

SSSa

Turning Technology into Reality

---

# company

---

SSA is a company that specialises in maximising your return on investment in analysis software.

Cost savings only come from analysis if it is made an intrinsic part of the design process and linked directly to the test program to keep it grounded in the real world.

To gain the maximum from the analysis process, integration with CAD has to be planned and the modelling approach optimised to unlock the full potential of analysis. Simply taking complex CAD assemblies used to define products for manufacture does not often result in useful analysis.

There are no absolutes in simulation, only a series of assumptions and best guesses as to what will happen. Long term correlation with test is what turns the best guesses and assumptions into useful, and ultimately, reliable predictions of performance.

The key aspect of successful implementation is the effective integration of the CAD system with the design process itself. This combined with constant and rigorous checking of predicted performance with that achieved in testing maximises the effectiveness of implementations.

SSA has over 50 years combined experience in helping customers create and implement simulation strategies to gain real financial and technical benefits for their businesses.

---

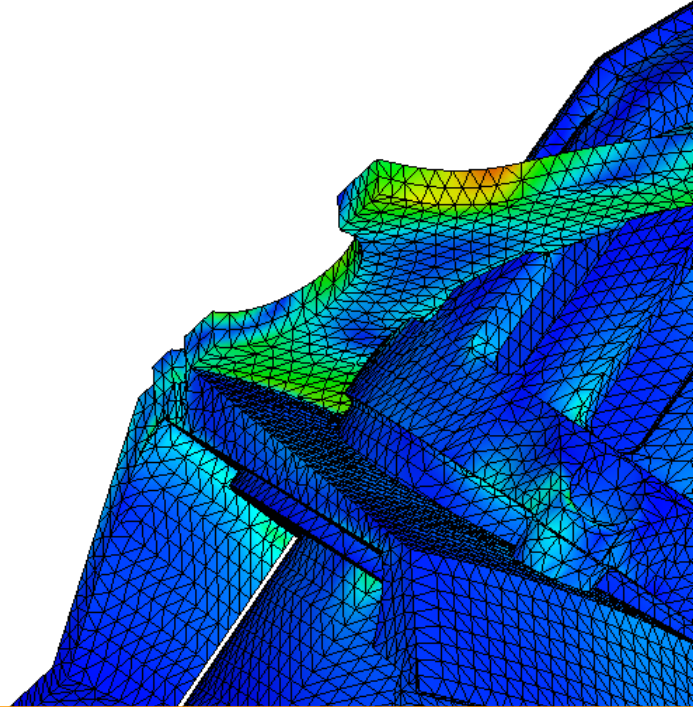
# consultancy

---

The process of creating analysis models which make useful predictions of real world performance is known as methods development.

New investors in the world of simulation are probably worst placed to carry out methods development. By carrying out investigations and trial analyses SSA can fast-track the model development process to create a simulation process template. These templates then allow SSA customers to drive their own design and development process.

High level analysis requires a high level input data. This data is generally obtained from testing – SSA can interface with test companies to provide the data necessary to ensure that the analyses carried out are fit for purpose.



# products

---

The SimStart implementation package is designed to introduce simulation methods effectively within the design, test, and overall engineering environment. This will accelerate the process of gaining a full strategic, technical and financial understanding of your technology.

## SimStart – The Product

Simstart is a product which fast tracks the implementation of CFD and FEA technology to achieve technical and financial benefits to customers in the shortest possible timeframe.

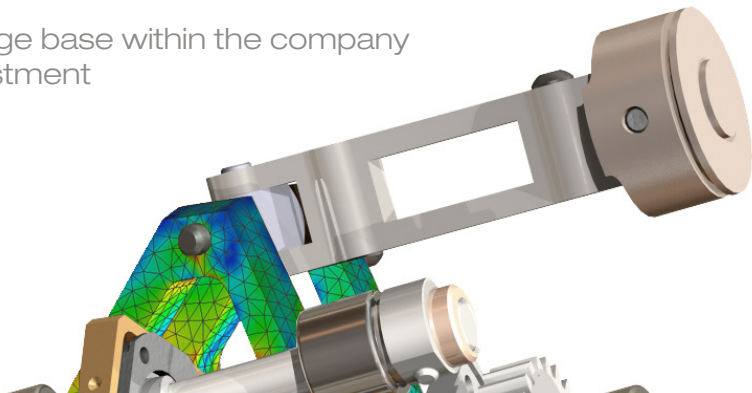
By examining the design, prototyping and test process, SimStart is tailored to the company's requirements, providing the benefit of simulation through targeted and well defined objectives. The package comprises of a range of core and optional modules.

