Vision and Scope Document

Emerson Portal Remediation

Prepared for

Emerson

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1. Problem Statement

Emerson engaged Microsoft Consulting Services (MCS) to review the previous version of the Emerson.com (.com), Emerson Network Power (ENP) and Careers sites which had been implemented on the Microsoft Office SharePoint Server (MOSS) 2007 platform. As it currently exists, the site had been shown to have significant deficits from both customer-facing functional perspectives (such as the Where To Buy experience), as well as non-functional attributes such as system stability and usability. Additionally, the architecture of the solution was such that it did not leverage effectively the web content management (WCM) solution capabilities of the MOSS platform but rather relied heavily on custom web parts to provide a majority of the application functionality.

Some of the key themes identified through the assessment were:

|  |  |
| --- | --- |
| Observed problem | Consequences |
| Much of the content and data that exist on the current sites is not architected appropriately | * Decreased information transfer to customers * Increased operational costs to correct and keep current the content * Reduced system performance and availability for Content Managers. * Inability to utilize Content Deployment or Variations as provided by the Microsoft Office SharePoint Server 2007 Platform. The remediated solution will support the standard Content Deployment and Variations infrastructure as provided by the platform. |
| Navigation is inconsistent across the current internet presence | * Finding content is a long process, decreasing information transfer to customers. There are numerous areas in the site that do not include navigation components that would be expected if a common Navigation Strategy had been implemented. * The current navigation strategy involves a large amount of custom development. This has proven problematic to maintain and manage from an operational perspective. * Navigation Strategy as agreed upon by MSFT and Emerson will be defined in the Functional Specifications that accompany each of the applications. The remediated site will adhere to the Navigation Strategy to ensure end user consistency in navigation. |
| Content is often duplicated multiple times across sites | * Increased operational costs for data storage * Increased operational costs to make multiple updates |
| IT Typically must coordinate content publishing and page changes | * Higher IT workloads, increasing solution operating costs * Periodic delays in content publishing, decreasing information transfer to customers |
| Lack of appropriate Application Lifecycle Management Processes | * Update of the existing code is problematic as Emerson has not adhered to standard Application Lifecycle Management processes to ensure maintainability of the code base. This includes but is not limited to storage and versioning of the code base in an appropriate Source Control Repository. * Lack of a test environment that allows for the complete testing of the solution from end to end including the Content Deployment aspects of the solution. |
| SharePoint Search is not returning expected results | * Content is difficult to locate, decreasing information transfer to customers * Global content is particularly difficult to locate * Search Pages are isolated from each other preventing discoverability of other search options easily within the information architecture. |
| Search Engine Optimization Issues are evident in the existing solution | * There were numerous issues defined in the current solution as relates to the Search Engine Optimization efforts that Emerson has undertaken. It was agreed upon that the following items will be provided in the remediated solution to allow Emerson better control over the SEO within the site(s)   + Addition of Alternate Browser Title – This field will be added to the base content type of all WCM Pages. This will allow the Content Author to define different information to be displayed in the browser title than the actual page title in the site.   + Addition of Keywords Field – We will add the Keywords field to the edit mode panel of each WCM Page. This will allow Content Authors to define keywords that will be added to the META Keywords tag of the pages. This will enhance the ability of search engines to categorize the pages.   + Addition of Description Field – We will add the Description field to the edit mode panel of each of the WCM pages to ensure that the Content Authors have the ability to define a brief description of the page. This will be rendered into the META Description field of the page to enhance the ability of the Search Engine Crawlers in properly indexing and categorizing the pages.   + Navigation and Breadcrumbs – As defined in the Functional Specifications for each of the three applications that fall into the scope of this project, appropriate navigation elements will be provided on each of the pages to allow the search engines to follow the navigation links within the site to ensure that the pages can be indexed appropriately.   + Site Map – a Site Map Web Part will be provided to ensure that there is a central location that contains links to the various locations within the site. This is in addition to the Navigation elements defined above.   + 301/302 Redirect Module – Microsoft Office SharePoint Server has a known issue as relates to the redirect type returned when a browser is redirected to another location. A Technical workaround for this issue will be included in the remediated solution. |
| Additional point solutions continue to emerge without a central service provider | * Increased operational costs * Increased solution complexity * Reduced re-usability of artifacts developed for a single point solution. |

