

A BEST-PRACTICES APPROACH FOR YOUR THUNDERHEAD.COM DEPLOYMENT

01 INTRODUCTION

“To turn initiatives into sustainable programs that continuously improve and transform processes, business process professionals must establish centers of excellence (COEs) as quickly as the organization can support them.”

– Alexander Peters from Forrester Research

Defining and following best practices are important steps to getting the most value from your Thunderhead.com implementation.

It’s been shown that companies who develop standards and governance as best practices for their customer experience solutions achieve the following goals; they:

- Increase the effectiveness of their solution especially related to enterprise applications – whether multi-channel NOW implementations or online SaaS implementations
- Significantly reduce costs associated with disparate systems and redundancy
- Improve the overall customer experience

But how do you ensure that the standards and governance procedures you’ve developed are implemented, maintained, and deployed throughout the enterprise?

One approach that’s proven successful in many organizations is creating an enterprise center of excellence (COE) for Thunderhead.com initiatives.

In this paper we’ll talk first about best practices with respect to your Thunderhead.com implementation and then about the benefits of creating a Thunderhead.com COE. Thunderhead.com software is designed to enable large organizations to leverage its components across multiple channels, business areas, and ultimately customer experience strategies. At the same time, we all recognize that a unified approach to customer communications is required in order to ensure a consistent customer experience. For these reasons, developing a center of excellence for your Thunderhead.com implementations is an appropriate strategy.

02

5 BEST PRACTICES FOR CUSTOMER COMMUNICATIONS WITH THUNDERHEAD.COM

Thunderhead.com provides the tools and capabilities to help you drive customer communications and design and deliver a great customer experience. Working with our customers, we've identified five areas of best practices that will help you ensure success in your Thunderhead.com implementation: data models, style and branding, communication templates, infrastructure and operations, and business process.

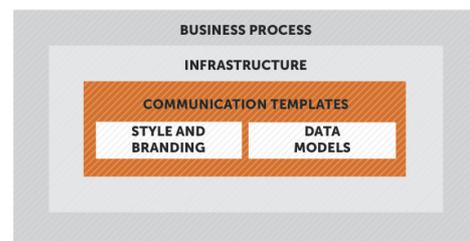
Data models: It's important to have a solid data model for a successful implementation. However, it's also important to look at how the data models for a specific project might apply beyond that project, including longer-term goals. You should therefore consider how data will be used in communications across the enterprise, both to ensure consistency and to allow data from transactional events and realtime conversations to be used in managing the customer journey.

Style and branding: Developing a best-practices style library in Thunderhead.com for your overall brand communications can help you ensure that new documents and projects adhere to your brand guidelines. Styles can be defined for all channels; web, email, SMS, and print and can include commonly used objects such as logos, signatures, address information, letterhead, and legal language, as well as support the application of your brand tone of voice, and so on. You can then establish governance to make sure that deviations from the style guide and additions to it are managed appropriately.

Communication templates: In this area, it's important to consider your long-term design goals in addition to the template designs you're using for current projects. A good best practice is to establish a subject matter expert (SME) for template design. The SME can then lead workshops and training programs for anyone else in the enterprise who will be using the communication templates. For many organizations, the ultimate goal is to turn maintenance and control of templates over to business users as much as possible.

Infrastructure and operations: Cross-enterprise use of Thunderhead.com infrastructure, APIs, and multichannel enablement is one way you can realize cost savings with your Thunderhead.com implementation. Developing a COE may help to ensure that all functional units have the expertise they need to take advantage of the capabilities and efficiencies in Thunderhead.com.

Business process: Understanding and documenting business processes and requirements – appropriate sizing, implementation planning, project management, and testing procedures – is important for business improvement and transformation. This is where the Professional Services team at Thunderhead.com can help. We've developed many different projects for many different companies, and that experience enables us to work with your team or COEs to share knowledge and best practices about how to transform business processes throughout the enterprise.



