



New CMS & Legacy Apps

Don't Re-Write — Integrate!



Agenda

- Overview of Mura CMS
- Integration Options
- Quick-start Plugins

Overview

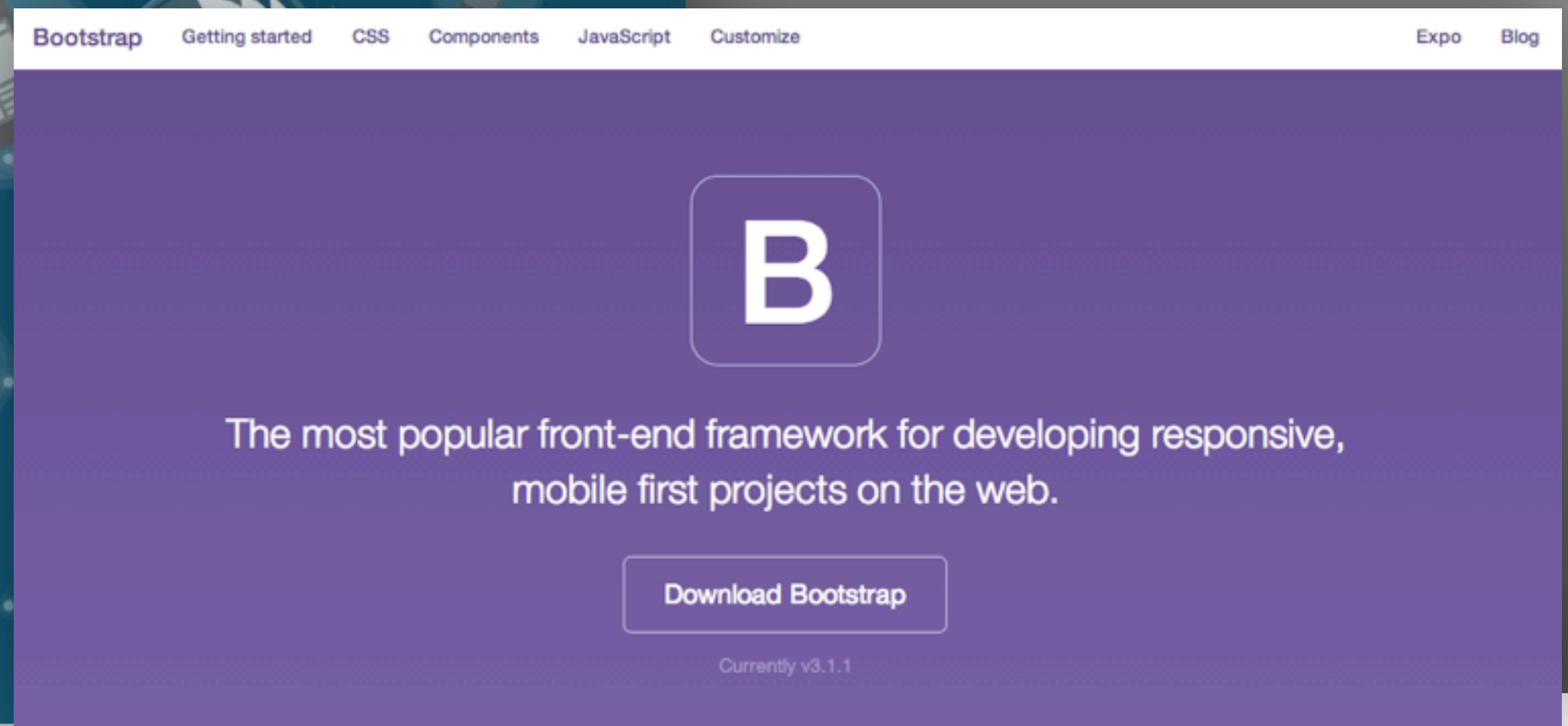
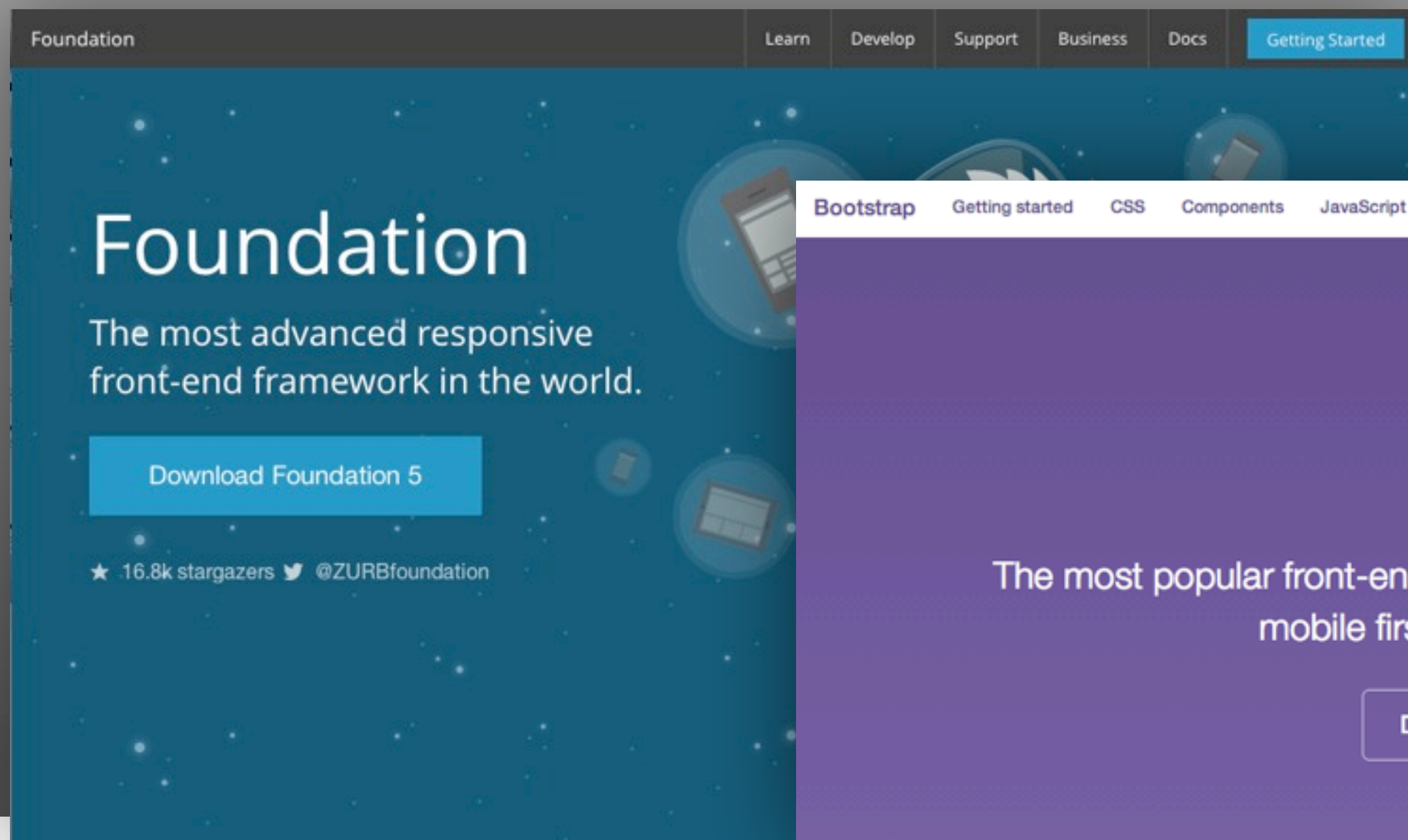
of Mura CMS (demo)

