

Finding the Right Standards Management Solution

IHS Whitepaper

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As an engineering standards and technical specification user, you face at least two challenges after you've identified the standards you are going to use: obtaining the standards and managing the standards and their use.

Considerations when identifying an approach to meet these challenges include cost, access, ease of use, and reliability of the information. If the staff that need access to the standards are located in multiple offices, assuring that everyone has access to the standards and that the correct versions of the standards are being used will be a key concern.

Ideally, you want a solution that provides

- geographic accessibility
- allows for access 24/7
- has minimal impact on corporate resources
- provides information that meets quality requirements
- a way to meet copyright restrictions and use agreements
- ease of use

There is the simple approach for obtaining the standards you need - visiting each standards development organization's (SDO's) web site and ordering a paper version of each standard. For immediate access and to save on paper, you might be able to download electronic copies from each SDO.

To save time and the avoid headache of setting up multiple suppliers in your procurement system, you can find a third party re-seller. This allows you to purchase your hard copies or electronic versions of the standards from all the SDOs from a single source.

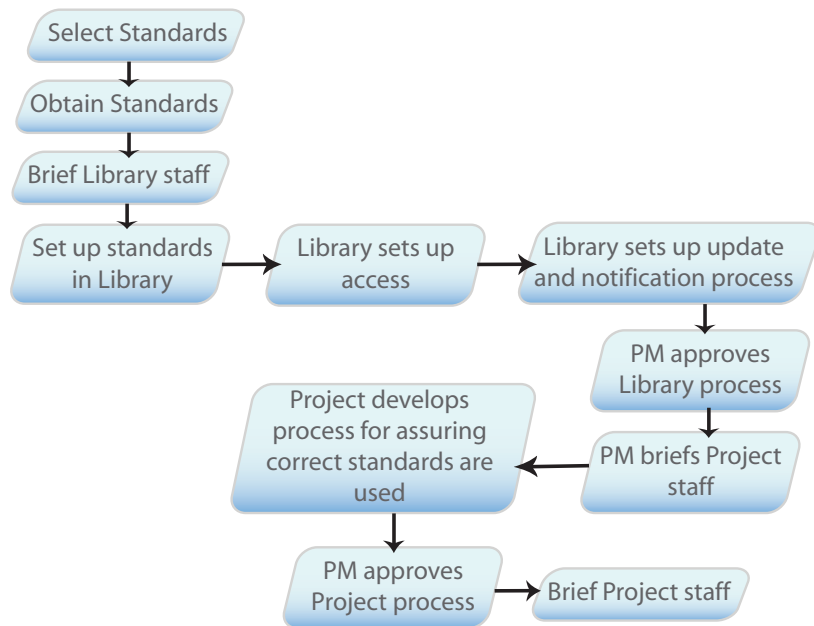
These options meet your first challenge, obtaining the standards. Now, you need to manage the

standards themselves and assure they are being used.

Use the Right Version for Compliance

Standards management becomes easier if you aren't planning to use the current version of the standard at all times. If you are using a specific version, you won't need to worry about updates. However, selecting a specific version of the standard for use is often only an option for the duration of a specific project. Also, because revisions of standards sometimes result in beneficial improvements, you may want to reserve the right to use updates. No matter what scenario is applicable for you, at some point you will likely become concerned about standards updates.

So, you need to put in place a system for keeping your standards current. If you've obtained paper copies of the standard, you'll need a place to store them and assign someone the responsibility for physically updating the documents. Don't forget, you'll need to notify users of updates and you may need to update multiple copies particularly if staff are geographically separated.



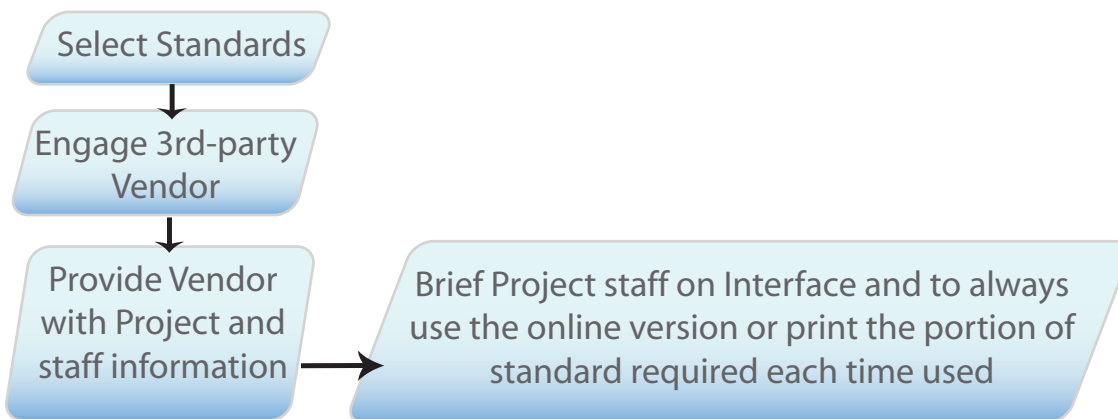
Establishing a paper-based standards library takes considerable resources.