03 CONSTRUCTING A COE TEAM FOR YOUR THUNDERHEAD.COM IMPLEMENTATION

As we alluded to above, it's one thing to develop a set of best practices for the organization to follow. It's quite another thing to make sure those best practices are followed, maintained, and, where appropriate, revised or discarded. Centers of excellence can help your organization achieve those goals.

For example, companies that commit themselves to delivering a great customer experience know that they must not only develop best practices around customer experience but make sure that every person embraces them and every process is aligned to it. Centers of excellence can be used quite effectively to define customer experience strategies, set standards, and promote best practices.

Technically speaking, centers of excellence are usually small, cross-functional teams or groups that establish and maintain a set of procedures to ensure that the larger organization can meet its strategic goals. Connie Moore from CIO Magazine suggests that to be most effective, companies should create COEs that are "small and nimble, and replicate them throughout the organization."¹ When building a COE team, you will likely want to fill a number of roles. This team must not only understand best practices for a Thunderhead.com implementation, they will also be responsible for understanding your organization's vision with respect to customer communications (and customer experience management).

Typical areas of responsibility we've seen in successful COEs include the following:

- New project sizing and risk assessments
- Data model and integration best practices
- Template best practices and brand governance
- Multichannel standards (with responsibility for output and print vendor management)
- Quality assurance guidelines

Although it's common for the COE itself to be managed within IT, members of the COE team often come from different areas within the organization, including key business owners and stakeholders in marketing, compliance, support, and customer service. This approach can ensure that the COE is responsive to the business while helping to drive standards and governance. Engaging all departments is especially important when the purpose of the COE is to implement a broad strategic goal, such as delivering a consistent, best-in-class customer experience

04

LEVERAGING YOUR INVESTMENT TO DEVELOP A GREAT CUSTOMER EXPERIENCE

As some enterprises are discovering, COEs are not merely helpful for developing and maintaining standards, these small agile teams can actually transform the larger organization. According to Alexander Peters from Forrester Research,

To turn initiatives into sustainable programs that continuously improve and transform processes, business process professionals must establish centers of excellence (COEs) as quickly as the organization can support them.

Continuous improvement is certainly a worthy goal, but sometimes wholesale transformation is needed. One area where that is often true today is the way in which many organizations handle customer communications and ultimately the customer experience. Unlike Apple (a company that obsesses about customer experience in every detail, at every touch point, in every communication), many businesses today offer their customers a fragmented or disjointed experience. The web experience is disconnected from the retail experience, online support is different from phone support, email and print communications are not related, and so on.

In its report, "The Customer Experience Index, 2012," Forrester found that customers rated only 37% of the companies they do business with as good or excellent. Nearly two-thirds received a rating of OK, poor, or very poor. Customers described experiences such as "going to a store, only to be sent to a website, then to interactive chat and a phone call, to end up with a paper form to sign." Customers, says Forrester, "are tired of it."

This fragmentation is why many organizations have turned to customer experience management (CEM). They recognize that customer experience is the responsibility not solely of the marketing department, but of the entire enterprise. They also recognize the important role that technology – and thus, the IT department – will play in ensuring that every touch point with the customer is considered and integrated.

Which brings us back to centers of excellence and Thunderhead.com. Thunderhead.com offers enterprise solutions that improve the way businesses engage with their customers. These solutions help organizations maintain consistent conversations and communications across all channels, from print to digital (web, mobile, and social) to the call center. Creating a COE around your Thunderhead.com implementation then allows you to steer the entire organization toward one goal: creating a stellar experience for your customers.