Integration

Options

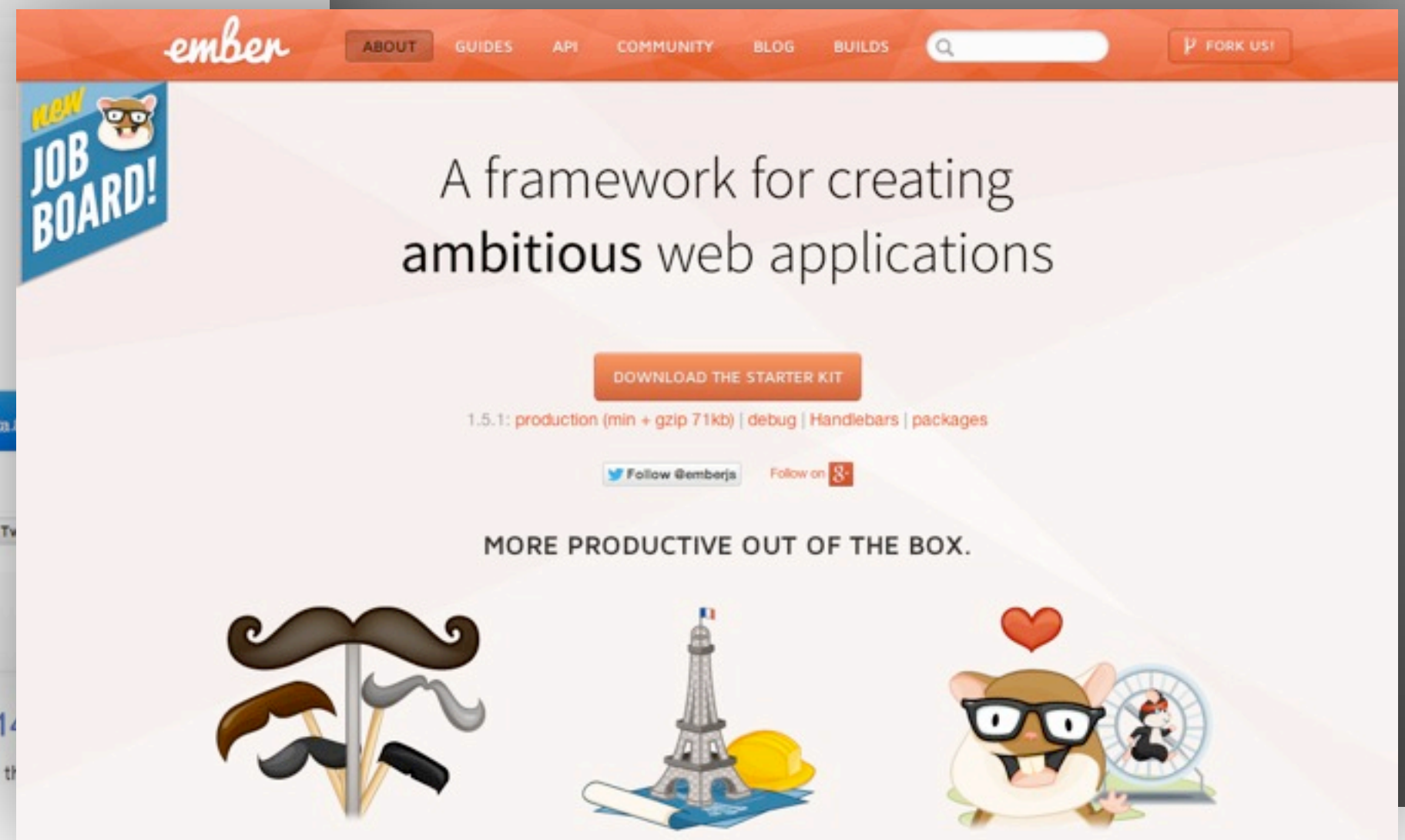
What Can I Use?

