

ABSTRACT

PROCESS MANAGEMENT AND DESIGN LAYOUT OF HIGH THROUGHPUT SCREENING

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Calibr is a pharmaceutical company in San Diego and growing very quickly rate and need help redesigning their lab layout and in doing so reducing their cycle times and down times in machines. In addition to this, they do not currently have an accurate measurement of how long their processes take in an overall cycle. The objective of this project is to provide Calibr with a redesigned layout to accommodate new equipment as well as a software tool that can output Gantt charts for their planning of their testing. Our approach to this project first included mapping out the facilities at Calibr and creating a current state model to help make improvements off of. To help measure whether or not our designs for our new lab layout would help Calibr, we created a simulation model. The alternative layouts would be determined by the distance traveled for the product and would be evaluated based on cycle time. Our software tool was created using ASP.NET in the C# programming language with the goal of making it customizable for Calibr. One of the conclusions from this project is that there is a high variability in their processes, so the simulation can only be accurate up to a point. However, an optimal location was chosen for the new equipment.