



REQUEST FOR INFORMATION

# ASME Standards C&S Connect Replacement

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## REQUEST FOR INFORMATION

The American Society of Mechanical Engineers is undertaking a project to replace its legacy Standards Development System.

As part of the effort, ASME will use this Request for Information (RFI) to help decide on the best technical avenue and partner for the implementation. Evaluation of responses will determine whether building a custom solution, buying existing product, or a combination of the two is required to meet ASME's current and future business needs.

## ASME BACKGROUND INFORMATION

ASME is a not-for-profit membership organization that enables collaboration, knowledge sharing, career enrichment, and skills development across all engineering disciplines, toward a goal of helping the global engineering community develop solutions to benefit lives and livelihoods.

Founded in 1880 by a small group of leading industrialists, ASME has grown through the decades to include more than 130,000 members in 158 countries. From college students and early-career engineers to project managers, corporate executives, researchers and academic leaders, ASME's members are as diverse as the engineering community itself.

ASME serves this wide-ranging technical community through quality programs in continuing education, training and professional development, codes and standards, research, conferences and publications, government relations and other forms of outreach. ASME's core values are rooted in its mission to better enable mechanical engineering practitioners to contribute to the well-being of humankind.

The governance of the Society is the responsibility of member-elected governors, who volunteer their vast knowledge and expertise to the organization. The board of governors and other volunteer leaders of ASME work in collaboration with a professional staff to shape the Society's programs and strategies and make them available to engineers throughout the world.

ASME administers its programs through offices in the United States, Belgium, China and India and through various committees and groups, to ensure that the myriad technical interest(s) of its member and the global engineering community are met.

For additional information on our Organization, please visit our website at [WWW.ASME.ORG](http://WWW.ASME.ORG)

## ASME C&S CONNECT OVERVIEW

ASME C&S Connect is a member's only legacy ColdFusion web application that was launched in 2000 to facilitate ASME's standards development process. The system is accessed primarily by ASME standards committee members and staff. However there are some areas, such as committee web pages and a database of interpretations of standards, which are publically accessible on the internet.

ASME C&S Connect System currently has approximately 5500 users. The system allows committee members to track and update work items such as revisions to existing standards. It is also the primary means of committees casting ballots and voting to approve various proposals and revisions.

In addition to tracking work items and votes, C&S Connect allows system users to view meeting agendas and minutes, find contact information for other system users, receive communications, and view other important documents.

C&S Connect is integrated with ASME's membership system, TMA Personify, and other supporting systems related to specifying committee meetings, publishing standards, and others.

The purpose of this project is to replace C&S Connect in its entirety. For the replacement, ASME is looking for an application that

- Provides existing functionality with an improved User Interface and User Experience.
- Allows for following established organizational procedural requirements to facilitate the ASME standards development process. This includes record management and proposal tracking, and a customizable ballot/voting workflow.
- Allows for document management of standards revisions including version control and inline text editing, or integrates into a module that has that functionality.
- Integrates with other systems, such as Personify, asme.org, and internally developed applications.
- Provides a content management system that is capable of storing various file types including video, MS Office, Adobe, and others.
- Offers the ability to create reports and system analytics.
- Ensures current and future browser and operating system compatibility, including Mobile Platforms

## ASME C&S CONNECT PUBLISHING OVERVIEW

The approved ballots/records in C&S Connect are standards or portions of standards. The standards, as either individual records that make up the changes of a given standard or the modified standard as a whole, and some metadata are passed off to C&S Publishing. Any changes from the previous edition must be clearly indicated unless it is an entirely new standard or rewrite.

Currently, all proposals for revisions to standards is done outside of C&S Connect in other applications, such as commenting PDFs in Acrobat, markup on scanned pages, textual changes compiled in Word, or table work presented in Excel.

Some C&S Connect reporting is utilized by the C&S Publishing Team, and some C&S Publishing reporting is presented back to C&S Connect.

