

# Nathan Kistler – CTQ Assignment

## CTQs

- **Prestigious**
  - The median income of individuals purchasing the car should be at least \$500,000 per year.
- **Exciting**
  - The car should appear in at least 3 Hollywood movies in the year after its release.
- **Attractive**
  - At least 95% of people in a 40 person focus group should agree that the vehicle is attractive.
- **Comfortable**
  - The sound level while the car is driving on a highway should be less than 30 decibels.
- **Handling best in class**
  - The vehicle should measure at least 1.07 g in a skidpad test in normal operating conditions (i.e., 70 degree F, 50 % relative humidity, no rain).

## Follow-up Questions

- Did you find it difficult to decide which CTQ's would fulfill a particular need? Why or why not?
  - It depended on the category. For instance, the prestigious, exciting, and attractive categories were more difficult to identify quantifiable CTQs. I found these categories much more subjective compared to the handling and comfort categories.
- Do some CTQ's fulfill more than a single need?
  - I did not find that a single CTQ satisfied more than one need. It may be possible to do so; however, I found each category to be distinct enough to require its own CTQ.
- What needs not explicitly stated above are customers likely to have?
  - Examples include safety and speed.
- Was it difficult to develop measurable CTQ's? Why?
  - This depended on the category and ties with the first follow-up question above. Certain mechanical features like speed, handling, and sound-level can be measured using devices. However, cosmetic features like being exciting and attractive are much more subjective. This makes these features more difficult to tie to a measurable CTQ.
- What technique can you use to move from subjective to measurable descriptions?
  - I believe using focus groups in the current project help to move a subjective to a measurable CTQ. This strategy uses the opinions of people with a standard survey to develop measurable results.