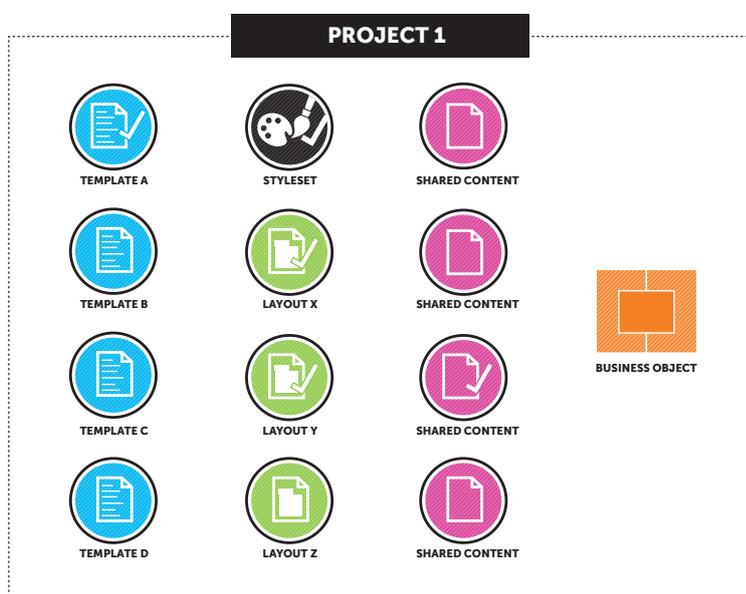
Imagine that you had this kind of pervasive dedication to your customers' needs across your enterprise. With the support of a customer-focused COE you could continuously improve the experience in every conversation. You could deliver exactly what consumers want, every time. Companies that deliver this superior customer experience outperform the status quo to drive customer loyalty, competitive advantage, improved brand health and increased revenue. Aligning an enterprise around creating a phenomenal customer experience is the kind of transformation that COEs are designed to enable.

WE'RE HERE TO HELP

Setting up a center of excellence may be a new experience for some of our customers, and we're happy to help with that. Our team at Thunderhead.com is available to conduct a best practices workshop with your organization and then work with you to establish a COE tailored to your business. Please contact us to learn more:

**customersuccess@
thunderhead.com**

APPENDIX 1. BEST PRACTICES EXAMPLES



Each of the graphics in this section represents an example of the types of best practices typically governed by a COE. Detailed guidelines documented in a standards manual increase effectiveness while also reducing the learning curve for new team members.

PROJECT MANAGEMENT AND RELEASE STRATEGIES

Best Practices for project release cycles should include a design which models the change cycle of the business. A business change may for example require changes to five templates, four pieces of shared content, and a layout. All of these items should be checked-out to the project to allow the change to be made. The document templates will themselves point to released versions of other resources – for example, a released styleset or a released piece of shared content. These do not need to be part

of the project as they do not form part of this business change.

In the Project A diagram example, some of the resources (with red ticks) are ready for release before other resources in the project. Best practices project management procedures should allow for separate projects to be created to enable individual resources to be moved forward while leveraging Thunderhead.com's built-in project management, approval workflow, and security.

SHARED CONTENT, STYLESETS, AND LAYOUTS

Standard stylesets and layouts to support company branding are an important area for governance. We recommend publishing a style guide for all Thunderhead.com communication to ensure adherence to the corporate brand as well as best practices for maintenance.

One of the hallmarks of Thunderhead.com is the ability to reuse and repurpose as much content as possible. Benefits of reuse include:

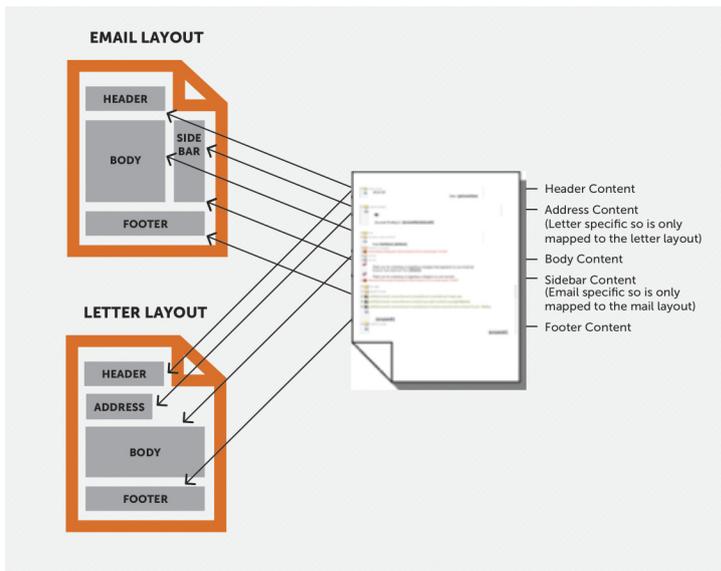
- Greater consistency across communications
- One central location for updates, so that one change will update all related communication.
- Ability to manage and view the impact of any change made to content that is common between communications

In order to maximize the benefit of shared content, Thunderhead.com makes the following recommendations.

