

SWOT Analysis — Optics



By Dr. Duncan Moore

Rudolf and Hilda Kingslake Professor of Optical Engineering, University of Rochester



STRENGTHS OF THE OPTICS INDUSTRY:

The Rochester, N.Y., Region is fortunate to have numerous strengths in the optics industry.

Among them is a rich history in optics, harking all the way back to the founding of Bausch & Lomb Inc. in 1853. Rochester is also the birthplace of the Optical Society of America and today boasts the largest OSA chapter in the country. The region also has a rich history of entrepreneurship, from George Eastman, the founder of Kodak, to Joseph Wilson, the late chairman of the board of Xerox Corp.

The region also possesses a diversity of expertise in the industry, from biomedical optics to digital imaging, lasers, aerospace and defense applications, semiconductors and vision science.

Rochester's educational resources are second to none. Approximately 55 percent of all optics degrees conferred in the United States are conferred by the University of Rochester. In addition, Monroe Community College boasts the oldest optics technology curriculum of any community college in the country.

Finally, our infrastructure for small and midsize optics shops is renowned throughout the industry. From polishing and grinding to rapid prototyping, the Rochester, N.Y., Region has the resources companies need to transform their concepts into reality.

WEAKNESSES OF THE OPTICS INDUSTRY:

Rochester's optics industry has few weaknesses, but there are some. Among the top weaknesses is a lack of angel investment and venture capital. For entrepreneurs and small start-ups, this lack of initial capital can be a struggle.

VISIT ROCHESTERBIZ.COM





Other weaknesses include a lack of a major intellectual property law firm in the metro area. This can be a weakness, especially in light of the numerous patent-infringement cases that have come to the fore in recent years.

OPPORTUNITIES FOR THE OPTICS INDUSTRY:

Any optics firm that decides to locate in the Rochester, N.Y., Region will soon discover numerous opportunities to grow its business.

Among the top opportunities is access to world-class research laboratories and facilities, including the Institute of Optics and Laboratory for Laser Energetics at the University of Rochester, as well as the Chester F. Carlson Center for Imaging and Photonics Research Laboratory at the Rochester Institute of Technology.

The region is also home to numerous optics shops that specialize in rapid prototyping, creating the customized products your company needs in record time.

In addition, opportunities for collaboration are plentiful for those seeking partnerships to help their companies grow.

THREATS TO THE OPTICS INDUSTRY:

By far the biggest threat to the optics industry is the increased outsourcing of jobs overseas.

Many worry that it is just a matter of time before the potential lower cost of engineering overseas becomes a threat and hurts the industry the same way the manufacturing industry has been hurt by outsourcing over the past decade.

We in the Rochester, N.Y., Region are working hard to ensure that doesn't happen through an increased focus on research and development, entrepreneurship and innovation, and efforts to increase angel investment and venture capital. ❖

VISIT ROCHESTERBIZ.COM