

OPTIMAX SYSTEMS INC.

THE BUSINESS LOGIC OF CONTINUOUS LEARNING

By Karen Kahn, February 2018

Continuous learning is at the heart of Optimax's business strategy. The company will hire people with no formal credentials beyond a high-school diploma and trains them to fabricate high-precision optics using advanced manufacturing technologies. These frontline technicians, called opticians, make up over two thirds of the company's 300 employees.

"We aren't primarily concerned with credentials; we look for people from our partnerships who want to work with their hands, want to learn, and want to grow with the company," says HR Manager Alejandro Mendoza. Over time, many of these employees return to school, taking advantage of Optimax's prepaid tuition benefits, to build their careers.

"Our goal," says company President Mike Mandina, "is to create a profitable company that provides good jobs and career opportunities for our employees and prosperity for our region." Mandina witnessed the decline of Rochester's largest manufacturers, Kodak, Xerox, and Bausch & Lomb, and the consequent loss of jobs for the region. With new technologies emerging in the early 1990s, he saw an opportunity to rebuild the region's manufacturing base—but this time, through a creative blending of technology and craftsmanship.

Becoming an Employer of Choice

Believing that people thrive when they have meaningful work, Optimax's leaders have honed a company culture that successfully leverages the inner drive and talents of each employee. They hire creative and motivated individuals—and then shape their performance by:

- > Empowering individuals and teams to make decisions,
- > Investing in continuous learning and career development,
- > Sharing information broadly throughout the company,
- > Rewarding success through generous profit-sharing, and
- > Providing opportunities to work on innovative projects that benefit humankind.

This strategy has propelled Optimax's business success as well as its reputation as an "employer of choice." Consistently ranked among the Workplace Dynamics top ten mid-sized workplaces in the Rochester area, *the company is growing 20 percent per year, while the sector is growing just 3 to 5 percent.* Optimax expects to add another 40,000 square feet in manufacturing space and grow its workforce by about 50 percent by 2025.



OPTIMAX'S ONTARIO WORKFORCE

"Most people wake up in the morning and want to create value," says Rick Plympton, CEO of Optimax Systems, Inc. "We build on our employees' innate desire to create by helping them to grow their skills and get better and better at what they do."

Founded in 1991 by a group of moonlighting Kodak technicians, working in what was formerly a barn, Optimax is the largest manufacturer of prototype optics in the U.S. The company specializes in quick delivery of high-quality precision optics for aerospace, defense, medical, and semi-conductor applications.

Optimax's 60,000 square-foot manufacturing facility, located in Ontario, New York, includes 30 different manufacturing cells producing optics in a range of shapes and sizes. This precision manufacturing requires a highly skilled workforce and innovative equipment including: patented VIBE polishing, two environmentally controlled metrology rooms, high-end finishing equipment, and in-house coating chambers.

Optimax strives to make optics faster, more cost-effective, and of higher precision. The result has been cutting-edge discoveries in materials, manufacturing processes, and coating technologies that have helped the company grow its customer base—and carry on the region's legacy as a global leader in optics manufacturing.

Empowering Frontline Innovation

Optimax's 200-plus opticians, who use computer numerically controlled (CNC) technology to fabricate high-precision optics, see themselves more as craftsmen than factory workers. Jeff Iorio, one of a small cohort in a three-year apprentice program, says, "Machining is like baking, it's routine. Optics is like cooking. It is an art."

That artistry is encouraged by the shop floor design, which is organized into LEAN manufacturing cells. Each cell includes a group of machines on which an optician can take a job from raw material to finished product. Tasked with creating lenses worth tens of thousands of dollars, opticians are provided broad autonomy, and therefore feel tremendous pride in their work. "I feel fulfilled in what I do, because I'm a maker," says Optician Genny Kingsley. "Every day is a different challenge."

