

Case Study: Self-Help Information Web Site

An online self-help information web site extends its US-based development team for complex web development with high-quality nearshore software engineering services.

"We found Software Next Door engineers based in Mexico, in proximity to our US offices, could use Agile development methods and act and perform as an integral part of our development team. Our teams worked so well together we were able to launch new web updates much faster, translating into better service for our users."

Client Chief Technology Officer

Background

The advent of the web has brought about dramatic changes in the way software is developed, tested and deployed. The most obvious change is the “live” nature of web-based sites and applications that force shorter development cycles, tighter customer feedback loops, and constant updates.

One of Software Next Door’s clients, a leading provider of online self-help information, is a classic example of this environment. The client has two distinct types of users – high-end business professionals numbering in the hundreds and a large number of consumers numbering in the thousands. The professionals find, organize, distribute and manage specific content. These experienced business professionals have expertise in highly specialized fields, and provide focused consulting via the web site to consumers of the data. The web site also provides services for the transfer and management of the content between these professionals and consumers.

There is constant demand from ever-varying fields of expertise, requiring continuous adaptation and change to the client’s web presence and its services. The diverse nature of the end users (both professional and consumers) also demands that the web user interface be highly flexible and intuitive.

The Challenges

The client’s core engineering group originated the architecture of the site, as well as the first implementation. The client’s software architect worked directly with business and sales teams to identify specific, ongoing development requirements. Other team members were responsible for final QA and updates to the site.

The challenges faced by the client included:

- Weekly enhancement and change requirements resulting from sales and business activities.
- Complex data management requirements involving new content and new customers.

- Complex requirements necessitating a high degree of software development expertise.
- Maintenance of existing functionality in the face of constant change.
- Agile development methods in use to develop product iterations every 30 days.

The Solution

To supplement the US-based team and help overcome these challenges, the client asked Software Next Door to supply qualified software engineers. Software Next Door engineers were based out of Queretaro, Mexico, in the Central Mountain Time zone. Queretaro is one of Mexico's larger IT centers, and is just over two hours from Mexico City, Mexico's largest IT center. The Mexican developers, all with English language skills, consisted of skilled mid-level and senior software engineers with experience in complex web development. Software Next Door engineers were integrated smoothly into the client's Agile development environment enabled by a high-speed, high-availability, high-bandwidth network infrastructure.

Initially the client built their web site using tools such as Microsoft's Visual Studio Team System and .NET framework. All code developed was checked into a sandbox and tested immediately by the client's QA team. Software Next Door engineers located in Mexico attended daily Scrum sessions with the client's development team, and were in constant communication throughout the US work day. Fast and smooth communication occurred via phone, email, and web-based meetings. Customer-driven changes were often communicated and discussed among the architects, developers and sales team in a single call. This environment enabled the client's team to enjoy the benefits of an expanded virtual team using nearshore resources working in an Agile environment without the high cost of US-based resources.

Software Next Door engineers quickly became domain experts in several of the client's web site components. The client implemented major site upgrades, with core areas of functionality designed and developed by Software Next Door.

Results with Software Next Door

- Saved over 35% in software development costs over in-house development.
- Extension of the in-house team was seamless and highly effective.
- Quality releases were continually added to the web site in a timely fashion.

Moving Forward

The client subsequently decided to migrate its web site development to Java and other open source technology. The new solution integrates different best-of-breed open source technologies, including Java, Tomcat, Redis, RabbitMQ, MySQL, Neo4j, Cassandra and Lucene. In keeping with this change in technology by its client, Software Next Door has migrated the capabilities of its staff to serve the new requirements.



The client continues to expand their San Francisco-based development team and, to save money, also is adding offshore development resources. The dynamic nature of the web site coupled with the need for constant interaction among various team members led the client to consider locating part of the team in Mexico. Mexico is in the same time zone, appropriate for effective Agile development and offers a lower cost alternative to the US. In addition, there is no issue getting visas for travel to work on-site in the US, when necessary. The initial engagement with Software Next Door was deemed a trial of both outsourcing development and Software Next Door as a supplier. Based on positive results to date, the client decided to expand the size of the Software Next Door engineering team in Mexico to supplement its US-based talent, taking advantage of Software Next Door's high-quality, nearshore resources to solve complex tasks and develop critical software applications.