Subsequent to this, the decision was made that the correct way to handle this situation with the existing sites was to re-design and re-implement the sites using an approach to Web Content Management on MOSS which was more consistent with Microsoft preferred practices. When remediating the solution, common extensions to the SharePoint Platform will be developed for subsequent use when delivering these (and future) point solutions on this platform. This will give Emerson greater efficiency than is currently experienced in developing additional sites subsequent to this initial project.

1. Business Opportunity

Emerson today has many issues with the Internet Web Content Management solution as is currently implemented. These issues have led to the inability of business users to contribute and maintain content, increased support costs and lower than desired application availability. Due to the nature which the original Emerson.com, Network Power and Careers sites were developed originally, there was very little ability to leverage the components built for these sites for subsequent sites (specifically Climate Technologies and Process Management). This has led Emerson to produce these sites as separate entities that leverage very little code or artifacts from a shared component library. This approach increases the cost of the system as relates to development and maintenance of subsequent sites.

Today, Emerson has the opportunity to:

1. Decrease Operational Costs of the existing solution over the long term compared to the existing implementation.
2. Decrease solution complexity by eliminating large portions of the previous implementation that were developed. This will reduce the support and maintenance costs of the system by leveraging the capabilities provided by the SharePoint platform rather than developing custom solutions for things that the platform provides.
3. Empower content owners to manage their own content with minimal interaction with IT
4. Provide a base framework and development methodology that can be used a reference implementation for future divisions that migrate to this platform.
5. Empower the divisions that host their Internet Presence on the Emerson Platform to utilize Content Deployment using the Out of the Box SharePoint Content Deployment Processes
6. Provide the ability of Business Divisions to translate content using the SharePoint Variations Infrastructure.
   1. Opportunity Statement

Emerson has the opportunity to redesign the ENP, Emerson.com, and Careers Internet-facing web presences, in order to better meet the business functionality and content management requirements. Additionally, this will allow Emerson to create a platform which can more easily support the Internet presences of additional divisions within Emerson in a more architecturally consistent and cost-effective manner.

1. Project Vision and Scope
   1. Vision Statement

The solution should provide a global web presence with an approach to managing content that empowers the content owners to manage their own content, and provides a sound technical baseline for the implementation of the three specific Internet presences. Additionally, this baseline should serve as an architectural model for additional business divisions seeking to deliver a web presence upon this platform.

Microsoft will redesign the Emerson.com, Careers and Emerson Network Power sites using Microsoft Preferred Practices for Web Content Management systems built on the Microsoft Office SharePoint Server 2007 Platform.

* 1. Benefits Analysis

The benefit to Emerson in performing this remediation effort is to finally realize the vision of building a common framework to provide all Internet Facing Web Content hosted by Emerson ITSS. The previous solution did not provide the functionality required to build subsequent solutions. The remediated solution will provide this desired framework as well as reduced operational costs and increased reliability and stability as compared to the previous solution.

Emerson will have the ability to add translations of the source content by using the SharePoint Variations Feature of the platform. The remediated solution will also provide the ability to deploy content to the publishing farm from the authoring farm using the SharePoint Content Deployment functionality as provided by the platform.

New functionality can be added to the base platform in an easier and more predictable manner than in the previous implementation. By following standard application lifecycle management methodologies, introduction of updated or added features will be predictable and testable before promoting to the production environment. This will increase trust in the overall solution.