LEAN manufacturing, pioneered by Toyota, empowers individuals and teams to continuously adjust the workflow process to reduce waste and increase efficiency. "LEAN allows us to maintain our agility, 'fail fast', and learn, so that we can meet our customers' needs," says Mendoza.

|| I want people to feel that if they want to keep learning, I support that, and we'll pay for it. It is too costly not to train them. **||**

- Alejandro Mendoza, Human Resources Manager

Increasingly, Optimax teams—which manufacture optics of specified sizes and shapes—are becoming self-managed groups, making decisions regarding training and team development, resource investments, job assignments, and cell organization. The ultimate goal is for all employees to share "responsibility and authority," says Plympton.

Group Leader Greg Frisch, who has been with the company for 17 years, explains that in the past, "you needed to get multiple signatures to buy a piece of equipment. Now there is more trust; if we need it, we get it. The people closest to the work have the most information, and we empower them to make decisions."

"When we take advantage of everyone's knowledge, particularly those closest to the work, we make faster and better decisions," says Plympton. But, he notes, teams are moving at their own pace. "It's a journey; we are discovering what works best as we go."



VISUAL INSPECTION OF A PRECISION OPTIC

Employment Benefits

- > Holiday pay effective day one
- > Gain sharing at 25% of monthly profits
- > 100% tuition assistance
- > Direct hire of employees over use of contractors
- > Health insurance
- > Dental, vision, and life insurance
- > Employee Assistance Program
- > Long- and short-term Disability
- > 401k retirement plan with match
- > Pre-tax spending benefits
- > Paid time off
- > Employee earned leave bank
- > Access to company vacation home

Improving Systems to Leverage Talent

Good decision making at the individual and team level requires full transparency and highly disciplined systems to manage information, workflow, inventory, and access to tools. Without these systems, Optimax could not leverage each person's knowledge and skills to their maximum capacity, says Plympton. "That's why we are continuously improving these systems: to get people as much information as possible in real time."

"Sharing knowledge, skills, and information keeps us on the cutting edge," says Andy Haefner, a manufacturing Group Leader. Consistent with that philosophy, the company's financials are displayed on the shop floor wall. A bonus system, in which employees share 25 percent of monthly profits, makes these numbers meaningful and motivating. Everyone shares in the risks and rewards of innovation, whether an experiment ruins a \$20,000 lens, or results in a breakthrough product.

Fostering Individual and Firm-Level Learning

Optimax prioritizes continuous learning to advance its employees' skills and prepare them for the company's goal of continuous improvement. New opticians learn their skills on the shop floor, through Job Instruction Training (JIT), where over several months they work side-by-side with a teammate, observing and developing increasingly complex skills. The new optician is only allowed to work on his or her own when the trainer believes their skill level has sufficiently advanced.

Developing basic competency is only the first step in a continuous learning process. Dylan Dennison, who has been with the company for about a year, says, "I still learn every day. I can get assistance from anyone with the knowledge to help me solve a problem. You are encouraged to learn on your own, but there is always support to fall back on."

That support often comes from company president Mike Mandina, who keeps his desk on the shop floor. Dennison says, "I can go to anybody for help, including Mike. If I am struggling with a problem, he's there." This is of great value to Dennison, both for the opportunity to learn and for the respect the relationship conveys. "It's very different from working at a large corporation, where the CEO wouldn't know I existed," he says. "Optimax has mastered making you feel like you are important, no matter what job you are doing."

This informal coaching is matched by a more formal structure, in which group leaders analyze the skills needed by their team members and work with employees on yearly individual learning plans. Depending on their career goals, employees can take advantage of Optimax's robust in-house training (average of 1,000 hours of training delivered per month) or enroll at local colleges with fully subsidized tuition.

Creating the Right Culture

Developing skills to become a master optician is one half of the Optimax learning equation. The other is understanding and adapting to a culture that is at once laidback and fun—the company uniform is proudly identified as a tie-dye t-shirt—and yet fast-paced and performance-oriented. Optimax doesn't leave this to chance: they are as proactive in shaping their culture as in preparing their employees for lifelong learning.

New employees read *The Question Behind the Question*, a book that explores "personal responsibility" in the workplace. They are also assigned a mentor outside of their team or direct supervisory chain. The feedback loop is strengthened by an annual 360 peer review in which employees are rated on both aptitude (skills, attention to detail, productivity) and attitude (team player, trustworthy, positive spirit).



