



Letter of Submittal

9/10/2015

Gary Bateman
Chief Information Officer
Iowa Workforce Development

RE: Washington State CareerBridge Conversion

Dear Mr. Bateman,

Frontline Solutions is pleased to present this proposal for the customization of the Washington State CareerBridge application for Iowa Workforce Development. We have more than 20 years' experience developing mission-critical, enterprise level applications for a broad range of satisfied customers. By starting with a proven existing system and modifying it for IWD, the State of Iowa will save a considerable amount of expense and be able to launch an ETP site by the federal deadline.

If you have any questions about our proposal, please let me know. Don't hesitate to call me at (253) 891-8244, or (253) 376-5760 (mobile) or send an email to johnt@frontlinesolutions.com.

Sincerely,

A handwritten signature in black ink, appearing to read "John Tacke".

John Tacke, PMP
President
Frontline Solutions, LLC

Proposal

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Prepared for: Gary Bateman
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Iowa
CareerBridge

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1 General Information

1.1 Document Information

1.1.1 Related Documents

Document Name	Location/Description

1.1.2 Revision History

Version Number	Date	Description of Version
1.0	9/10/15	Initial proposal

1.2 Executive Summary

This proposal is in response to the State of Iowa's request to obtain and modify the Washington State CareerBridge web applications. The CareerBridge web applications consist of the following three sites:

- 1) CareerBridge Public Site – provides career and provider research features, including a user portal.
- 2) Training Provider Portal (TPP) – interface for training providers to manage their institution's programs and locations.
- 3) Admin Portal – Management portal for agency personnel to approve TPP edits and update dynamic content using the Content Management System (CMS)

1.2.1 Objectives

The purpose of this project is to

- Significantly reduce the cost and time-to-production of a training provider web management system by modifying an existing system. The cost of development of the CareerBridge site was well over \$250,000.
- Remove Washington-specific data elements and add essential IWD data elements
- Rebrand site per State of Iowa design standards
- Identify external data sources for provider and career statistics and load data
- Provide hosting services for the web applications

2 Technical Proposal

2.1 Project Scope

The project will follow the general development pattern below:

- Requirements Analysis & Specification
- Application & Database development & Unit Testing
- Data Migration
- Final Beta Testing & Production Configuration
- Train a trainer(s) on new system

2.1.1 Phase I – Site Preparation

The code and database for CareerBridge will be copied. All graphical and text elements that form the CareerBridge brand will be removed.

In addition, Washington State specific data elements will be removed from the public, TPP, and Admin site.

Much of the CareerBridge content is dynamically generated through the Content Management System (CMS), which is part of the Admin site. This content will also be removed.

2.1.2 Phase II – Rebranding

Frontline will work with the State of Iowa to rebrand the CareerBridge site. This will include redesigning the site to meet Iowa web development design standards and conventions.

It will also include a graphic design phase, where three home page mockups will be presented for review. Iowa will select one to refine into the final home page design. This will also establish the navigation design of the site. A similar, but less extensive, process will also be followed for secondary content pages.

2.1.3 Phase III – Data-Driven Page Review and Update

All pages on the public, TPP, and Admin site that display data elements will be reviewed. IWD will indicate the data elements that are not applicable and need to be removed. In addition, it is expected that some new data elements will be introduced, and some existing ones either re-arranged or reformatted.

On the public site, the data elements fall under the following three principal features:

- 1) Training Provider Search
 - a. Search Interface
 - b. Provider Details
- 2) Career Search
 - a. Job Trends
 - b. Job Details
 - c. Career Clusters
- 3) Career Quiz

On the TPP site, the data elements are specific to managing training provider data. A training provider consists of the following major data entities:

- 1) Provider-Level data, such as school name, etc.
- 2) Program-Level data. Each institution can have multiple programs. The bulk of the data fields exist at the program level and include ETP information, program descriptions, and also program statistics.

-
- 3) Locations – Each school can have zero (in the case of an on-line school) to many locations. In addition, the data allows for programs to be identified with one or more locations.

A principal feature of the TPP site is the workflow process of a provider entering a change to their information, and that change then going through an approval process within the agency before it is published on the public site.

2.1.4 Phase IV– Data Loading

All Washington-specific data will be deleted. This will include all schools, programs, locations, and users. Lookup data required for management of the site will remain.

Frontline will work with Iowa to determine the required data sources to populate the new system with Iowa data. If there are not any application data sources to automatically load data, then Frontline will provide a means of entering the data manually in as efficient a manner as possible. This will most likely be in the form of spreadsheets.

