Good ergonomics are of particular importance in the office. Stand-sit systems are in big demand because of their importance to the health of office workers. But the products so far on offer often fall short with respect to function and especially design. Determined to change this situation, Actiforce and Lightweight Solutions teamed to design something better and their resulting prototype gained them Interzum Award 2017 in the highest category. A key element of the new design is the modern high-performance Lisocore material, which opens up new perspectives.
To put it in a nutshell, together Lightweight Solutions and Actiforce simply aimed to achieve more with less. Actiforce manufactures high quality height-adjustable desk and table frames in Malaysia and sells these around the world. Together, the two companies designed a stand-sit workstation requiring no cross-members that get in the way of legs, incorporating the innovative lightweight board material, and creating numerous desktop design options. In addition, the new design reduced the amount of tabletop material required by 70 percent, and 30 percent less steel. At the same time, the system has added functionality.

In this product sector, that is tantamount to a revolution! Previously, it was a complex and expensive business to make a freely formed desktop for stand-sit workstations. For both Lightweight Solutions and Actiforce, this placed strict limitations on the joint design and thus also the positioning of such desks within the overall concept of office furnishing.

In addition, the two companies had to satisfy a series of further requirements, such as the absence of cross-members under the table, better desk-top functionality by the integration of technology – made possible by the voids within the Lisocore board – much simpler assembly and more besides.
So how did this cooperation come about, and with it this revolutionary desk?

Holger Fricke is the inventor and also chief executive of Actiforce Deutschland. He said: “For some long time we had customers asking if we could meet additional requirements, but we did not know how, so decided to do something about it. Some time ago there was an article in möbelfertigung with the heading: ‘An innovation makes big waves’. This drew our attention to Lightweight Solutions. We immediately saw that Lisocore board had the potential to convert our vision into reality.”

“We arranged an early meeting and quickly reached agreement to cooperate. It was at once self-evident that not only was Lightweight Solutions a supplier of a very special type of board; but also a highly skilled product developer. They have an in-house testing laboratory and furniture test rig that enables them to greatly reduce the usual extended development period. The result: we were able to conduct tests simultaneously at two places – at Actiforce and Lightweight,” says Holger Fricke.

Michael Schäpers is chief executive of Lightweight Solutions. He said: “What Herr Fricke says gives us confidence in our underlying objective, which is to solve problems, and not just to be a supplier of lightweight board materials. We want Lightweight Solutions to be seen by industry and medium-sized business as a partner that always has the right answers to pressing problems; and of course, is able to convert these answers into products.”

Finding the answers to problems such as these is part of the Lightweight Solutions business DNA. It was the driver behind their creation of Lisocore boards, a product that ventured into totally new territory. One consequence was there were no suitable lightweight board production machines on the market, so they designed and built their own. Their system uses high-pressure boards to manufacture the core structures and the Lisocore production line.

Of necessity, Lightweight Solutions became a problem-solver for all sorts of tasks, from which a growing number of customers now benefit.

Linking with Actiforce they jointly produced and tested the first prototypes in only six months. The results were so good, that they decided to submit the first...
prototype to the Interzum Award contest.

The result was more than impressive: the Actiforce Elements stand-sit desk received an award in the ‘best of the best’ category. Said Holger Fricke: “Winning the prize completely overwhelmed us and of course gave us even more confidence in the joint enterprise.”

At present the product is in the certification phase. Using the TÜV test results Actiforce and Lightweight Solutions will highlight and document the desk’s unusually high robustness and load-bearing characteristics. Using the Elements linear concept specially developed by Actiforce for lightweight construction, the product already meets or exceeds the TÜV requirements.

The manufacturer fully expects to come through testing with flying colours, since Lisocore has superb load-bearing characteristics, combined with high bending strength, dimensional and edge-stability.

Marcus Wehner is head of sales, R&D at Lightweight Solutions and said: “When we developed Lisocore we wanted not just to save weight. We wanted to mark out a construction philosophy and make a statement. We wanted to create a product that gives the industrial user the ability to combine new designs with new functions. And I am convinced that we have succeeded. Now, we are on the lookout for further industrial partners with whom we can convert our visions into innovations.”

Holger Fricke added: “With the help of Lightweight Solutions and Lisocore, we have been able to redefine the design of stand-sit desks. That would not have been possible with previous conventional materials. This board has enabled us to create new forms and synchronise the processing of large boards with up to twelve legs. That was not previously possible. In addition, we very much like that it is now possible for wires and cables to be concealed within the worktop. This enables Actiforce to do what it does best – namely, to combine the best of German engineering skills with those of Dutch and Danish design. This innovative board material has almost no limitations.”

At present, Actiforce is manufacturing rectangular and kidney-shaped desks and the new products will be on show from January 2018. The first board dimensions will be 800 x 1,600, 800 x 1,800 and 800 x 2,000 millimetres.