Once published/issued electronically, PDFs of the standards are made available for the appropriate committees. Certain standard lifecycle events/states are also shared from publishing to C&S Connect/committees, such as a Reaffirmed or Sustained Maintenance in the form of a revised PDF and limited metadata.

## RFI REQUIREMENTS – GENERAL SYSTEM NEEDS

The following is a list of general requirements for the new C&S Connect system:

### 1. **User Roles and Permissions**

Defined role-based security and permissions for the whole system to determine the level of access the user will be allowed to perform for specific actions. Users enter their email address and password via the ASME Single Sign-On interface and are granted permissions and views based on the role(s) assigned to their account.

### 2. **Notifications**

The new C&S Connect system requires notification and email capabilities. These notifications need to be both system generated emails and user generated emails. Notifications, in general, shall be captured within a user's profile.

- **System Generated Notifications & Emails:** The new system will need to have the capability of sending automatic notifications & emails to C&S Connect users based on business and conditional logic. System administrators should be able to modify and create new system generated emails without developer support.
  - **User Generated Emails:** C&S Connect users need to be able to send email messages to other C&S Connect users from the system.
  - Users should have the option to opt-out of some system generated emails.
3. **Compatibility across Major Operating Systems and Major Browsers**  
The system will need to be compatible with all major operating systems and major browsers. The user experience should be the same regardless of browser.
  4. **Mobile access**  
The system should be accessible by handheld mobile wireless devices such as smartphones, tablets, iPads, etc.
  5. **Security and Data integrity**  
Measures must be taken to ensure data security and integrity. The system must provide assurance that information can only be accessed and modified by authorized users. Data transfer must be secured and safeguarded against data loss in the event of a system failure. It should also maintain thorough authentication practices to restrict data access by unauthorized users. A Data Disaster Recovery Plan should also be provided for occurrences such as power outages, server failure, and virus attacks.

## RFI REQUIREMENTS – STANDARDS DEVELOPMENT AND MANAGEMENT NEEDS

The following is a list of requirements specific to the needs of ASME’s standards development process:

1. **Work Item Tracking – Records, Ballots, and ANSI forms**  
The new system must track work items through the ASME standards development process. Currently there are three main mechanisms for doing so.
  - a. **Records-** There are currently 6 record types that are used to manage committee work. These record types are Component Record, Code Case Record, Entire Document Record, Interpretation Record, Reaffirmation Record, and Membership Records. Component, Code Case, Entire Document, and Interpretation Records all have 3 views: Create New, Update, and View. Typical records have a file attachment that contains the standard or revision to the standard.  
  
Record forms are used for tracking committee actions. Actions include, but are not limited to, developing or revising an ASME standard, and routine approval of administrative actions such as awards or technical papers.  
  
The record contains fields which are used for explaining what the action or proposal is, who owns the action, and also has a section to attach files including the actual proposed standard or revision. When a committee member, who is acting as a project manager considers the proposed action complete, the record is sent to the full committee on a ballot form for voting.
  - b. **Ballots-** Ballots (Voting) are used to approve records. The current ballot types are Component Ballot, Entire Document Ballot, Weighted Ballot, Board Procedural Ballot, Recirculation Ballot,

Interpretations Ballot, Membership Ballot, and Real-Time Ballot. There are multiple ballot views, some of which are dependent upon the user role. The primary views are create new, update, and view. Those with the role of committee member have a vote on ballot form view. There are 2 similar staff views that allow ASME staff to enter a vote for a member or modify a member's vote.

Ballot forms are used for collecting committees' feedback on one or more records. During the voting period, the committee members submit approved or disapproved votes and comments related to the proposal.

The project manager reviews these votes and comments and then responds accordingly within the system. If the proposed work item needs to be modified, the record is updated, and the committee is balloted again. If the committee approved the proposed action, the record is sent to the next committee up the hierarchy on a ballot for their approval. This process continues until all of the necessary committees have voted on the record and approved it.

- c. **ANSI forms-** These are forms used to submit approved revisions of standards through the American National Standards Institute (ANSI) process. There are 5 types of ANSI forms, PINS, BSR-8, BSR-9, BSR-10, and BSR-11. These forms can be have 3 views – New, update and view.

