

C U S T O M E R S P O T L I G H T

Medtronic Streamlines Processes and Supports Its Green Mission

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April 2009

Sponsored by Adobe Systems Inc.

Introduction

Medtronic Inc. is a global provider of medical devices, diagnostic products, and therapies for patients with chronic diseases. In 2008, Minneapolis-based Medtronic had revenue of \$13.5 billion and more than 37,000 employees worldwide. Nearly six million patients worldwide rely on the company's implantable pacemakers, cardioverter defibrillators, insulin pumps, heart stents, and glucose monitoring systems, as well as dozens of other products. About three years ago, Medtronic embarked on an initiative to improve several of its business processes, beginning with reducing cycle time. As a global company, Medtronic spent too much time physically moving around paper forms required for processes such as approving capital expenditures, requesting security badges, and making arrangements for employee relocations. By automating targeted form-based business processes using Adobe LiveCycle ES software, Medtronic could eliminate the costs and delays caused by maintaining and distributing paper-based forms globally and at the same time eliminate errors by building in workflows within the forms themselves. While the main goal of implementing Adobe's solutions was to reduce cycle times, Medtronic can also identify benefits that enhance the company's environmental footprint by eliminating paper and reducing energy consumption.

Business Process Improvement

The initial process targeted for improvement was the process for approving capital expenditures. "The reason why we bought Adobe LiveCycle ES originally was to streamline this unwieldy process," says Sheila Judge, the Senior Manager of Document Solutions at Medtronic. Focusing on the capital authorization request process made it easier to justify the investment in Adobe LiveCycle ES, since Finance — the key department involved in all capital investment decisions — was well aware of the shortcomings of the process. So while improving the process, "at the same time we could get Finance on board to approve the purchase," Judge says.

Solution Snapshot

Organization: Medtronic Inc.

Operational challenge: To streamline form-based business processes

Solution: Adobe LiveCycle Forms ES for XML-based form templates

Adobe LiveCycle Process Management ES for creating workflows with business rules

Adobe LiveCycle Reader Extensions ES for activating additional functionality in the Adobe Reader such as annotating, signing, and saving

Project duration: Phased approach as processes are added and rolled out to additional departments

Benefits: The company reduced the cycle time of the capital request process by up to 50%. Environmental benefits include reduced paper waste, reduced emissions caused by transportation, and reduced energy consumption valued at \$161,000 in less than one year. The company is also on track to save \$5 million globally by reducing the number and operating costs of printers.

Before Medtronic implemented the Adobe solution, employees seeking approval for capital investments of more than \$250,000 had to fill out a capital authorization request form and then physically route it to the appropriate manager or, in many cases, managers, for approval. Routing the forms globally via FedEx or mail could be time-consuming or expensive. Often, employees would not know who the appropriate manager was, which added even more delays. The environmental costs of maintaining and distributing paper-based forms around the globe also contradicted Medtronic's Environmental Sustainability Policy, which includes five broad mandates:

- Conserve natural resources
- Promote energy efficiency
- Eliminate waste
- Reuse and recycle materials
- Enhance new building construction and facility modification

Medtronic's long-term environmental goals target reductions in volatile organic compounds, air emissions, greenhouse gas emissions, water use, and regulated and nonregulated waste. Eliminating the need for a paper-based process helps Medtronic improve its environmental footprint. Although Medtronic can identify the environmental benefits of using Adobe, the decision to implement Adobe LiveCycle ES software with Adobe Reader and Acrobat products was motivated first by improving the business. In this case, Adobe facilitates the creation, routing, and approval of capital authorization forms electronically. "The real driver for us was process improvement," Judge says. "Specifically, we wanted to reduce the cycle time for approving capital investments."

For more than two years, Medtronic employees have been able to request a capital investment by completing a form electronically on Medtronic's intranet. Using the software, Medtronic built in automated workflows based on business rules that determine where to direct capital requests based on the dollar amount of the purchase requested. Gone are the days when employees misdirected forms, and physical routing is also a thing of the past. Medtronic now uses Adobe LiveCycle ES to handle several other form-based processes:

- Security badge requests
- Order requests
- Employee relocations
- Payment requests
- Adding processes for more green benefits

While this paper has identified environmental benefits realized from automating the capital authorization request process, such as reducing the amount of paper and fuel wasted by maintaining and transporting physical documents, Medtronic has achieved more quantifiable green benefits from defining and automating another business process — collecting and sharing new ideas from employees across the company. Medtronic's high-performance organization initiative is designed to change the culture of the company by empowering employees to contribute new ideas on any kind of topic, such as new products, new processes, or facility improvements. "To some extent, employees weren't submitting ideas because they weren't sure what their managers would do with the idea. So we wanted to take the immediate managers out of the review or approval process," Judge explains. The idea of the process is all about "harnessing people's ideas internally and making them come to life," she says.

