Streamlining Service Bulletins at Toyota Motor Europe

Customer: Gary Howe

Company: Toyota Motor Europe

Industry: Manufacturing

Video Interview: Streamlining Service Bulletins at Toyota Motor Europe

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~650k€	50%	Improved Quality
Annual savings	faster translation and publication of non-English bulletins	through standardization

About

This case study explores the specific challenges encountered by TME (Toyota Motor Europe) during the creation and distribution of its Service Bulletins. These service bulletins require technical communication and collaboration between different departments and include complex procedures.

Service bulletins are a form of technical documentation designed to offer guidance for the maintenance, repairs, and modifications of equipment that is already in active service. These bulletins are issued by the manufacturer or other authorized entities with the purpose of alerting operators to potential safety concerns, maintenance needs, or other critical information.

The integration of Componize's CCMS has led to a streamline on the creation, management and localization process, making it less time consuming, more accurate and easier to manage.

You can watch the entire conversation we had with Toyota Motor Europe in our webinar video.

TME background

TME (Toyota Motor Europe), is one of the 5 headquarters that Toyota has around the world and the only one in Europe. Toyota Motor Corporation sells its cars in more

than 170 countries and regions, with TME having 8 manufacturing plants in 6 different countries. TME's sales operations extend across 53 countries, facilitated through 28 NMSCs (National Marketing & Sales Companies), overseeing over 2500 Toyota outlets in Europe.

Componize CCMS

Componize CCMS (Component Content Management System) is a software that streamlines the production of technical documentation, allowing companies to easily author, maintain, translate and deliver content on several channels.

Challenge

Overview

TME wanted to find a way to streamline the service bulletin creation process, making it faster and more accurate, and with that, increase customer satisfaction.

The process typically involved creating a document in MS Word with the information gathered from several other sources, and manually reformatting the document. The service bulletin was then reviewed and approved by multiple individuals/teams. This process was very time and labor-intensive, which would bring delays to the start of implementation in the market.

Furthermore, if any errors occurred during the process, it could have led to erroneous or incomplete documents. A customer safety issue!

Challenges with MS Word-Based Process

- **Data Integrity:** The manual nature of the process posed a risk to data integrity. Copy-pasting data from other systems or documents led to occasional errors and outdated information.
- **Inefficiency in Localization:** Localizing Service Bulletins for different markets was a time-consuming task. Each version had to be manually adapted and checked for compliance with local regulations and legal requirements, adding layers of complexity to the distribution process.
- **Lack of Standardization:** The use of MS Word led to inconsistencies in formatting and structure, as there was no centralized template or style guide in place.

- **Version Control:** Managing multiple versions of the same document became cumbersome, leading to confusion and errors. This was especially problematic when updates or revisions were needed.
- **Collaboration Bottlenecks:** The MS Word-based process did not facilitate real-time collaboration. Team members had to wait for one person to complete their part before moving on to the next step, causing delays.
- **Time Delay:** with MS Word the review and approval processes were very time consuming. This led to a longer delay for the start of implementation in the market.
- **Tight Deadlines:** The fast-paced nature of the automotive industry required Service Bulletins to be created and distributed within a very short timeframe.
- **Information Accuracy:** The bulletins needed to contain reliable and up-to-date technical data, a significant challenge given the complex nature of modern vehicles.
- **Compliance:** Adhering to stringent industry regulations and standards was imperative to avoid legal repercussions and maintain brand integrity.

Solution

Overview

TME identified that the DITA XML standard, already used by some TMC departments (Toyota Headquarters in Japan), would offer them the opportunity to:

- better structure their content;
- set up bulletin templates that could automatically adapt based on variables such as models, engines, markets, etc.

What remained was to find a content management system (CMS or CCMS) flexible enough to:

- connect to various data sources to retrieve up-to-date information (an internal product datahub that centralizes technical data from different systems),
- implement a workflow for each type of bulletin capable of interoperating with different third-party systems (for example, to retrieve data at certain stages of the process), and which would simplify the work of the writers,
- create dynamic forms (with variables from third-party systems) to facilitate the creation of a new bulletin.