ANSI Forms are used to submit a record through the ANSI process once the record is approved through balloting. If the work item is to develop a brand new standard or to revise certain types of standards it is sent to ANSI as part of a project initiation notice (PINS form). If the work item is to revise a standard, first it is submitted to ANSI for a public review period on the BSR-8 form. After the public review period is complete, the proposed action is submitted to ANSI for approval as an American National Standard on the BSR-9 form. If more time is needed to complete the ANSI process, an extension can be requested using the BSR-11 form. The BSR-10 form is used for standards that are not updated for long periods of time. The ANSI forms are presently exported as a Word document and transmitted to ANSI.

The different types of records, ballots, and ANSI forms have varying functionality based on business rules for each specific type. Records, ballots and ANSI forms are linked and connected

## 2. **Document Storage/Management/Sharing**

Provide a Document Management tool to centralize, store, manage, track, version, share, and modify documents electronically in a secure and efficient manner, and to increase productivity and meet compliance requirements. The tool must allow for full-text searching of documents.

Examples of documents include the following: procedures, operating guides, meeting agendas and minutes, committee informational documents, volunteer working documents for committee sharing, and files that are attached to records and ballots.

## 3. **View Committee Information**

Provide a content management system for committee web pages.

## 4. **User customization/dashboards**

Develop functionality to allow users create their own dashboards that will override the default one.

## 5. **Work item tracking functionality**

Users need the ability to be able to track work items, such as records, that they are responsible for and be able to easily handle tasks associated with those items. Typical project manager actions include updating

proposals and responding to ballot comments. There is no limit to the number of records/work items an individual can be managing at one time.

#### 6. **Help Material**

Provide an updateable online help repository for users to support them in accomplishing tasks within the context of their committee. The online help material should include tutorials to guide users through the voting process, and to demo particular tasks and procedures. The Help platform should: allow for storage and display of videos to allow for self-directed learning, provide the ability to save and print the material, include searching and interactive capabilities, and the ability to manually modify its content.

#### 7. **Offline Work Capability**

The ability for members to be able to work with offline capabilities without a connection is mandatory. Members should be able to enter their data remotely and then have that data automatically sync with the server when they regain network connectivity

#### 8. **Reporting, Auditing, Analytics**

- Reporting – Both preconfigured reports and the ability for users to develop their own reports is required (similar to an advanced search). The reporting approach will need to permit the ability to download, print and save a report, export reports in a variety of formats such as PDF, MS Word, HTML, XML, MS Excel, text, and other applications. Customization and updates of the report layout is also a must, including adding and deleting fields to the report layout.
- Auditing- Include a system auditing tool that will comply with ANSI's auditing policy. Provide monitoring tools for the Staff to determine and track different types of events which will be recorded and maintained via security logs.
- Analytics - Provide a web analytics tool to measure, collect, analyze, report, and display information about visitors and registered users including number of page views, most common pages viewed, and different paths to access certain pages, to assess the system performance and usage.

#### 9. **System Searchability**

The system will need to include search function to enable users to locate online content. Search engines that work best with large volume of data and queries should be used for the new system. The search function will centralize the existing Quick Search, Advanced Search, Membership and Committee Page search.

#### 10. **Data Retention Policy**

The new system must include functionality to execute ASME's data retention policy by providing reports and alerts prior to the removal of the data based on the schedule set forth in the policy based on data type.

#### 11. **System linkages**

- Existing System linkages - The new C&S Connect platform must utilize ASME's Single Sign-On implementation for user login and authentication. C&S Connect membership information, including the hierarchy of committees, users' membership terms, and committee position is managed in TMA Personify, ASME's Association management system. Therefore, the new C&S Connect platform will need to integrate with Personify. Currently the systems are integrated via a SQL batch job that replicates all required information from Personify to CS Connect on a scheduled basis.

