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ASTM International speeds delivery of standards-based educational and test-reporting services

CCC develops publishing platform to make enterprise content easy to access and produce across an organization

More than 30,000 people from 150 countries create and update standards through ASTM International, one of the world's most respected standards development organizations. ASTM is committed to serving global societal needs and strives to positively impact public health and safety, consumer confidence, and overall quality of life. To improve lives, the company develops voluntary consensus standards with an international membership of volunteer technical experts and innovative services.

ASTM INTERNATIONAL

Industry
Standards

Location
Global

About
Over 13,000 ASTM standards operate globally. These voluntary consensus standards improve the lives of millions every day. Combined with ASTM's innovative business services, the standards enhance performance and help everyone have confidence in the things they buy and use.
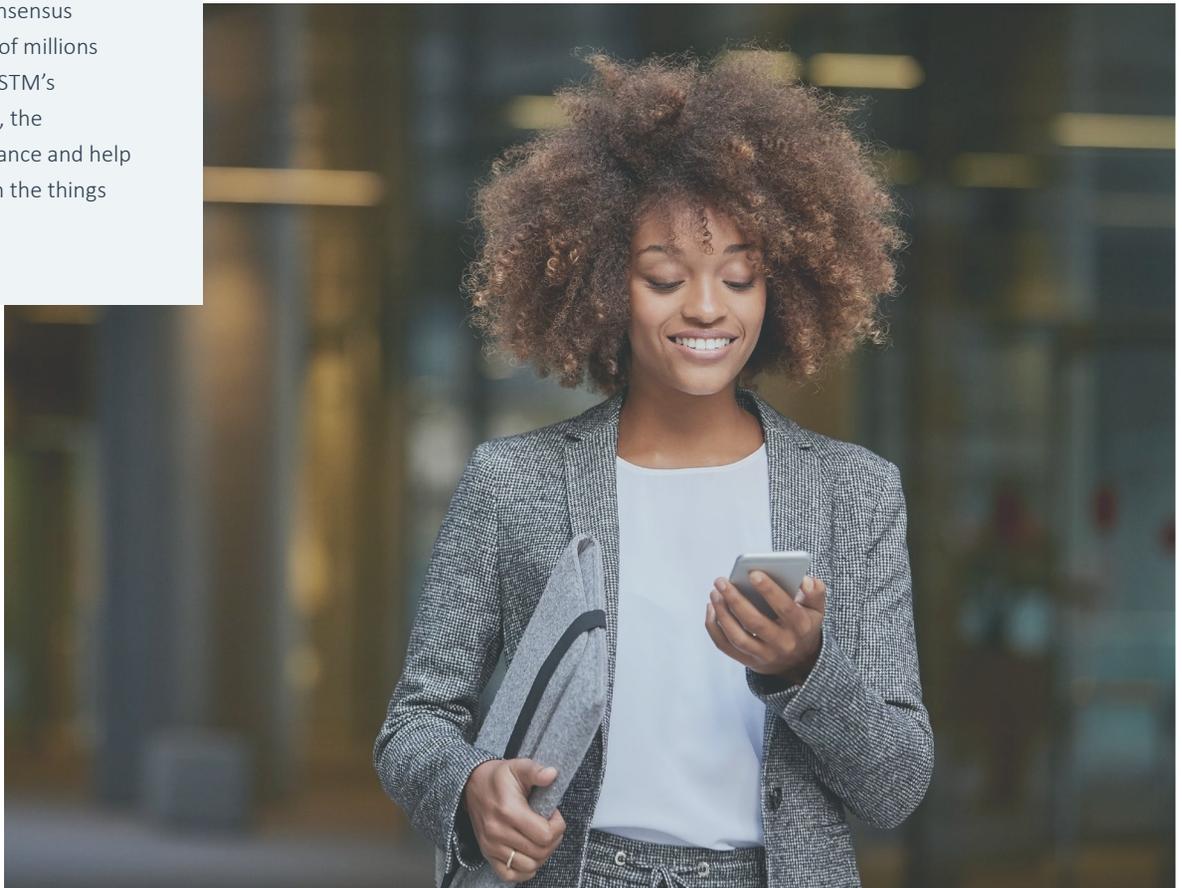
The challenges

ASTM has been a leader in the field of standards for many years, adopting an SGML-first workflow in 1998. Since that time, the organization has developed processes that support the publication of thousands of new and revised standards every year.

To improve its ability to scale and diversify its publishing capabilities, ASTM sought to enhance the core tools used to author and revise their standards. As part of this initiative, ASTM also identified the need to deploy a new content management system (CMS) with the goal of better supporting the internal teams that provide supplemental services for standards. This included the eLearning team, which provides educational content, and the Interlaboratory Study (ILS) team, which conducts and issues research reports.

Both teams relied on a multitude of home-grown solutions, manual processes, and storage silos to produce and update content. This environment created ambiguity in the creation of educational and testing content and diminished transparency in project management processes. The environment was also challenging for ASTM's IT team, which provides technical support to the eLearning and ILS teams. Collectively, these three teams were increasingly distracted from ASTM's more strategic initiatives aimed at supplemental services.

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>
> **Athena Huss**
> Instructional designer for technical training and elearning at ASTM

As a result, ASTM launched a content-management project to achieve the following goals:

Modernize content management

The ASTM content management tool for standards editorial production at the time was over 25 years old and lacked features commonly found in modern solutions. Over the years, the platform had gone through extensive integration and customization. ASTM hoped to identify a flexible component CMS to accommodate strategic growth.