If you're using electronic copies, you'll likely need to put them up on your intranet. Depending on the usage agreement with the SDO, you may need to control the number of people accessing the documentation at any one time, control the printing of hardcopies, and maintain license agreements for multiple locations.

If you've gone to a third party to purchase your standards, you may have a third option in addition to managing paper copies or setting up a system on your intranet.

Third party Internet-based database providing flexible, easy standards access addresses multiple concerns when looking at standardization. Even if you think your needs are simple enough to be considering paper copies for standards, a managed information solution offers multiple benefits and is worth evaluating. If your standards management needs are complex and you're considering setting up an intranet solution, it is definitely useful to look at an Internet-based managed information solution.

Managed Information, when dealing with standards and specifications, is providing designated documents for the user under a system where after identifying needs, the user is only concerned with accessing the documents. Managed information is not the same as information management, content management or knowledge management. Managed information may fill an enterprise content management or information



Using a 3rd-party managed information system requires few staff resources.

management need but is not wholly controlled by the user and provides information that is not generated by the user.

Third party managed information offers standards access and management using the Internet. The provider controls access and is responsible for updates. The third party provides the user interface and searching capability. Users are able to search multiple SDOs from a single location and using a single log in.

Using the Standards is the Key to Success

One of the key benefits of standardization is risk reduction. In a survey of risk managers conducted between December 2005 and January 2006, regulatory compliance tied for third with weather-related risks as the risks expected to influence risk management the most. Depending on your risk areas of concern, your use of standards may control safety risk, reduce regulatory compliance risks, or manage economic risks. You only achieve the risk reduction if the standards are consistently used. Using the wrong version of a standard or using a standard from the wrong SDO costs projects time and money. So, it's in your best interest to make using standards easy.

Multiple Copies Increases Costs

Maintaining a current and extensive standards library particularly when serving multiple offices is expensive due to space and personnel requirements, the need to have multiple copies, and shipping costs. Not to mention the often common lack of use.

In a survey of 6,000 end-users conducted

What will your staff say to the auditors?

Monday is the start of a week-long independent quality assurance audit. During the in-brief, the lead auditor asks to speak to couple of the maintenance engineers and operations personnel. The staff knew about the upcoming visit and had been reviewing training records and procedures all week. Corporate quality assurance had signed off on all the procedures.

Friday afternoon during the out-brief, the auditor noted that due to findings at other company offices, standards compliance was a key concern.

The result of the audit was that in almost every instance of standards compliance reviewed the maintenance department and operations staff was working from different versions of the same standard. In some cases, this resulted in the potential for non-compliance conditions with government requirements. In other cases, the potential for safety and environmental violations was identified.

Let the corrective actions begin!

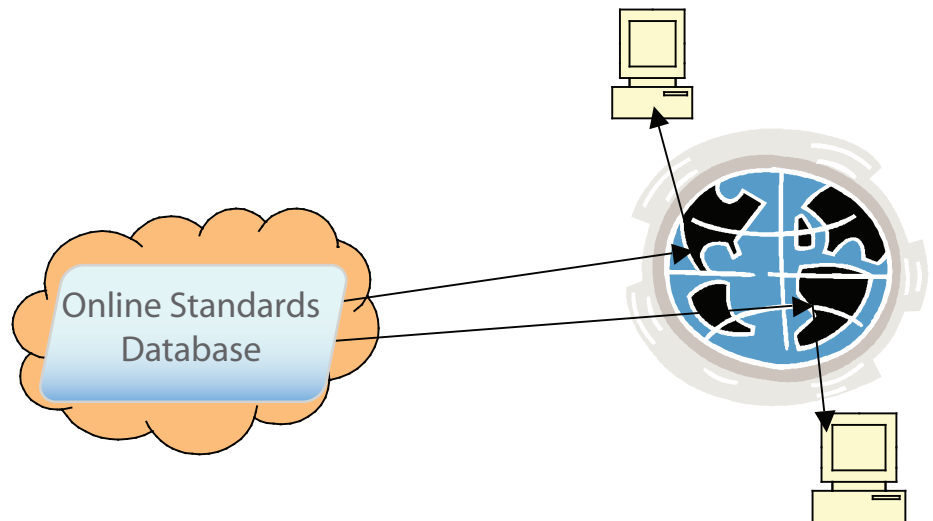
Since there is a potential for non-compliance with government requirements, operations must be shut down until compliance is demonstrated. The audit did not include the entire population of operations and maintenance procedures. However, since there were problems with every procedure reviewed, staff will need to review all remaining procedures and determine which standard is being used by all responsible parties.