Additionally, the new platform will need to integrate with or replace all existing internally developed applications, such as the meetings database, the publications database, prospective member forms, and ANSI letters.

- New/Potential system linkages - The new platform should have the capability to be integrated with other Standards and Certification applications. These include CA Connect and associated .net applications for ASME Conformity Assessment operations. ASME requires the ability to be able to link with publishing applications and potentially to track revisions in XML. These integrations will allow ASME to continue to grow and meet 21st Century needs and expectations.

#### 12. Interpretations Submittal and Display

Members of the public are allowed to submit requests for interpretation of standards to ASME using a publically available web form. This form then creates a record in C&S Connect for the committee to process. Once an interpretation is approved, it is made available to the public on a searchable database. This functionality needs to be included and improved upon in the new C&S Connect platform.

#### 13. Generate Minutes and Agendas

One of the most common tasks performed by our staff is generating minutes and agendas. The new system should accommodate generating minutes and agendas based off information captured on records and ballot forms, members' profile and committee rosters.

#### 14. C&S Publishing/Document Management

C&S Publishing is currently working with a number of standards organizations and stakeholders to create an XML standard for standards publishing (<http://www.niso.org/workrooms/sts/>). This XML will be the foundation for publishing and metadata distribution. The following reflect long term goals and requirements:

- Online text editing (of the underlying NISO STS XML) is supported, along with revision tracking, with the ability to output these in-progress documents (with the change tracking represented) as Word docx and PDF documents.
- The ability to do online editing is an option, as would uploading files more in line with what we receive today as described above.
- Ability to upload and define source graphic/ancillary files as an integral part of a specific record, even if online editing was chosen as the option for textual changes.
- A standards CMS that is either integrated with or used by C&S Publishing for managing the content of ASME standards.
- Metadata fields need to be shared between Publishing Systems and this system.
- Clear versioning/lifecycle descriptions must exist for any record
- Ability to provide published PDFs back to the pertinent committees.

## CONTACT INFORMATION, TIMING, VENDOR INFORMATION, REQUIREMENTS CLARIFICATION AND SUBMISSION INSTRUCTIONS

### CONTACT INFORMATION

Questions regarding this RFI should be emailed to the individuals listed in the grid below. Under no circumstances are you to contact any other ASME employee for information without first contacting the individual(s) below. Communication about this RFI to individuals outside of this list may be deemed unofficial.



#	Name	Department/Title	Phone	Email
1	Daniel R. Sharp	Manager, S&C Process Management Dept.	212 591 8538	sharpd@asme.org
2	Joseph LaPlaca	Project Specialist, ASME Information Technology	212 591 8615	laplacaj@asme.org

## VENDOR INFORMATION AND SUBMITTAL INSTRUCTIONS

Please fill out the attached Excel document and return it by email to the contacts listed above.

## TIMING

The completed Excel file needs to be returned by **Friday December 2, 2016**.

## CLARIFICATION AND DEMONSTRATION PERIOD

It is expected that prospective vendors will have questions related to the requirements set forth in this document. It is also anticipated that demonstrations of ASME's current system would be beneficial to prospective vendors to allow ASME an opportunity to clarify our process, strengths, and needs.

To this end, a two week clarification period will be held from **November 7<sup>th</sup> to November 18<sup>th</sup>**. During this period ASME will set up web conferences and be generally available to answer questions and provided needed clarification/demonstrations.

To set up a time, please contact Daniel Sharp at [sharpd@asme.org](mailto:sharpd@asme.org) and CC Joseph LaPlaca at [laplacaj@asme.org](mailto:laplacaj@asme.org).

It is preferred that all questions are submitted via email so that questions can be answered and circulated simultaneously to all prospective vendors.

# APPENDIX I

## SUPPLEMENTAL INFORMATION

The following supplemental information is hoped will help prospective vendors better understand ASME's process and needs:

Procedures for ASME Codes and Standards Development Committees

<https://cstools.asme.org/csconnect/FileUpload.cfm?View=yes&ID=25963>

High level standards development process flow:

