Proposal #4 → Establish DOE Optimization Process

Problem Statement:

- *Difficulties in compromising various R&H performance* → manual approach in tuning suspension hardpoints/compliance *(multi regression)*
- In other application (ex: weight target definition), require *statistical tools to analyze and define suitable weight target vs wheelbase vs segment size.*

Research Proposal:

- To *establish DOE optimization process flow (Taguchi, RSM etc.) for multi regression application* → example vehicle dynamics analysis.
- To *extend application of DOE optimization approach for target setting process* → example weight target setting, powertrain performance etc.

- Multi regression in vehicle dynamics analysis → ≥ 1 performance target to be met from similar tuning parameters.

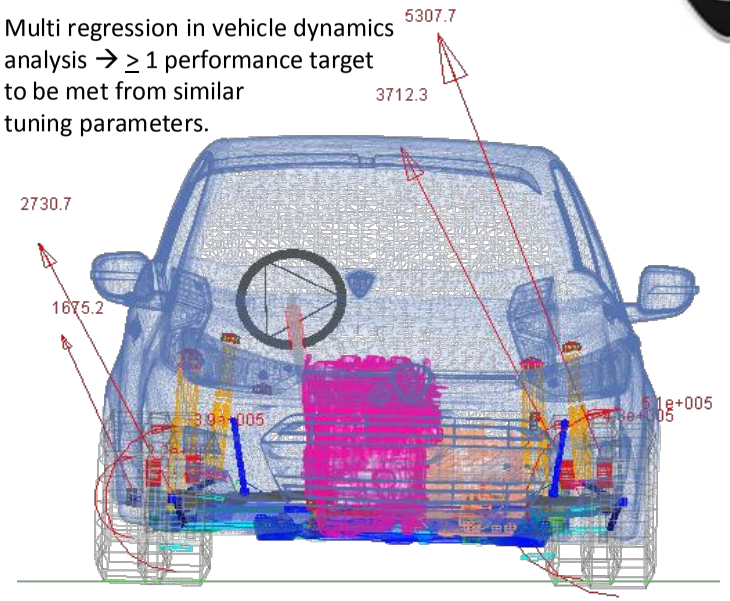
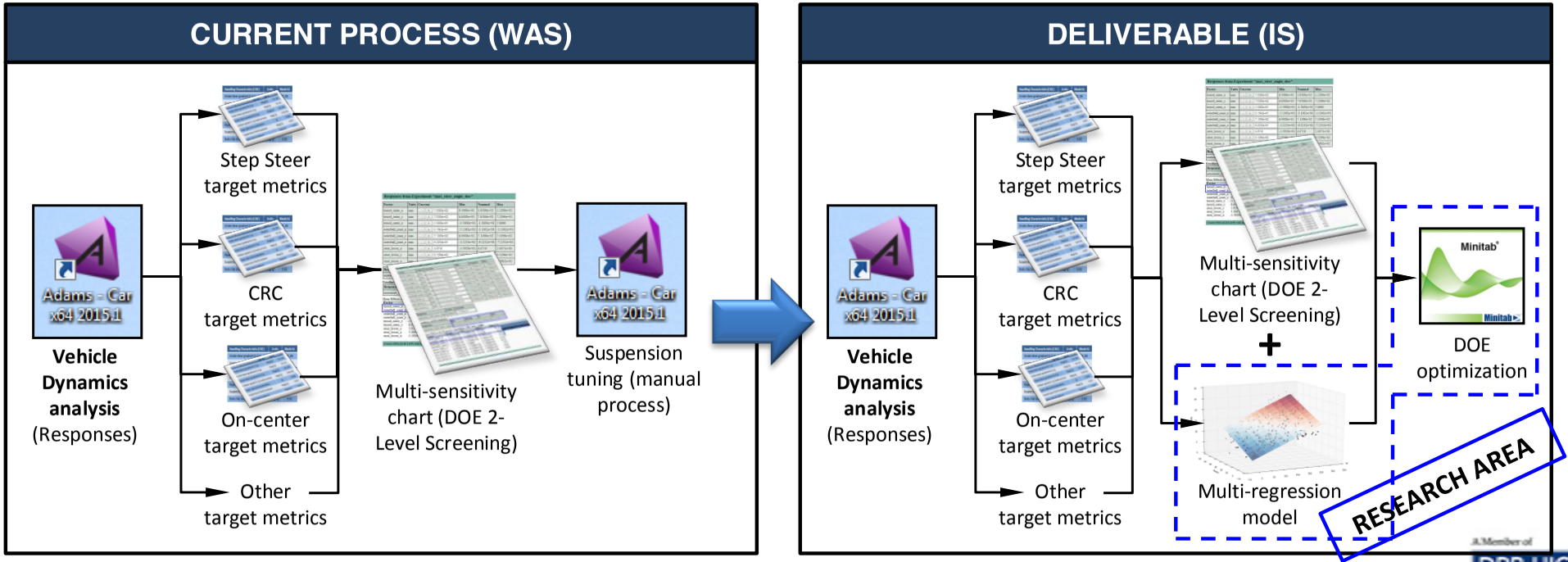
Figure 01 : Multi regression problem in vehicle dynamics