- Use any front-end framework you want



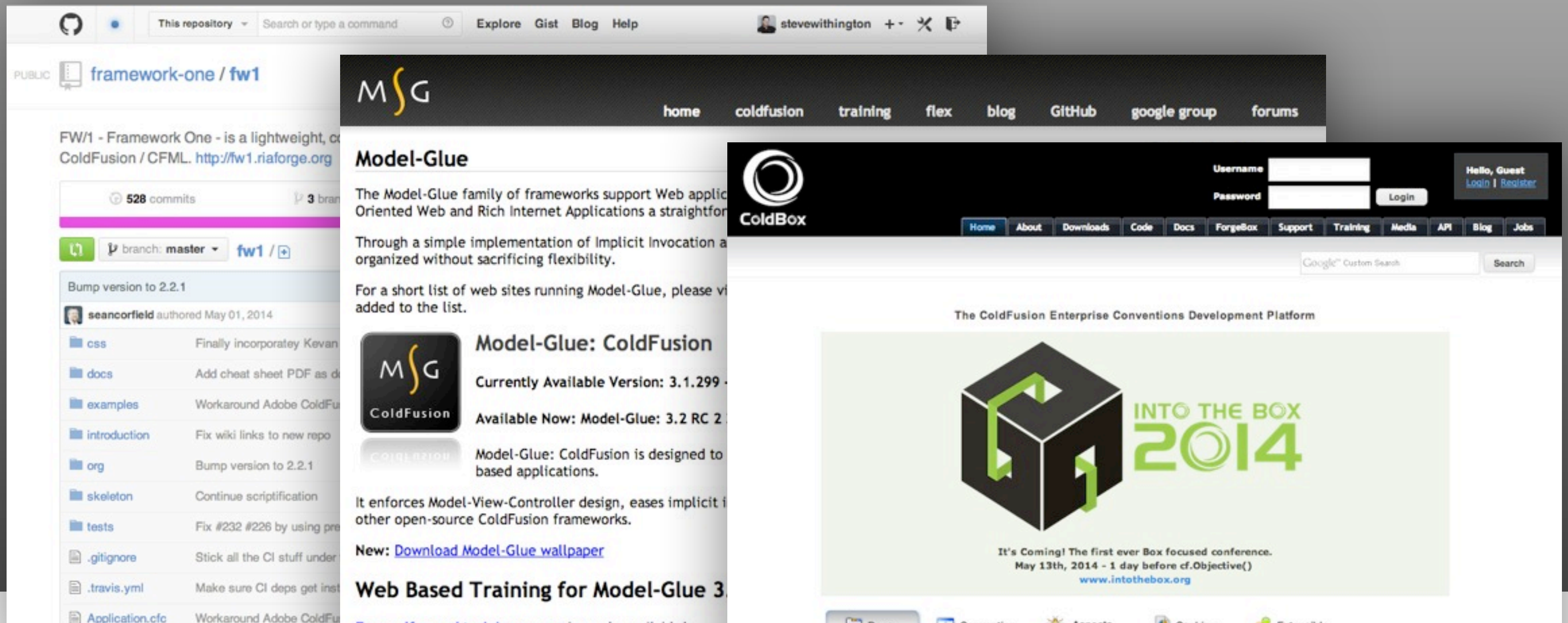
What Can I Use?

- Use any JavaScript framework you want



What Can I Use?

- Use any CFML framework you want



The collage displays three web pages related to CFML frameworks:

- Left Panel:** A GitHub repository for `framework-one / fw1`. It shows 528 commits and a list of files including `css`, `docs`, `examples`, `introduction`, `org`, `skeleton`, `tests`, `.gitignore`, `.travis.yml`, and `Application.cfc`.
- Center Panel:** The **Model-Glue** website. It describes a family of frameworks supporting Web applications and Rich Internet Applications. It mentions "Through a simple implementation of Implicit Invocation and organized without sacrificing flexibility." and provides a link to "Download Model-Gue wallpaper".
- Right Panel:** The **ColdBox** website, described as "The ColdFusion Enterprise Conventions Development Platform". It features a large graphic for **INTO THE BOX 2014** with the text "It's Coming! The first ever Box focused conference. May 13th, 2014 - 1 day before cf.Objective() www.intothebox.org".

