



### Customized Learning Solution

#### Executive Summary

Our customer needed this series of courses to be asynchronous, 508 and Sharable Content Object Reference Model (SCORM) compliant, and fully integrated in the existing learning management system, so that delivery would be possible to secure, remote locations. Using a custom template, Kaizen was able to produce a learning solution that met the requirements and integrated seamlessly with the customer's learning management system. Through the implementation of multiple reviews at each stage of the development process and the use of our Quality Assurance database, we were able to provide an error-free product ahead of schedule.

#### Scenario

The customer requested an interactive, instructional web-based training series to explore how the complex aspect of negotiation between customers and suppliers can affect the success of a software development program.

#### Current Training

The customer had several blended-learning solutions in place that included instructor led classes with web-based training components. The existing training content covered only the development process and did not address the human interactive aspect of software development.

#### Requirements

The new series of courses needed to be asynchronous, Section 508 and SCORM compliant, and fully integrated in the customer's existing Learning Management System (LMS). The client also requested original graphics, engaging activities for the learner, and a low-stakes assessment strategy.

#### Analysis

After reviewing the initial requirements, the following was discussed with the customer and stakeholders:

- Who is the targeted learner?
- Will there be prerequisites for the first course in the series?
- How much of the existing content can be leveraged for the new courses?
- What specific knowledge or skills should the learner gain from the new training series?



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Since the client informed us that the existing training would be a prerequisite for the new series of courses, the existing web-based courses were reviewed and the current instructor-led courses were either audited or, for those available, video recordings of the courses were reviewed.

### **Recommended Learning Solution**

After examining the existing course content and speaking with the customer and stakeholders, the Kaizen team suggested a series of nine courses utilizing an extended scenario that would follow a fictional software development program through the entire process—planning through delivery. Each course would focus on a specific aspect of the development process and would highlight common conflicts that occur between customers and suppliers at that particular point in the development cycle.

The knowledge check for each course would either be a further extension of the scenario with the learner making “good, better, or best” decisions for the characters given specific situations or a re-examination of the previously presented scenario with the learner determining a better way to resolve a conflict.

The series of courses would be developed in a customizable template already created in Adobe Flash by the Kaizen programming team. Use of the template would speed development; ensure Section 508 and SCORM compliance; and verify successful integration in to the customer’s LMS. The template would be customized to incorporate specific functionality and interface design elements needed specifically for these courses. Once customized, the template would be reused in each of the nine planned courses.

### **Design**

Based on the customer’s goals, the Kaizen Instructional Design team determined learning objectives for each course in the planned series. Since each course in the series corresponded to a specific aspect of the customer’s existing software development process, the order of the courses was predetermined, as they would be sequenced in the same order as the software development program. A Design Plan Document (DPD) was created containing all the known information: dedicated Subject Matter Experts (SMEs) and stakeholders; information about the targeted learners; mission relevance; the course goals; terminal and enabling objectives; relevant, known content details; instructional approach; and graphical approaches discussed with the client.

Once the customer and stakeholders approved the DPD, a project schedule was created. Since this particular customer was also the SME and had worked with Kaizen on several other courses for his organization, he provided content to our Instructional System Designers (ISDs) in the form of a transcript. Once received, we met with this SME/customer to discuss the transcript, identify areas where additional detail was needed, and, together, we developed characters that would appear in all nine courses.



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The storyboards were then developed. Every aspect of each lesson page was planned: transcript, screen text, graphics suggestions, knowledge checks, navigation, and any variations in the transcript for the 508 compliant version were noted. After internal Quality Assurance (QA) reviews and revisions, the customer evaluated each lesson and provided detailed feedback. Edits were made based on the client's feedback and the storyboards were resubmitted for approval. The storyboards were approved before programming began.

### **Development**

Kaizen's graphic design team developed several interface options from which the customer could choose. The customer's current branding was incorporated into each design, in order to provide consistency with the existing courses. The client chose one design and requested slight changes to the color scheme. Edits were made, and the interface was resubmitted and approved. Since this was a character-driven, scenario-based course, the graphics team also created images of the narrator and nine characters, based on the descriptions provided in the storyboards. The character images were approved, as well.

Working from the approved transcript in the storyboards, audio was recorded for the courses. Several teammates were utilized for this effort; 10 teammates participated (one narrator and nine characters). Using existing staff for audio sped the recording and editing process since the "talent" was already on site and scheduling was less problematic. Utilizing public domain audio recording and editing software, we were able to load several workstations and thus work in parallel to save time and money.

The graphics team worked from the storyboards to create text and graphic treatments, timed with the imported audio tracks recorded previously. Each slide was created as a .swf file and then imported into the Kaizen web-based training template. The designated programmer imported the transcript directly from the storyboards. Without this custom template and compatible storyboards, each page of the transcript would have to be entered by hand. Automating this process saves valuable time and resources. The programmer also programmed the knowledge checks for each lesson.

