

The City of SAN DIEGO Performance & Analytics **FACT SHEET**

Improve Fire-Rescue Emergency Call Processing Time

As part of a strategic initiative to improve the City's emergency response times, Performance & Analytics (P&A) advised a working group from the Fire-Rescue Department's Emergency Command & Data Center (ECDC) to shorten the time to process fire and medical emergency calls. This project followed the Lean Six Sigma model of ***define, measure, analyze, improve, and control*** to achieve a significant reduction in call processing duration.

Define. The City's overall emergency response time comprises many small intervals of time between a caller dialing 9-1-1 and the emergency responder providing aid at the scene. One time segment occurs in the ECDC where staff receives the call, asks a series of questions, enters data into the computer-aided dispatch (CAD) system, and alerts the appropriate apparatus to respond. The group focused on improving performance for this segment of the emergency response time.

Measure and Analyze. The CAD system collects enormous amounts of data, which was analyzed to understand the current state. The historical design of experiment tool and other statistical analysis tools helped determine which factors were statistically significant for improving call processing time and helped avoid working on solutions that would not improve the critical path or that were simply outside the control of the ECDC.

Improve. A Kaizen event, in which all ECDC staff members were asked how to improve the layout of the CAD call-taking screen to minimize clutter and simplify navigation, led to implementation of a new call-taking screen on December 1, 2015. Also on that date, by taking advantage of a new capability in CAD, ECDC automated a formerly manual step in the call-taking process. In addition, ECDC staff provided input on the layout of their workstations, and a new computer monitor will reduce clutter and may further impact future call-taking performance.

Control. The formal control plan included having the ECDC training coordinator provide monthly tips through live training and a monthly newsletter, provide individual call takers with monthly (or more frequent if individuals prefer) statistical performance reports along with coaching sessions, and monitoring ECDC performance and initiating future Kaizen events to spur further improvements.

After improvements were implemented for the first quarter of calendar year 2016, the following quantitative results were achieved: reduced the period of time in which 90 percent of calls were taken within 16 seconds, a 16 percent improvement compared to the same period in 2015. In addition, the Lean Six Sigma project qualitatively improved ECDC personnel morale and demonstrated that the data-driven approach can have far-reaching success when applied to other City processes.