



/// Government Cashes in on Quality

The Bureau of Engraving and Printing and the U.S. Mint are quality success stories

By *Nicolette Dalpino*

Show me the money!" Clichéd as that statement is, it's still true. The bottom line is always money, but there's more to quality in government than just the bottom line. "Government doesn't have the same profit motive as industry, but they do have the same customer base," says J.R. McGee, president and CEO of *X-Stream Lean* of Pottstown, Pennsylvania, which has a lengthy history of working in the government sector. "When you're dealing with industry, which is highly motivated by profit, it is much easier to get buy-in to change. But with government, the focus changes from profit to service, and you have to clearly understand three things: their mission, their culture and their environment."

The idea of government as a massive service organization is mind-boggling, especially when one considers just one small part of it, the U.S. Treasury, which is made up of 16 departmental offices and 12 bureaus. Every one of these departments and bureaus serves a myriad of functions and employs an immense work force. According to its mission statement, the U.S. Treasury's goal is "to promote the conditions for prosperity and stability in the United States and to encourage prosperity and stability in the rest of the world." The very root of that prosperity and stability lies in the value and quality of the United States' currency. Anyone who's traveled outside of the United States knows that the dollar is king. Why? Because it's the de facto world reserve currency and affects everything from the daily lives of U.S. citizens to the nation's role as an international superpower.

The Bureau of Engraving and Printing (BEP) and the U.S. Mint are the manufacturing arms of the U.S. Treasury. Their cultures are based on the basics of supply and demand, with the added responsibility of producing the nation's most valuable commodity-money.

Central to the practices of both bureaus is security and adequate production volume of a high-quality product. They have to create enough money to supply the Federal Reserve, which doles it out to various financial institutions. Behind the scenes, these bureaus must also tackle problems common to any organization, such as employee safety, environmental issues, public awareness, cost management and quality standards. What separates these bureaus from regular industry is that they are self-funded and they must keep up with technological advances to assure the public and the world that U.S. currency is of the highest quality and is difficult, if not impossible, to counterfeit.

To address these concerns and create a more measured approach, both bureaus have successfully adopted quality management systems based on ISO 9001, lean manufacturing and best practices.

Bureau of Engraving and Printing

Counterfeit deterrence is a high priority for the BEP. With an estimated 65 percent of the nation's currency circulating outside U.S. borders and greater worldwide access to ever-

improving technology, counterfeiting is easier than ever. To combat technological advances in this most artistic of criminal endeavors, the BEP first had to define the quality necessary to make a better product.

"Years ago, machine-readable [security] features were not on the scene, and every security feature was in the paper and intaglio printing," says Russell Tudor, chief, Office of Production Management at the BEP. "But to make a better product, we had to start going to our customers [e.g., the Federal Reserve] and urging them to define the quality that they required." It's no surprise that the quality aspects that these customers were most concerned about involved counterfeit-prevention measures.

The BEP focused its efforts on technology development and continuous design improvements, resulting in the NexGen currency design seen on the new \$20, \$50 and \$100 notes that hit the market in 2003, 2004 and 2005, respectively. The new design introduced subtle background colors to the BEP's signature intaglio printing and contains a feature developed to deter counterfeiters who use personal computers and ink-jet printers. To stay ahead in the technology game, the BEP established the Securities Technology Institute in collaboration with Johns Hopkins University. Together they, along with the Secret Service and other bureaus, are seeking new methods in design, paper, ink and printing processes to thwart new counterfeiters.

To meet the demands of its customers, the BEP also stepped up its standardization practices. It first registered to ISO 9001: 1994 in April 2001 and mobilized a more efficient system of measurement to track its performance.

Registration required following a rigorous quality control program to bring the bureau into compliance. "An overall quality management system was somewhat difficult because we realized during the process that we really had to tighten up our practices," says Tudor. "The end result was, however, better productivity and an even stronger product."

By 2003, the bureau was ready for compliance with the 2000 version of ISO 9001, which includes more specific requirements regarding customer focus, quality planning and ancillary processes in manufacturing. The result is increased revenue and customer confidence, leading to research and development of new counterfeit-deterrent features in the next series of notes, called FuGen, due out sometime in the next seven to 10 years. Recertification to ISO 9001: 2000 occurred earlier this year.

The biggest challenge for the BEP is operating under a revolving fund that doesn't receive congressional appropriations. The bureau has annual revenues of approximately \$500 million. Through the use of activity-based costing principles for each of its programs and commercial manufacturing practices, including annual examinations of the cost standard for each denomination, the BEP continues to improve performance and achieve customer satisfaction. In turn, this allows the bureau to maintain working capital, recover costs, generate funds for investment capital and continue to aid in the effort to protect the security of the nation's currency.