The process of capturing ideas is now done electronically with Adobe and doesn't require paper or any hands-on administration. Employees can submit their ideas for saving money or becoming more green, and the ideas are automatically routed via built-in workflows to the appropriate functional leader where they are evaluated and potentially put into effect by a designated team. The process was automated in July 2008 for a limited number of employees in Workplace Solutions, primarily on the facilities management side of the business, but it will be rolled out to more departments shortly. Already, several of the nearly 300 ideas have significantly contributed to Medtronic's Environmental Sustainability Policy.

Medtronic also uses the Adobe solution to control the process of assigning printers. Recently, the company defined a new global policy for printers in an effort to reduce the number of devices and at the same time reduce waste. "If employees have a convenient printer next to them, they tend to print more," Judge says. Using Adobe LiveCycle ES, employees are now required to fill out a printer request form if they want a printer. The form and its associated workflow capture legitimate exceptions based on employee situations and/or work environments that justify a printer, such as employees with physical disabilities, a regulated manufacturing environment, or specialty print requirements. Currently, the printing policy is being rolled out in phases, but Judge says the program is on track to save the company \$5 million globally just from reducing the number and operating costs of devices.

Challenges

Since Medtronic acquired Adobe LiveCycle ES three years ago, the company's global rollout of the capital authorization process has extended over two and a half years. An initial pilot in operations was successful, but then the project stalled when the company decided to convert to SAP financials. "We considered embedding the process in SAP, but we decided that would have been more expensive," Judge says. However, Medtronic did need to engage Adobe and a consulting firm to design the complex workflows required for the Adobe-based process. Although the company is using the new process globally as of May 2008, Medtronic still faces some technology challenges in Japan.

Another challenge relates to the dependencies between Adobe LiveCycle ES and Adobe Reader and Acrobat software. Users need particular versions of Reader and Acrobat to work with Adobe LiveCycle ES; with Acrobat, "there is no ability to manage on an enterprise level what version employees are using," Judge says. Medtronic's IT department deployed Citrix as a means of pushing out the correct version of Acrobat to those employees who need it. In addition, the IT department had to strip Medtronic-customized toolbars from Reader to work with Adobe LiveCycle ES. Initially, IT rolled out Reader without testing the software; now IT performs quarterly rollouts and tests to ensure that Reader works properly with Adobe LiveCycle ES.

Other challenges were typical change management issues. Some Medtronic employees initially were reluctant to use the new process; now that the process has led to discernible cycle time improvements, employees are much more receptive to using it.

Benefits

As for a quantifiable ROI of automating the capital authorization process, Judge says cost savings were never calculated because the main goal was to reduce the time needed to approve capital requests. The system's built-in workflows "enforce the financial approval rules," Judge says. Specific benefits include the following:

- The company reduced the cycle time of the capital request process by up to 50%.
- Environmental benefits include reduced paper waste, reduced emissions caused by transportation, and reduced energy consumption valued at \$161,000 in less than a year.
- The company is on track to save \$5 million globally by reducing the number and operating costs of printing devices.

The green benefits in particular are more obvious in Medtronic's use of Adobe technology for capturing employees' ideas as part of the high-performance organization initiative. Ideas submitted electronically with Adobe-based forms such as installing timers on lights, changing to more efficient fluorescent lighting, and shutting down steam boilers during the summer have saved Medtronic a total of \$228,000. (The \$161,000 savings from reduced energy consumption is included in this figure).

Medtronic is evaluating other processes to automate with Adobe LiveCycle ES. One such process, the Field Action Form, represents a huge potential for cost savings by eliminating postage. Currently, Medtronic is calculating the ROI of moving the forms to Adobe LiveCycle ES.

Methodology

The project and company information contained in this paper was obtained from multiple sources, including information supplied by Adobe, questions posed by IDC directly to Medtronic and Adobe employees, as well as Medtronic and Adobe corporate documents.

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