

# DEVER GOODWIN, LLC

## SAMPLE WEB APPLICATION PROJECT

### SCOPE OF WORK

Create a custom web application representing a content management system with the following features:

1. **A public interface representing the company website**, which derives its content, layout, navigational menus and links from a relational database maintained through the administrative interface, and includes the **following features** (unless otherwise noted, the mechanisms of which are defined in the scope for the administrative interface in item 2):
  - a. **HTML Templates** for powerful, custom, editable page layouts.
    - i. **Custom HTML Templates defined for each language and/or page** as desired that contain the elements of the new creative design (provided by CLIENT), formatted to work with the custom content managed via the content management system (including client-defined menus).
    - ii. **Templates can be modified and applied as needed by the client** in conjunction with the administrative interface to customize/ modify the site's appearance going forward.
    - iii. **Client-defined content can be applied to templates or pages as desired to** allow for both common content (shown on multiple pages), and page-specific content as-needed.
    - iv. **Templates can contain any number of content blocks** (ex: Main content area, link section, news article list section, etc.), each of which are managed independently in the administrative interface.
    - v. **Content blocks can contain any number of elements (sections of html code), in any order**, allowing for page-specific information to be interspersed with common code (content used on multiple pages such as contact information) as desired.
  - b. Content presented in any number of **languages** and in **high/low bandwidth formats**.
    - i. Client can **add a language** and its associated templates and content at any time **without requiring any additional system programming**.
    - ii. **Automatic site language selection** for the user.
      1. System will analyze any available language-selection information stored in a cookie from previous visit(s), and if none, use any available HTTP information about the user's system to make a first guess selection of language for presenting the site to the user.
      2. At any time, the user can make a site language selection, which will result in the selection being stored in a cookie on the user's machine for future visits.
    - iii. Client can create **navigational items, pages and content that is language-specific** as desired, as well as items that exist in all defined languages.
    - iv. Client can define separate content elements to be presented on each of the **high- and low-bandwidth versions**, in any language (version to be selectable by the user).

- c. **Dynamic navigational items (menus)**, with labels, links and hierarchy all fully-definable for each language via the administrative interface.
  - d. **Trading Partner Search** (querying the existing CRM database), including:
    - i. Search by Buyer, Supplier, or either.
    - ii. Search by region, country, name.
    - iii. Browse directory/ search results.
    - iv. Results include partner profile, logo and website URL as possible per current CRM database.
  - e. **Trading Partner Registration Form**, including error processing and record handling for integration into the current CRM database (fields to be specified by client).
  - f. **Site search**, with results presented as abstracts including the content title (headline) and first 256 characters of content, with any html tags removed (for the purposes of showing the result set text without html elements, images, etc.).
2. **A Staging Interface** representing the company website in a pre-production status.
- a. **Client can create multiple draft versions** of the following elements:
    - i. Templates
    - ii. Template Content Blocks
    - iii. Template Content Elements
    - iv. Navigational Menus
    - v. Pages
    - vi. Page Content Blocks
    - vii. Page Content Elements
    - viii. Content Elements
  - b. **Client can create a pre-production version of the same elements.**
  - c. **Client can view a version of the website showing pre-production elements** overriding their production counter parts.
3. **A site-wide security permission system** whereby system administrators with root access capabilities can:
  - a. **Define on a per user basis, the permissions relating to a section of the website.**
  - b. Permissions include the ability to create or modify any elements as defined in section 2a above.
4. **A web-base administrative interface** to be used by company site administrators, secured with username and password access, built in a modular format with the following features:

## **CONTENT MANAGEMENT MODULES**

- a. **Templates Module**—manages the list of HTML page templates supported on the website by allowing the administrator to:
  - i. View the list of supported templates.
  - ii. View/edit fields associated with any given template, including the filename of the corresponding template (HTML) file, and whether the template is “active” (is production-ready and can be associated with pages).
  - iii. Add a template (add a record corresponding to a newly created template file).
  - iv. Delete a template (delete the record corresponding to a deleted template file).

