Royal Canadian Mint cuts costs with 'virtual' coins created with CATIA V5 and ENOVIA SmarTeam

"Our PLM solution automates and integrates the entire quotation, new product development, and engineering process. It furthers our goal of becoming a lean enterprise."

Neil Hallam, Chief Information Officer (CIO), Royal Canadian Mint.

Overview

■ **The Challenge**
   The Royal Canadian Mint (RCM) wanted to improve coin design and production processes to cut development time and costs

■ **The Solution**
   The RCM chose CATIA V5 and ENOVIA SmarTeam, including best practice methods for developing coins, associated tooling, and packaging

■ **The Benefit**
   The RCM reduced development cycles and costs for new coins, while improving creativity, collaboration, and customer satisfaction.

Preserving a time-tested tradition of excellence

Headquartered in Ottawa, the RCM is recognised worldwide for its quality craftsmanship, top-notch customer service, and leadership in minting technology research and development (R&D). Employing more than 650 people in all aspects of coin design, production, and marketing, the RCM develops circulation and collector coins for Canada and other countries.

"To maintain our lead position, achieve our lean enterprise aspirations, and continue to deliver a strong return on investment to our sole shareholder, the Canadian government, the RCM needed to address a number of operational challenges specific to coin design and production," said Neil Hallam, CIO, Royal Canadian Mint.

For instance, to get new ideas and coins to market faster, the RCM sought to improve design collaboration. And to reduce costs, the RCM needed a new approach to creating the tooling required to produce prototype coins.

In addition, the RCM's existing Product Data Management (PDM) system was proving inadequate for efficient document preparation, tracking and management. The company had difficulty controlling the processes and documentation associated with engineering changes and found it difficult to effectively and proactively leverage the vast amounts of experience and engineering information collected from projects to help them streamline design and development to deliver better coins faster and more cost effectively.

CATIA V5 and ENOVIA SmarTeam fit the bill

To meet its goals of reducing development time and costs, and to improve product quality and customer service and satisfaction, the RCM chose IBM Product Lifecycle Management (PLM) solutions, including CATIA V5 for collaborative 3D product design and ENOVIA SmarTeam for collaborative product data and lifecycle management for the SMB market. CATIA V5 and ENOVIA are developed by Dassault Systèmes. With training and consulting services from RAND Worldwide, CATIA V5 was installed and users were provided with classroom and desk-side training.

Best practice methods for developing new coins, tooling and packaging were also created. In parallel, a new engineering specifications repository was implemented, based on ENOVIA SmarTeam, and configured to accommodate the types of information the RCM needed to capture and track.

"Our state-of-the-art PLM solution including 3D design systems introduced in 2004 now encompasses the entire quotation, new product development, engineering and engineering change work flow processes," said Neil Hallam.

Putting PLM to work to drive quality and reduce cost

Using CATIA V5, the RCM creates 3D definitions of a coin, its engineering specifications, as well as associated tooling and packaging. The modelling and assembly capabilities also enable the RCM to showcase designs to prospective customers and internally.

ENOVIA SmarTeam, which gives the RCM a centralised engineering specifications database and supporting workflow common to the whole organisation, has provided some of the most significant gains. Users can now more easily capture, store, organise and access comprehensive information on every aspect of the company's products.

"Not only does ENOVIA SmarTeam house all of our comprehensive product specification data, it also spans the entire 'idea to product' workflow," said Hallam.

By simplifying and bringing better control to the engineering change process and allowing users to more quickly and easily access existing data for reuse, ENOVIA SmarTeam has driven down engineering and manufacturing costs.

Overall, with CATIA V5 and ENOVIA SmarTeam, the RCM has been able to manage and reuse existing knowledge to increase creativity, innovation and collaboration enterprise-wide, taking a big step toward its vision of automating all product lifecycle processes associated with coin design, development, production and retirement.