Demo

App1 : Uber Simple

App1 Review

- Copied application to the theme's display_objects directory
- Converted `index.cfm` into a front-end controller
- Added the application as a display object using a code snippet
 - `[m] $.dspThemeInclude ('display_objects/app1/index.cfm') [/m]`

Mura \$scope

- **Bean Factory:**

- `$.getBean('someBean')`
- `$.getBean('user').loadBy(username='Steve')`

- **Mura Events:**

- `$.event(), announceEvent('yourEvent')`

- **Sub-\$scopes:**

- `$.content(), $.currentUser(), $.globalConfig(),
$.siteConfig()`

- **Helpers:**

- `$.getContentRenderer(), $.getPlugin(), $.getImageURL(),
$.addToHTMLHeadQueue()`

Mura \$scope: Helpers

- `$.siteConfig('themeAssetPath')`
 - **Outputs the path to your theme directory**
 - `/ {SiteID} / includes / themes / {ThemeName}`

Mura \$scope: Helpers

- `$.dspThemeInclude ('path/to/file/cfm')`
- **Dynamic CFinclude of the desired file**
 - `<cfinclude template="/{SiteID}/includes/themes/{ThemeName}/path/to/file.cfm`

Mura Events

- **Application Flow:**
 - Chain of events that fire in sequence
- **Each link in the chain can be intercepted to:**
 - Provide *additional* OR,
 - Even *replace* business logic
- `eventHandler.cfc` (Site & Theme)

Event Handlers

- **Front End Requests:** onSiteRequestStart, on{Type}{SubType}BodyRender
- **Contextual Events**
 - **Admin Life-Cycle Events:** onGlobalRequestStart, onAdminRequestStart
 - **Application Events:** onApplicationLoad, onGlobalError, onSiteError
 - **Admin Rendering Events:** onContentEdit
 - **Content Tab Events**
 - **Login Events**
 - **Content Events:** onBefore{Type}{SubType}Save
 - **Feed Events**
 - **User Events**
- **Custom Events**

Demo

App2 : Subfolders

App2 Review

- Copied application to the theme's display_objects directory
- Converted `index.cfm` into a front-end controller
- Added a `onSite404()` event listener in the SITE `eventHandler.cfc`
- Added the application as a display object using a code snippet
 - `[m] $.dspThemeInclude('display_objects/app2/index.cfm') [/m]`
- Used `$.addToHTMLHeadQueue()` to add custom JS & CSS to head

Demo

App3 : Application.cfc

App3 Review

- Copied application to the theme's `display_objects` directory
- Converted `index.cfm` into a front-end controller
- Added a custom eventHandler using the `onApplicationLoad()` event in the **THEME** `eventHandler.cfc`
- Added the application as a display object using a code snippet

- `[m] $.dspThemeInclude('display_objects/app3/index.cfm') [/m]`

Quick Start

Plugins

Why Plugins?

- **Update-Safe Customizations:**
 - Extend Mura CMS
 - Add new functionality
- **Distribute Code Across Sites / Installs**
- **Custom Administrator**
- **Integrate Existing Applications**
- **GPL 2.0 License**

Plugin Anatomy

- *index.cfm**
- *license.txt**
- **/plugin**
 - **/config.xml.cfm**
 - */plugin.cfc**
 - */config.cfm**
- **Optional*

/plugin/config.xml.cfm

- **Setup Variables (base & custom)**
- **Register Your Plugin's:**
 - Display Objects
 - Event Handlers