NOTE: All supplied HTML templates, including graphics and HTML elements used in the navigational menus and page layout, will be created by CLIENT according to client's specifications. Dever Goodwin, LLC will integrate dynamic block delineations and navigational menu flexibility so that the templates work with the system as desired.

- b. **Template Content Blocks Module**—manages the properties of content blocks defined in each HTML template by allowing the administrator to:
  - i. View the list of current blocks, to ensure correlation with the content blocks defined in the HTML template.
  - ii. View/edit fields associated with any given block, including:
    - 1. The block label, used to identify the corresponding template block (matching the label of the dynamic block in the template).
    - 2. The block type, whether “page” based (in which content is defined independently for each page in each language—see the Page Content Blocks Module), or “template” based (common to all pages using the template—this is useful for including common content on multiple pages, such as news items).
    - 3. If the block is template-based (not page-based), the “headline” or “title” associated with the block—this label can be used in the block template to headline the content block itself. Note: Template block “common content” is not returned in the set of site search results, since there would be no definable page to which to direct the user.
  - iii. Add a page content block.
  - iv. Delete a page content block.
- c. **Template Block Elements Module**—manages the content elements contained in a given template content block (This allows for multiple content elements to be contained within a content block, which allows for the combination of template-specific content elements with more common content elements, such as the current date or company contact information, within a single content block in the template), by allowing the administrator to:
  - i. View the list of content elements contained in the block.
  - ii. View/edit fields associated with any given block element, including the identity of the element for each of the high- and low- bandwidth versions of the block (among all defined content elements in the system—see the Content Elements Module), and its rank among other elements (determines order top-to-bottom within the block).
  - iii. Add a content element to the block.
  - iv. Delete a content element from the block.
- d. **Languages Module**—manages the list of languages supported on the website by allowing the administrator to:
  - i. View the list of supported languages.
  - ii. View/edit fields associated with any given language record, including:
    - 1. Language name.
    - 2. Active (whether the language is available for viewing by the public on the website, for use in keeping the associated pages turned off until they are production-ready).
    - 3. Default HTML Template—the html template used by default for pages written in the given language (can be the same for multiple languages if desired).
  - iii. Add a language record.
  - iv. Delete a language record, including all associated pages (if desired).

- e. **Language Association to User HTTP Headers Module**—to whatever extent OS locale/ language information is available for the user through HTTP headers (such as the “Accept-Language:” header), manages the association of the various values possible in the header variable with languages currently supported in the system. Notes:
  - i. For example, if “en” is detected, it may be associated with language “English”. This is a submodule of the Languages module, and its purpose is to define a “first guess” language assignment to users who do not already have selected language information in a cookie on their machine.
  - ii. This module will also allow for a language to be selected as the “default” language (ex: “English”) chosen if the locale cannot be detected, or if its value does not match any of the defined locales assigned to languages.
  - iii. We have not yet identified the best solution (source) for information as to the user’s locale/ language information, but will conduct a thorough investigation of the available info as part of this scope and team with the client to select the source that is most-probably accurate and useful in determining a first-guess language assignment for the user.
  
- f. **Navigation Items Module**—manages the website’s navigational menu items by allowing the administrator to:
  - i. View the hierarchy (parent-child structure) of the current set of navigation items in any defined language.
  - ii. View/edit fields associated with any given navigation item, including:
    - 1. Parent item (if not a top-level item).
    - 2. Rank amongst sibling items (all items having the same parent item), which determines order top-to-bottom in the list.
    - 3. Whether there is a link associated with the navigational item (can be null if the navigation item is simply a parent item with no associated “link-to” page), and whether the link is to an internal page (of the content management system) or an external url (can be used to link to modules of the system that are external to the content management system, such as the newsletter module and/or trading partner search, or an external url such as google.com, etc.).
    - 4. For each defined language, the item label and whether the item is to be active (allows for items to be available in one/more language but not in others).
  - iii. Add a navigation item.
  - iv. Delete a navigation item.
  
