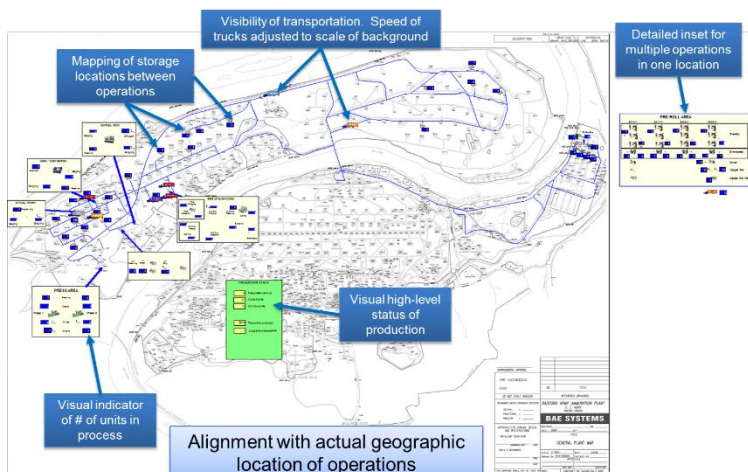


OOE Success Story

Flow and Capacity Improvement with Discrete-Event Simulation

- Customer:** US Army Joint Attack Munitions Systems Project Office
- Problem / Challenge:** Demand was exceeding production capacity for the MK 90 rocket grain produced at Radford Army Ammunition Plant. The government owned-contractor operated facility was facing significant capital expenses to increase capacity.
- Proposed Solution:** UAH partnered with an engineering company to map the production process and collect data. UAH then developed and validated a discrete-event simulation model of entire production process and what-if scenarios to identify opportunities for improvement.
- Outcomes:**
- Discrete Event Simulation Model* A complex simulation model was developed to represent the production of the rocket grain across the facility. The process covered multiple facilities across the 4,600 acre site. Details of the model included not on the production operations but also transportation, equipment reliability, weather interruptions and quality/rework.
 - Improvement Scenarios* Fourteen improvement scenarios were constructed and analyzed that explored a variety of improvement ideas.
 - Impact* Recommendations were made to economically increase production to satisfy demand.



"UAH's simulation model enabled us to validate throughput drivers of a complex production operation as well as predict the impact of multiple 'what if' scenarios. Given our constant change in requirements, this "living model" provides us the opportunity to optimize our production facility real-time and allow us to meet war-fighter demands. Other analysis methods would have been too costly and time-consuming."

- Tim Kay, Performance Management
Director, Joint Attack Munitions
Systems Project Office

UAH's Office for Operational Excellence

For more information

Please visit our web-site at www.uah.edu/ooe or call 256-824.4284