# Abstract

This senior project is a redesign of Systech’s manufacturing floor as they move to their new facility to be able to support the expected increase in customer demand. As of January 2013, Systech was working near full capacity, and because of their new product release, they expect the demand to outstrip the production capabilities of the current facility. Because of this, Systech is moving their final testing operations in San Diego to a larger building. During this transition, they have expressed interest in redesigning the current floor layout in order to maximize the productivity of their employees. To accomplish this, floor plan analysis, ergonomic design principles, and facility planning expertise are used to determine the best fit layout for the new facility.

The proposed facility design takes into account a visibly clear layout, using visual management techniques, as well as clustering similar tasks to optimize resources. Measurements of the new facility were made on site with a tape measure and printed file of the general layout. Once main measurements were calculated, Google Sketchup was used to create the frame of the building. This design took into account visual management, future production expansion, and a decreased footprint.

In the financial analysis of the proposed facility, the expected monthly distance savings were 25.4 miles, which can be extrapolated to an annual savings due to reduced transportation costs of approximately $2,500. As production is scaled, this savings would increase to $5,000+.

This proposed layout design can be utilized by Systech management as a roadmap as they move forward with the production in the new facility. Ideally, the proposed facility design should be implemented to gain the most savings as operations increase in the coming months.