Create shared content only when it is ready to be shared

Thunderhead.com's shared content concept is a key factor in efficient document creation and reducing the overall cost of maintenance. Shared content should only be created when it is needed and when all of the data items that need to be populated within it are available. While it is tempting to create shared content as soon as the static content is ready, it is best to wait until it is populated with data items or assembly rules, so that when it is imported into a template, the list of data items is created automatically. These data items can be set after the shared content is created, but it is much faster to do this after the data and rules have been created.

Here are some initial questions to answer to help facilitate a best practices review session where Thunderhead.com Professional Services will assist your organization with standards and governance leveraging a COE.



Create inline shared content for common phrases which vary by a business rule

Inline shared content is simply shared content that uses the Inherit style to inherit its formatting from the parent document template. This can be extremely useful for applications where there are common words and phrases which must be controlled by business rules. For example, a piece of inline shared content might be created which displays:

For questions, call Customer Service – Telephone: 1-800-555-1234

This could be utilized in many documents, providing for easy maintenance and a single point of update.

Use variable data by value, rather than by business object reference

Passing variable data by value is the default and allows multiple document templates to use the same shared content. For example, an address block might have input data for AddressLine1 through AddressLine6 and be used by

many document templates. If it were set up using business object references from within the shared content, it would only be reusable in document templates which use exactly the same business object. If you pass the data as arguments, the shared content can be used with many different business objects.

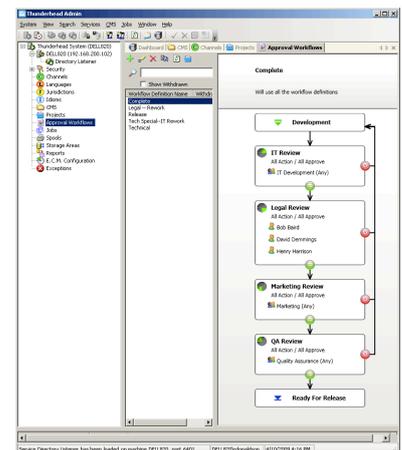
USERS, SECURITY, AND APPROVAL LEVELS

All elements of the Thunderhead.com platform (modules, tasks, processes, screens, etc.) are securely controlled using the principle of group-level access. Each time a request is made to use a particular resource, the group-level access attributes are checked against those marked on the resource. Defining standards is key for enterprise implementations. In addition, defining best practices for simple and complex workflows will ensure consistent efficiency within the organization. For example, workflows can be simple (taking entire projects directly from a state of development to a state of "ready for release") or complex (involving

multiple stages of approval from multiple groups and/or users), according to specifications.

The approval workflow functionality in Thunderhead.com's Approve NOW features:

- Multiple workflows per project
- Workflow design functionality that enables sophisticated workflow routing
- Parallel approval
- Group-based approval, in addition to approval by named individuals
- An Inbox showing all items awaiting approval
- Collaborative annotation
- Target completion indicators, which show at a glance which items in a workflow case require the most urgent review
- Synchronization with external third-party workflow systems, via the Thunderhead.com NOW API.
- Workflow cases are started from the Projects tab and are managed in Thunderhead.com Admin, via the Approval Workflows tab and the Inbox.



FORMS MANAGEMENT DESIGN AND META DATA

Best practices for forms management design are important especially when taking full advantage of the complex selection criteria.

Typically attachments are selected by multiple criteria such as line of business, state jurisdiction, effective date, commercial versus personal, etc.