Provide transparency into course production progress

The eLearning team used multiple tools to produce courses to help customers understand and leverage standards. For example, different software products were used to handle storage and transfer (Dropbox), workflow (Basecamp), authoring (Word, Articulate), reporting (Excel), and tracking (Smartsheet). The team also wanted to receive proactive milestone notifications when changes occurred to standards linked to course material. This would streamline workload planning and eliminate manual investigations into standards changes. Another challenge for eLearning was tracking the progress of educational content handled by dozens of instructional designers (both internal and external). Designers experienced this at a granular level (e.g., individual content items) and at a higher course level (e.g., the overall readiness of the course for publication).

Automate manual, low-skill tasks

The ILS team was hindered by numerous manual tasks that prevented them from offering standards committees the full value of their standards testing services, which affected both content and metadata. For example, the team tracked content via spreadsheets, organized folders on network drives using bespoke file-naming conventions and spent a disproportionate amount of time generating PDF research reports. The delivery method for publishing the reports was also labor-intensive and protracted, involving requests to the ASTM IT support team. The reports were then distributed to numerous internal and external parties to complete the publication process.

> "With the help we received from CCC, we improved our ability to ensure content is consistent, correct, complete and easy to access. Our internal teams have also improved their efficiency in generating content that supports our mission to help our clients continuously evolve their standards."

Julie Sabo
Director of graphic design, digital output, and production services at ASTM

The solution

To solve these challenges, ASTM sought a replacement for its CMS, which had become a niche application that limited the ability to scale content management across the organization. Because the CMS sits at the heart of the business, ASTM decided to take a phased, agile approach to mitigate risk and costs. They focused first on deploying a content-delivery system for the assets produced by the eLearning and ILS teams.

Among the vendors considered for this project, CCC emerged as the best partner for ASTM. "CCC fostered a team-oriented relationship and adjusted easily to the number of internal resources we could provide on the project," says Julie Sabo, director of graphic design, digital output, and production services at ASTM. "They led us through the various project phases with in-depth explanations and tools to help our team succeed in meeting the project's mission. CCC made the process easier by learning extensively about our organization and how each process and content asset works."

Envisioning the transformation to automated process

Starting with a proof-of-concept (PoC) of the publishing platform, CCC provided a dedicated, on-site resource to assist with hands-on guidance and help ASTM staff become familiar with the content delivery system. Following the success of the PoC, CCC hosted a high-level discovery workshop and developed a detailed solution, leveraging CCC's define-and-design process.

"CCC also collaborated with our teams to align the content delivery system requirements to the out-of-the-box and configurable functionality of the publishing platform," says Sabo. "This approach demonstrated the power of the core technology and enabled our teams to envision how the new solution would significantly transform manual processes into automated workflows while also improving content consistency."

Change-notifications trigger project creation

The CCC team then applied its in-depth knowledge of data flows to identify the master sources for informing the content delivery system of user changes to standards. These changes act as triggers for planning workloads and initiating the content authoring and publication processes.

Working closely with the ASTM data experts, CCC created a simple API and JavaScript solution to integrate ASTM data sources and the publishing platform. As specific standards related to the eLearning and ILS teams reach key milestones — such as a revision to a standard or a new standard that has been approved or published — each team automatically receives a notification.

CCC took these notifications one step further, automatically generating new project structures within the publishing platform and pre-populating them with existing content from both the platform and the ASTM MarkLogic database via another API integration. By automating this workflow, ASTM eliminated tasks the eLearning and ILS teams previously had to perform manually. CCC also integrated the publishing platform with a critical ILS system that provides users with a seamless transition from report content and lab data curation to work-in-progress product assembly and distribution.

The results

By eliminating manual project-management and content-access steps, the CCC publishing platform allowed the ASTM eLearning and ILS teams to invest more time working with the standards committees on strategic initiatives to improve the organization's supplemental products. Each time a change to a standard occurs, the CCC publishing platform automatically generates a project in real time, copies the prior version of associated assets, and identifies any supplemental services that the eLearning and ILS teams need to update. These functions eliminate the need to go through manual steps and communicate with project resources through email, which previously slowed projects.

Another benefit is more consistent data. All users now access a single source when working on projects. And, to launch a new project, ASTM personnel simply click to assign tasks rather than creating entirely new projects from scratch.

Quick and easy project status views

With the new platform, anyone working with content to update an educational asset or a research report knows they have all the information they need and that they are working with the latest file versions. And after a supplemental services update is launched, the publishing platform provides a portal view into the ASTM MarkLogic data repository.

"Rather than relying on IT for help, we can now publish content directly to the MarkLogic data repository," says Caitlin Farrell, ASTM's ILS team project manager.

Faster course updates and greater control over changing content

Any changes that occur to standards educational content are now available to ASTM clients much sooner. "With our previous process, it took 45 days to complete updates to courses after a change to a standard occurred," explains Athena Huss, instructional designer for technical training and eLearning at ASTM. "We now complete updates within a few days. We also reduced contractor costs because they no longer spend time searching for content they need—the platform connects with every asset we need automatically."

The CCC publishing platform also helps with educational asset versioning. As course changes are applied for every change to a standard, ASTM is able to reduce the time compared to manually checking spreadsheets and creating new folders. And if there's a change that project managers do not like, or if someone mistakenly overwrites content, ASTM can easily revert to a previous version.

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Learn more

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