START UP
INDUSTRIAL
RESEARCH

CAROTS

Expertise in Simulation: FEAC Engineering P.C.

Sotiris Kokkinos, CEO of FEAC Engiennering P.C. (left) and his brother **Charis Kokkinos, CTO of FEAC Engiennering P.C.**, founded the company in 2014. (photos: FEAC)

What motivated you to start FEAC Engineering?

Sotiris Kokkinos: I founded the company FEAC Engineering with my brother Charis Kokkinos, in 2014. Charis had been working in the field of simulation at CERN for five years. At the same time, I was working for a couple of high technology companies in Greece. From 2010 until a few years ago, Greece experienced a severe financial crisis. When Charis decided to return to Greece, there were not many companies hiring people. So we decided to take fate into our own hands and started our own company. We established a company offering simulation services. With our technological background, we knew that the field of simulation was new and would be the technology for the upcoming years to develop new technologies as well as products. However, the issue was not only that we were in a country experiencing huge financial problems, but also that we were highly trained engineers without the knowledge how to establish a company and how to run a business.

What are the problems or challenges that your company offers a solution for?

Today, products have many advanced technological features. Instead of just developing mechanical components, smart technologies in the product need to be considered. In our case, the product can be a vessel, satellite or aircraft in the aerospace or aeronautics industries. We have to study a lot of physical phenomena to see how a product will perform in real-world conditions. We help our clients to visualize and understand how the product will perform before constructing it. For this, we make use of high-power computing. For example, if a client wants to understand how a vessel will react in real-world application, we can construct the structure virtually, and then use computing power to simulate the effects of different environmental forces on the vessel as a whole.

How much time passed between having the idea for your start-up and your launch?

It took us six months to set up the company. Before we started, we had worked on the idea and a business plan. We participated in several start-up incubators in Greece to gain knowledge of how to establish, and run a company and finally, six months later, we managed to officially register our company in Greece.

Who helped you get started, for example friends and family, incubators, investors or mentors?

Founding a company was not easy; it was based on our financial resources, mine and my brother Charis', as well as a little help from our family. Incubators helped us with the business plan, taught us how revenue streams work and showed us who could be our partners and clients.

Company Facts

FEAC Engineering P.C., registered in 2014
Number of employees (2020): 7
Business area: Finite Element Analysis (FEA), Computer Aided Design (CAD), Engineering, Digital Twins, Simulation, Design Optimization, Innovation, and R&D

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What was your biggest problem in the start-up process? And what was your biggest mistake, or was there an obstacle that you did not expect before?

The biggest problem was finance. We founded our company at the height of the financial crisis in Greece. A lot of people told us we were crazy to start a company in times like that. However, our energy and will to create something innovative was more prominent than all those problems. A significant advantage was a contract we already had with CERN before we had even started the company. Within this contract, we managed to provide services and results for a very challenging technology project for them. The project received worldwide acknowledgement for its results. CERN back then asked us to provide an invoice to pay for our services, and we were not ready yet, not registered as a company to issue an invoice.

What kind of structures would have helped you to cope better?

In 2014 banks in Greece were not able to provide loans for companies, especially for start-ups. At the same time, we were not able to support this kind of loan as we did not have a lot of revenue streams, so we decided to develop another way. The plan that we followed was to become the members of several national and international technology associations, like maritime, defense or space industries associations. Through those associations, we managed to build a large network. This helped us gain projects for the company to bring in revenues. Of course, being a company in Greece with all the financial problems we had, to participate in several expositions and conferences around Europe meant a lot of investment, but that was the only way to find clients around Europe.

What has been your most interesting company case so far?

The most interesting case was the project at CERN. We were a brand new company, nobody knew anything about us, and from the first day, we already had an excellent reference. We are still providing service and we are among very few Greece companies supplying CERN with simulation services. Our research concerned design and multiphysics simulations, meaning we had to study the structural, thermal, electromagnetic and vibration properties of superconducting accelerator magnets simultaneously. Superconducting accelerator magnets are used in the collisions that are created at CERN to accelerate the particles in motion. The result was that we were able to design and construct an accelerator electromagnetic field of about 11 teslas. Back in 2014 it was the most powerful magnet ever constructed.

What is your biggest challenge at the moment, personally in your role and for the company?

Due to our expertise in simulation, we are official partners and certified training partners of Siemens DISW (Digital Industries Software) simulation tools since mid of 2017. We are also partnering with them, developing simulation tools. We are responsible for reselling, providing services, maintenance and training for Greece, Malta and Cyprus. At the same time, we work at integrating our simulation software as an add-on module and deliver our business strategy to further extend our client pool by providing our services in industry sectors like maritime, oil and gas, defense, aerospace and CERN. Most of our challenges are of a technological nature.

What would help you most right now to reduce costs, increase your visibility and to co-operate with other intermediaries?

We don't need to reduce costs, but we need to manage the cash flow in the company better. We have closed deals, good research projects, but our cash flow is still not what we would like it to be. Simulation is the new way of developing products and technologies now. Still, the problem is making clients understand what simulation is and what the advantages of applying simulation are. That process takes time: From the initial discussion to the close of a deal it takes ten to twelve months.

What is your number one advice for a new founder of an intermediary?

Believe in what you do and do your best. There might be a lot of problems, and maybe the company that you run will not always be successful, but that does not mean that you will fail forever. Just believe in yourself and do your best to deliver results for the client. ■

CAROTS (Commercial Analytical Research Organisations Transnational Strategy) is an international project that aims to establish a new type of private or public-private company in the Baltic Sea Region: Commercial Analytical Research Organisations (CAROs). CAROs, as intermediary bodies between industry and academia, provide enterprises with much quicker yet complete assistance in analytical research in areas like New Materials, NanoTech or Life Sciences. The project is led by DESY, Deutsches Elektronen-Synchrotron, in dialogue with ten project partners and twelve associated organisations from across the Baltic Sea Region.

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