

**Hexagon
Virtual Assembly****Evaluate and optimize the assembly process prior to the first tool being built.**

Simulate the welding and assembly process to predict and mitigate distortion and other undesirable behaviors.

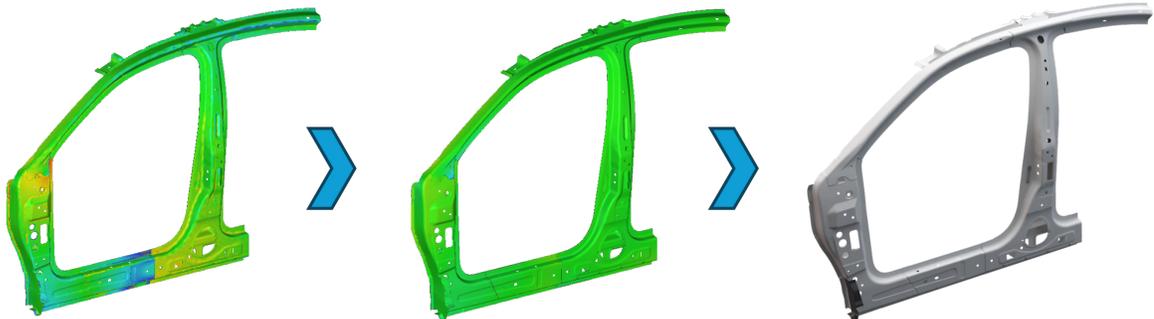
Consider the impact of:

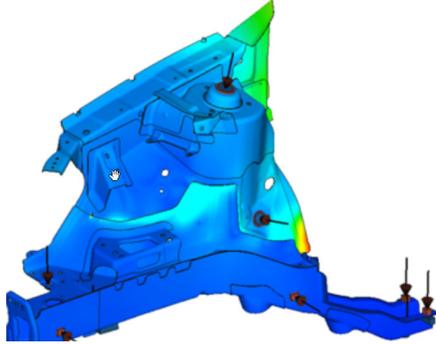
- integrating metrology (scan) data
- realistic gravity orientation
- forming simulation data
- real-world assembly process info
- thermal and mechanical multi-physics

Hexagon Virtual Assembly enables users to predict and mitigate the undesirable impact of clamping, fixturing, welding, and assembly processes on customer products. It is highly user-friendly and automated, and accessible to manufacturing engineering (non-CAE) experts.

Solution Use Cases

- Evaluate the interaction between the design and manufacturing process
- Determine stability/robustness of process and fixture/tooling
- Understand the impact of manufacturing process on dimensional tolerances
- Evaluate, predict, and mitigate manufacturing issues early in the product development process

**Virtual: Non-conforming****Virtual: Conforming****Physical: Conforming**

Virtual Assembly**Key Capabilities**

- **Usability** and **automation** allow users from different backgrounds to leverage the workflow, shortening the time to iterate to a successful outcome virtually.
- **Advanced multi-physics** welding and assembly simulation, including realistic gravity orientation
- **Flexibility** to mirror real-world processes and integrate with existing workflows without inappropriate simplifications.
- **Incorporate physical data** to reflect the “digital reality” of scanned parts within the assembly simulation



Reduce Cost - By reducing and eventually eliminating the need for physical prototypes, the cost of a product program can be significantly reduced. Also, the ability to address changes earlier in the process before tooling is built drives further cost reduction.



Reduce Time - Eliminating the dependence on physical parts to perform assembly tryouts, and the time required to perform and check the tryouts themselves will dramatically reduce the calendar days required for a new product program. The ability to address changes earlier in the process before tooling is built means that any changes can be implemented earlier and faster.



Improved Quality - By enabling a holistic evaluation of the design and process earlier in the product development cycle, companies are able to better optimize their design and process, and drive better quality products.



Sustainability - Saving material, energy, and resources by replacing expensive physical tryouts with virtual prototypes.