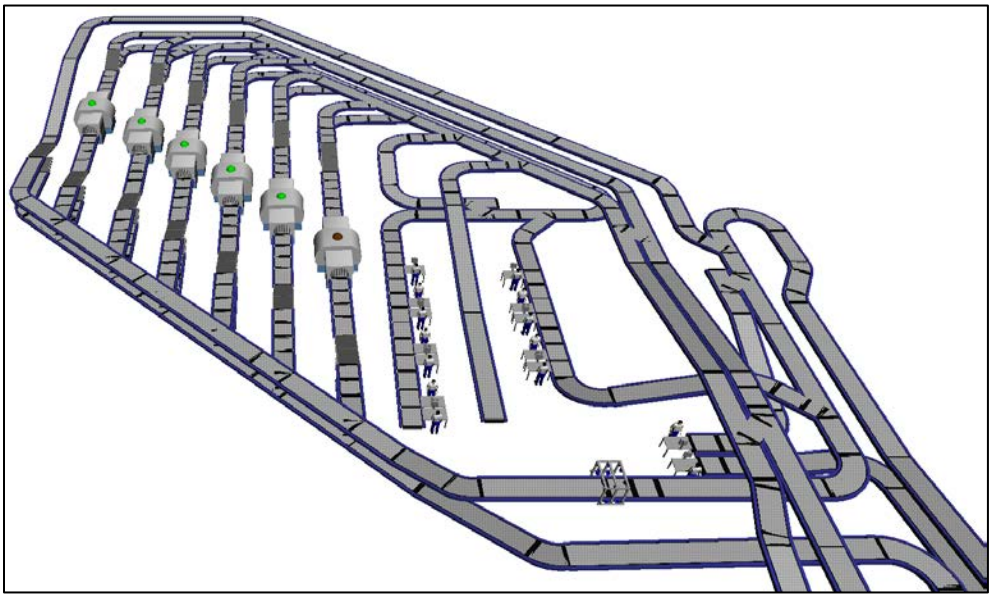
American Airlines LAX T4 CBIS



Client Name: American Airlines
Date Started: January 2008 **Date Completed:** February 2011

In coordination with the Los Angeles International Airport (LAX), American Airlines is planning to install a Checked Baggage Inspection System (CBIS) in Terminal 4. In support of this effort, TransSolutions has evaluated the performance of both 30% and 70% designs.

TransSolutions developed simulation models of multiple proposed design concepts and analyzed the expected performance of each concept based on the Transportation Security Administration's (TSA's) Planning Guidelines and Design Standards (PGDS). Throughout the design evaluation process, TransSolutions worked with CAGE, the system designer, to refine and improve both configuration and control logic elements of the system design.

TransSolutions' project responsibilities included:

- Developing demand projections for the Date-of-Beneficial Use and Date-of-Beneficial Use + 5 year time horizons
- Developing 3D simulation models and animations of multiple design configurations
- Quantifying screening equipment requirements, expected system throughput, and bag delivery times
- Identifying areas within the design that may limit performance and identifying and testing improvement alternatives
- Testing alternative control logic strategies, including:
    - o Pre-EDS bag divert policies, queuing, and VSU operations
    - o Post-EDS merge priority rules
    - o Bag advancement strategies in the Check Baggage Resolution Area (CBRA)
- Documenting design assumptions and modeling results to support the Basis of Design
- Participating in design review meetings with the TSA