**Global technology company wants to boost Swedish product development**

**Simulation-driven product development opens up brand new opportunities for innovation – in all sectors. This is the opinion of Altair, a new exhibitor at Elmia Subcontractor this autumn.**

“We are a leading supplier of simulation software that enables innovation with reduced development time, which in turn reduces costs throughout the life cycle,” says Anna Johansson, Marketing Manager Nordic Region at Altair.

Innovation Intelligence is Altair’s trademark. As a global technology company headquartered in Troy, Michigan, USA, it reaches more than 5,000 customers in 25 countries, with a staff of around 2,000 scientists, engineers and creative thinkers. Altair has been operating in Sweden and the Nordics since the mid-1990s.

**Simulation – a necessary driving force in innovation**

The idea behind the software is simulation-driven product development – from concept design to final production. Using simulation, a product can be designed for optimum performance, life and economy, thereby shortening production time which can otherwise entail costly, time-consuming prototype tests. Altair offers software products and consulting services in the field of simulation.

“Using simulation is a necessary driving force in innovation, a way to be competitive today, also for subcontractors. Nowadays, calculation not only includes the actual end product, but also the constituent details,” Johansson explains.

**Software solutions for optimised design**

It is of benefit even at the beginning of the design phase to use topology optimisation or TO, a mathematical method in the software that can optimise the material layout based on factors such as load and tension requirements. The aim is to achieve optimum design, encompassing everything from structure and movement to thermal control and electromagnetism – while the software analyses, interprets and visualises data.

**A great need for simulation in all manufacturing industry**

“We have customers in all sectors. Some of our main ones can be found in aviation and automotive, where they need to simulate and calculate factors relating to safety, weight reduction and the choice of materials, for instance,” says Johansson.

Altair’s customers also include many producers of consumer products in fields such as electronics and medicine.

“Simulated drop tests, for example, can be used to test how well the product withstands a fall from different angles and heights,” Anna Johansson concludes.