The ability to quickly create high-quality automated template-based documents brings consistency and facilitates the work from the different areas of the company, maintaining its workflow and saving the company on time and resources.

Componize also facilitates the standardization of the content with modular, reusable and easily translatable content. With that, the content can better suit different audiences, areas and regions.

The Notion of Digital Continuity
Digital Continuity is the concept of maintaining an unbroken flow of information within an organization. For TME, achieving digital continuity meant integrating Componize CCMS with existing enterprise systems, thereby ensuring that data could be accessed, modified, or archived at any stage of the production process without loss of integrity.

Since the writers were primarily automotive engineers, it was also necessary to find a solution that would not change their writing habits too much (MS Word until now).

The integration of Componize CCMS with the other production systems and tools to replace the MS Word-based documentation process at TME sets Componize apart from other CCMSs that do not easily or fully integrate with its organization's other production systems and tools.

All these requirements naturally led Toyota Motor Europe to select the Componize CCMS, integrated with the Fonto authoring tool.

Benefits gained with Componize CCMS

- **Data Integration and Dynamic Forms**: Dynamic forms within the system pull real-time data from the product datahub. This ensures that the bulletins contain the most current and accurate information.
- **Localization**: With standardized content, TME was able to automate the localization process before sending the content to its NMSC and with that reducing the cost of translation and the workload for the NMSCs.
- **Initial Drafting**: The process begins with the initiation of a new Service Bulletin within the Componize CCMS. Pre-designed templates are used to accelerate the creation of new bulletins, ensuring consistency and quality across all documents.
- **Process-Driven Work**: Structured workflows guide employees through each step of creating a Service Bulletin, reducing errors and improving efficiency.
- **Collaborative Authoring**: Multiple team members can work on the same document simultaneously, thanks to the modular nature of the DITA documents (each DITA component can be edited independently). This eliminates bottlenecks and speeds up the drafting process.
- **Review and Approval**: Once the initial draft is complete, it enters a guided workflow for review and approval. Automated notifications are sent to designated reviewers, who can provide feedback directly within the system.
- **Distribution**: After approval and localization, the Service Bulletin is automatically pushed into the systems which distributes to the relevant parties.

Return On Investment

In this case study featuring TME and Componize CCMS, the summarized results are presented in the table below. Specifically, the data in the table pertains to one type of Service Bulletin (TI: Technical Instructions).

Moreover, it's important to note that TME has since expanded the usage of the Componize CCMS solution to encompass five different types of bulletins and is continuously incorporating new types.

TME's estimate suggests that the **overall return on investment (ROI) for the five bulletins is doubled** compared to the figures presented in the table below.

Return on investment (ROI) of Componize CCMS and DITA for one type of Service Bulletin (Technical Instructions)

Benefit	KPI	Results
Standardization of the TI content	Reduced workload at NMSC	11,000 hours/year **248k euros**
Lead-time KPI's	Fixed lead-time for TI's available	English TI ready on x-DayOther languages on x+15 days **-15 days reduction**
Campaign TI publication & revisions will be centralized	Reduced workload at NMSC	2,000 hours/year **75k euros**

Total return on investment (ROI) of Componize CCMS and DITA for the production of Service Bulletins

TME has since expanded the usage of the Componize CCMS solution to encompass five different types of bulletins and is continuously incorporating new types. This has enabled TME to:

- Generate approximately **€650,000 in annual savings**
- **Halve the time to translate and publish** non-English bulletins
- **Improve the content quality** through standardization

Conclusion

The results above were possible through the adoption of DITA and the CCMS, which enables businesses, at a global level, to increase employee productivity, while ensuring accuracy and consistency. TME has been using the Componize CCMS since 2015 and it has been a game changer for the company.

Componize CCMS automation and workflow improved TME's service bulletin processes, enhancing speed, accuracy, and digital continuity in the organization.

With the facility for managing, reviewing, approving and distributing, the organization has been able to reduce the time and resources spent on its service bulletins, while at the same time, reducing the risk of errors and having more consistent and accurate documents.

Looking ahead, TME plans to further leverage Componize's capabilities to automate other aspects of their documentation process.