/plugin/config.xml.cfm

```
<cfoutput>
  <plugin>
    <name>Plugin1</name>
    <package>Plugin1</package>
    <directoryFormat>packageOnly</directoryFormat>
    <loadPriority>5</loadPriority>
    <version>1.0.0</version>
    <provider>Blue River Interactive</provider>
    <providerURL>http://blueriver.com</providerURL>
    <category>Application</category>
    <settings></settings>
    <eventHandlers></eventHandlers>
    <displayObjects location="global"></displayObjects>
    <extensions></extensions>
  </plugin>
</cfoutput>
```


Display Objects

registered via config.xml.cfm

```
<displayObjects location="global">

    <displayObject    name="Say Hello from .CFM"
                      displayobjectfile="extensions/dspHello.cfm" />

    <displayObject    name="Say Hello from .CFC"
                      component="extensions.displayObjects"
                      displaymethod="dspHello"
                      persist="false" />

</displayObjects>
```

Display Objects: .CFM

```
<cfscript>
/**
 *
 * NOTE:
 * This is essentially just a simple 'include' file
 * You could do whatever you need here (e.g., db lookups, etc.)
 * Also, since this will be rendered via the front-end,
 * you have access to the Mura $scope!
 *
 */
</cfscript>
<cfoutput>
    <h3>Hello from dspHello.cfm</h3>
</cfoutput>
```

Display Objects: .CFC

```
component accessors=true extends='mura.cfobject' output=false {  
  
    property name='$';  
  
    public any function init(required struct $) {  
        set$(arguments.$);  
        return this;  
    }  
  
    public string function dspHello() {  
        return '<h3>Hello from display0bjects.dspHello()</h3>';  
    }  
  
}
```


Display Objects

Basic

SEO

Mobile

Layout & Objects

Categorization

Tags

Related Content

Extended Attributes

Advanced

Publishing

Layout Template ?

Inherit From Parent

Alternate Child Layout Template ?

none

Inheritance Rules ?

☐ Inherit Cascade ☒ Start New Cascade ☐ Do Not Inherit Cascade

Content Objects

Available Content Objects

Plugins

Mura Plugin

Say Anything Configurable Display Object

Say Hello (CFC)

Say Hello (CFM)

Left Column Content Objects

User Tools

Main Content Content Objects

Mura Plugin - Say Hello (CFM)

Right Column Content Objects

Event Handlers

registered via config.xml.cfm

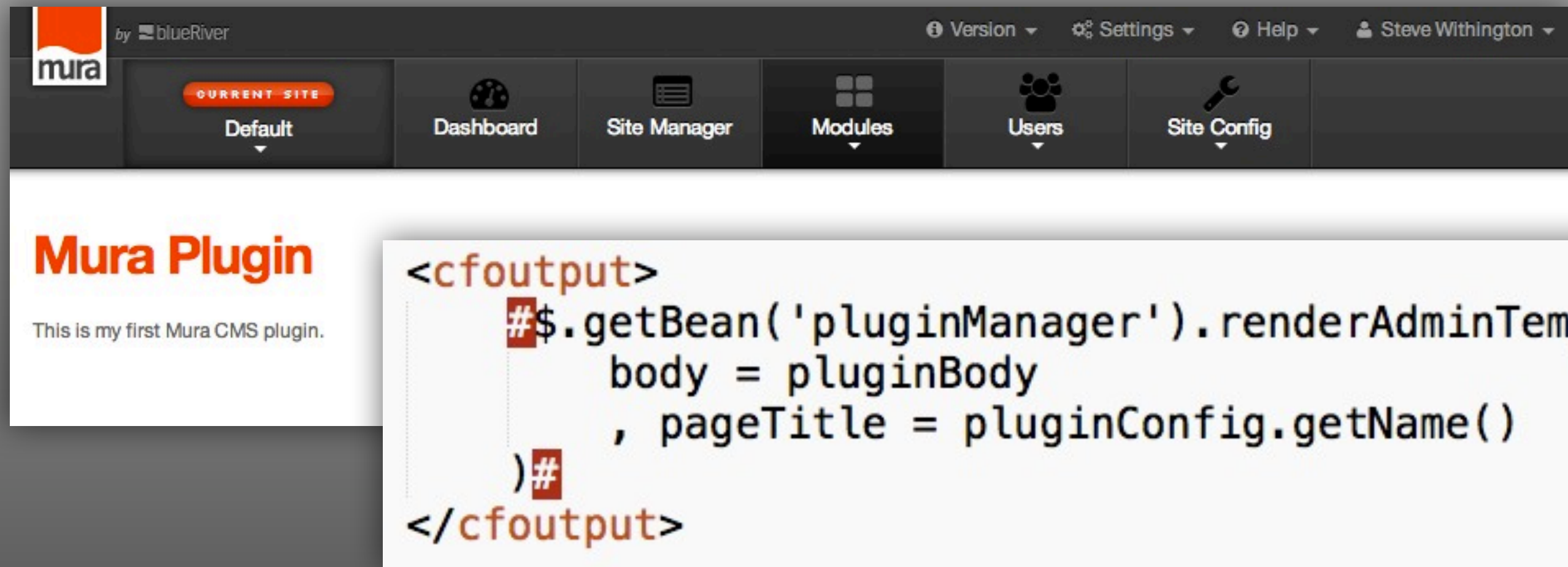
```
<eventHandlers>  
    <!-- This is the only eventHandler you need to register -->  
    <eventHandler    event="onApplicationLoad"  
                    component="extensions.eventHandler" />  
</eventHandlers>
```


