# Modular Vehicle Platform Design for a Luxury Automobile manufacturer

#### About the Client

Our client is a California based Chinese automaker supplier Company with manufacturing operations in the same location.





### The Challenge

Being a new company in the market, they wanted a platform and underbody design that would allow them to compete in multiple segments using an adaptable design. Our client provided a list of imperative vehicle and performance targets as well as cost targets.

## The Solution

To create a platform to be used for multiple vehicles, DEP engineers took a modular strategy. A modular design concept would allow the platform to be modified easily to be used for various frame designs so that the customer can compete easily in multiple segments. Keeping some parts common while others unique to different bodies allows the platform to be used for both compact utility vehicles as well as sedans.

DEP generated master sections with respective feasibility studies. Component packaging feasibility solutions and studies for the crush space and both front and rear motor compartments. The material mixed strategy included a mix of extruded aluminum parts, cast aluminum parts, and stamped steel parts all carefully chosen to achieve an optimal cost of production manufacturing in the strategy.

#### The Result

DEP's body engineering team provided the client with a platform that is versatile enough to be used between different body styles and maintain base design concepts. DEP was able to create the complete CAD model in six weeks using our rapid product development tool MeshWorks.

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