This audit only included operations and maintenance. Since the finding is significant, upper management directs a company-wide quality assurance audit.

by Outsell, the respondents that usually go to the corporate library for their information do so grudgingly. In fact, only 3% of those responding identified the corporate library as their preference for information.²

Online Approach Improves Access

If your standards management approach is based on creating an online library using your corporate intranet, many of the drawbacks of a paper library are eliminated. Accessing standards from their desk top is convenient for your staff. The ease of access will likely increase the use of standards. Since standards use is essential for successful standardization, the risk of non-compliance decreases.



An Internet-based standards library allows access anytime anywhere

An intranet-based library still presents some of the drawbacks of a paper library. An intranet electronic library

- requires significant corporate resources
- may present security concerns for access from outside offices
- may require access and print control to comply with use agreements and copyright restrictions
- requires notification of staff when updates are

made to posted standards

While standards use will likely increase, the chances of having incorrect versions of standards being used still exists. Printing copies and keeping them handy for reference in the field, or even at your desk, is easy. Rigorous controls and a disciplined workforce are required to eliminate this issue.

If your project requires continued use of a specific version of a standard, using a corporate intranet electronic library needs to accommodate maintaining the historical versions of standards along with the current version for others in the company.

Delays result from use of outdated specification

A maintenance engineer and procurement specialist reviewed materials and equipment procured and staged for a series of pressure fitting replacements. Quality designations and specifications were verified.

While completing the inspections prior to start of work, it was noted that paperwork specified SP-109-1997 for Welded Fabricated Copper Solder Joint Pressure Fittings. The version of the specification used was questioned. MSS had issued a significant revision of the document in 2006.

Tracking down the standard version used by the organizations involved took several phone calls and much waiting around. After two days, it was found that the current revision was not used consistently.

Resolution of the problem required a comparison of the changes to determine if the instances of use of the older revision had any impact on the project.

After meetings, reviews, and several memos to file, the project was given the go ahead without re-work. However, due to the specification question, the project was completed behind schedule impacting other scheduled work as well.

A Complete Standards Management Solution

The use of a third-party managed information system for standards use on projects addresses a majority of both the paper library and intranet library drawbacks.

Since a third party system resides on the Internet rather than your corporate servers, computer security concerns for access are largely addressed. This type of system is always available from anywhere.

Using a third-party managed information system means that someone else is responsible for updating copies of standards. If your provider's process for updating standards is governed by procedures and controlled, you can have a high degree of confidence in the integrity of the information.

The third party takes care of managing who accesses the information and what they have access to. This addresses the issue of using historical versions of a standard while other projects in the company use the current version.

Along with access control, the third party provides the user interface. Since your provider has many users, they are motivated to have an interface that is intuitive and flexible. The search capabilities and data display options are likely to be extensive to meet all their users' needs.

The ease of use, no matter where your staff is located, and the knowledge that the information available can be relied upon to be correct will likely increase use by engineers and other staff. Increasing compliance and reducing the risks associated with non-compliance. New staff, particularly new university graduates, will expect and be comfortable with this type of system.

Having your standards and requirements residing on a system remote from your corporate resources allows continued access in emergency situations. If your paper library or servers are unavailable -- or worse destroyed -- due to power outages, natural phenomenon such as hurricanes, or terrorist activities, standards accessed using an Internet system will most likely still be available to support

work needed to restore operations or work being performed in other locations.

