



### Issue

The costs of transportation between two manufacturing plants in Europe have been increasing over a two-year period and are above budget. Year to date, these Costs represented 7.4% of sales. Company Management has requested that this be reduced by 1% to 6.4% of Sales

### Breakthrough Strategy

- Measure** A process map was developed by transport route. Existing data on the process was unusable, so a new measurement system was introduced and data collected. A Characteristic Selection Matrix developed from this data indicated three Key factors (X's) as impacting the Transportation Costs (Y)
- Analyze** A Multi-variate analysis, together with a Correlation and Regression Analysis confirmed a direct relationship between excess transportation costs and a small number of Production and Logistic Issues.
- Improve** A Robust Design exercise was conducted to establish the bounds for the key Production and Logistic Issues (X's) to drive the Transportation Costs (Y) to 6.4 % of Revenues.
- Control** Daily Control Charts were developed for monitoring the Key Production and Logistic Issues (X's) while changes were implemented in Production and Logistic area.
- Results** Transportation Costs have been reduced to 6.5% of Sales within 6 Months of the project start. The Project has identified other opportunities for reducing costs further.
- Savings** \$205,000 USD direct savings made with six months of the project start, with a year end benefit of \$275,000 USD