering Hotwire to capitalize on the opportunity and create new markets. The new portal not only streamlined internal operations, but also improved service by making vital information easily available on demand.

Compared to the customization of an off-the-shelf CMS or implementation of an application from an ASP, an estimated ROI of the Internal Portal project is about 400%. The Test Automation project helped increase the application code coverage from 35% to 63% and the number of automated use cases went up from 500 to 1,700. Intangible benefits like security, usability, data propriety, and speed are likely to be even more significant.

Luxoft's combination of nearshore and offshore development offers potential for more efficient collaboration. The Luxoft engineers' professionalism and trademark expertise in requirements analysis left out no detail, no matter how minute -- guaranteeing a successful outcome. Throughout the entire project, Hotwire could completely rely on their partner.

Hotwire plans to continue working with Luxoft. As Kaplun says: "We will maintain the same level of cooperation in the next year. If there is no slowdown in business in San Francisco, our collaboration with Luxoft will be growing in direct proportion to our growth."

"Developing the back-end system for Travel Ticker's website was a very important project for us. We gave it our full commitment from day one, and we are pleased to have gained Hotwire's full trust," said Michael Minkevich, VP Technology, Luxoft. "It was an opportunity for Luxoft team to show its hallmark expertise in CMS development and in-depth knowledge of web technology, in combination with our strong client commitment."

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