eventHandler.cfc

```
component accessors=true extends='mura.plugin.pluginGenericEventHandler' output=false {  
  
    property name='$' hint='mura scope';  
  
    public any function onApplicationLoad(required struct $) {  
        // Register all event handlers/listeners of this .cfc with Mura CMS  
        variables.pluginConfig.addEventHandler(this);  
        set$(arguments.$);  
    }  
  
    public any function onSiteRequestStart(required struct $) {  
        // This makes any methods of the object accessible via $.yourPackageName  
        var contentRenderer = new contentRenderer(arguments.$);  
        arguments.$.setCustomMuraScopeKey('YourPackageName', contentRenderer);  
    }  
  
    // You could place any other event handlers/listeners here  
  
}
```

Admin Template

- Optionally use the Mura CMS look and feel



The screenshot displays the Mura CMS Admin Template interface. At the top is a dark navigation bar with the Mura logo and 'by blueRiver' on the left. On the right, it includes links for 'Version', 'Settings', 'Help', and a user profile 'Steve Withington'. Below the navigation bar is a row of menu items: 'CURRENT SITE' (highlighted in orange), 'Default', 'Dashboard', 'Site Manager', 'Modules', 'Users', and 'Site Config'. The main content area below the menu shows a 'Mura Plugin' section with the text 'This is my first Mura CMS plugin.' and a code block for the admin template.

```
<cfoutput>
    #$.getBean('pluginManager').renderAdminTemplate(
        body = pluginBody
        , pageTitle = pluginConfig.getName()
    )#
</cfoutput>
```

Advanced Options

- **Configurable Display Objects**
- **Custom Events**
- **Object Relational Mapping (ORM)**
- **Bundle Options:**
 - `toBundle()`, `fromBundle()`
- **CFML Frameworks:**
 - FW/1, Model-Glue, Fusebox, etc.

Plugin Examples

- MuraPlugin
- MuraFW1
- Visit <https://github.com/stevewithington/muracms-integration> for a list of many more

Thanks,
You Rock.

Resources

- GetMura.com
- BlueRiver.com
- github.com/BlueRiver
- github.com/SteveWithington
- gist.github.com/SteveWithington
- Mura CMS Developers on **Google Groups & LinkedIn**
- **Paid Support Plans: Short-Term & Annual**
- **Hosted, On-site & Online Training**