In addition to this data is the data-driven content for the website. Iowa will determine the data-driven pages and page sections that need to be completed for the launch the site. Frontline will provide access to the Admin site as soon as possible after the graphic design phase so Iowa personnel can begin creating content.

2.2 Proposed Schedule of Deliverables

Development can begin upon approval of the proposal. Based on the deliverables and scope the following general schedule is anticipated based on a 10/5/2015 start date:

Phase I – Site Preparation	10/5/15-10/16/15
Phase II – Rebranding	10/5/15-10/16/15
Phase III – Site Development	10/19/15-11/27/15
Phase IV – Data Loading	11/9/15-12/4/15
Final Beta Deployment, Review and Training Period	12/7/15-12/16/15
Go-Live	12/18/15

After the requirements review, a detailed project schedule identifying tasks and milestones will be created. The project will follow an Agile methodology, where sprints will occur in one-two week intervals and scrum meetings occurring 2-3 times per week.

2.3 Standards and Methodology

2.3.1 Development Standards

Current development standards for enterprise-level, mission-critical applications will be employed. These include:

- Source code control. All files used during development will be placed under source code control using Team Foundation Server. This includes all source code files, report files, binary files and database scripts.
- Robust error handling and logging.
- Verbose source code commenting.
- Consistent source code elements, such as variable and object naming standards.

2.3.2 Methodology – Agile Model

Frontline Solutions uses a hybrid of the Agile software development model. Projects are divided into manageable pieces that are designed, developed, unit tested, and tested as an integrated system. While we adhere to the core principles of the Agile method, we tailor our development approach for the needs of each individual project. Traditional Agile project management methodology is well suited to this project because the detailed scope of work for this project will somewhat fluid and subject to changes during development.

Environment — Our management structure consists of developers, testers, and documentation specialists who report to a single project manager. Our employees adhere to strict development practices such as nightly code check-ins to source control (Microsoft’s Team Foundation Server), unit testing, regular bug reviews, and specific coding standards and code documentation.

Risk assessment — The project manager works closely with the development team and the client to identify and mitigate risks through regular progress assessments. The project manager is responsible for communicating all risks to the client.

Change management — The project manager assesses all change requests or deviations from the original requirements and design, and evaluates whether the change can be incorporated or should be postponed.

Communication — The project manager is the primary point of contact, and interacts with the client to identify requirements, develop architecture models, and prioritize deliverables. We maintain a high level of communication with clients, especially during the requirements-gathering phase. Our priority is to ensure that our clients are always fully informed on progress. Regular phone conferences will be scheduled, and email will be used extensively to ask and answer questions. We will also use desktop sharing technology, such as GoToAssist, if we need to work through more complex issues than email can support.

To maintain a high level of transparency, Frontline uses Microsoft Team Foundation Server (TFS) as the primary project management tool. The project is set up in TFS based on the Agile methodology. In addition, source code control and issue tracking is managed through TFS. A SharePoint portal is provided to the client where they can monitor activity and receive alerts as the development team progresses through the project.

Collaboration — Our goal is to ensure that all project requirements from the client’s perspective are met and exceeded. With that in mind, we work hard to foster a collaborative environment. We view ourselves as partners rather than vendors. Because we maintain an in-house development staff, we have a degree of flexibility not available to outsourcing companies.

2.4 Development and Implementation

2.4.1 Database Design

Database Version

This application will be developed using SQL Server 2012 or higher. Programmatic access to the data will be through ADO.NET, ensuring the best performance. The database will follow the standards for relational data design, including normalization, index design, proper data typing, etc. The database will be designed by a certified Microsoft Database Administrator (MCDBA) with expert knowledge and experience in SQL Server and all related technologies (including SSIS, SSRS, SSAS, replication, security, hardware design and backup strategies).

Design Approach

Data integrity will be maintained at the database, which will prevent any possibility of orphan or redundant data being generated. All database access will be through stored procedures. Only administrators will have direct access to database tables.

Security

Database security will follow the same approach as application security in that there will be multiple levels of users (such as administrator, accounting, production, engineering, etc.). The security method will be Windows Integrated, meaning that users will need to be a member of the network domain to login to the database. Database objects will be given the appropriate security to support the user.

