

## **CASE STUDY: OPTIMAL FLOW STRATEGY**

### **SITUATION ANALYSIS:**

A manufacturer of products was having difficulty operating efficiently due to slow market demand from clients. As a result, they sought out development of an optimal flow strategy for their manufacturing footprint while ensuring they had scalability for when higher demand returned. Racca Solutions Group (RSG) was engaged to perform simulations and obtain buy in from the leadership as to the most efficient manufacturing layout based on their current capabilities.

### **IMPROVEMENTS IDENTIFIED:**

RSG began by conducting a thorough manufacturing facility assessment which will include an evaluation of the people, processes, use of machinery and space as well as visiting critical vendors that support manufacturing operations. After the assessment, design/modeling work was completed to determine opportunities to minimize operational complexity, streamline material flows, improve materials handling and make effective use of the outside vendor facilities.

With the help of “best in class” simulation software, Simul8, RSG replicated the client’s manufacturing process via simulation (information gathering, maintenance scheduling and resource deployment). The key areas of focus included:

- Enhanced material/manufacturing flow
- Reduction of all operating costs through technological and functional improvements
- Supply chain and inventory strategies review (gap regarding true production visibility)
- Simulation of current manufacturing processes
- Production bottlenecks and capacity limitations (use simulation for statistical modeling)
- Fostering an ergonomically correct and safety-sensitive manufacturing environment

### **OVERALL RESULTS:**

Within a two-week period, Racca Solutions Group was able to effectively diagnose production inhibitors and potential bottlenecks. With the help of Simul8 and detailed information gathering, RSG was able to create a pragmatic manufacturing re-deployment plan that addressed all immediate production and safety gaps/requirements. The manufacturing footprint was marginalized, as a true one-piece material flow was introduced, and the production cycle time was reduced by 27% while improving throughput up to 300%.