Positively Impact Productivity, Money, Time

A third-party provided managed information system provides users with the benefits of ease of use, flexible access, and confidence in the quality of the information. This type of managed information system ultimately has a positive impact on your company's bottom line. A managed information system for your standards provided by a third party

- facilitates increased productivity by reducing research time
- minimizes downtime by providing the right standards and specifications all the time
- reduces risk by having standards available all the time and increasing the likelihood that standards are used

IHS Provides Quality and Comprehensive Standards Access

Using ISO registered processes and procedures, IHS provides clients access to more than 450,000 standards from over 370 SDOs along with nearly 350,000 military documents. The managed information services delivered by IHS, to clients worldwide, improves quality and productivity while assuring compliance.

These relationships allow IHS to set clients up with standards access that includes user agreements meeting their needs. This keeps companies out of legal trouble regarding usage and copyright restrictions.

Access to Standards and More

IHS offers a full managed information solution that includes access to standards, regulations, and parts information. Enterprise solutions from IHS can be customized to provide whatever level of service or combination of products that best suits your needs.

Pemex Saves Time and Improves Use

Engineers and technicians at the Exploration and Production Division of Pemex are saving considerable time in accessing industry standards information by using a managed information system and online standards library provided by IHS. In the past, Pemex maintained this information in central libraries located in the company's main engineering centers.

One problem with this approach was that a considerable amount of time was required in order to maintain these documents. Updates were received on a regular basis from the companies and organizations that supplied them and clerical staff had to quickly update the binders to avoid the possibility that engineers and technicians might use out-of-date information. Another problem was that it often took a considerable period of time leafing through the standards binders before the users were able to find the information they needed. Finally, users who did not work close to one of these engineering centers used to spend extra time either traveling to the nearest center or waiting for the mailed information.

To develop their managed information system, Pemex selected IHS Enterprise Solutions, because of its extensive library of petroleum standards and extensive software development capabilities. Today, more than 3,500 Pemex employees access the system over the company intranet from five servers strategically located throughout Mexico. "Our engineers and technicians save large amounts of time by being able to access complete standards information from their desktop or laptop", said Silvano Torres Xolio, Auditor of Industrial Safety and Environmental Protection for Pemex ExPro. "Another important benefit is that each person has access to more complete and updated standards information than was available in the past."

Managed information solutions include Specs & Standards, CyberRegs, and Reference Linking.

Specs & Standards expands clients' standards and subscription by

- providing flexibility for searching both within the subscription and within other SDO collections
- users receiving notifications of updates via email,
- assuring access control
- providing the ability to make one time purchases or expand subscriptions

BP Assures Compliance

Industry standards, codes, and practices provide the foundation for most of the BP Group's new Engineering Technical Practices (ETPs) and BP site technical practices. Standards are referred to in ETPs to realize the value of standardization and avoid inclusion of duplicate detailed technical guidance in the body of the ETP. The text of the standard ceased to be voluntary in the context of the ETP.

The BP petrochemical collection is comprised of 52,896 documents from more than 30 SDOs and continues to be the main component of BP's Specs & Standards subscription. BP's Specs & Standards subscription includes complete standards from the British Standards Institute, Engineering Equipment and Materials Users association, International Electrotechnical Commission, and Engineering Sciences Data Unit.

CyberRegs is a favorite choice for full-text Federal Register, CFR, State, and International regulatory information for environmental, health & safety and transportation industry professionals. CyberRegs provides content and features not available from other resources such as email update or change notifications, change tracking, and cross referencing.

Reference Linking provides access from client procedures to referenced standards, specifications, or regulations. Links can bring up specific citations in the standard or simply the standard itself. Links can be specified to be the most current version of the regulation or a particular historical version as appropriate. This function further assures that the right standards information is available all the time.

Email moreinfo@ihs.com or call 800.387.4408 ext. 299 (US and Canada) or 303.397.2896 (Worldwide) for a free demonstration of IHS managed information services or a quote for a specific service.

About IHS Inc.

IHS (NYSE: IHS) is one of the leading global providers of critical technical information, decision-support tools and related services to customers in a number of industries including energy, defense, aerospace, construction, electronics, and automotive through two operating segments, Engineering and Energy. We serve customers ranging from governments and large multinational corporations to smaller companies and technical professionals in more than 100 countries. Our customers rely on our offerings to facilitate decision making, support key processes and improve productivity. We have been in business for more than 45 years and employ more than 2,300 people around the world.

Resources

¹Lenckus, Dave. Risk Managers Name Top Threats. Business Insurance, 4/24/2006, Vol. 40 Issue 17, p3.

²Strouse, Roger. Corporate Information Centers in the Year of Accountability. Online; Jul/Aug 2001, Vol. 25 Issue 4, p.86.