

Q+A

WITH SCOTT LIVINGSTON
~PRESIDENT AND CEO~HORST ENGINEERING FAMILY OF COMPANIES

Q The aerospace industry took a hit during the Great Recession. How is the industry doing today?

A Livingston: The industry is segmented into defense and commercial. Defense is weak and has not come back to any pre-recession level because of sequester and the wind down of fighting in the Middle East. There is no political will to fund additional defense spending, so it's declining. On the commercial side you have a completely different story. Aerospace was hurt most in 2010 and 2011, but it has come back. It came back better in 2012 and 2013. By most accounts 2014 was a very strong year. Right now the fundamentals of our industry are good and the forecast is bright.

Q What is the trend now in aircraft development?

A Livingston: The need for more fuel-efficient aircraft is the number-one goal. All the major airlines want more fuel-efficient engines and planes, so you'll see tremendous amounts of investment in fuel efficiency. Engine-makers are coming out with more fuel-efficient propulsion. Air framers are building more fuel-efficient planes. Plane manufacturers are going to be delivering modernized fleets over the next 5 to 10 years. You're going to see a complete overhaul of new aircraft as a result of more fuel-efficient, more reliable planes.

Q Why is your company, Horst Engineering, relocating production from Mexico to Connecticut and Massachusetts?

A Livingston: A lot of firms moved into our area in Mexico, and the labor got soaked up. For a variety of reasons, including the ability to manage an operation over such a great distance for a company our size, we decided to return that production to the U.S. An ecosystem, a network of suppliers, is critical to our business, and it's one of the reasons why we chose to pull back from Mexico. We need a variety of subcontractors including heat-treaters, coders, testers, laboratories, and other small specialty shops. Mexico promised this kind of ecosystem [but] they are a long way from developing it to where we need it to be.

Q The aerospace industry is moving to advanced manufacturing technology. How will the need for multidisciplinary knowledge and state-of-the-art skills impact the aerospace industry?

A Livingston: In aerospace in particular, the skills needed to do precision machining, precision forming, and many of the other processes are scarce. Right now we have a two-pronged approach in manufacturing: lean enterprise and technology. It takes investments in both areas with people at the center of that in order to stay competitive. There has been a 30-year decline in the U.S. paying attention to manufacturing. For those of us in production, we are seeing lots of technology improvement in multi-access machines, controls, and equipment that is auto-fed by robots. That type of technology requires a good combination of engineering skills and technical skills on the shop floor. There have been years of underinvestment in these areas, so we are all fighting for the same people. Ironically, it is the technology that could attract that next generation.

Q What can be done to attract young talent to the field?

A Livingston: The situation has improved in the last few years because of the emergence of



unmanned aerial vehicles (UAV). There is a direct connection between the development of those types of advanced aircraft and what kids are doing with the consumer versions of these drones. Everything they're working on in college right now is related to aerospace and UAV technology. That's getting their attention even though 99 percent of the production is old-school methods, like machining, turning, milling, grinding, forming, and molding. The good news is they're being attracted by some of these new technologies. But we've got to get these kids out from behind the computers and onto the shop floor. Then they can go back to their computers and merge the two.

Q The industry also is challenged with retaining its existing workforce. What are you doing to keep talented workers?

A Livingston: We are a 59-year-old business, so legacy is important to us. We have a five-generation workforce, from folks in their late teens to folks in their 70s. We are proud of that. We couldn't have this massive loss of retirees aging out because we wouldn't be able to sustain our business. We know we've got to have a culture that can support these folks, as well as bringing in the youth. We recognize that the best recruiting is retention. And in an environment where labor is tight and skills are scarce, the most important thing for you to do is to improve your own culture and keep the people you have. That means building the right human resource system and offering the training

so they can progress in their own roles.

Q What impact do you think privatization will have on the aerospace industry?

A Livingston: The good news about privatization is that more people are interested in working for entrepreneurial firms than they are in going to work for large agencies, especially with the constant threat of budget cuts and the decline of investment in those agencies. It's allowed these scrappy upstarts to emerge. We're seeing them spur innovation. Elon Musk is one in a billion, and all this technology will create a generation of pioneers.

Q What about the future of aerospace manufacturing?

A Livingston: A lot of folks in aerospace manufacturing have run family-owned businesses for generations, but that's changing. The perception of manufacturing has been a bad one for many years, and that's why we're trying to capitalize on this resurgence over the past three or four years. Investment is coming into the manufacturing side at a record pace because there isn't a next generation leading these companies. So we will see a wave of consolidation. And the industry is fragmented with many small, niched companies. The government is no longer supporting us like they did because defense is weak. The growth will be in building commercial aircraft.