* 1. Requirements

There are two sources which will serve as the sole sources of requirements of record. First, there exists a functional prototype of the proposed site, in the form of the existing site as developed before MCS was engaged. Second, the development team is producing a series of functional specifications. These documents should have the necessary requirements for the system to provide the basis for technical design of the components required to deliver the solution.

Through our analysis during the planning phases, multiple documents were identified as requirements for the previous version of the site were discovered. However, due to incompatibilities and subsequent changes that were made between the development of the document and the implementation of the site, a decision was made to begin with a new set of functional specifications. These specifications will be the definitive source of functional requirements for this version of the system. These specifications are included with the vision and scope but should be seen as working documents that will be refined as the envisioning and design portions of the project are completed.

Additional non-functional requirements are documented here for clarity.

* + 1. Operational Requirements

All components that are to be deployed to the Emerson SharePoint Environment(s) will be packaged and deployed using standard SharePoint deployment methodologies. Any manual configuration of the solution will be accomplished through standard SharePoint and/or ASP.NET configuration methodologies along with the appropriate environment specific settings. These must all be documented and provided to Emerson with each associated code drop

* + 1. System Requirements

The remediation of the existing solution assumes the correct sizing of the solution architecture that was previously provided by Microsoft (Emerson.com OneWeb MOSS2007 Internet-Facing Production Farm v.2.0.7 FINAL DRAFT 09-28-2007.docx provided to Emerson by Microsoft)

During the remediation assessment, there was the suggestion that Emerson add an additional farm to the development and test environments to provide an architectural match to the production system. This allows full testing of all aspects of the system including Content Deployment (this is not possible in the existing development and test environment configuration within Emerson) The new physical architecture has been defined with Emerson and is represented in the following diagram:



All development and Integration environments will be virtual, single server farms and are not represented here. This diagram represents the Test Environment (Authoring and Publishing) along with the Production Environment (Authoring and Publishing).

It is assumed that the performance and throughput calculations performed in the earlier sizing estimation process are still applicable to this solution as the primary issue with the existing solution is related to the architecture and design of the solution rather than the physical constraints of the hardware. Emerson has invested significantly in the new Infrastructure that is located at the Global Data Center and it is assumed that this infrastructure is sufficient to support the goals of this project.

* + 1. Security Requirements

All Content Managers and Administrators within the overall Emerson SharePoint Environment will be authenticated using Active Directory authentication to the default zone for the authoring web application. Authors, Content Managers and Administrators will perform authoring in the authoring environment. Authors and Content Managers will have no permissions to modify content directly within the production environment.

Internet consumers will all be anonymous from an authentication and authorization perspective. There is no requirement for this phase of the project to support login by external, internet facing consumers. There will be anonymous access allowed on the Internet Zone of the Publishing Farm. Internet users will have no access to the authoring farm.

Anonymous users will not have the ability to write data to the application unless functionality is provided by the development team to operate as the application pool identity of the application. This is specifically targeted towards the forms functionality that is required by Emerson Network Power.

* 1. Scope of Project

The preceding Vision Statement provides a motivating goal for the team working on this project. As such, we write it with broad brush strokes in order to provide a shared and inspiring ideal. The statement provides context for decision-making at later stages of this project when deciding among features, cost and scheduled delivery. It is not provided to be a legally binding contract for the solution. The revisions of this document going into the future provide the detail scope of what will and will not be accomplished to meet the vision. That said, the core features to be enabled by the solution could be characterized by these following specific goals and objectives:

* + 1. Business Objectives

#### Content Management Objectives

|  |  |
| --- | --- |
| Objective | Rationale |
| Provide the ability for Business Users to provide the Content Management Duties | In the previous solution, the Content Management Experience was so complex that normal business users were not able to perform Content Management. This has hindered the potential effectiveness of the WCM System. |
| Provide a stable platform for Internet Facing properties | The scope of this effort is to provide a replacement solution for Emerson.com, Careers and Emerson Network Power. Subsequent development can leverage this platform and methodology but are outside the scope of this effort. |
| Provide Global Capabilities to Emerson Business Divisions | By leveraging the SharePoint Variations Infrastructure and components that are to be developed to provide redirection and navigation to the appropriate variation, Emerson Business Divisions will have the ability to host localized versions of content for languages and cultures that are supported by the SharePoint Platform. |
|  |  |

