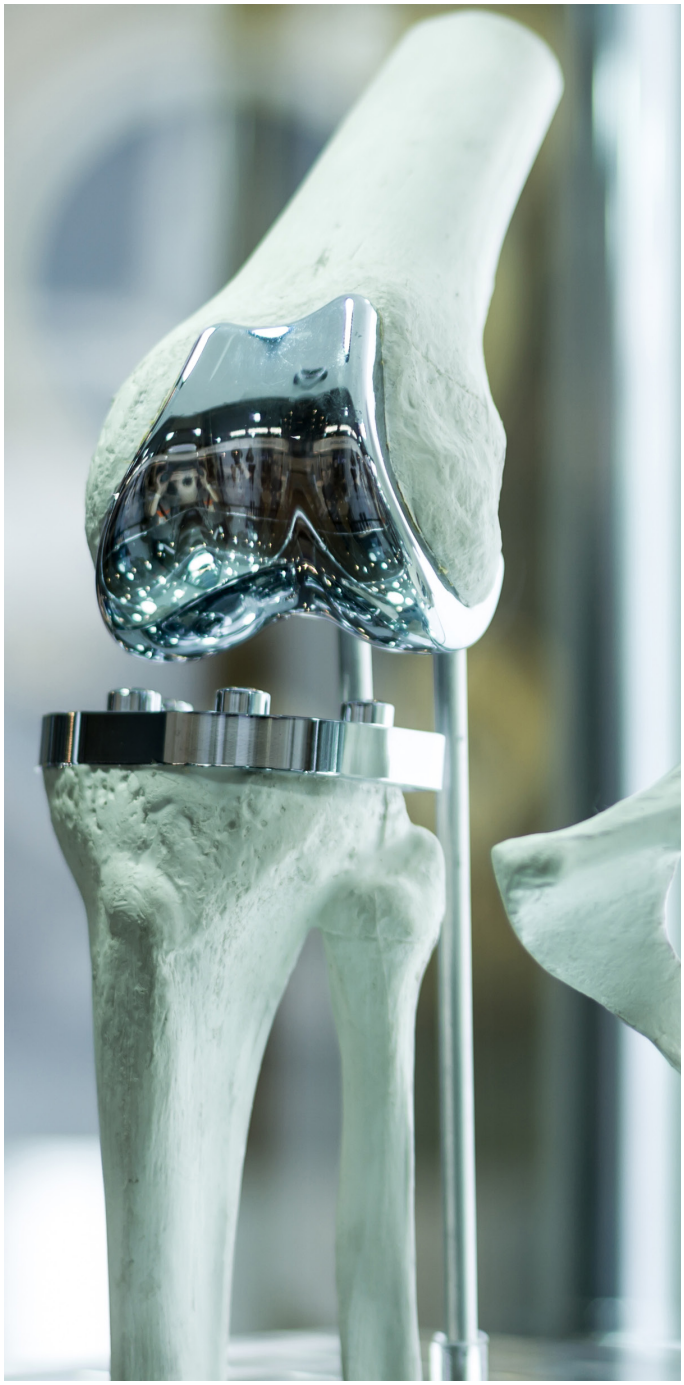
ENGINEERING

Industries eXcellence Global

CASE STUDY: GLOBAL TOOL & RESOURCE MANAGEMENT FOR MEDICAL DEVICES



About the Customer

The customer is a market leader in Medical Device Manufacturing, specialized in the design, development and production of the world's leading orthopedics products, including knee, hip, shoulder, elbow, foot and ankle artificial joints and dental prostheses. Headquartered in the U.S., the manufacturer has operations in over 40 countries and sells products in more than 100 countries.

Project Summary

As a first step towards eliminating paper, gaps and inefficiencies in the customer's manufacturing data management processes, Engineering's Industries eXcellence Global team designed and implemented a new Product Lifecycle Management (PLM) solution that not only consolidated and standardized the management of their machine tools and resources within one central system, but enabled the customer to share and reuse this data across all production sites worldwide.

Project Activities

» **Leveraged Siemens Teamcenter Manufacturing to design, implement and integrate a comprehensive Tool & Resource Management solution across multiple plants.**
» **Implemented Teamcenter's Manufacturing Resource Library (MRL) to manage and classify all master data for cutting tools, fixtures, CNC machines and post-processors*.**
» **Implemented a central classification system used to store and utilize all post-processors globally.**

*** A post-processor is software that translates CAD/CAM data to commands that a CNC machine can understand. Each post-processor is a unique "driver" specific to a CNC machine, robot or mechanism in production.**

Business Drivers

» **Improve traceability of machining tools**
» **Reduce time and effort for tooling model creation**
» **Enable reusability of post-processors at any global site**
» **Eliminate rework for post-processors at each site**
» **Enable storage and management of all tooling and fixture models against master routings in one unified system**
» **Increase data accuracy to improve production efficiency**

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More About the Project

Tool and resource management is an important process for any discrete manufacturer, but even more so for those operating within highly-regulated industries, such as medical device manufacturing. These companies are required to document and provide full traceability of everything that happens throughout the production process for each product.

Before our project, the customer was facing major challenges and inefficiencies in their manufacturing data management processes, and particularly when it came to their machining tools and fixtures. They needed a solution that would help them improve how they manage and track their tools and resources on the shop floor throughout the product and production lifecycle. Moreover, even though they produced the same products globally, the lack of a centralized system for managing their models, programs and post-processors prevented them from being able to share this resource data across plants. As a result, the customer was missing out on the huge cost-savings and efficiencies offered by data reusability and standardization.

As a first step towards helping the customer transform their data management processes on an enterprise scale, and leveraging Siemens Teamcenter Manufacturing software, our team implemented a Product Lifecycle Management (PLM) solution foundation as the new central database for all of the customer's current and future manufacturing data. This strong and flexible digital backbone would not only enable them to consolidate where they store, manage and monitor their tools and resources, but could be extended to integrate and cover all of their design, engineering, process and product data in the future.

Next, we wanted to close the gaps in how the customer managed and tracked resource data throughout the tool lifecycle. Building off their new PLM backbone, our team implemented and integrated Teamcenter's Manufacturing Resource Library (MRL) application in order to manage and classify all of the customer's master data for cutting tools, fixtures, CNC machines and post-processors worldwide.

Now, all resources stored within the digital tool library will contain defining attributes that can be used to search and filter for the desired item. This allows users to easily manage tooling components and assemblies, interface with tooling vendor catalogs, save time when looking for resource data and reuse proven processes and resources. Users at all 40 plants worldwide now access the same system, ensuring that the information being used is complete and accurate, providing full traceability and revision control, and significantly reducing the time and effort needed for tooling model creation across the enterprise.

Engineering's Advantage

From conception to final product, a lot of data must be managed and shared efficiently across the enterprise to ensure business success. At Engineering, we believe that the management of the entire product and process lifespan within a single digital environment is critical for companies striving to achieve manufacturing excellence. By creating a single source of truth, we gave the customer the foundation they needed to start their journey towards closed-loop optimization, as well as the right tool management solution to streamline and standardize their resource data management processes worldwide. And thanks to the extensibility of the solution we delivered, this digital transformation journey is just beginning.

Would you like to learn more about this customer case study? Contact us at info@engusa.com.

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Industries eXcellence is a division of the Engineering Group, a global software maker, system integrator and provider of innovative technology solutions and services. Our division specializes in the digital transformation of the manufacturing and transportation sectors. We design, build and implement solutions that drive process automation, operational efficiency, supply chain optimization and intelligent data analytics for leading industrial enterprises worldwide.

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