

**DRIVING PRODUCTIVITY
WITH SIMULATION**

A CENTRAL STERILE SUPPLY
DEPARTMENT'S SUCCESS

07.2016
CASE
STUDY

BACKGROUND

The Surgical department of a top rated Adventist hospital system in Central Florida was growing rapidly through the addition of a Women's Center and expanding their Organ Transplant, Oncology, Cardiovascular, and Orthopedic surgical programs.

Their 37 operating rooms (ORs) were supported by a Central Sterile Supply Department (CSSD) that recognized immediate productivity improvements were necessary if it were to meet increasing surgical case demands.

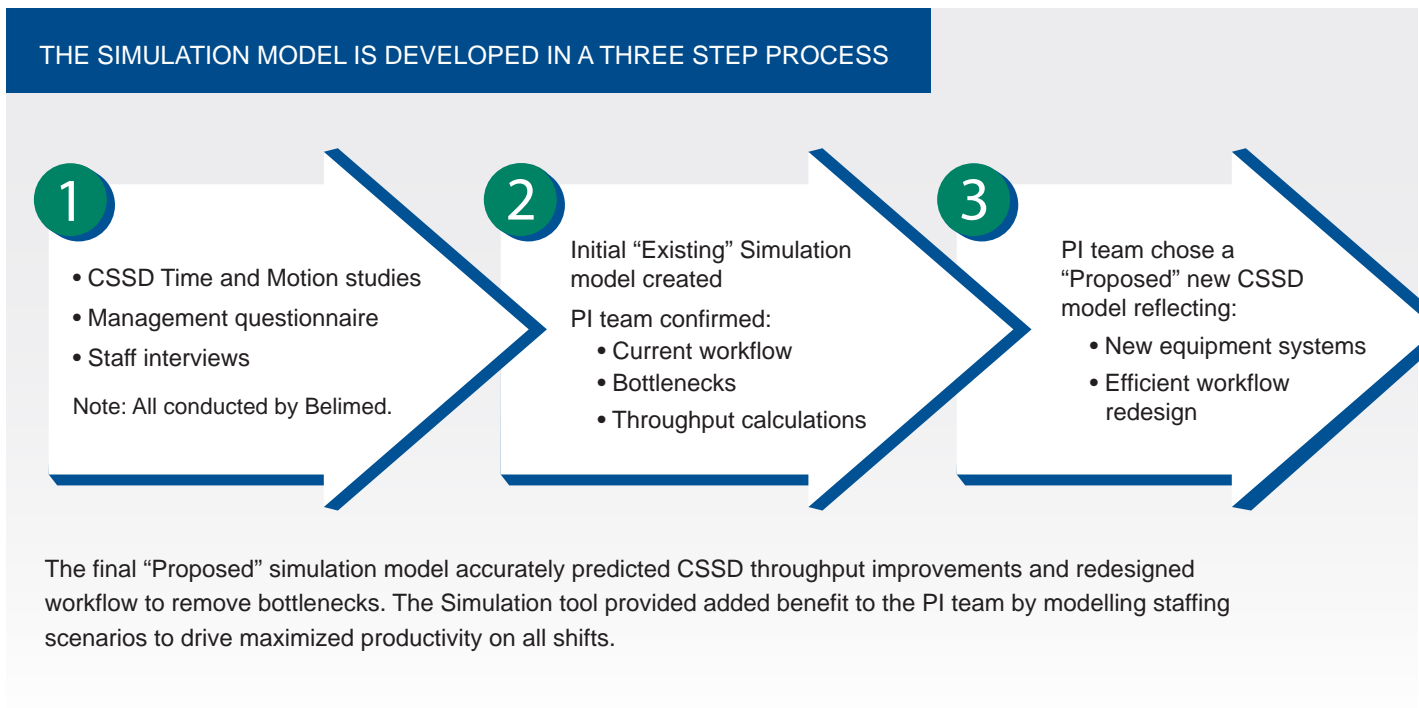
To address this challenge, a Process Improvement (PI) team was assembled by the hospital to focus on improving efficiency, driving out waste, and increasing throughput in the CSSD.

