When BJ Kowalski set out to renovate a 40,000-sq-ft building as a new home for his 100-plus-person laboratory, he knew he wasn’t going to create the typical lab next door. “In the future, we believe dentistry will be more like the medical device industry—modern, high-tech and immaculate—so my goal was to create that type of environment,” says Kowalski, Owner of ROE Dental Laboratory.

To say “mission accomplished” would be an understatement. Located in Independence, OH, the new facility features a contemporary gray-and-white color scheme; open production areas with 12’ ceilings highlighting exposed rafters and ductwork, skylights and suspended light fixtures; a separate room for the lab’s 11 mills; and another separate temperature-controlled room to house its many 3D printers.

While the lab uses Labtrac laboratory management software and each technician has a tablet that shows his workload throughout the day, TV monitors are also strategically positioned around the lab showing the status of cases in real time. Because the lab specializes in implants, it has three fully functional dental operatories—including a CBCT unit and digital X-ray systems—for consultations and procedures with dentists and their patients as well as hands-on, live-patient training. ROE also has three licensed radiologist technicians on staff and offers a CBCT service for area dentists.

Previously a secure data center for a cell phone carrier, the facility was equipped with some unique features that were advantageous for a laboratory. For instance, it has an advanced full-building backup power system, including a $500,000 backup generator the size of a semi-tractor trailer. An Uninterrupted Power Supply system bridges the seconds-long gap between a power outage and generator activation—an ideal feature for preventing case disasters, like losing multiple units in the porcelain oven or having mills or 3D printers stop in the middle of a job.

It also had an extensive IT infrastructure in place so the lab didn’t need to do any rewiring for its computers or extensive line of digital equipment. An added bonus all of the lab’s wiring, plumbing and ducts for the centralized suction system are housed underneath a 3” raised floor, creating a quiet, clean and clutter-free environment.

From planning to completion, the multi-million-dollar project took two years. The staff moved in last May—the transition took place over a weekend and the lab was closed for just one day. ROE celebrated by hosting an all-day continuing education open house for 300 dentists, complete with tours, speakers, demonstrations, catered food, and live music and cocktails in the evening. “Our clients were really impressed,” says Kowalski. “Over and over we heard, ‘I had no idea a lab could look like this’.”

Two Key Planning Strategies

Before selecting a new location or starting the renovation, BJ Kowalski, Owner of ROE Dental Laboratory, used two key strategies to minimize costs and maximize workflow:

1. He researched the business incentives offered by the various municipalities in his area, Cuyahoga County, OH. “The town of Independence offered several, including an initial $75,000 building improvement grant and a seven-year unemployment tax credit program that cuts our municipal taxes by 50%,” he says.

2. He and his team analyzed the lab’s workflow using value stream mapping (VSM), a lean manufacturing technique used to document, analyze and improve the flow of information or materials required to produce a product or service. For instance, they looked at their top 10 products, drew a diagram of how they moved through the lab and then determined the most logical layout of people, equipment and benches within the space. Kowalski then spent about five months working with a design-build firm and Lista, a furniture manufacturer, to determine the final design.
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The facility includes three operatories, including one surgical suite equipped with a CBCT unit. Normally a $175,000 investment, ROE is getting free use of the scanner through a unique partnership with nearby Zuga Medical, an upstart implant company. Zuga paid for the CBCT unit as well as the surgical operatory equipment and video connection to the 60-seat conference room. In return, the suite is named the “Zuga Digital Imaging Suite,” which helps get the company’s name out to the dozens of dentists who visit the lab for education each month. In addition, the company has access to the lab’s training facilities and Zuga’s dentist-customers can use the equipment at no charge.

ROE staff members enjoy a spacious lunchroom with huge windows, two stainless steel refrigerators and outdoor seating with umbrellas.