However, consider the scenario where you have a large repository of forms that have metadata within resource categories that define perhaps 20 to 30 different metadata items. You could use any combination of those metadata fields to retrieve specific sets of templates or enclosures.

You can use resource categories with API calls such as searchCMSBy-ResourceCategory. You can also use resource categories from within Business Content Studio to retrieve shared content or to retrieve enclosures.

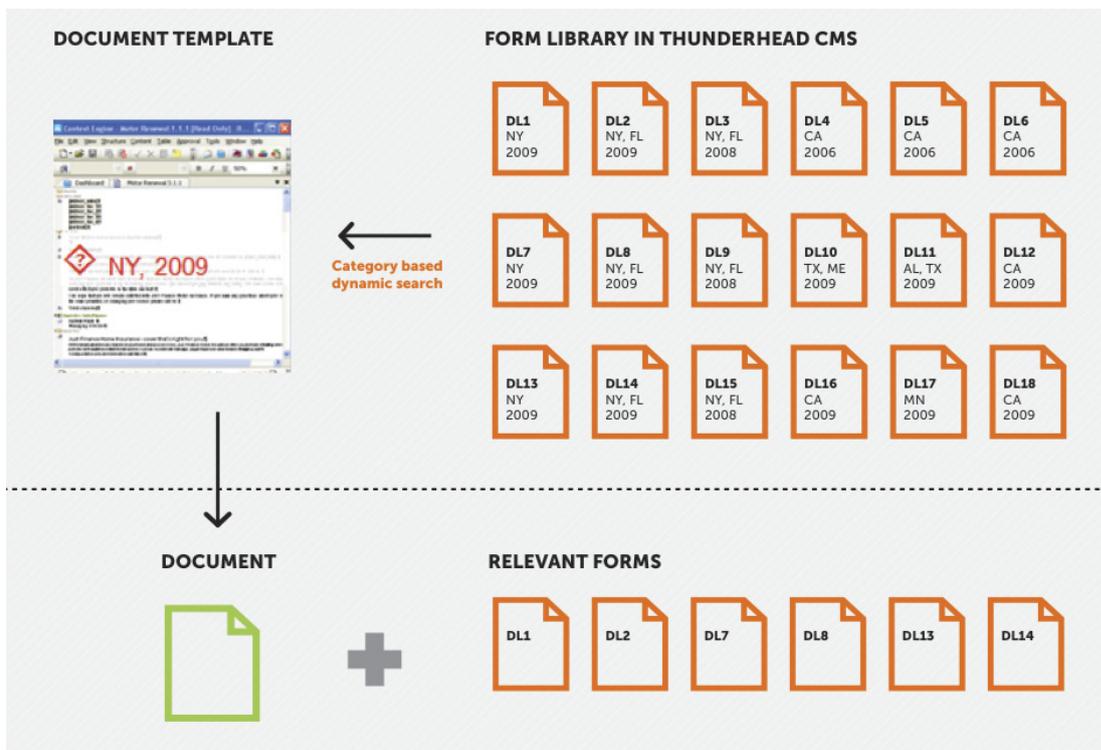
Standardizing the API calls for multiple business areas to leverage becomes a reusable asset best governed by a COE.

RISK MANAGEMENT AND QUALITY ASSURANCE

A final example of the types of best practices recommended for central governance are templates to help project managers follow proven methodologies for risk management and quality assurance. These templates are built upon years of experience

implementing complex projects in enterprise architecture environments. The templates include:

- Architecture sizing tools
- New project scope inventory and effort assessments guidelines
- Unit, system, and integration test plan templates
- Project plans for high-quality, low risk, iterative development
- Risk management considerations for various project types including multi-channel batch, real-time, web portal integration, and highly sophisticated interactive documents.



APPENDIX 2. CUSTOMER SURVEY: GETTING STARTED WITH A BEST PRACTICES REVIEW

Here are some initial questions to answer to help facilitate a best practices review session where Thunderhead.com Professional Services will assist your organization with standards and governance leveraging a COE.

