

## A solution tailored to your needs Using XML in technical documentation

With ever shorter project cycles and an increasing number of products and markets the demand for Content Management Systems (CMS) is growing rapidly. However, it is not the CMS itself that will help you face the challenges of creating high-quality content on time but rather how the tools are integrated into your content and business processes and implemented to meet your specific requirements.

While turnover is increasing continuously and new clients from all over the world are acquired the demand for customer-specific technical documents in multiple languages and a wide range of output formats is growing too, often leaving documentation departments overburdened with the sheer volume of content to be produced.

Due to new requirements and challenges in technical documentation technical writers are often no longer able to efficiently create content using the traditional authoring processes. The creation of manuals takes too much time and money and the increased quality requirements can no longer be met. To solve this problem more and more companies use Content Management Systems based on XML (Extensible Markup Language).

In order to ensure efficient use of the CMS companies have to analyse their existing processes prior to implementation of the tool. Here, a thorough analysis will help you choose the CMS that best suits your needs. Some key factors to be kept in mind when analysing your processes and requirements are listed below (see table).

The list of requirements helps customers decide whether they want to use their file system or the database repository of a CMS for data management. Also, in your requirements you should define the data format you want to use for content creation. Here, the choice is between a proprietary data format and XML.

### Four approaches to content creation

Depending on the customer-specific requirements there are four approaches to the way content is created. For content creation you either use a proprietary data format or XML, for document management you can choose between file system or CMS.

	File system	Content Management System
proprietary data format	Established workflow. Only to be used with simple documentation requirements.	Improved document management, but only slight enhancement of internal document structure. Little reuse of data in future documentation.
XML based data structuring	The structuring of your data helps streamline the editorial process and allows for future reuse. This way of structuring is particularly useful in documentation departments with a small team, little modularisation and product variants.	An XML based authoring process complies with complex requirements in data structuring and management. Especially suited for companies with complex documentation requirements.

Depending on what data format is used and how the documents are managed there are four different approaches to content creation.

Many of the customers that consult a service provider like Ovidius use a proprietary data format and their file system to create technical documentation. This approach yields little business benefit and often slows down the creation process. The approach neither allows for building up internal document structures nor supports data management and integrity on the document level. Using proprietary tools and the file system is a cost-effective way of content creation as no additional software is required. However, this advantage is often offset by the inefficiency of the editorial processes and the low quality of the documentation.

Using a Content Management or Document Management System for management and storage of proprietary data is another approach, which allows for data sharing and administration of access rights and the streamlining of the processes involved.

Usually, an appropriate approach for small documentation departments is to use XML for content creation and the file system for storage and management. Companies using this solution tend to have few language and product variants to consider in their technical documentation. When considering this approach it has to be kept in mind though, that keeping track of the information modules can get increasingly difficult if documents are split into too many modules.

XML-based Content Management Systems are especially suited for complex documentation requirements. They allow for data structuring (reusing and repurposing content) as well as for data management (modularisation, individualisation etc.).

## 10,000 € per workstation

Once a company has decided to use an XML CMS a data transformation from non-XML to XML data is necessary. One of the main benefits of XML is the separation of content and layout and the creation of structures similar to those of a database, which allow for easy modification and support queries.

When choosing the Content Management System you should make sure that the system capabilities comply with some basic requirements such as the support of any DTD (Document Type Definition) or XML Schema. Also, the system should allow for easy DTD modification and extension.

XML Content Management Systems are critical for increasing efficiency in complex documentation processes. In many cases time and budget for the implementation project may discourage companies when starting to select a CMS. However, the future benefits far outweigh the initial costs of about 10,000 € per workstation. It is also important to note that costs will decrease with an increasing number of CMS users.

Depending on the size of the documentation department and the complexity of the documentation processes a 100 per cent return on investment (ROI) can be achieved in one to five years. However, when discussing the pros and cons of CMS implementation it has to be stressed that a Content Management System can also be cost-justified on the basis of various intangible and „soft“ benefits such as streamlining of processes and improvements in quality. These are qualitative metrics which are hard to quantify.

Costs of the editorial process without XML CMS		Costs of the editorial process with XML CMS	
Identification of the documents which need to be modified	2,400 €	Modification of 100 information modules	6,000 €
Modification and layouting of 150 manuals	96,000 €	Translation of 100 information modules	8,000 €
Translation of 150 manuals	86,000 €	Generation of 150 manuals	2,400 €
<b>Total costs</b>	<b>184,400 €</b>		<b>16,400 €</b>

XML Content Management Systems are particularly suited for complex documentation processes. How an XML CMS can save you time and money has been demonstrated in a case study carried out by Grasso, one of the world leaders in industrial refrigeration. Before implementing an XML-based Content Management System in 2000 the documentation department created about 150 manuals a year spending some 184,000 € on content creation and modification. Today Grasso only creates and modifies 100 information modules a year. Here, the implementation of an XML CMS could save the company 168,000 € a year.

Requirements	Description
Individualisation	What is the print run of your documentation? Are you creating a manual for mass circulation or a customer-specific documentation that will be published once?
Modularisation	Will the documentation be split into modules for efficient reuse of content?
Languages	Will you publish in just one language or does your editorial process have to support various languages?
Media	How many output formats will your technical content be published in?
Repurposing content	Will part of the technical documents be used for other purposes (e.g. as training material, maintenance schedules etc.)?
Size of the documentation department	Is the content created by just one technical writer or a team of writers that work jointly on the documentation and need to maintain consistency?
Reproducibility	Do you plan long-term use of your data or is it just to be published once?

Key points that have to be taken into consideration when analysing your processes

## About Ovidius

Ovidius is based in Berlin, Germany, and specialises in XML and SGML software solutions for creating, managing, and publishing of technical and scientific information. We help companies with complex documentation requirements, e.g. automotive, mechanical engineering, software "manufacturers", aviation and defence, medical engineering and IT companies.

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