BiW Design – Light Weighting

BACKGROUND AND CHALLENGE
A major automotive OEM wanted to optimize the weight to achieve given weight target to reduce carbon footprint.

SCOPE OF WORK
• Design Optimization of BIW Structures
• Closures from Class A – Surface input for new vehicle variant during the design phase

SOLUTION
• Evaluation of master sections for requisite changes in the BiW components and the impact on the closures
• Evaluation of complex geometry sections to integrate multiple structures after detailed study on the impact on manufacturing, functionality and performance
• Assessment of impact on the performance through preliminary virtual simulations and relevance for closures
• Proposed, engineered, and implemented reduced BoM quantity by 5 parts

IMPACT
• Able to achieve weight reduction which translated to cost and time for manufacturing
• Reduced CO2 emission in conventional vehicles and improved range in case of electric vehicles