

My PhD at Cambridge focused on Material Sciences—I considered chemistry but materials felt more “real,” making products that people use, getting it out into the market. It’s always satisfying for me to have something tactile we’ve created as a team—I drive a Citroën that contains several of our alloys.

I arrived at Voreppe in 1991, when it was Pechiney, and spent six years at Neuf-Brisach starting up Auto Body Sheet before returning to R&D. My job changes constantly, there’s always something new with aluminium, and we have hundreds of ideas going on at any one time. Some of these led to current projects in areas like new sensors for digital manufacturing, future recycling technologies, or additive manufacturing (3D printing). For a brand new product, we start by understanding the customer’s needs, then imagine every option for a solution, doing affordable, rapid experiments to decide which ones to kill and which to pursue.

Back in the late 1980s, we had a machine at Voreppe that sprayed powder-based aluminium, but there were technical difficulties and it got nowhere as a business. When additive manufacturing started bubbling up, we knew immediately we could do something, because of the old work on powders, but it would be very expensive to develop alone. Then several customers asked us to collaborate on additive powder alloys, and we accepted with the condition that we would own the patents.

We used a small machine designed for making costume jewelry to prototype up to 10 alloys a day, and then with partners printed up the best candidates with small batches of powder. In this way, we did hundreds of experiments, and now have two market-ready alloys. Powder is like a startup business—it could go big or stay small, but there is lots of interest worldwide, and customers are using additive manufacturing for all sorts of new niches we didn’t even know existed.



RAVI SHAHANI
INNOVATION CHAMPION
C-TEC VOREPPE, FRANCE

“MY JOB CHANGES CONSTANTLY, THERE’S ALWAYS SOMETHING NEW WITH ALUMINIUM, AND WE HAVE HUNDREDS OF IDEAS GOING ON AT ANY ONE TIME.”