"Our business model is unique"

Interview with Robert Edmund from Edmund Optics

Mr. Edmund, the roots of Edmund Optics go back to 1942, when your father Norman Edmund founded the company. You took over responsibility from him in 1975 and now you manage a global business. What were your thoughts when you inherited the company from your father?

R. Edmund: My father originally started the business as an optical company. In the late 1950s, he became more interested in education and science kits for young people. This shifted the company's focus from optics to something much broader, and my father changed the company's name to Edmund Scientific. When my father gave me control of the company, it was my idea to put the focus back on optics. Eventually, we sold the business of educational kits and changed the name back to Edmund Optics.

As an entrepreneur and company founder, my father was very good at coming up with new product ideas. But like many entrepreneurs, he was not as interested in building up a company infrastructure and developing people to take the business into the future. And that is what interests me. I like the science of organizational development, which is how you build a company. In family-owned businesses, it is quite typical for the second generation to focus on developing the organization, not just the products.

Even with the very best optical instruments, it is impossible to look into the future. But you must have a vision of how you would like the future to be. What were the ideas behind your first decisions as an entrepreneur?

R. Edmund: We recently prepared a long-term strategic plan that stated both our mission and vision. I believe the most important mission of the company is to serve our customers. Our future is determined by what they want us to do. For example, when our customers started asking for aspheric optics, we knew that we needed to make those a part of our future plans. So we started investing in the capability to manufacture aspheric optics and provide those products. It is so critical to listen to your customers - they’ll tell you where your future is.

Today, Edmund Optics has more than 26,000 products to offer, which are sold around the world. A large number of these are your own developments. Would Edmund Optics have been just as successful as a pure distributor in
the vision market?

R. Edmund: No, I think we were only able to grow and stay focused in our markets by creating our own manufacturing capability. Once again, this is something that our customers pushed us to do. We found that many of our good customers would buy a small quantity of optical components to make a product. When they were taking the product to market, they would then need a larger quantity. We had to manufacture those for the customer, otherwise they would have gone to someone else, and customers prefer to work with one company through all the stages of product development and product life.

What we also find is that there are many high-technology products using optics where the lifetime requirement of the product is not hundreds of thousands of optics, but sometimes maybe just two to three hundred. To name an example, our optics are used in DNA blood analyzers, of which maybe 500 are made each year. So the customer prefers to work with a company that can manufacture the small quantities of components required. Many larger manufacturers don't accept such small orders. So in effect, our customers asked us to become a manufacturer.

You manufacture a very large number of products and keep a lot of them in stock. That appears to be a factor behind your success. But does having so many products in stock cause problems for your balance sheet?

R. Edmund: Well, it's a question of investment. If you want to be a supplier, the most important thing is to give customers what they want as quickly as possible. If you don't have a particular component in stock, then they'll look elsewhere. So to win customer loyalty, you have to invest in your inventory as well as in manufacturing. It's an expensive thing to do, and frankly, I believe that is why we don't have many competitors, as a lot of people would rather invest their money elsewhere.

Most pure manufacturing companies say that all their investment is in equipment. However, if you look at our balance sheet, you'll see that while investment in equipment is high, our investment in inventory is four times higher.

Many of the products at Edmund Optics are optimized for use in industry and are of the very highest quality. This standard of quality has clearly contributed to the company's success. To what extent is this success down to your personal enthusiasm for optics and optical systems?

R. Edmund: My personal goal is to do things well in terms of the quality of our products and the quality of our service. As I said before, producing very high-quality products is just one part of the equation. You need to provide a good service, too. That means technical service and advice, quality assurance, and
delivering quickly and on time. It also means investment in metrological systems in order to test your products and provide that data to the customer when needed.

That leads on to my next question. Not only do you have 26,000 products in your catalog, but Edmund Optics also has more than 200,000 customers worldwide. How do you manage to maintain a good relationship with such an impressive number of business partners?

R. Edmund: Managing your customer database is a science in itself and once again requires investment - this time in information technology and the people to use it. Our customer database tells us which customers require technical support so we can assign people to provide it. The database also tells us how frequently customers buy our products, which helps us determine how often we mail them catalogs and send emails. Managing your customer file is a science in itself - a statistical field of science that requires a mathematical mind.

Most of your customers order products from your catalog. But do you also have a sales force that is in direct contact with your clients?

R. Edmund: Yes. What would normally be one department in a company - that is, the "Sales and Marketing Department" - is two at Edmund Optics. We have the Marketing Department, which prepares the product catalog, creates the website and manages the customer database. And then we have the Sales Department. Each one is run by a top-level management executive. That's an unusual business model, but once a customer develops a relationship with Edmund Optics and starts purchasing a certain quantity of products, we assign a sales person to give that customer sales support and advice.

That seems to be a model that is quite specific to Edmund Optics. Is that also something that differentiates you from other companies?

R. Edmund: Yes, it's a factor in our success. We believe our business model is somewhat unique and is constantly evolving.