BUSINESS OBJECTS AND XML SCHEMAS

Ref#	Details
BOXML1	How many business objects are being utilized in the Thunderhead.com environment?
BOXML2	What are the main factors for usage of multiple business objects? For example: feeding systems, applications, communication types.
BOXML3	Is there common data across all business objects? For example: an address class, etc.
BOXML4	Is all business object creation and maintenance facilitated through an XML schema (XSD file)?
BOXML5	Does the schema(s) reflect any common domain level data? For example: a recipient schema used to define a commonly used recipient class.
BOXML6	Is data organized into domain level classes and template specific classes? For example: data common to all communications in a set of classes and template-specific data organized into further classes.
BOXML7	Is all data strongly typed? For example: monetary amounts defined as integer data types as opposed to strings.
BOXML8	Is the naming convention of data items "template author" friendly? For example: X101_Dt vs Policy_Modification_Date.
BOXML9	Are enumerations being used where appropriate? (Enumerations should be used, where possible, for all data items that have a predefined list of possible values. This mitigates risk of template authors incorrectly coding assembly logic.)
BOXML10	In the case of large data models, are views being used? (Views can limit how much of the entire data model is visible to template authors, thus improving usability.)

DATA MANIPULATION AND AMALGAMATION

Ref#	Details
DATMA1	Are derived properties being populated with SQL queries out to external data sources? If so, approximately how many derived properties are being populated this way?
DATMA2	To what extent are derived properties being used and, in general, for what purpose? Could the data manipulation be handled further upstream – for example, by the extract program or existing ETL layer?

SAMPLE DATA

Ref#	Details
SMPLD1	Does a library of sample data exist for template authors?
SMPLD2	To what extent are derived properties being used and, in general, for what purpose? Could the data manipulation be handled further upstream – for example, by the extract program or existing ETL layer? Do all business object updates, including development of derived properties get tested with sample data?
SMPLD3	Do template authors have the necessary XML skill set to update Thunderhead.com sample data to facilitate unit testing assembly logic?

CMS ORGANIZATION

Ref#	Details
CMSOR1	Are Thunderhead.com resources being organized by type? For example: folders for sample data, folders for shared content, config files, etc.
CMSOR2	Is there a client-specific domain structure in place representing application or line of business?
CMSOR3	Does the folder structure lend itself to easily facilitate the propagation of security permissions?
CMSOR4	Is the naming convention intuitive for folders and the contained resources?
CMSOR5	Are keywords or descriptions being assigned to resources to aide locating of resources?
CMSOR6	Does the CMS folder structure represent ownership of content? For example: shared content owned by a specific business group organized as such to facilitate ease of assigning permissions so that only the appropriate group can edit the shared content resources.

PROJECT USAGE

Ref#	Details
PROJCT1	Are individual projects used by multiple developers for collaboration?
PROJCT2	Does project usage reflect an actual project or program of work being conducted?
PROJCT3	Does project usage reflect a collection of related items of work that must be completed on or near the same date?
PROJCT4	What are the development processes with regards to project migration into testing and production environments?
PROJCT5	What are the development processes with regards to project rollback?
PROJCT6	Is the enterprise licensed for Approve NOW? If so, are Approve NOW workflows being used?

STYLESETS

Ref#	Details
STYLST1	Is the styleset naming convention intuitive and a reflection of the style's use rather than its characteristics? For example: Body_Header vs. Arial_14pt_Bold.
STYLST2	Are styles being used appropriately across all channels? For example: Body_Header defined across all channels vs. Body_Header_Print and Body_Header_Email.
STYLST3	Are styles being used to control paragraph related white space? For example: space-after attribute being used vs. carriage returns in the fragments.
STYLST4	Are widow/orphan controls being used to prevent content breaking inappropriately across pages?
STYLST5	Are table styles being used according to best practices? For example: definition of row/cell styles etc., that are then referenced by a parent table style. Also the design of the styleset should separate the formatting of table cells into typeface-oriented attributes (font-family, line-height, font-weight) and cell box attributes (borders, background-color, etc.). For example, you might create a styles tableBody and cellStyle and use tableBody across all of your table cells for the character formatting and use the cellStyle to present lines around the edge or background shading. Using this approach allows box formatting to be changed independently of the character formatting which can save time later when you need to add table heading or totals style.
STYLST6	Is text transformation being handled by an inline style where appropriate? For example: using uppercase attribute to transform a string data value to uppercase.