The SimStart services are delivered by a team of engineers comprising of specialists within the field of simulation techniques who are coordinating with project managers.

## SimStart – The benefits

The key benefits of the SimStart product include:

- Shortcuts many of the pitfalls traditionally associated with introducing analysis
- Reduces learning curve
- Rapidly increase knowledge base within the company
- Maximises return on investment



# training

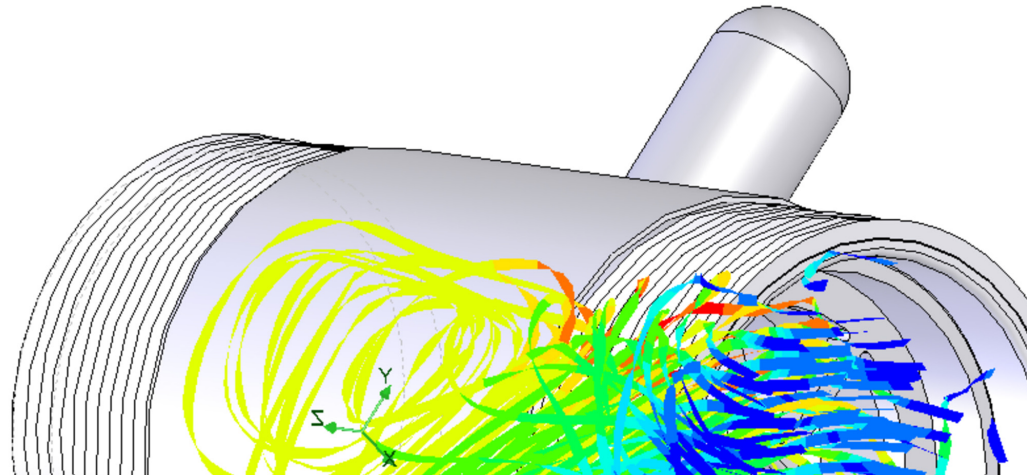
SSA offers training courses which focus around reducing the learning involved, but also how to carry out analyses, and the implications - as well as how to carry out analyses and the implications.

- Basic finite element analysis
- Thermal analysis
- Forced vibration analysis
- Non-linear analysis
- Computational Fluid Dynamics
- Fluid Structural Interaction
- Electromagnetics

Training can be carried out at our offices or on site.

