Key partner in Design Process Innovation
To design with eyes fixed on the future: this is my goal – a goal which I share every day with my colleagues. They are the true wealth of EnginSoft, and the protagonists of this story.

Recently, whilst driving on the highway, I was overtaken by a sports car. As it passed, I admired its aesthetic genius and unparalleled expression of Italian style. I was especially caught by the emotion and pride I felt in knowing that several fundamental elements of its powertrain arose from simulations carried out by engineers at my company.

I then began a strange mental game, a kind of census of all types of simulation models we’ve developed for cars over the years: aerodynamics, engine fluid dynamics, ventilation, defrost; and then for the component manufacturing processes - wheels, seats, steering, beams, brake shoes, sheet metal – as well as changing the acoustics, simulating impact tests, optimizing drivability and comfort, and solving the problems of hybrid and electric vehicles. It was an endless list. Easier to play was the reverse game: for which issues related to design, manufacturing processes, and tests had we not developed some simulation model? An insignificant number:

From there, my thoughts raced as I extended the game to other industrial sectors - agro-food, electrical appliances, civil aerospace, geomechanics, off-shore. A long series of images came to mind.

What a long and fascinating journey we have travelled! When I founded EnginSoft in 1984, simulation-based engineering and sciences were an emerging field. It fascinated me, and I sensed its potential. I dreamed of changing the way we design and produce through virtual prototyping, simulating manufacturing processes, and scientific computing.

After almost 30 years, we have become a true center of excellence in engineering simulation with branches and partnerships that can assist companies in all aspects of innovation in design and production processes.

I still believe that, even with a difficult world economy, engineering and sciences based on simulation are a necessity: the most effective means to optimize production processes and create new quality products. Regardless of the industry (automotive, aerospace, consumer goods, construction, energy, healthcare or machining), it approaches the entire design process from conception to completion in a holistic way, bringing together designers, analysts, and the entire chain of suppliers. It may seem like a complex process, and sometimes perhaps utopian, but I believe it is a safe investment to reduce the growing competition from emerging markets.

EnginSoft has a world-class team of engineers, each with specific skills, who sometimes are also researchers from the best engineering universities: human capital and knowledge of which I am proud, and which has allowed us to become a powerful bridge between the vibrant world of research and its application in everyday life.

I would also like to take this opportunity to thank all our loyal customers, who are our raison d’être. We would never have been able to forge this long path without them, and without the excellent cooperation of their designers.
A Key Partner In Design Process Innovation

Instrumental solutions for engineering, consulting, training and research in virtual prototyping to accompany businesses into the future

EnginSoft is an Italy-based multinational consulting company active in the field of Simulation-Based Engineering and Sciences. Founded in 1984, over the years EnginSoft has become the partner of choice to support companies in design process innovation, thanks to the extensive skills of our highly qualified staff. We provide a wide range of services including effective, high-quality consulting, advanced training, development of ad hoc custom software, and research.

In Italy, EnginSoft employs about 120 engineers with multidisciplinary skills in a variety of contexts and technologies: large-scale, industrial, transportation, metallurgy and in all contexts in which simulation is a strategic asset for innovation and business competitiveness. We make extensive use of software solutions that match or exceed prevailing industry standards (ANSYS, MAGMA, Flowmaster, modeFRONTIER and others), and invest heavily in the use of infrastructure-based High Performance Computing (HPC) and Cloud Computing platforms.

Based on such tools and over twenty years of systematically building our knowledge and expertise, EnginSoft is able to customize the best solutions for each problem in product or process development for companies from a wide range of manufacturing sectors. These include automotive, aerospace, rail and seaborne transport, communications (electronic and electromagnetism) and energy (oil, gas and plant design).

In particular, EnginSoft has extensive experience in the disciplines of mechanical and structural engineering, fluid dynamics, high- and low-frequency electromagnetism, and proven skills in the analysis of multi-physics phenomena.

In the name of excellence and with an eye toward the future

For us, this is an axiom that describes the daily collaboration with the Research & Development centers of major industrial groups.

It means working together with our clients to identify and develop the solution that best suits their industrial needs; improving the efficiency and effectiveness of engineering simulation tools; and utilizing our intellectual capital and wealth of expertise to achieve the highest return on investment.
Technology transfer to support innovation

Innovation is key to business success, and one of the most effective tools to reach and maintain a position of excellence both nationally and internationally.

In an increasingly globalized and rapidly-changing market, where the differing cost of labor resources huge impact on the industries of competing nations, the level of competitiveness of Western companies has shifted. The development or acquisition of new technologies and the process of internationalization have become indispensable tools with which companies are forced to compete.

In this context, the transfer of technology has taken a leading role, emphasizing the need to facilitate the transfer of scientific and technological knowledge from research to production.

But finding ways and methods to make these technologies available and, above all, effective, requires a careful analysis of the specific industrial reality, a deep understanding of its potential for development, and an accurate assessment of return on investment. In other words, it requires specific expertise in technological innovation and extensive experience in the field.

When it comes to virtual prototyping, EnginSoft has both. For over twenty years, we have been directly involved in several Italian and European research and development projects. We enjoy close ties with the “Best of Breed” in computer sciences, and have established partnerships with the most important businesses in other fields.

For this reason, EnginSoft specialists can introduce and optimize Simulation-Based Engineering and Sciences in a manner closely-suited to each specific production context, carefully considering its special needs and business objectives, and ensuring the effective use of the skills, methods and experiences of the business they are called on to support.

Interventions range from consulting on the development and implementation of joint projects to identifying appropriate means of financing the creation of scientific and industrial partnerships.
The effectiveness and efficiency of virtual modeling

Research & Development

EnginSoft also supports its customers in choosing the appropriate financial instruments to achieve their development plans, and in the writing and submission of grant applications. The complementarily between technology consulting and financial advisory services makes for a truly innovative capability. EnginSoft is able to provide fast and timely disclosure on grants and low-interest loans available to innovate products and production processes.