SHARED CONTENT

Ref#	Details
SHDCN1	Is shared content being used liberally?
SHDCN2	Has shared content been created using generic arguments (not tied to specific business object classes) to define its arguments?
SHDCN3	In the case of shared content created using anything other than the generic method of defining arguments mentioned above, is the entire business object being passed to the shared content? Or a specific class?
SHDCN4	Has nested shared content functionality been taken advantage of? For example: Nesting three address-related shared content resources into a single, all encompassing, address-shared content.
SHDCN5	Are commonly used business phrases, phone numbers, etc., being created as inline shared content?
SHDCN6	Is all inline shared content style-agnostic? For example: all content set to "Inherit" style.
SHDCN7	Has consideration been given to using shared content to provide a template library for content too dynamic to qualify as traditional shared content?

DDVS

Ref#	Details
DDVRV1	Has rationalization been conducted on the DDVs?
DDVRV2	Do DDV "templates" exist? For example: a resource that a copy can be made of to accelerate the development process. The template contains the defined channel, business object argument, styleset references, etc., as well as any regions of the documents that are always reused, such as the address or header sections.
DDVRV3	How extensive is the use of repeated document-level scripting across DDVs? Could this be created as functions within a function library?
DDVRV4	Are DDVs well organized and structured with regards to the usage of sections and fragments?

ASSEMBLY LOGIC

Ref#	Details
ASLGC1	Has assembly logic been implemented according to coding best practices? For example: appropriate use of parenthesis, appropriately nested logic, etc.
ASLGC2	Has advanced assembly logic been implemented where appropriate? For example: "when" statements vs. repeating "if, else if" statements.
ASLGC3	Has advanced content been implemented where equivalent functionality could have been achieved with the use of shared content?
ASLGC4	Is inline logic being used to mitigate the need for repeating high percentages of text across fragments?
ASLGC5	Could assembly logic around enclosures or shared content links be reconstructed to take advantage of dynamic enclosures and/or dynamic shared content?

MULTICHANNEL ENABLEMENT

Ref#	Details
MLTCH1	Is the enterprise making use of Thunderhead.com's multichannel capabilities?
MLTCH2	If so, are single DDVs being used for multichannel communications? For example: one DDV configured to output content to print and email.
MLTCH3	Are fragment editions and content to region mappings being used to appropriately vary the content across delivery channels?
MLTCH4	Has the shared content library also been configured to reflect the multichannel configuration? For example: a single piece of shared content for the company logo, with two channel-related editions vs. two separate pieces of shared content, each housing a version of the company logo.
MLTCH5	Are channel job properties being used to pass post rendering processing related data to the appropriate channel output?

THUNDERHEAD NOW
LEADING THE WAY IN CUSTOMER COMMUNICATIONS MANAGEMENT

ABOUT THUNDERHEAD.COM

Thunderhead.com is a leading provider of enterprise solutions for customer experience management. The Thunderhead.com ONE customer engagement platform provides powerful SaaS solutions that fundamentally change the way businesses engage with each other and their customers. Some of the world's most demanding companies trust Thunderhead.com to help them build customer engagement and create enduring relationships. With Thunderhead.com, businesses have more power to drive revenue, brand strength, and differentiation through superior customer experience. Thunderhead.com serves its global customer base from offices located in North America, Europe and Asia Pacific. See: www.thunderhead.com

info@thunderhead.com

Copyright © Thunderhead 2009. All rights reserved. Version 1.0 (UK). Thunderhead endeavours to ensure that the information within this document is correct and fairly stated, but does not accept any liability for any errors or omissions.

**THUN
DER
HEAD
.COM**