Table 2: Business objectives area 1

* + 1. Technical Objectives

#### Solution Design

|  |  |
| --- | --- |
| Objective | Rationale |
| Adhere to standard SharePoint WCM Preferred Practices | The previous implementation deviated significantly from what are considered best practices for design and development of a WCM Solution built on SharePoint. The new solution should align with Microsoft Preferred Practices for WCM Solutions built on the SharePoint Platform. |
| Build and Extend a Framework | The vision for the original implementation was to build a framework that could be leveraged to provide additional solutions with reduced effort. This was not accomplished previously. We will build the remediated solution as a framework of re-usable components that can be subsequently leveraged to develop other sites. |
| Extend rather than replace | A large amount of the development effort for the previous solution was spent developing custom web parts when extensions to out of the box functionality could be leveraged. All custom development will be justified to prevent development of un-needed artifacts that lead to a more complex solution. |

Table 5: Technical objectives area 1

#### Operational Objectives

|  |  |
| --- | --- |
| Objective | Rationale |
| Adhere to common logging and troubleshooting approach | The previous solution did not provide adequate logging functionality to enable Emerson ITSS Operations to troubleshoot issues. The remediated solution will provide a common and predictable pattern for all logging and exception handling. |
| Utilize Standard SharePoint Administrative and Management Methodologies | The previous implementation relied heavily on scripts and manual steps to set up and configure the solution. We will extend the Standard SharePoint WCM Infrastructure to reduce the amount of external configuration required to deliver the solution repeatedly for new environments. While not all manual configurations can be prevented, It will be managed in a predictable manner that is in line with Standard SharePoint Methodologies. |
|  |  |

Table 6: Technical objectives area 2

#### Out of Scope

|  |  |
| --- | --- |
| Objective | Rationale |
| Performance testing | Performance testing will not be performed by the Microsoft team under the current scope. Other resources from Emerson may undertake such testing if that is desired. As such no performance criteria will be used as acceptance criteria of the software under the current scope. |
| Performance Testing Remediation | The project does not contain scope accounted for in order to enhance performance. The application will be designed and constructed according to Microsoft preferred practices, time was not allocated for additional performance remediation in the current scope |
| Content Migration | Migration of content from the existing implementation to the remediated solution is considered out of scope for this project. Microsoft will provide knowledge transfer to Emerson on how to enter content into the new system but actual content migration tasks will be performed by Emerson. |
| Creative Development | It is assumed that Emerson/Tribal DDB will provide creative artifacts needed for the development and implementation of the solution. Images, CSS and JavaScript will be leveraged from the existing solution to suit the remediation development. Development or Modification of any flash assets within the scope of effort are outside the scope of work for this project. |
| Usage Analytics | Out-of-the-box usage reports available with SharePoint 2007 will be configured. Webtrends and Hubspot code will be implemented in the master page of the remediated solution (as provided by Emerson). Any customization, setup or analysis of 3rd party usage analytics solution is considered out of scope for this project. |
| Governance | Governance is the process to guide the development and use of a solution based on SharePoint. Providing governance guidelines is considered out of scope for this project. |
| Disaster Recovery | Disaster recovery includes backup/restore, offsite storage, archiving etc. It is assumed that Disaster Recovery planning is outside the scope for this project |

Table 7: Technical objectives out of scope

* 1. Version Release Strategy

The project is will be managed through a series of iterations. Each of these iterations contains a specific set of solution requirements (functional and non-functional) which are targeted for completion during that iteration. Requirements implemented during early iterations can also then be validated during early iterations. This will allow the solution to stabilize early, and be only incrementally destabilized with introduction of additional solution components.

