

Transforming Technical Publishing into a Competitive Asset

Increasingly, managing technical content is becoming a challenge for many manufacturers of complex products. From maintenance manuals and parts catalogs to standard practices and service manuals, manufacturers require a broad range of technical publications to ensure that their products and services perform safely and dependably.

This is especially true in the commercial aviation, telecommunications, high tech and power generation industries. In addition, companies are increasingly managing technical content to ensure compliance with regulatory agencies such as ATA, OSHA and EPA, as well as to support strategic initiatives such as ISO 9000 and Six Sigma. Because managing technical content is a complex and labor-intensive process, most manufacturers view Technical Content Management (TCM) as a budget-draining cost center within their

operations. Yet, some manufacturers have discovered a solution that delivers world-class technical publications, improves customer service, and yields operational cost savings that can be channeled back into product research and development.

This solution greatly improves the performance and ROI of a critical aspect of the company's product lifecycle management (PLM). That solution is TCM Outsourcing. In fact, an increasing number of manufacturers are turning TCM over to experienced outsourcing providers, enabling these manufacturers to optimize return of investment, achieve TCM operational excellence, and strengthen their competitive position through an improved focus on their core business of making products and servicing customers.



TCM Outsourcing Case in Point: Bombardier Aerospace

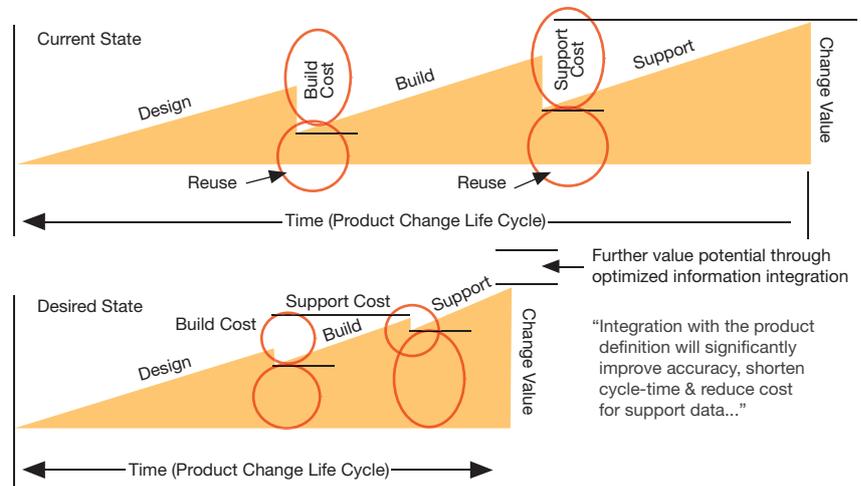
Among the noted companies using Capgemini's TCM solution is Bombardier Aerospace, the world's third largest aircraft manufacturer. Bombardier Aerospace turned to Capgemini to not only help the company improve the returns from their infrastructure investments, but to also provide its customers with world-class technical information assets and services.

To help Bombardier Aerospace meet these objectives, they entrusted Capgemini with the outsourcing of selected processes for its technical publications. This sensitive activity takes in the design, editing and updating of documents to related aircraft manufactured by Bombardier Aerospace. The technical manuals contain complete information about each aircraft, including on-board passenger guides, technical descriptions, maintenance reports, repairs listings, new functions or characteristics and regulatory changes.

Capgemini's TCM solution supports Bombardier Aerospace requirements for multichannel delivery, through paperbased delivery (including loose-leaf and full version release) and in the near future will include digital delivery on CDs, Bombardier Aerospace website, and SGML/XML source files. These are essential documents – both from a legal and commercial point of view. Highly detailed and mapping out all parts of the aircraft, the technical guides need to be updated three to six times a year for every aircraft. This calls for an enormous investment by Bombardier Aerospace, both in human and financial terms.

To deliver the TCM solution, Capgemini assembled a team of content management and publications professionals with a wealth of experience in engineering, technical writing, and in the manufacturing industry. Capgemini is also utilizing its Rightshore™ approach to deliver these services from its operating center in Bangalore, India.

Figure 1 Bombardier Aerospace's Reinvestment in Upstream Product Integration



The intent of Capgemini's unique and customized TCM outsourcing service offering is to help Bombardier Aerospace improve returns from its infrastructure investments, to deliver additional value to Bombardier Aerospace by providing its customers with world-class technical information assets and services, and to strengthen its competitive position.

