

The product design and development process can prove to be problematic for engineers. It is required that they consider trade-offs between product attributes in the areas of cost, weight, manufacturability, quality, and performance. The optimum design in reality is usually one in which the compromises are acceptable, but understanding the impact of design decisions on all relevant attributes is tremendously difficult. This is a process made much easier through Computer-Aided Engineering (CAE).

Engineers face difficult challenges when determining how to arrive at the best overall design, making the right compromises, and not sacrificing on the critical attributes. We are able to evaluate many different types of designs, giving high confidence that the final design will successfully meet product requirements, before the physical product is built.

- Customer benefits
- Component weight reduction,
- Reduce product cost
- Improved structural integrity
- Designs ready for manufacture
- Products that meet life cycle requirements

Finite Element Analysis (FEA) and virtual simulation of components and complex assemblies is a basic requirement for engineers in all industry. Virtual simulation using FEA and Mechanism design enables us to evaluate and optimise the product attributes quickly and efficiently during the design and product development stages. Services to our customers include:

- CAE modelling and analysis using FEA
- CAE modelling and mechanism design to evaluate virtual operation
- Multi CAD import and native CAD access
- Geometry creation and editing
- Static and animated plots and charts for structural deformations, stresses, strains, and failure with scalar and vector quantities

**Got a complex mechanical design that has a number of moving parts? Need design verification?**

The CAD Guys, through virtual testing can help our customers better understand the relationship between components. We are able to sit down with you, and through our interactive display evaluate the design under any number of operating conditions assisting our customers in overcoming their business challenges by providing greater knowledge and a superior understanding of their products.

**Need a light weight high performing components?**

The CAD Guys can take the guess work out of the equation. After we design the component we work with our customers to understand the operation of the part and feed that knowledge into our FEA model to produce an optimal part.