2.4.2 Application Development

Primary Tasks

- Develop detailed scope of work
- Design and implement business rules and processes
- Interface design that emphasizes easy access to related information and efficient searching
- Develop security architecture

Development Environment

The core application interface will be developed as an ASP.NET application using Visual Studio 2013 or higher, with C# being the development language. All data entry, review, searching, reporting and analysis will occur through the application. There are a number of aspects to application development that require a broad spectrum of skills. These skills include graphic/visual design, business rule development, usability analysis, database design and technical writing. Frontline employs people who are experts in each skill area to ensure the highest quality application. For example, a database designer will not also come up with the visual design of the application.

Application Security

In addition to database-level security, the application itself will have a security layer that restricts access to application features based on user type. This will include a combination of hiding and disabling features. A user interface for adding new users and assigning them to groups will be provided.

3 Management Proposal

3.1 Contact Information

Company Name: Frontline Solutions, LLC
Proposal Contact: John Tacke
Address: 15605 Main ST E, Sumner, WA 98390
Telephone Number: (253) 891-8244
Fax Number: (253) 891-8255
Email Address: johnt@frontlinesolutions.com
Website: www.frontlinesolutions.com

3.2 Qualifications and Related Experience

Frontline Solutions is a Microsoft Certified Partner in business since 1991. Over the years, we have had the opportunity to develop mission-critical software solutions, web applications and data interfaces for many different businesses and industries. From manufacturing to health care, Frontline has helped companies achieve efficient and productive business processes through technology solutions.

Following is a partial list of industries for whom Frontline Solutions has developed custom applications and websites.

Many Public Sector Agencies

Construction

Manufacturing

Retail & Sales

Health Care

Finance

Technology

Non-profit Agencies

3.3 Development Team

Each member of the Frontline staff contributes their unique talents toward the specific aspects of a project that match their skill set. Rather than assigning one person to the whole project, where they must design the interface, implement business rules and design a sound database structure, each project is partitioned by skill set and the appropriate employee is assigned to that portion of the project.

The development team includes experts in —

- Project management and architecture
- Database design, analysis and administration
- Data Interface
- User Interface & Graphic design
- Technical Writing & Testing

3.3.1 Project Manager and Architect — John Tacke

John is the president of Frontline Solutions. His programming career began many years ago — when he was in eighth grade — on a Radio Shack TRS-80. He has a BA in math/physics from Whitman College and a BS in mechanical engineering from Columbia University.

John is a licensed Professional Engineer. He was awarded a patent when working as an R&D Manager for a manufacturing facility. His engineering career includes management-level experience in power generation, construction and manufacturing.

John went on to found Frontline Solutions in 1991. His engineering and management background has proven to be a tremendous advantage in the software industry. His in-depth experience in project management and problem solving skills and solid understanding of the inner workings of business enables him to approach projects from a business standpoint, not just a developer's standpoint.

3.3.2 Senior Systems Analyst — Steve Thompson

Steve has over 20 years of experience in software development using Microsoft tools and mobile technologies. Projects vary from single user applications to complex multi-tiered enterprise sized systems that work across the nation. He has worked as a project manager supervising a team of up to 8 developers and 4 testers. More recently he has developed a number of business mobile applications for the iPad.

3.3.3 User Interface Developer — Norm Pedersen

Expert C#.NET developer with more than 10 years' experience developing, testing, and implementing business applications and systems — both web-based and desktop. Well versed in numerous languages, development environments, and browsers. Extensive experience designing and developing front end user interfaces for a variety of products, including desktop applications, web applications, and custom search solutions.

3.3.4 Documentation and Testing — Rachelle Waters

Rachelle is a graduate of the University of Washington's technical writing and editing certification program. She has developed many help systems for Frontline, as well as writing and editing web content and marketing materials. Rachelle also has training in usability analysis and application testing.

4 Cost Proposal

4.1 Development Budget

The cost of development of the IWD Career Site will be \$78,000.

4.2 Hosting Budget

Frontline will host the application at their colocation facility. The production database and web servers reside here. All application and database updates will be administered by Frontline personnel. Backups of the database can be provided on an FTP site for IWD staff to download and use for internal analysis.

The hosting fee will be \$300/month and will include up to 4 hours of technical support and minor updates.

4.3 Terms

Billing will be done monthly on a progress/percent complete basis. Terms will be Net 30. Upon signing of the contract, a retainer of \$10,000 will be required.

4.4 Exclusions

Below is a list of possible costs that are not covered under the firm price:

- Travel expenses (meals, airfare, hotel, ground transportation, etc.)
- The purchase of software or hardware specific to this project

4.5 Approvals:

Frontline Solutions, LLC

Iowa Workforce Development

Signature

Signature

Date

Date