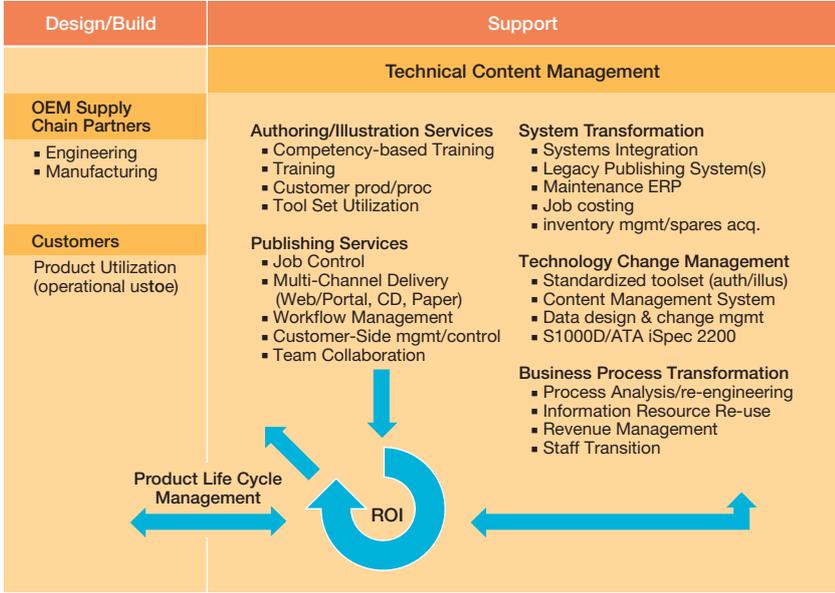
Optimize ROI

Bombardier Aerospace's objective is to redirect cost savings derived through outsourcing its technical publications to the transformation of its information management systems, as well as in the overall product life cycle change process. The intent is to move data integration upstream with product definition, and to improve customer satisfaction of the support data delivered with their aircraft. Jeffery MacDavid, Director of Technical Publications, Customer Services, Regional Aircraft Division comments, "Bombardier's reinvestment into the integration of product definition will significantly improve accuracy, shorten cycle time, and reduce costs for support data over the current state of our product change life cycle."

Operational Excellence

Outsourcing its technical publications has allowed Bombardier Aerospace to achieve world-class technical information assets and services. Capgemini is helping Bombardier Aerospace consolidate redundant systems while leveraging best-in-class technology used in the creation, management and distribution of their information products. Processes are also being standardized to improve the usability and quality of those products, with faster delivery to the customer for critical production support use. Metricbased service levels and operational controls increase accountability while improving quality, predictability, and risk management; enabling a higher level of customer-side management and control; and facilitating compliance in a highly regulated environment.

Figure 2 Capgemini’s Technical Content Management Platform



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Jeffery MacDavid
 Director of Technical Publications,
 Customer Services,
 Regional Aircraft Division

The Capgemini TCM Outsourcing Solution

As part of its Global Business Process Outsourcing (BPO) services unit, Capgemini offers TCM Outsourcing solutions to the following industries:

- Aerospace and Commercial Aviation
- Automotive and Industrial Equipment
- High-Tech Manufacturing
- Utilities
- Telecommunications

Robust TCM Offerings

Capgemini brings flexible, open architecture, efficient and comprehensive work management tools and processes – covering content management, workflow management and project management – to every TCM engagement.

Strengthen Competitive Position

Simultaneously driving strong ROI and achieving operational excellence from TCM activities, can call for an enormous investment, both in human and financial terms. Outsourcing with Capgemini allows for the redistribution of time and resources otherwise spent on TCM to core business areas that more directly impact areas like product development or customer service.

World-class technical information assets and services backed by a scalable sourcing model that flexes with market demands, also enables competitive advantage. “It’s all about cutting our costs for this particular activity while, at the same time, transforming Capgemini’s technology into a competitive advantage,” explains Charbel Bachaalani, Outsourcing Affairs Director for Bombardier Aerospace. “That’s why we decided to subcontract the selected process within our technical publications, whereas before, we might have called in external services on an ad hoc basis, depending on the work load.”

TCM services include:

- Engineering Augmentation (CAD services)
- Technical Writing and Illustration/Drafting
- Interactive Electronic Technical Manuals (IETM)
- S1000D
- ATA iSpec 2200
- Process/Systems Transformation and Support
- Data Transformation/Conversion

Wide Range of Delivery Formats

With satellites and the Internet gaining popularity as communications tools, Capgemini offers TCM services in a wide range of digital formats, in addition to traditional “hard copy” options.

Whether electronic or paper, Capgemini delivers technical documents in virtually all industry standard formats, including PDF, HTML, XML and SGML.

Capgemini’s publications capabilities include:

- Operations manuals
- Maintenance and Repair manuals
- Parts catalogs
- Facilities Management manuals
- Engine manuals
- Installation manuals
- Telco Network Configuration records
- Standard practices manuals
- Service bulletins
- System and Component manuals

Customized Approach

To meet client’s specific needs and business objectives, Capgemini will create a TCM outsourcing solution that includes any, all, or a combination of the following:

- Normalization – Capgemini manages the consolidation of multiple disparate platforms, processes and tools (typically resulting from consolidation activity) to establish a more efficient, common platform and operating environment.

- People Transition – Capgemini absorbs people from the client’s operations and provides supplemental training to improve throughput and costs.
- Transformation – Capgemini directs streamlining and upgrading of the client’s technology to meet existing and anticipated business demands.

With each of these TCM solutions, Capgemini adopts its unique Collaborative Business Experience approach, working closely with clients to develop and implement the solution that ultimately delivers the most business value.

Why Capgemini TCM Outsourcing?

Capgemini is among the world’s leading TCM service providers. Our technical publications professionals bring a wealth of experience in

engineering, technology, manufacturing and design. Combining our TCM expertise with our global delivery capabilities and deep industry knowledge, Capgemini not only reduces costs but drives operational excellence with minimum risk. Beyond standard business practice, we have a passion for TCM and what it can do to dramatically improve business performance. Working together with our clients, we go well beyond creating documents that merely meet fundamental corporate and regulatory compliance requirements. We believe TCM should also enhance and complement the product or service. The content should be comprehensive, cost-effective and available 24/7; transforming technical publishing into a competitive asset.



About Capgemini and the Collaborative Business Experience

Capgemini, one of the world’s foremost providers of Consulting, Technology and Outsourcing services, has a unique way of working with its clients, called the Collaborative Business Experience.

Backed by over three decades of industry and service experience, the Collaborative Business Experience is designed to help our clients achieve better, faster, more sustainable results through seamless access to our network of world-leading technology partners and collaboration-

focused methods and tools. Through commitment to mutual success and the achievement of tangible value, we help businesses implement growth strategies, leverage technology, and thrive through the power of collaboration.

Capgemini employs approximately 75,000 people worldwide and reported 2006 global revenues of 7.7 billion euros.

More information about our services, offices and research is available at www.capgemini.com.

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