- g. **Pages Module**—manages the web pages themselves by allowing the administrator to:
  - i. View the list of current pages, according to their association with navigation items viewable in any language (as in Navigation Items Module).
  - ii. View/edit fields associated with any given page, including:
    - 1. Associated navigation item (Note: this field will determine only the “categorical” association of the page to a navigation item, for purposes of organization in the administrative interface. It will not necessarily require that the page be the page that is requested when the navigation item is selected in the user interface—this

association is defined in the Navigation Items Module since each item can at most request a single page).

2. Default HTML Template, if not the default template associated with the given language (this allows for a page to use the same HTML template regardless of language, if desired, which would be useful for unusual views such as diagrams, etc. in which language should not be a determiner of the template used).
  3. For each defined language:
    - a. The page title (shown as the title of the browser window).
    - b. The associated HTML Template, if not the default template for the page (this allows a single page in a single language to be associated with its own separate HTML Template, if desired).
  - iii. Add a page.
  - iv. Delete a page.
- h. **Page Content Blocks Module**—manages the page-specific properties of page-based content blocks defined in the HTML template by allowing the administrator to:
- i. View the list of current blocks, to ensure correlation with the page-based content blocks defined in the HTML template.
  - ii. View/edit fields associated with any given block, including:
    1. The identity of the corresponding template block, by label—this tells the system where to render the content block on the page.
    2. The “headline” or “title” associated with the block—this label can be used in the block template to headline the content block itself, and is also used as the title when the block is returned in a set of site search results.
  - iii. Add a page content block.
  - iv. Delete a page content block.
- i. **Page Block Elements Module**—manages the content elements contained in a given page content block (This allows for multiple content elements to be contained within a content block, which allows for the combination of page-specific content elements with more common content elements, such as the current date or company contact information, within a single content block in the page), by allowing the administrator to:
- i. View the list of content elements contained in the block.
  - ii. View/edit fields associated with any given block element, including the identity of the element for each of the high- and low- bandwidth versions of the block (among all defined content elements in the system—see the Content Elements Module), and its rank among other elements (determines order top-to-bottom within the block).
  - iii. Add a content element to the block.
  - iv. Delete a content element from the block.
- j. **Content Elements Module**—manages the content to be displayed on the website, as a content “library” containing content packets or “elements,” by allowing the administrator to:
- i. View the list of content elements defined for the site.

- ii. View/edit fields associated with any given content element, including:
  - 1. Metadata fields as needed, including revision date and author of the html content.
  - 2. Whether the element is “static” (contains hard-coded html), or “dynamic” (relies on a script to determine its value—this allows for dynamic content such as the current date, a list of news articles, etc.—Note: we will pre-populate the library with dynamic elements supporting any dynamic modules contained in the system, such as the list of news articles, etc.)
  - 3. For “static” elements, the html content itself. Notes:
    - a. The content field in the database will have the ability to store html code, including text, tags and browser-side scripts as desired by the client. Any references to support files such as images, Flash files, documents, etc. will include the “support documents” folder, to which the client can copy the referenced files via direct network access outside this system.
    - b. A method for defining links to other internal site pages, utilizing common html link definition structure, will be provided to the client by example/ via instruction (ex: `<a href=“main.php?pid=383”>Contact Us</a>`).
  - 4. For “dynamic” elements, the associated script to be included and “eval”uated for generating the element content. Notes:
    - a. We will pre-populate the library and create associated scripts for dynamic elements supporting any dynamic modules contained in the system, such as the list of news articles, etc.
    - b. Include scripts must meet certain technical requirements in order to function properly.
- iii. Add a content block.
- iv. Delete a content element from the block.

NOTE: The content field in the database will have the ability to store html code, including text, tags and browser-side scripts as desired by the client. Any references to support files such as images, Flash files, documents, etc. will include the “support documents” folder, to which the client can copy the referenced files via direct network access outside this system.

## **OTHER SITE MANAGEMENT MODULES**

- k. **Administrators Module**— manages the list of administrators allowed to operate the system by allowing the administrator to:
  - i. View the list of administrators.
  - ii. View/edit fields associated with any given administrator record, including name, username and password, and whether “active” (allowed to log into administrative interface).
  - iii. Add an administrator.
  - iv. Delete an administrator.