Virtual Start-Up Relies on Vention for Complete Design & Development Solution

CUSTOMER SITUATION
A virtual start-up company had conducted a market analysis that revealed a significant opportunity for an innovative catheter-based embolic protection device for high-risk patients undergoing transcatheter aortic valve replacement (TAVR).

As a small company mostly comprising business and medical experts, the customer needed to outsource all of its technical and engineering needs. The customer chose to work with Vention as a single-source resource for the components and services needed to bring the product to market, from concept through manufacturing.

VENTION SOLUTION
During the initial brainstorming session, Vention’s team of product development engineers built on the broad concepts the customer’s founders had brought to them. The team conducted extensive feasibility and product development studies analyzing and comparing different sizes and geometries to optimize the device, which would be a one-piece, user-friendly instrument that would feel familiar to physicians.

At the customer’s request, the project went inactive for several months during clinical evaluations and fundraising. Vention’s business model easily accommodated this break, and the team picked up the project again as soon as funding allowed.

After creating protocols for the design-safe device, Vention went into preclinical validation testing. The first human use was conducted about 2.5 years after the initial brainstorming session. Vention also supported clinical trials in Germany and Canada, with the device receiving CE mark just short of 3 years after the project began. The device is currently commercially available in Europe.

OUTCOME
With Vention handling all engineering work, the customer was able to remain a virtual start-up company throughout its life cycle, saving significant costs on staffing and general office overhead.

Vention saved the customer a significant amount of time in getting the device to human clinical use and obtaining CE mark, positioning the virtual startup for optimal results. A top-ten medical device manufacturer purchased the company, resulting in a more than 5-to-1 return for its investors.