PRECISION OPTICS REQUIRES PRECISION METROLOGY

Optimax doesn't just offer you a job, they offer you a future.

- Genny Kingsley, Optician

BUILDING THE PIPELINE

The primary limiting factors for growth at Optimax is finding workers. "You won't learn about advanced manufacturing watching TV," says Plympton. Nor does your average high school student necessarily learn the basic skills necessary to succeed in optics manufacturing.

To address these issues, Mike Mandina founded FAME, Finger Lakes Advanced Manufacturing Enterprise, a not-for-profit focused on developing the talent necessary for reviving advanced manufacturing across the region. FAME has three key priorities:

- Collaborate with local colleges and workforce development programs
- Build a pipeline of qualified advanced manufacturing technicians
- Create awareness of employment opportunities

Optimax offers students tours of their facility as well as summer internships. In addition, Optimax works closely with local schools to ensure educators understand the needs of business. "I'm working with school districts, community colleges, and economic development agencies," says Workforce Development Coordinator Jim VanKouwenberg, "continuing Mike Mandina's work to align educational resources and business needs."

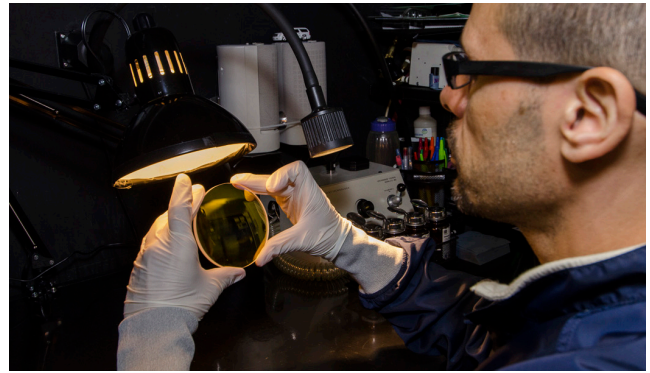
"You have to grasp the 'adult contract,'" says Optician Dan Buttery. "It's an unwritten commitment: Be grownup. Be responsible. Have integrity. If you make a mistake, own up to it. If you aren't sure it's a good idea, don't do it."

"Mistakes are not held against you," says Jaeden Powers, Team Leader for the coating department. "We give new employees a lot of hands-on experience. Mistakes are expected. What people look for is, 'Can you learn from that?'" This culture is reflected across the organization and senior staff is equally encouraged to acknowledge mistakes and identify lessons.

And as they learn, employees are given increased authority over their work. That motivates them to succeed. Says Apprentice Ben Zeller, "I am excited to get in early, because I am my own boss. I can get guidance from a coach but I'm responsible for getting the work done."

The ROI of Employee Development and Trust

This is exactly what Mike Mandina and Rick Plympton dreamed of as they built Optimax into a high-powered economic engine for their region. Even during the Great Recession, they did everything they could to keep their employees and maintain their culture. "Rick and Mike didn't want to let anyone go, since our commitment to our team members is so high," says Frisch. At the beginning of the recession, company leaders worked out a plan to share work and to double down on training. When the economy picked up, the company was even better positioned for the future. "We stayed in the game," notes Frisch, "and when the markets turned around, we were able to ramp up more quickly than our competitors." "Optics is exciting because we make the invisible visible," says R&D Optical Engineer Brian Myer. "Whether bringing Mars into focus through lenses on the Mars Rover or seeing inside human cells, optics expand our knowledge and understanding of our world."



VISUAL INSPECTION IS CRITICAL TO PRECISION OPTICS MANUFACTURING

“We are moving people from doing what they are told to do toward doing what they believe is right and creating value to ensure customer success.”

- Rick Plympton, CEO

Similarly, Optimax uses the principle of making the invisible visible to propel its business strategy. By emphasizing transparency, investing in their team members, and giving them the autonomy to get the job done, Optimax has found a winning formula. "By moving to role-based authority and full transparency, we build trust," says Mandina, resulting in increased innovation and speed, and that's what keeps our customers coming back." Explains Plympton, "Our employees are constantly coming up with new ideas that allow us to take on more challenging and creative projects—which is good for our team members, good for Optimax—and good for our community."



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