The current plan calls for 4 iterations starting with Iteration 0 and progressing through iteration 3. Iteration 0 has no code artifact deliverables. Iteration 1 will include core application functionality and will be promoted to the Emerson environment(s) merely to work out the process for managing code releases from a third party vendor. Iteration 2 is planned to include the Emerson.com and Careers application functionality. Iteration 3 will include the Emerson Network Power components. Dates for releases of the iterations will be managed in the official project plan and are subject to revision based upon the work planning exercises.

Operational Deployment instructions will be provided with each release of code to Emerson.

* 1. Acceptance Criteria

The solution will be accepted when the existing site functionality as agreed upon in the functional specification documents has been delivered to Emerson and appropriate User Acceptance Testing has been performed. Each of the three primary areas of the project (Emerson.com, Careers and Network Power) will undergo distinct User Acceptance Testing for that portion of the overall solution. Test cases that define the appropriate acceptance of the solution will be designed at a later phase of the project. User Acceptance Testing will be targeted toward the ability of Content Managers to create the pages defined in the functional requirements document using the controls and / or web parts that are specified within that document.

* 1. Operational Criteria

After each iteration (with the exception of Iteration 0), there will be a handoff of the code deliverables along with accompanying documentation that will allow Emerson to deploy the solution in its entirety into an environment local to Emerson.

All components will be packaged and deployed using Microsoft Best Practices for Solution Deployments of complex SharePoint Solutions. This includes packaging all artifacts within WSP’s (Web Solution Packages) that are to be deployed to the SharePoint Environment.

Content Deployment and Variations are to function as expected from a publishing site built on the SharePoint Server 2007 Platform.

1. Solution Design Strategies
   1. Architectural Design Strategy

The base framework will be an extension of the Architecture that is defined in the SharePoint Server 2007 Web Content Management Solution Offering provided by Microsoft Consulting Services. This Architecture and design approach has been proven on previous engagements and provides predicable approaches to common design strategies for WCM Scenarios.

* 1. Technical Design Strategy

The design strategy that will be employed for the project is to extend rather than replace. All components that are being developed for the overall solution are to be extensions of the framework provided by Microsoft where possible. Components are to be developed as part of an overall framework and should avoid being coded specifically to a single implementation. This will ensure that subsequent projects will have the ability to leverage any components developed previously.

* 1. Constraints

The Major constraint for this project is the timeline. Due to this project being a remediation of a previous implementation, the customer is very sensitive to the delivery dates of the remediated solution and this constraint is the primary driver for the project delivery schedule. When making decisions related to the project scope, timeline and resources, Timeline concerns should take priority.

#### Other Constraints

|  |  |
| --- | --- |
| Objective | Rationale |
| Browser Support and Testing | This solution is built upon the Microsoft Office SharePoint Server 2007 Platform. Browsers that are considered Tier 1 browsers for that platform will be targeted for testing. Browser limitations that are defined for the platform will apply to this solution.  Microsoft will perform testing for Internet Explorer 7 & 8 on Windows XP and Windows 7. We will also test with Firefox 3.5 on both Windows 7 and Windows XP.  The base resolution for the solution is assumed to be 1024x768. |
| Accessibility Constraints | Microsoft Office SharePoint Server 2007 has some known constraints as relates to accessibility. These constraints have been provided to Emerson and it is assumed that these constraints are acceptable to Emerson. |
| Non-Western Layouts | The remediated solution will support English as the Authoring Language for all Source Variations. Languages that are supported on the Microsoft Office SharePoint Server 2007 Platform will be available for use when defining and creating the variations for localization.  While every effort will be made during the design and development of these sites to ensure that alternate layouts (ie. Right to Left versus Left to Right) can be employed for non-western languages, the effort to develop alternate layouts for other languages has not been included in this project. Microsoft will ensure that all JavaScript, CSS and other supporting files required to provide these alternate layouts can be implemented at a later date to add support for alternate layouts. |

