

## More functionality through customization

### Integration of CAESSES into ANSYS Workbench by ACT

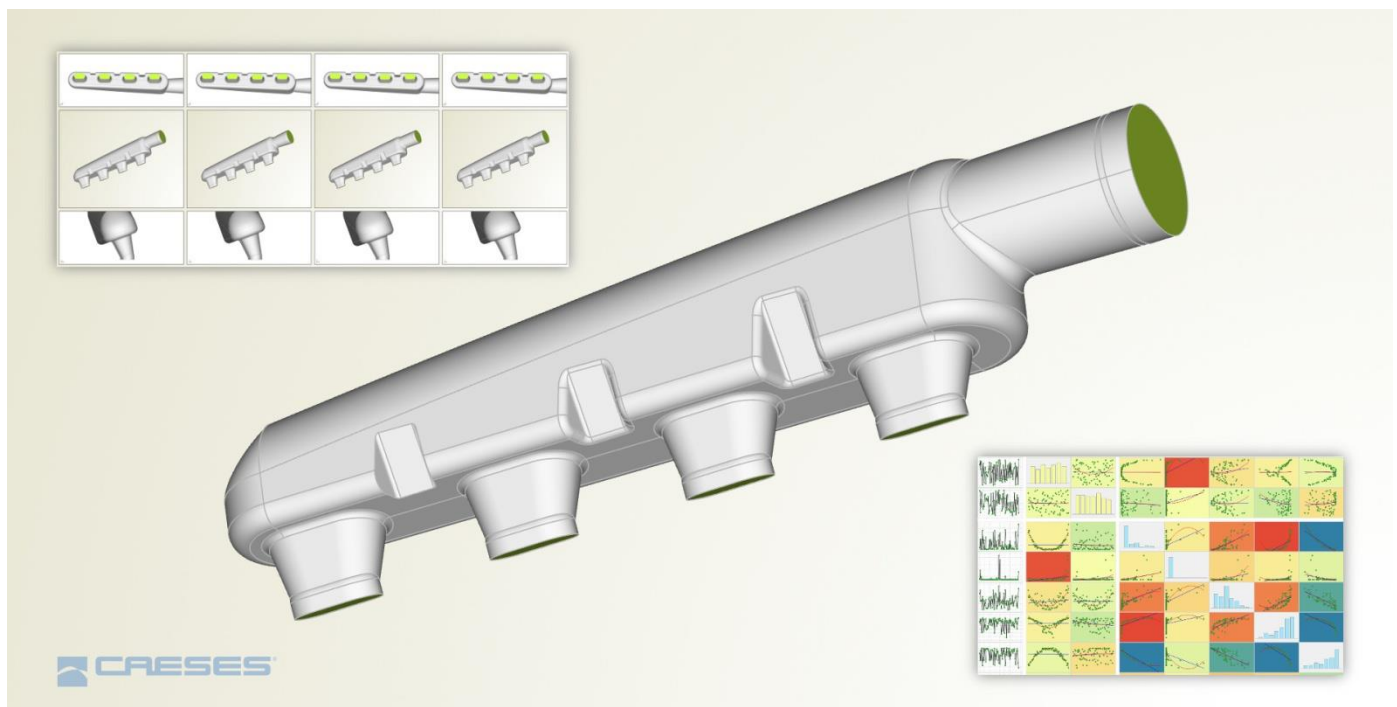


Fig 1: CAESSES for parametric shape optimization.

#### Task

FRIENDSHIP SYSTEMS AG is specialized in the development of CAD software solutions for the robust parameterized representation of free-form surfaces and their automated variation. With CAESSES, they are known above all in the field of optimization tasks in fluid mechanics.

To link this CAD technology with the simulation solutions from ANSYS, an interface for integration into the ANSYS Workbench was to be developed.

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### Solution

The integration was done with the ANSYS Customization Toolkit (ACT). It offers extensive possibilities for adapting the ANSYS environment to extended requirements. At first, the programmers of FRIENDSHIP SYSTEMS received a three-day training for a basic understanding of the integration possibilities with ACT.

Due to the intuitive handling, the core integration requirements could already be implemented during this training phase. This enabled the developers to independently complete, maintain and further develop the extension of the functionalities in the ANSYS Workbench. The CADFEM services also help for further development of this integration.

### Customer Benefit

With the integration of CAESES into the ANSYS Workbench platform, this additional technology is made available to a broad ANSYS user community.

The seamless integration into the ANSYS environment enables the parameterized mapping of free-form surfaces to be embedded in the parameter-based simulation workflow for many application areas. In combination with ANSYS optiSLang, workflows up to robust design optimization can be efficiently realized within the ANSYS platform.

For more information on integration and use cases, see: <https://www.ansys-blog.com/shape-optimization-caeses/>



Fig. 2: ACT interface for integration of CAESES into the ANSYS Workbench platform.

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### About CADFEM

Since 1985, CADFEM delivers CAE competence and works closely with ANSYS Inc. Today we are an ANSYS Elite Channel Partner and we provide our customers with everything required

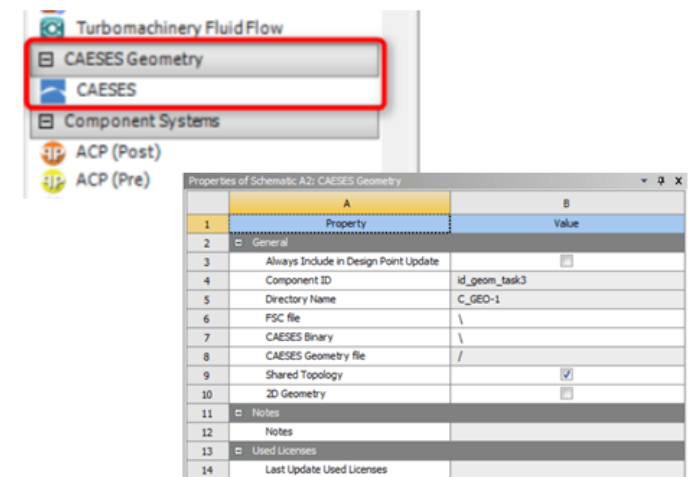


Fig. 3: New user defined analysis system CAESES Geometry and properties of schematic.

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