

## Analyzing Data to Save Tax Dollars: Erie County, New York



Erie County's first class of Six Sigma trainees used their knowledge of quality improvement and Minitab Statistical Software to save taxpayers more than \$2 million in 2008.

### KEY FACTS

#### ORGANIZATION

Erie County, NY

#### OVERVIEW

- Over 900,000 residents
- Annual budget of more than \$1 billion
- Includes cities of Buffalo and Lackawanna
- A major industrial and commercial center

#### QUALITY CHALLENGE

Enhance the level of services provided by local government while managing costs

#### PRODUCTS USED

Minitab® Statistical Software

#### RESULTS

- \$2.2 million savings in 2008
- Projected \$5.1 million savings in 2009
- Reduced costs for many services
- Renewed emphasis on quality throughout Erie County government

A \$1 billion annual budget may sound ample, but a few years ago, the costs of services ranging from law enforcement to cleaning county buildings had squeezed the government of Erie County, New York, to its limit. Residents faced a painful choice: raise taxes, or slash services. But Chris Collins, who had extensive experience using Lean Six Sigma to analyze and solve business problems, believed the same methods could save county dollars and enhance local services. Voters gave him the chance to prove it by electing him to the county's top position in 2007. Collins made Lean Six Sigma the cornerstone of his administration. Today, Erie County is saving money and delivering services more effectively, thanks to county employees who have dedicated themselves to quality improvement, and the powerful data analysis capabilities of Minitab® Statistical Software.

### The Challenge

Al Hammonds, deputy county executive, and Bill Carey, director of Six Sigma, spearheaded the effort to implement Lean Six Sigma throughout every aspect of county government. Investing in quality improvement met initial resistance. But the administration argued the county couldn't afford *not* to improve processes, and predicted that the initiative would more than pay for itself.

A pilot program began in 2008, when 250 employees representing a cross section of county functions received four hours of basic Lean Six Sigma overview training. Nine more completed certified Green Belt training through The Center for Industrial Effectiveness at the University at Buffalo, and they selected the county's first Lean/Six Sigma projects. Commissioners also were trained to ensure project teams received support at the top levels of their departments.

As these projects commenced, the administration knew it needed to prove, beyond a doubt, that Erie County was getting its money's worth. With Minitab in their toolkit, they were ready.

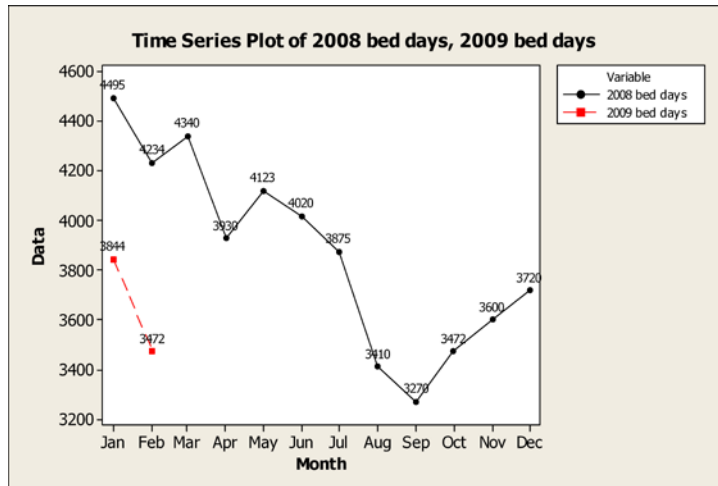
### How Minitab Helped

All of the county's pilot projects required significant data analysis, and the stakes were high—financially, and in potential impact on citizens. Fortunately, the Green Belts learned to use Minitab Statistical Software in their training.

*Learn how Minitab software can help you improve quality at [www.minitab.com](http://www.minitab.com).*

With user-friendly menus, state-of-the-art graphs, and easy-to-use tools, Minitab helped the project teams measure and analyze data, and demonstrate their results.

For example, mandated juvenile residential treatment services historically cost Erie County \$8 million a year. The Department of Mental Health focused on reducing the need for juvenile residential treatment for one of their projects. More than 150 children were in institutional placement in 2008, at a daily cost ranging from \$145 to \$400 per child. The project team used Minitab to identify critical intervention factors that influence court-ordered admissions to residential treatment. Based on that information, they established a new process that serves children effectively in the community as an alternative to institutional placement, and used Minitab as a management tool to demonstrate the ongoing efficacy of the new process.



Minitab's Time Series Plot for juvenile residential treatment in Erie County shows how sharply the demand has fallen since the Department of Mental Health's Lean Six Sigma team implemented a new process to serve children more effectively in their communities.

The time series plot shown above presents 2008–2009 monthly residential bed days. While the trend's slope is affected by seasonal variations, the annual utilization represents an 18% reduction from the 2007 base utilization level. That reduction saved taxpayers \$1.5 million in 2008, and the new process is on track to save an additional \$1.6 million in 2009. But in addition to saving taxpayers money, the new process has enabled more youth to stay with their families while receiving the care they need.

## Results

Lean Six Sigma and Minitab are improving processes in many other departments, too. The Department of Public Works tackled one project to consolidate and centralize fleet services, and another to reduce overtime. The Department of Health increased the enrollment in federally funded benefit programs so fewer eligible individuals used county resources unnecessarily. The Department of Parks used Minitab and Six Sigma principles to better manage equipment repair costs and to simplify the permit application and fee process.

The Department of Social Services increased efficiency in case processing for the Food Stamp, Medicaid and Temporary Assistance programs, resulting in a 2008 savings value of \$136,000, an average 90% of cases processed within the mandated time, and a 10% reduction in overtime. A project focused on child support significantly reduced an eight-month case backlog, saved over \$85,000, and increased gross child support collections from new cases by more than \$1 million during the project period.

Minitab analysis was critical to the success of these initiatives. The project teams used Minitab to pinpoint how well processes met expectations and identify which factors had the biggest effect on efficiency. They also used Minitab to monitor and demonstrate the impact of their projects, ensuring that their improvements continue to make a difference in the budget, and in peoples' lives.

Erie County's embrace of Lean Six Sigma and Minitab Statistical Software has empowered county employees to create true savings while improving the quality of services they deliver. The first wave of projects saved taxpayers over \$2.2 million in 2008, and those projects are on track to deliver an incremental \$2.6 million in 2009. The second wave of projects is expected to save an additional \$1 million in 2009–2010. A third wave of Green Belts started their training in March 2009, and their projects will generate still more savings for the county.

To learn more about Erie County's Lean Six Sigma program, visit [www.erie.gov](http://www.erie.gov).



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