Minitab®

A Government for the People:
Fort Wayne, Indiana

Minitab-driven Six Sigma programs enabled Fort Wayne to improve services—and save millions of dollars.

KEY FACTS

ORGANIZATION

Fort Wayne, Indiana

OVERVIEW

- Indiana's second-largest city
- Nearly 230,000 residents live in the city's 77-square-mile area

QUALITY CHALLENGES

- Repair more potholes within each 24-hour-period
- Cut the number of missed garbage collections

PRODUCTS USED

Minitab® Statistical Software

RESULTS

- 99.6% of potholes filled within 24 hours
- Missed garbage collections cut by 50%
- An estimated $3.5 million in cost savings

Before becoming mayor of Fort Wayne, Indiana, Graham Richard saw local industries implement Minitab-driven Six Sigma programs to improve efficiency and provide better goods and services. Once elected, Mayor Richard formed an Executive Quality Council to apply the Six Sigma methodology to improve services for Fort Wayne's citizens.

Challenge

The council identified two services of great concern—pothole repair and garbage collection. The city's track record of repairing 77 percent of potholes within 24 hours had room for improvement. The council set their goal at 97 percent repaired within 24 hours. Missed garbage collections averaged 92 per week. The team wanted to cut that in half.

How Minitab Helped

Many long-time employees believed that most potholes occurred in the southeast quadrant of the city. However, Minitab Statistical Software transformed raw pothole data into easily understood graphs, revealing that the northeast quadrant of the city had the most potholes, not the southeast. The data analysis also revealed that potholes in the southwest were filled more quickly than other quadrants. Upon investigation, the team discovered that the southwest's foreman relayed assignments to his crew more quickly, personally picking up new complaints from the central dispatch office.

To reduce the number of missed garbage collections, Minitab was used to identify the significant factors. Of all the factors that were examined including route, location, weather, day of the week, and personnel information, worker fatigue and inexperience were found to be the leading causes of missed collections.

*Learn how Minitab software can help you improve quality at www.minitab.com.*

Results

With proof that quicker communication cut response time, Fort Wayne improved the process, and the central dispatch office began immediately relaying complaints directly to the work crews by radio. The result? The city filled a dramatic 99.6 percent of potholes within 24 hours. The average response time was reduced from 21 hours to less than 3, and damage claims associated with potholes dropped from an average of more than $3000 to less than $1000 per quarter.

To mitigate garbage worker inexperience and fatigue, the city and its waste management vendor started new programs to improve team communication, provide safety training, limit the tonnage collected by solo drivers and offer workers a new shoe allowance. A year later, the garbage collection goal was met. From a financial perspective, the Six Sigma projects will save the city an estimated $3.5 million.

Thanks to Mayor Richard, who saw the value of Six Sigma for public service, Fort Wayne is a better place to live and work. And, according to a member of the Executive Quality Council, "We could not have reached this level of success this quickly without Minitab."
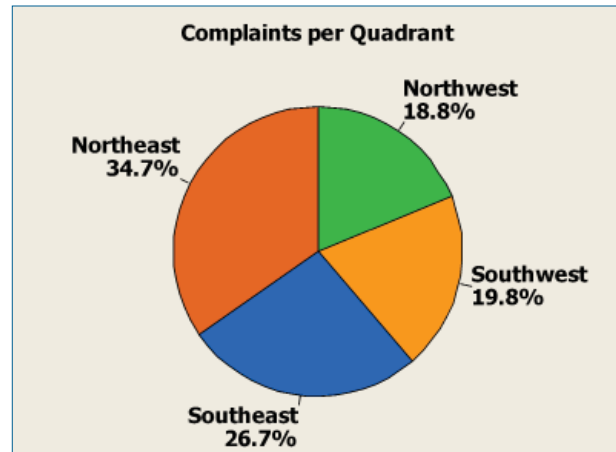
Data collected by the pothole project team showed most of the potholes were in the northeast quadrant, not the southeast quadrant, as city workers initially believed.
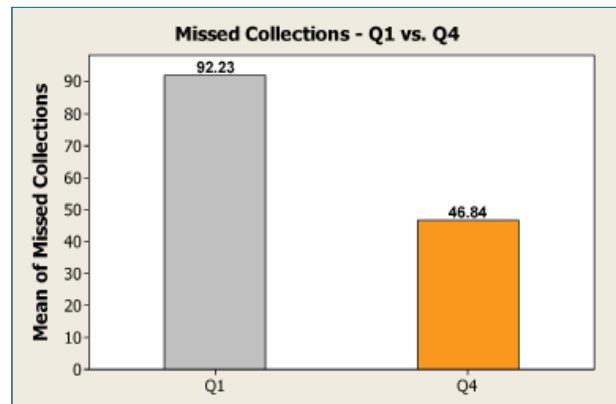
The trash collection project met its goal of reducing weekly missed collections by half in one year.