SOLUTIONS

The PI team determined that expertise in advanced infection control technology and evidence based design layout was needed to strategize new equipment and workflow redesign options.

They partnered with Belimed's Project Planning Group (PPG) who possesses this expertise. Their unique Process Flow Simulation tool combined with their lean, six-sigma certified engineers, were the two key resources needed to successfully analyze, plan, and implement their improved CSSD.

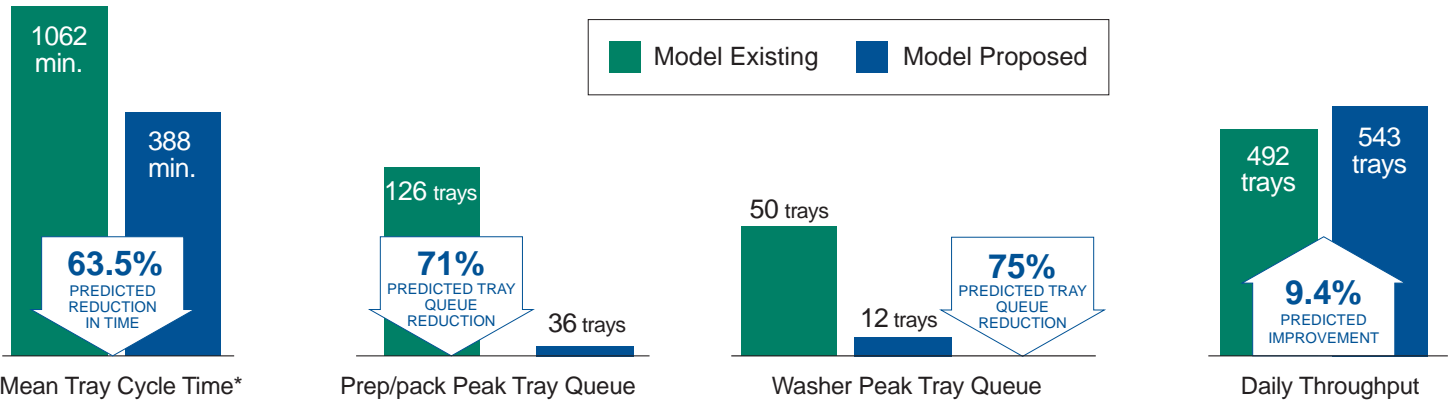
The Simulation tool allowed the PI team to visualize the entire CSSD process including instrument throughput and manual labor areas, so a holistic equipment and workflow solution could be designed to meet the facility's unique needs.



RESULTS

The final “Proposed” Simulation model forecasted CSSD productivity gains across a number of metrics before construction began, and the ability to support the actual surgical case increase that occurred post renovation verified those predictions.

A SAMPLE OF SIMULATION MODEL METRICS TRACKED, AND THE EXISTING VERSUS PROPOSED IMPROVEMENTS



Actual productivity improvements in the CSSD translate directly into additional available sterile inventory that supports higher surgical caseloads.

POST RENOVATION INCREASED CAPACITY

This CSSD increased capacity to support additional surgical procedures without increasing staff.

3,250

POTENTIAL ANNUAL SURGICAL CASES SUPPORTED

13.8%
INCREASE IN CAPACITY

CONCLUSION

The Simulation tool accurately predicted the impact of implementing advanced infection control technology and workflow redesign before renovation was started. The PI team chose the Simulation model for their CSSD renovation that resulted in tangible productivity improvements which quickly translated into easily supporting increased surgical cases and associated revenue.

With the model created from the simulation tool, future design changes can be studied for continuous improvement opportunities prior to investment.



*Mean tray cycle time is defined as the time it takes a tray to get back to sterile storage once it enters the decontamination area.

Information presented here is based on an actual facility but the institution has requested anonymity in this case study. The results discussed are specific to one healthcare facility and may differ from those achieved by other institutions.



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201608_PP03a_Rev. 0