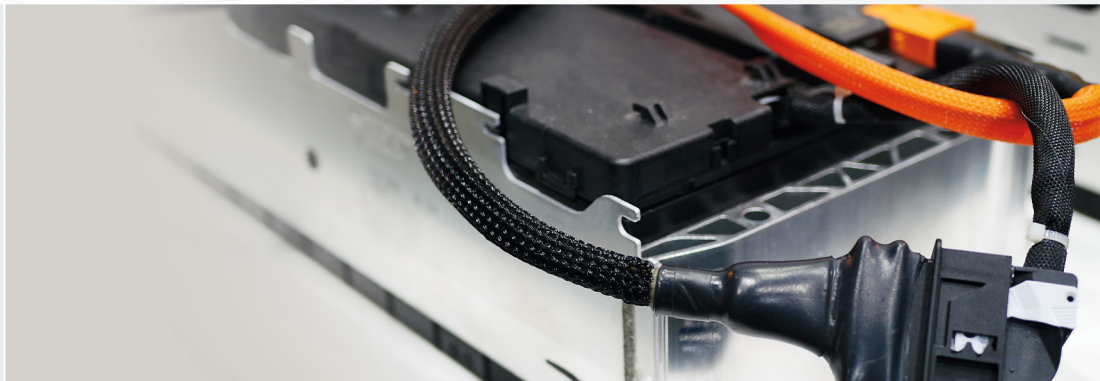


# From Zero to Won in Eight Months

## Farasis Dominates Bidding Process from a German OEM Thanks to a Virtual Prototype of Their Electric Battery That Surpasses Expectations



### A New Player Enters the EV Game

The move of the automotive industry toward electrification is seemingly unstoppable. OEM are announcing aggressive plans for Electric Vehicle (EV) production, and the International Energy Agency says the number of EV will grow from 3 to 125 million by 2030. So, it's no wonder that new players are entering the market, breaking the traditional rules of product design – new players like lithium-ion battery maker Farasis Energy. Looking to collect wins in this fast-growing market, the team at Farasis was able to gain the expertise and Virtual Prototyping capabilities to prove to a major German OEM that they were the best supplier – based solely on a virtual prototype. But how did they go from little simulation knowledge to won in just a few months?

### OEM Says “No Thank You” to Physical Testing

Farasis Energy, Inc., founded in California in 2002, is a developer and supplier of Li-ion battery technologies. With headquarters in China, a technology research center in the Silicon Valley, and several large-scale manufacturing plants in Asia and Europe, they are leaders in the industry. Witnessing the exponential growth of the EV market, Farasis saw an opportunity to expand their business. We spoke to Dr. Matt Klein, Manager for Engineering Analysis and Modeling at Farasis, who told us about his company's experience bidding for a large German automotive OEM.

Early in 2018, they received a development request for a new battery module from a German OEM. Bidding for a new battery design typically requires physical testing along with virtual testing (i.e. simulation). Farasis knew they would be working within a very short timeframe. Indeed, to bring EV to market faster, safer, and better than their competition, OEM and suppliers need to validate the reliability of their vehicles and parts faster than ever. This OEM accelerated the program timeline even further. Dr. Klein recalls, **“Half-way through the bidding process, the OEM actually decided to remove the physical prototype step – they would make their decision based on the virtual prototype.”**

### Simulation for the Win

Klein and his team were not caught off guard as they had teamed up with ESI, relying on the software provider's proven knowledge of the automotive industry and ability to provide real results, virtually, thanks to virtual prototyping. He describes ESI's combination of domain expertise and solution capabilities as crucial to the project's success. The ability to build a global (single-core) model, covering all engineering domains, led to a highly efficient workflow and ultimately a cost-effective solution for Farasis.

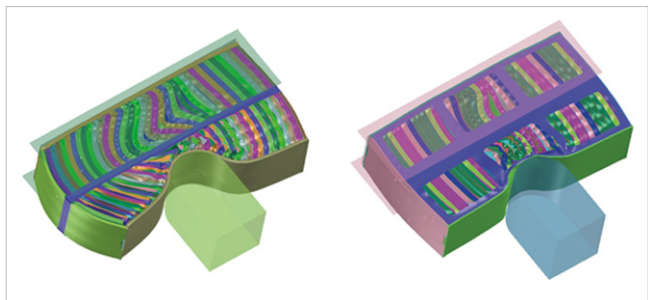
*“In just 8 months, we went from limited Virtual Prototyping capability to winning those bids. The head of the whole program conducting the bidding process went out of his way to tell us that the mechanical simulation was an instrumental part in helping us get the design approved. We could not have done that without ESI. Our partnership with ESI is truly strategic in bringing our simulation capabilities to a global leading standard.”*

**Dr. Matt Klein**  
Manager for Engineering Analysis and Modeling  
Farasis Energy, Inc.

### An Evolving Partnership

ESI is now putting in place a platform for Farasis' international team of CAE engineers, one that is fully automated and customized to their way of working. Thanks to this platform, the Farasis team will work together - regardless of what continent they are on - with great efficiency and transparency, on common Virtual Prototyping models. And what began as a bi-lateral partnership has quickly evolved into an ecosystem comprised of three major players – Farasis, ESI Group, and the automotive OEM – all hungry to tap into the EV market. Since their win, business is booming in Germany and China and in his new role as Global CAE Director, Klein plans to create a robust, global simulation team with the help of ESI.

We are keeping Farasis in our sights – and so should you.



Battery crush simulation analyses, using ESI Virtual Performance Solution, before (left) and after (right) design improvements show less damage. Courtesy of Farasis Energy.

for more information  
[www.farasis.com](http://www.farasis.com)

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