EnginSoft supports companies in the preparation of funding applications, selects and trains staff for research, and finds partners for international projects. Since 1994, EnginSoft has been recognized by the Ministry of Education, University and Research (MIUR) as a technology transfer laboratory in the field of CAE/iDP.

Consulting

With an interdisciplinary approach, a wide range of skills and a proven track record, EnginSoft provides quick, quality consulting services, whether the problem is related to the properties, performance, or process optimization of a single component.

Through the application of Engineering Simulation technology for design and production processes, we support innovation. From analyses of mechanical strength, deformability and durability to those in the field of thermal, fluid, acoustic, electromagnetic and optical engineering; from specific targets to overall objectives, and with a “multi-physics” approach, we share our knowledge and provide methods and tools to complement and enhance the systems and resources of our clients.

We offer CAE Assessment services to improve the efficiency and effectiveness of Computer Aided Engineering tools to achieve maximum return on investment.

Bespoke Solutions

Locating the most suitable technology for a single industrial reality, integrating diverse applications, and enhancing the intellectual capital of the customer: these are core goals for EnginSoft.

We distribute many software applications that have been carefully chosen based on standards of excellence, reliability, and quality of service. We provide a complete service in skills training, technical support, advice, and personalized business coaching.

We offer our knowledge, methods and skills to transform simulation codes into efficient design tools.

Training

For EnginSoft, training and cultural dissemination represent a commitment and a constant interest, embodied in many different initiatives and organized in collaboration with dedicated facilities and partnerships.

- Software technology training, with over 60 courses annually and personalized training
- On-the-job training
- Distance education for engineering via improve.it
- Continuing higher education via the TCN consortium, of which EnginSoft is a founding member
- Organization of workshops, seminars and conferences
- Publication of Simulation Based Engineering & Sciences newsletter
- Coordination and participation in pilot training projects
More than 3,000 projects...

...alongside leading companies of all sizes in every industry!

In almost 30 years we have participated in the creation of more than 3,000 projects in collaboration with companies of all sizes.

Working with companies from all sectors we customize the best solutions for each problem in product or process development. EnginSoft operate in range sectors including Transportation (Automotive, Rail & Marine), Energy & Construction, Appliances, Oil & Gas, Aerospace & Defence, Metal & Manufacturing and Others such as communications (electronic and electromagnetism).

Group turnover is approximately €. 22 million.
Research Projects

BENIMPACT

BENIMPACT is a two-year research project co-funded by the Autonomous Province of Trento through the ERDF (European Regional Development Fund). Within the project we have developed a prototype of the BENIMPACT Suite, which allows simultaneous completion of the analysis and calculations necessary for the design of an eco-sustainable building through the interaction, overseen by modeFRONTIER, of a series of highly integrated computational tools.

The suite includes the single, integrated use of five functional modules (geometric modeling, energy modeling, Life Cycle Assessment, Life Cycle Costing, and multi-objective optimization), four databases (building components, energy production systems, the current construction regulations and requirements, meteorological data), and two service modules (target setting and green design solutions).

As project coordinator, EnginSoft was responsible for the development of a BENIMPACT Suite prototype.

The methodological approach of BENIMPACT implements an integrated building design process. In the traditional design process, however, calculation tools that allow the evaluation of building characteristics in the design phase are not integrated with each other and are used, in general, by different professionals at different times in the design process.

Initiatives

EUCOORD

EUCOORD is a web-based solution for the Project Management and Financial Accounting Research Project of the 7th Framework Programme, its development based on many years of EnginSoft experience in the management and coordination of European projects.

The platform provides a single solution for all the tools necessary to manage research projects, from accounting to the automatic generation of reports, from data collection to the communication between the coordinator and the partners.

EUCOORD allows the project team, each with their own personalized and protected access, to work and interact 24 hours a day from any computer.

The license to use EUCOORD can be included in the eligible project management costs and is 100% funded.

Improve.it

Improve.it is dedicated to distance learning for engineering. Online courses are designed for professionals who work in complex contexts and need access to educational resources targeted efficiently and at low cost.

The topical themes of continuing higher education courses for engineers range from introductory to specialized, from theory to application.

The site has been developed by the TCN Consortium for Higher Education, of which EnginSoft is a founding member.

B2gether

B2gether is a new project of EnginSoft, a hub of events and initiatives to support businesses.

Because success is a difficult goal, but possible - together.

Due to the large number of process variables and the lack of process control unit synchronization, High Pressure Die Casting (HPDC) of light alloys and Plastic Injection Moulding (PIM) processes are generating more defects and higher energy consumption in European industry, showing less flexibility at each product and process evolution stage. Therefore, MUSIC is aimed at leading European companies involved in HPDC/PIM to ensure less waste, greater efficiency and robustness, and minimum energy consumption.

The development and integration of a completely new ICT platform based on an innovative cognitive control system connected to real-time monitoring allows active quality control, avoiding the presence of defects by acting directly on the optimization of process variables.

The challenges of MUSIC are quality and efficiency: Thanks to the research project it intends to exploit the huge (and still underrated) potential of HPDC/PIM integration along the entire supply chain, ICT and modern technology modeling.

EUROPEAN

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Because success is a difficult goal, but possible - together.
Our Mission is to assist and support enterprises operating in various industrial sectors in the pursuit of innovation in design and production processes through Simulation-Based Engineering.

A European leader in the integration of several "Best of Breed" in computer sciences, the group is active in the promotion, dissemination and use of simulation and optimization technology in the United States and around the world.