The bureau also measures its performance based on the percentage of currency notes delivered that meet the requirements of the Federal Reserve. Employing new measurement standards helped the BEP meet and exceed customer expectations, as well as reduce spoilage and other waste associated with the printing process.

Integral to the strength of any organization are the skills, specialized training, and health and safety of its work force. In operation since 1862, the BEP now employs approximately 2,600 people and has manufacturing plants in Washington as well as Fort Worth, Texas. The BEP encourages employee participation in decision making and upholds the idea that the employees on the floor have valuable insights into the product and help contribute to improving it.

The BEP's latest goal is "a healthier employee and environment and less reliance on natural resources," says Tudor. To achieve this, the BEP is now in the process of registering to ISO 14001. The reason behind this move is that the introduction of new equipment or processes "demands that the bureau continuously update its environmental standards to ensure the health and safety of its employees. Once certified, the BEP will need to maintain the standards set by ISO through a rigorous auditing process but will be exempt from inspections by OSHA's Voluntary Protection Program.

What does the future hold for the BEP? According to the 2007 Presidential Budget Report, the BEP hopes "to produce and deliver 9 billion notes to the Federal Reserve System in 2007, an increase of nearly 10 percent over the 2006 program." To achieve this, the bureau will have to address two critical elements: information technology and human resources. Through registration to ISO 14001 and ISO 9001, and with consistent monitoring, the bureau hopes to reach its goals.

The U.S. Mint

Take a look at those coins in your pocket. Each one is intricately designed with symbolism detailing pieces of American history. In 2004 the U.S. Mint produced the redesigned Lewis and Clark nickel, and the public is still being treated to the 50 State Quarters Program, where every ten weeks over a ten-year period (1999-2008), a new design honoring each of the 50 states enters circulation. It's difficult not to appreciate the artistry, especially because the U.S. Mint partnered with the National Endowment for the Arts to produce these functional works of art for public use and collection.

Created in 1792, the U.S. Mint has a primary mission to produce the nation's circulating coinage along with platinum, gold and silver bullion coins, and maintain physical custody and protection of the nation's \$100 billion in gold and silver assets. Another important objective of the U.S. Mint is coin redesign, and the sale and delivery of high quality products.

As the U.S. Mint receives no appropriated funds from Congress, operations are financed by proceeds from the sales of circulating coins to the Federal Reserve Bank System and numismatic items to the public. To this end, cycle time is important. Through lean manufacturing, the U.S. Mint improved cycle time to 69 days in 2005, from 85 days in 2004, showing marked success in realizing its strategic plan of "adding value, ensuring integrity and realizing world-class performance."

A large part of the success of any organization rests with its employees. Happy, healthy, informed employees produce well and save lots of money by simply understanding one another and getting along. To measure the attitudes of its work force, the U.S. Mint adopted the Pulse Survey. By administering this survey and seriously listening to and acting on the results, the U.S. Mint reduced the cost of processing disputes, which produced significant savings. In 2004 the U.S. Mint implemented an employee-driven process call PerforMax. Increased productivity has been achieved through safer work habits and greater employee awareness.

As for customer satisfaction, for the seventh year in a row, in 2005 the U.S. Mint ranked highest among 45 federal agencies surveyed by the American Customer Satisfaction Index. It achieved a score of 88 percent, up 2.3 percent from 2004, significantly exceeding the averages both for the government sector (71.3%) and private industry (71.5%).

The bottom line

By actively seeking higher standards, the BEP and the U.S. Mint continue to raise the bar and maintain public and customer confidence in the production of coinage, currency, and securities documents. For these two bureaus, understanding their missions, cultures, and environments are key issues when implementing new measurement processes. Public awareness has increased through tours of their facilities along with redesigned currency and coinage. The security of the nation's money is consistently monitored and improved. When it comes to the U.S. monetary system, quality really is the bottom line.

About the author

*Nicolette Dalpino is a freelance writer and editor. She was the senior research writer for six years at World Trade Press, a publisher of international trade and business-travel books. Dalpino co-authored **Global Connect!** and **The Pocket Guide to Mobile Connectivity**. She was instrumental in researching and writing extensive updates for www.globalroadwarrior.com, a database covering all areas of international travel and trade for 175 countries (print version due July 2006). During the past year she worked extensively with author Ken Walton on his book **FAKE: Forgery, Lies & eBay** (Simon Spotlight Entertainment, 2006), which detailed his rise and fall as an art forger. QD*

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