* 1. Software Configurations

Listed below are the software requirements for this project:

• Windows Server 2003 R2 x64

• SQL Server 2005 x64

• SharePoint 2007 SP2

* 1. Customer and User Profiles
     1. Site Administrators: They will have administrative privileges in the site
     2. Content authors: They can create, edit content
     3. Content approvers: They can approve/reject the content
     4. Anonymous users: They can only view the content.
  2. Risks and Dependencies

The following areas of the application are defined as having risk and should be monitored closely to ensure that these issues can be closed in a manner that prevents impact on the overall project

|  |  |
| --- | --- |
| Risk | Description |
| The overall Search Strategy was revised during envisioning | During Envisioning, the various components that were developed previously were analysed and an alternate approach to the Search User Interface was introduced to Emerson. This approach utilizes a standard “Faceted Search” approach along with a “Search Center with Tabs” approach. We will need to ensure that the design and implementation are signed off by Emerson/Tribal DDB as we do not have Mock-ups or Comps of this new Search Center Design |
| Products and Services Redesign | The overall Products and Services section of the Emerson.com site has undergone a proposed redesign by Tribal DDB. This was presented to Microsoft in late December. While Microsoft has every intention of developing this new interface rather than the old interface, there is an increase in effort compared to the previous implementation. This effort will be outlined in a Change Request to ensure separation of the original estimates from this additional functionality. |
| Global Gateway Redesign | Similar to the products and Services Redesign, the new Global Gateway design as provided by Tribal DDB was reviewed during the envisioning phase. This effort will require a subsequent meeting with the key Emerson Business Stakeholders to refine the “Variation Strategy” that will be used to drive the Global Gateway. This effort will also be included in a change request as it is functionality that differs from the originally estimated effort. |
| Careers Site Design | During the remediation assessment, it was determined that there were fundamental issues with the architecture of the Careers site. We have still not gotten official signoff for the overall design strategy for careers. Microsoft made estimates based upon the prosed design and these estimates assume signoff on the new design for Careers. If signoff is not attained for the redesign, there will be impact on the effort estimates and components to be developed for Careers. |

* 1. Project Management Strategy

In the best possible world, all products could be delivered good, fast and cheap. The reality is that, if any two of those attributes are successfully achieved, the third cannot be satisfied. Project management requires that a balance be struck among resources/cost, delivery dates and features of any product. Any of those three attributes can be managed in order to optimize, constrain or accept its outcome. MCS recommends the project management strategy diagrammed in the following figure.

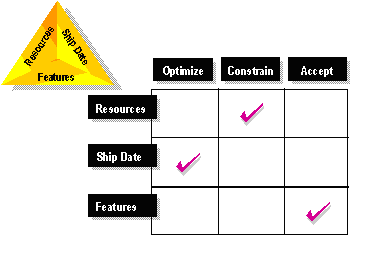


Figure 1: Project management trade off matrix

A desired upper limit on the project’s budget constrains the resources that can be applied. This limited group of people is asked to deliver the desirable features by a deadline set in the future. Their goal is to work creatively to deliver as much value as possible, but to meet the time deadline. In order to do this, the project team and customers must accept that some features will not be in the final product. The goal of this strategy is to understand the customer’s desires and needs, and rank them from most important to least. With this strategy, even important features may be left out of a specific version of a product if the benefit delivered by releasing the product outweighs the opportunity cost lost to a feature’s absence. This strategy is known as “shipping is a feature.”

Using the matrix in the preceding figure, other project management strategies can be devised, but they must adhere to the following rules:

One column must be checked in each row indicating how that attribute will be managed.

No column can be checked more than once, in order to avoid conflicting strategies.