Let's talk a little about the optics industry, in particular about staff. In Germany, technology companies are finding it increasingly difficult to recruit highly-qualified staff and developers. Is this also a problem in the United States and other countries?

R. Edmund: Not having enough optical engineers to meet the needs of the technology community is a worldwide problem. In the United States there are very good universities teaching optics, but they are unable to attract enough students. For example, I am involved with the University of Arizona and they have an
absolutely wonderful optics program. But only fifteen to twenty students graduate from the program each year. Those graduates get a job immediately and also a very good salary, because companies effectively have to bid for them. For instance, if we make an offer to a student, he or she will often say: "Okay, I'll wait for some more offers and I'll work for whoever gives me the highest salary."

I've heard that there aren't enough people studying optics in Europe, either. As far as I know, China is the only country that is producing a lot of optical engineers. We think it's a good idea when graduates from Chinese colleges go to the United States or Europe to study further and develop the base that they have acquired in China.

Another thing we find interesting in the United States is that more and more women are becoming interested in optics. We're pleased to see that, as women make excellent optical engineers.

**So how do you suggest getting young people involved in optics?**

**R. Edmund:** We were talking to Fraunhofer Institutes about this and they said that using different terms could help get young people interested. Many young people simply don't get excited when they hear the word "optics." Perhaps we need to say "light" instead, as in: "This is the science of light." That could make it more interesting.

**Developments in technology will continue to have a considerable influence on our business and private lives in the future. What important developments do you expect at Edmund Optics in the years to come?**

**R. Edmund:** Interest in technology has grown again after the 2008/2009 financial crisis. In fact, in 2010 we had something of a technology boom. Some of the economic problems around the world have caused activity to slow down a little at the moment, but we expect it to rise again.

Technology is the best opportunity for developed countries to fix their economies and move forward. Today, optics are being employed in a very broad spectrum of products - not only in inspection applications, which have a tradition of using optics, but also increasingly in the medical, life sciences and security industries. There are many, many opportunities, and once again it is important to talk to your customers, as they'll give you a good idea of where the future is. For example, we have one customer in the United States and one in Europe who are buying optics for use in dental equipment. So it's now possible for dentists to show patients the hole in their tooth, which helps the patient understand the problem and how the dentist is going to fix it. Examples like this clearly demonstrate how optics are becoming a part of almost everything we do in our lives.
Your example about dental equipment seems to indicate that optics are getting smaller. Is that a trend?

**R. Edmund:** Yes, we are definitely seeing a trend towards "smaller" and there is increasing interest in very tiny optics. There continues to be interest in larger components, but the demand for small optics is where the greatest growth is.

**So is this demand also coming from customers in the machine vision and robotics industries?**

**R. Edmund:** Yes, definitely. In machine vision, for example, quality inspection used to be on large machines. But those machines have become smaller, so optics have to follow and become smaller, too, in order to meet the requirements.

You are probably watching Europe and the euro very closely from the other side of the Atlantic. How concerned are you about what is happening right now?

**R. Edmund:** We are certainly interested in what happens to the euro. Most of our European customers are in high-technology countries, so we have few customers in Greece, for example, but a lot of customers in Germany and France. I suspect that the euro will remain in the countries where we have most of our customers. From our point of view, the current value of the euro is both good and bad news. Now, when we convert our sales in euros into dollars, we are getting fewer dollars than before. So that's bad. On the other hand, we buy a lot of optical equipment from Germany, and that equipment is becoming cheaper for us. So that's positive. Currently, we are not manufacturing optics in Europe, but if the value of the euro continues to drop, that could be a good idea.

**So the problem with the euro doesn't appear to be affecting your global strategy that much?**

**R. Edmund:** In my opinion, companies that focus on only one market find it difficult to grow. When you have a global perspective you can balance your risk. For example, we are currently doing a lot of manufacturing in Asia, but the cost of manufacturing there is rising. So we're also doing some manufacturing in the United States, because the price of natural gas there is currently low. So if you have operations globally, you can adjust and move them where you need to.
In May this year you were nominated for the Ernst & Young "Entrepreneur of the Year 2012" award. Upon hearing that, one could assume that you have achieved almost everything. But as an entrepreneur, you must still have future objectives. So where would you like to see Edmund Optics in the future?

R. Edmund: I don't think it's ever possible to reach your goal when you're running a company, because you always have to look to the future and prepare your company for survival. That involves having a strategy that evolves over time and, most importantly, creating a management team and staff who can take the goals, mission and vision of the company into the future. I'm currently 64 years old, and I spend more time developing the right management team for the future than I do on anything else.

Will the people who take on this responsibility have the freedom to adapt and come up with their own ideas?

R. Edmund: Yes. You have to turn over responsibility. You also have to accept that the people who take on that responsibility will make some mistakes. But as long as they learn from their mistakes and don't repeat them, then you have the right people.

Kontaktieren

Edmund Optics Inc.
101 E Gloucester Pike
NJ 08007 Barrinton
USA
Telefon: +1 856 547 6803