

L6S Helps Citizens Rebuild After the Thomas Fire Disaster

By Dr. Rachel Linares

A natural disaster will shake a community to its core, but it can also be the inspiration for dramatic organizational change. On December 4th, 2017, the Thomas Fire started just outside of Santa Paula, California, and quickly grew into the second-largest wildfire in California history. Within the first 48 hours of the fire it traveled over 20 miles and burned almost 100,000 acres. It took 40 days for firefighters to contain the blaze, and when the smoke cleared the fire had burned 281,893 acres and destroyed 1,063 structures. In the immediate aftermath, the Ventura County Resource Management Agency (RMA) was faced with the problem of overseeing the clean-up, which consisted of two phases: the initial debris clean-up, and the long-term recovery rebuilding. A significant part of the long-term recovery included overseeing the process of approving and issuing building permits to fire survivors who wanted to rebuild their destroyed homes. The building permit process was not prepared to handle the volume of requests that was about to come or to provide the rapid service that the impacted citizens deserved. RMA had worked steadily over the previous years to improve parts of the process through a combination of software improvements and many Just Do It projects. In the aftermath of the fire, County Leadership decided that it was time to take decisive action and use **Lean Six Sigma (L6S)** and the Service Excellence Program to redesign the building permitting process as it relates to fire recovery.

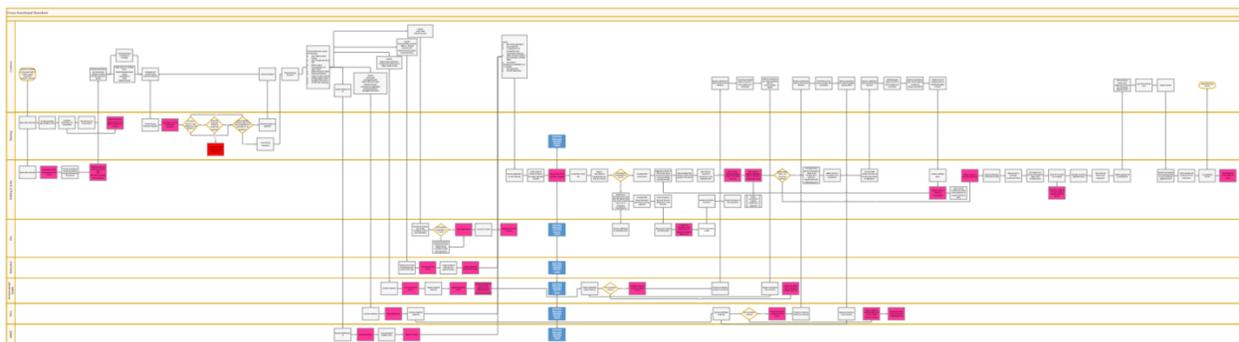
The County of Ventura is unique in its approach to and acceptance of Lean Six Sigma process improvement methodologies with its implementation of the Service Excellence Program. Housed within the County Executive Office (CEO), the Service Excellence Program works to encourage a Countywide culture of service excellence, continuous improvement and empirically based decision making as a means of improving the quality, consistency, speed and cost of County services. The program is supported by two full-time staff members that focus on teaching multiple levels of L6S classes, facilitating Kaizen events throughout the 26 different County agencies, and tracking process improvement projects and their savings (monetary and time), impact on customer service and furtherance of the County Strategic Plan. Now in its tenth year of existence, the Service Excellence Program has trained over 4,700 County employees, completed over 1,100 improvement events and created over \$33.6 million in total savings over the ten-year period. The total savings represent both hard savings (resulting from cost avoidance) as well as soft savings (resulting from time savings and reducing process “waste”) estimated for the first year after the improvement’s implementation. The majority of the savings are soft savings, allowing County staff the ability to reallocate their time towards other work activities.

After identifying the need to improve the building permitting process to support the Thomas Fire rebuilding process, the Director of RMA (the Kaizen Champion) contacted the Service Excellence Program staff (the Kaizen facilitators) and requested support for a Kaizen that focused on improving the building permit process. The Kaizen facilitators jumped right into the process, working with the Champion to write the Charter, define the problem and create the Kaizen goals. The RMA Director outlined two specific goals for the Kaizen: (1) design a process that provided a single point-of-contact; and (2) reduce waste within the system so that all initial

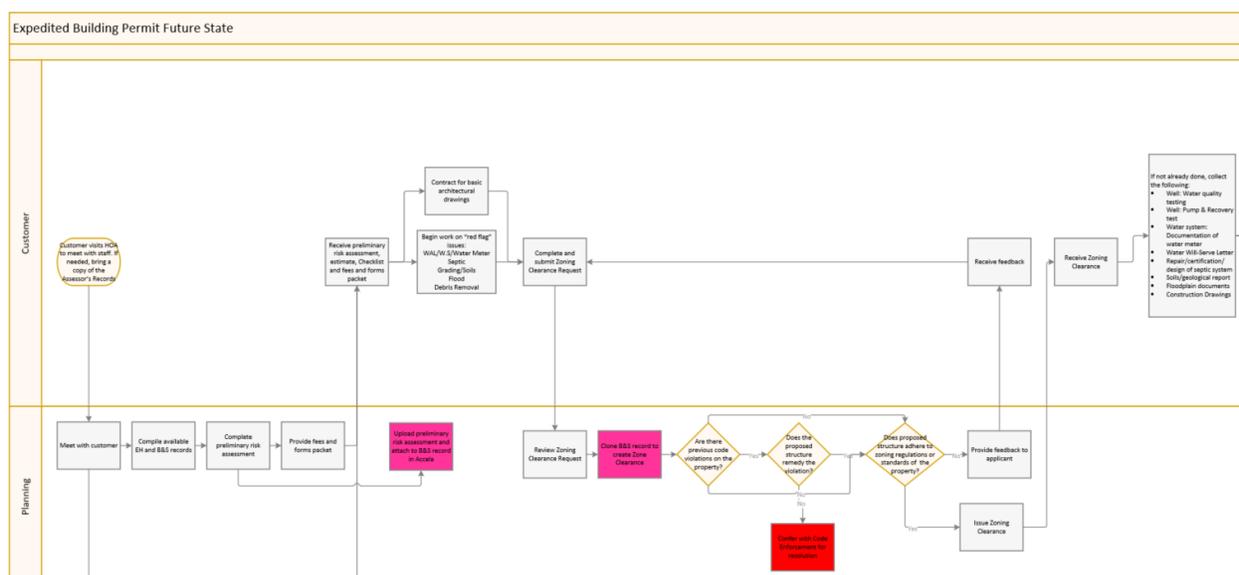
plan checks could be completed in two weeks, and all secondary plan checks could be completed within one week. These goals were challenging but represented the County's commitment to process improvement and helping residents rebuild their lives after the Thomas Fire disaster.