After programming, the lead instructional designer reviewed each lesson for accuracy, quality, and consistency. Issues were tracked in the QA database and then resolved. After the initial ISD QA review, each lesson was uploaded to the develop server and then subjected to an editorial and technical review. All identified issues were tracked to completion in the QA database. Once the internal testing and revisions were completed, the customer then reviewed each lesson. The customer's feedback was recorded on an Excel spreadsheet that was then imported into the QA database and tracked to completion.



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### **Beta Testing**

The customer identified 14 participants for beta testing. The participants had varied experience and knowledge of the content, but all were active in the software development community. Three days before the beta test was scheduled to begin, an email was sent explaining the purpose of the course and expectations for the participants. The day before the scheduled beta test, a customized questionnaire was sent to the participants to be completed as they reviewed the course. This allowed us to focus the participants' attention on specific areas of concern. We also provided areas for general comments and feedback. The participants were given 3 days to complete the courses, as not to interfere with their regular duties. We received feedback from 11 participants. Compared to previous beta tests of other courses, this was a fairly typical response rate.

Once the beta test feedback was received, it was compiled into one list, grouping similar comments. The instructional team, ISDs, graphic designers, and programmers, met with the customer and stakeholders to review the results of the beta test. Each comment was reviewed and the team determined if changes would be made as a result of the feedback. When making these decisions, we considered the severity of the issue (functional issues are a priority), the frequency of the revision request (how many participants pointed out the perceived problem), and the level of effort needed to make the corrections (minor subjective editorial changes may not be worth the time if audio has to be rerecorded, transcripts have to be changed, and significant graphics rework is needed). Once the team agreed on the necessary revisions, the edits were made. The revised course was then uploaded to the development server so that the customer could verify the agreed-upon edits were made and grant approval for the course's "go live" state.

### **Implementation**

After the beta test and revisions were complete, the LMS support team tested the courses for functionality and 508 and SCORM compliance. Since these courses utilized the Kaizen web-based training template that had been customized for this customer's learning environment, the courses passed the first time and we were able to "go live" the same day. The courses were immediately available to the customer's targeted audience.

Once the courses were live, the customer was provided with the source files. This allowed the customer to reuse the custom graphics on their website or any documentation created later, providing a consistent look and feel for all the materials associated with the series of courses.

### **Summary**

Our customer needed a series of asynchronous courses that would be fully integrated in the existing LMS, so that delivery would be possible to secure, remote locations. Using a custom template, Kaizen was able to produce a learning solution that met the requirements and integrated seamlessly with the customer's LMS.

## **Glossary of Terms**

### **508 Compliance**

In 1998, Congress amended the Rehabilitation Act of 1973 to require Federal agencies to make their electronic and information technology (EIT) accessible to people with disabilities. Inaccessible technology interferes with an ability to obtain and use information quickly and easily. Section 508 was enacted to eliminate barriers in information technology, open new opportunities for people with disabilities, and encourage development of technologies that will help achieve these goals. The law applies to all Federal agencies when they develop, procure, maintain, or use electronic and information technology. Under Section 508 (29 U.S.C. ‘794 d), agencies must give disabled employees and members of the public access to information that is comparable to access available to others.

(“Section 508 Laws” <http://www.section508.gov/section508-laws>)

### **Asynchronous Learning**

Asynchronous learning is a student-centered teaching technique in which online learning resources are used to enable information sharing between people in a network. In asynchronous learning, information sharing is not limited by place or time.

(“Asynchronous Learning” <http://www.techopedia.com/definition/23154/asynchronous-learning>)

### **Learning Management System**

A Learning Management System is a software application that automates the administration, tracking, and reporting of training events. However, it’s not that simple. A robust LMS should be able to do the following:

- centralize and automate administration use self-service and self-guided services
- assemble and deliver learning content rapidly
- consolidate training initiatives on a scalable web-based platform
- support portability and standards
- personalize content and enable knowledge reuse.

(“Field Guide to Learning Management Systems”  
[http://www.astd.org/~media/Files/Publications/LMS\\_fieldguide\\_20091](http://www.astd.org/~media/Files/Publications/LMS_fieldguide_20091))

### **SCORM**



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SCORM stands for Sharable Content Object Reference Model. SCORM is a set of technical standards for e-learning software products. SCORM tells programmers how to write their code so that it can “play well” with other e-learning software. It is the de facto industry standard for e-learning interoperability. Specifically, SCORM governs how online learning content and LMSs communicate with each other.

(“SCORM Explained” <http://scorm.com/scorm-explained/>)