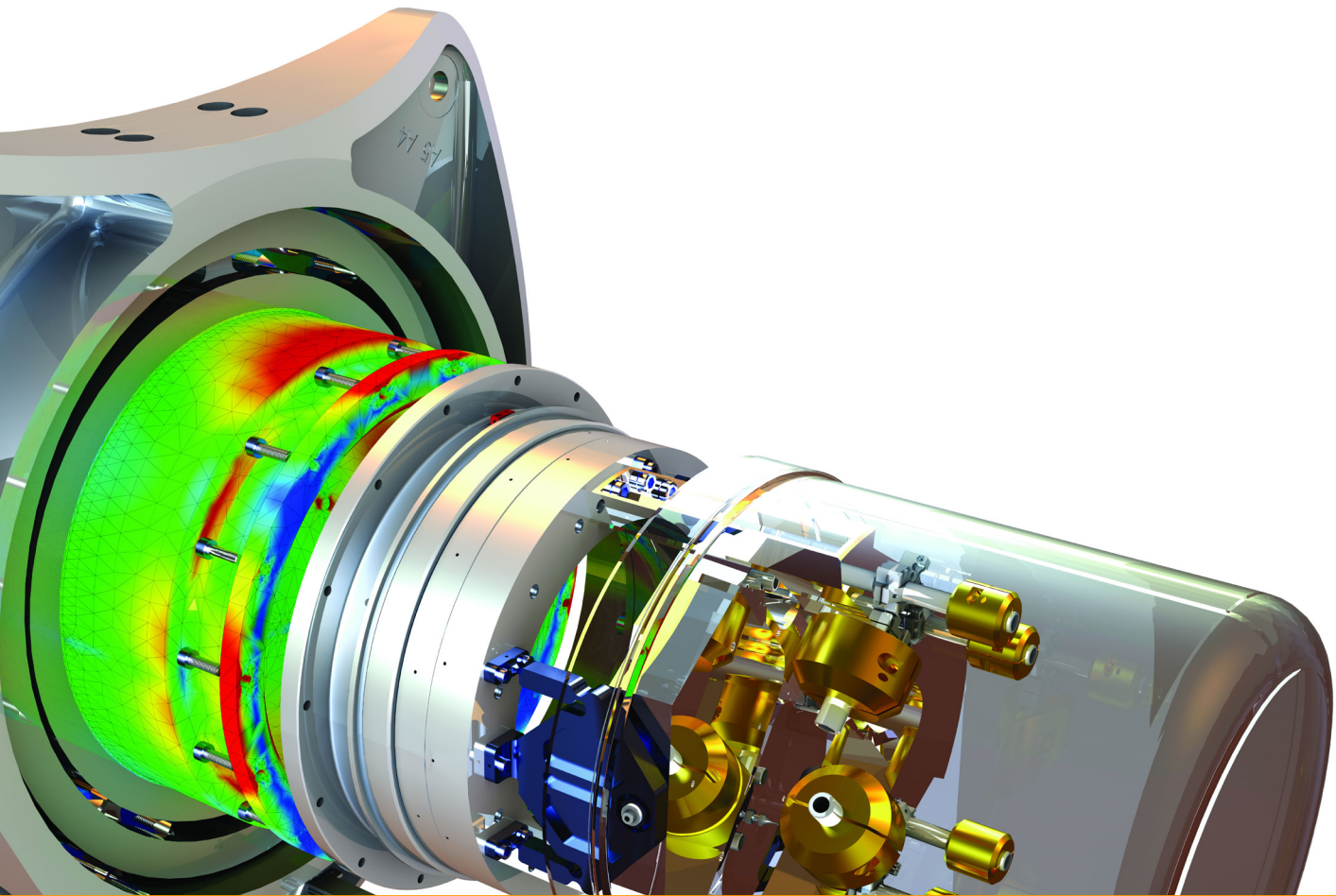
## Bespoke Training

By using actual customer problems as the basis of training exercises are a good way to learn the analysis process, however bespoke training can accelerate the learning process by using customers example problems as the basis of training exercises. Closely allied to methods development bespoke training courses help formalise the knowledge capture and exploitation process.



# implementation strategies

Defining and monitoring an analysis strategy is important if real financial benefits are to be gained, and for quantifying further investment. Analysis strategies should be focused on financial gains. SSA can help define realistic analysis strategies and carry out the all important pilot studies necessary to ground the plan and help it achieve its aims.



# case studies

---

“Laurence Marks’s approach to our finite analysis requirements is down-to-earth and logical, and we know we can let him just get on with it, even when we might describe the task as “awesome”.”

“We have used Laurence solely for many years; we have simply never had cause to look elsewhere. If needed, Laurence will stay up to deliver the goods the next morning for us!”

Roger Lee-Smith, Project Manager for Genevac Ltd

“Our sensor offers significant improvements in efficiency to major gas turbine OEM’s and users. The pressure is on to get to market quickly to enable these ‘blue chip’ companies to meet environmental legislation targets. Finite element analysis has significantly reduced the development time and costs of our sensor.”

“The sensor has to work reliably in extreme temperatures of over 1000C. We use a combination of robust materials and close tolerance processing and manufacturing techniques. Our analysis needs are therefore very demanding.”

“Thankfully, we knew Laurence Marks of SSA Ltd. Laurence is a character we feel very fortunate to have found, with his breadth of skills, both academic and engineering related, that allows him to cut to the chase and understand our requirements clearly and quickly.”

“Laurence is focused on the solution, utilising the favourable software for the application. His results are clear and always an honest and accurate assessment of our equipment.”

“Laurence is an impressive member of our team. We trust his skills and conclusions and he will remain vital to Oxsensis Ltd’s growing success.”

Steve Tyler, Mechanical Design Manager for Oxsensis Ltd

---

SSA Ltd  
Head Office  
Waterslade House  
Thame Road  
Haddenham  
Buckinghamshire  
HP17 8NT

01844 295235

[info@ssanalysis.co.uk](mailto:info@ssanalysis.co.uk)

[www.ssanalysis.co.uk](http://www.ssanalysis.co.uk)

---