Once the goals were established, the Kaizen team was gathered, consisting of 19 Subject Matter Experts representing all seven departments involved with the building permit process. The team first embarked upon building a swimlane map diagramming the building permit process (as illustrated below). The scope of the process ran from the time an applicant first contacted the Planning Department to discuss a potential project, until the time that the Building & Safety Department issued the approved building permit. Between those fenceposts, the applicant interacted with seven different departments within three different County agencies. Depending on the complexity of the project, the applicant could be required to submit up to 45 different materials. Building the swimlane map was complicated and occupied multiple work sessions but inspired a tremendous amount of dialogue and discussion amongst the Kaizen participants.

Swimlane Diagram (whole map):



Swimlane Diagram (zoomed portion):



Once the process was outlined, the team conducted a brainstorming exercise, working to identify all the potential issues that could derail or completely stop the building permit process. These issues included water availability, access to sewer system connections, septic system placement and design, property location within flood plains, flood channels and fault lines, and fire department access. Any one of these problems could prevent a building permit from being issued and might not be discovered until significant time and resources had been dedicated to the application process. After these ideas were discussed and consolidated, the Kaizen team created a preliminary assessment form. This form would be used during the very first interaction with an applicant to document any concerns specific to their property and provide an outline of what was needed to address any potential issues inherent to the specific property. Once completed, the form would be scanned and logged into the permitting software system, keeping a record of the information. Utilizing this form in the first interaction helped to provide critical information to the applicant at the beginning of the process.

Additional brainstorming exercises were held, focusing on problems seen within the current state and creating corresponding solutions. The team then focused on building the future state of the process, incorporating the use of the preliminary assessment form and several of the brainstormed solutions. These solutions included the increased usage of the permitting software, implementing a permitting software training plan, and repositioning assets and information (regarding the affected properties) in preparation for the expected applications. The County knew exactly what properties would be utilizing the expedited process and were able to gather information about the property and the destroyed structure prior to any building permit applications being submitted. This information, which was accessible by any employee involved in the permitting process, allowed employees to guide permit applicants more efficiently through the permitting process and provide a customized list of required application materials specific for their property.

After completion, the future state process was implemented and monitored. Prior to the Kaizen, one of the most measurable portions of the process, the initial plan check completed by the Building and Safety department, consistently took three or more weeks to complete. After implementation, the initial plan check was consistently completed in 10 days or less for all Thomas Fire affected properties. Additionally, Building & Safety became the point-of-contact for all permit applicants. The Kaizen was considered a success because the participants were able to achieve the two overall goals: create a process that utilizes one point-of-contact for permit applicants, and eliminate non-value-added steps and waste within the process to allow the initial plan check to be completed within two weeks, and any subsequent plan checks to be completed in one week (representing improvements of 60% and 50%, respectively). Overall, the new process reduced the total number of steps by 10%, reduced the number of decision points by 20% and reduced the number of handoffs by 33%. Additionally, the Kaizen was completed, and the expedited process was presented to the Ventura County Board of Supervisors in only 12 weeks, demonstrating to both fire survivors and the general public the focus and dedication being given to the Thomas Fire recovery efforts.

Dr. Rachel Linares joined the County of Ventura as Continuous Process Improvement Manager in 2017. As part of the Service Excellence Program, her work focuses on teaching and promoting process improvement practices, implementing and supporting the Economic Vitality Strategic Plan (EVSP) and coordinating the County Strategic Plan. In support of the EVSP, Dr. Linares serves as the Permit Navigator. This role focuses on promoting business-friendliness in the regulatory/permitting environment throughout Ventura County by facilitating collaboration, streamlining of regulations and permitting requirements, and promoting consistency in policy and practice.



Dr. Linares has completed a Doctorate in Business Administration through the University of Liverpool, and is currently pursuing her Lean Six Sigma Black Belt Certification through California Polytechnic State University in San Luis Obispo. Her research and academic publications include topics such as student motivation, assessment and evaluation of applied skills, assessment standardization, and affirmative action admissions practices.

Prior to joining the County of Ventura, Dr. Linares enjoyed a robust career in higher education, working at several universities including the UCLA Anderson School of Management and California State University, Channel Islands. Among other duties, she was responsible for the operation and management of student financial services, executive education programs, and enrollment and admissions services for traditional and adult-learning programs.