



Elos MedTech Charts Success with Datanomix

Automating data collection and analysis improves operations and exposes trends.



Elos Medtech is a leading development and production partner for medical devices and components, with a focus on dental and orthopedic implants and instruments. The company operates from facilities in Sweden, Denmark, China, and the United States, serving as a contract manufacturer for a number of international medical technology companies.

Tim Martin, engineering manager at the Elos facility in Memphis, Tennessee, has a wide range of responsibilities, including machine uptime, making sure the engineers are focused on continuous improvement, and ultimately, working on making processes better and faster to increase the profitability of the factory. A major focus for Tim is to oversee innovation at Elos Memphis, adding new machines and technology with an emphasis on automation and efficiency.

The Elos facility in Memphis has a lot of technologically-advanced equipment, including a host of CNC Swiss lathes and CNC grinding machines. Tim is a strong believer in analytics to help understand and improve operations, and he was looking for a way to collect data for monitoring machine performance automatically. At the time, all the data was collected by hand and according to Tim, “We relied on our operators to give us their numbers, and it wasn’t always completely accurate. We always want to be as accurate as possible.”

.....

“We relied on our operators to give us their numbers, and it wasn’t always completely accurate. We always want to be as accurate as possible.”

—Tim Martin, engineering manager, Elos MedTech



- LOCATION:
 - 80,000 square foot facility
 - in Memphis, TN; part of a
 - multinational company with
 - operations in the United States,
 - Europe, and China
- KEY TAKEAWAYS:
 - Elos Medtech has verified the accuracy of the Datanomix production data by hand—Elos trusts the insights delivered by the platform
 - The benefits of TV Mode extend beyond the production floor – customers and the board of directors are impressed with the operations data
 - True machine utilization data from Datanomix is helping Elos Medtech with capacity planning for the machines in the Datanomix cell



Searching for a Monitoring Solution

"I was looking for systems that could help automate our data collection and I came across Datanomix," said Tim. "So in August of 2021, when Datanomix was exhibiting at the PMTS show in Cleveland, we set up a booth demo. The system delivered lots of data and the reports and dashboards that came out-of-the-box were right on point. It made sense to have a web conference with the entire team—the site manager, production manager, continuous improvement manager, quality manager, and myself."

Everybody came out of the meeting impressed, so Elos Memphis decided to implement the Datanomix platform on one of their most important manufacturing cells, which consisted of Swiss-turn lathes, 6-axis point grinders, centerless grinders, and laser etching machines. "There were some challenges initially—every machine is not alike even if the manufacturers tell you they are—but Datanomix worked with our staff through the challenges," said Tim.

Accurate Data Automatically

Datanomix connects directly to the CNC controllers, collecting and analyzing machine data in real time with no operator input required. Using advanced machine learning, the Datanomix platform tracks machine utilization, cycle times, Takt times, and other vital metrics against a benchmark derived from actual job runs. With a philosophy of "trust, but verify," Tim has verified the accuracy of the Datanomix statistics. "I've had my lead production people collect the data by hand, and they've confirmed the accuracy of the Datanomix data, and best of all, it's automated and analyzed in real time."

"What helped push us over the edge to purchase Datanomix was how user friendly it was, especially the automated reports we get out-of-the-box," stated Tim. "A lot of times, new software can be cumbersome, and it's difficult to find what you're looking for. With Datanomix, any of our users can just pull up the system on their computer or a tablet and see what's going on with production live. You don't have to go through different pages and you don't have to throw your data into a spreadsheet to get anything useful out of it. It's just so user friendly and easy to use."

With Datanomix, Tim is armed with the right information automatically. "We use three Datanomix reports every day—the Coffee Cup Report, a Shift Report, and a Utilization Report. This lets us start the day off right by showing us how our machines and jobs performed yesterday. With the right information, we can focus on the jobs and machines that had issues instead of running around trying to collect the data to have an effective production meeting every morning."





"A lot of times, new software can be cumbersome, and it's difficult to find what you're looking for. With Datanomix, any of our users can just pull up the system on their computer or a tablet and see what's going on with production live."

—Tim Martin, engineering manager, Elos MedTech

As Seen on TV

The ERP system at Elos Memphis is not connected to its CNC machines, so it does not provide automated production reports. Before Datanomix, all of the performance numbers were handwritten and then transferred into spreadsheets. The numbers for the previous day would then be posted on communications boards out in the shop area and it was up to everyone to stop by the boards to be informed of where production was at the time. It worked, but it took too much time and too many people to get the information that is available instantly in Datanomix. And, wider access to more production information has created momentum throughout the shop.

In the Datanomix cell, Elos installed large-screen TVs featuring TV Mode, a rolling dashboard that shows live production status. Everyone can see what's happening with every job run on every machine in the cell in real time. "At first, operators were a little apprehensive about tracking every job, but after some time with Datanomix, and reassurances from management, they realized it allows all of us to concentrate on what needs to be done to make improvements and raise profitability. Now, they simply look up to see where they are versus where they could be— it's an incentive to hit an A+ score."

And the benefits of showing live production status don't end on the floor. "I would say that having ready access to our operations data has created a positive change not only within the organization, but also with other interested parties. When customers come in and look at those TV monitors, they instantly understand that we're a data-driven factory. And the board of directors came through recently, and they were extremely supportive of how Datanomix helps keep production on track. It's an exceptionally positive facet of the full-scale Datanomix solution," stated Tim.



"When customers come in and look at those TV monitors, they instantly understand that we're a data-driven factory. And the board of directors came through recently, and they were extremely supportive of how Datanomix helps keep production on track."

—Tim Martin, engineering manager, Elos MedTech



Data Drives Returns

As Elos Memphis rapidly grows its staff to meet its customers' ever expanding needs, Datanomix is helping in a couple of ways. First, intuitive production scores (from A+ to C-) mean even the newest employee knows where their job should be, so there's no doubt about the status of the machines they are operating. Second, seasoned operators can flow to jobs that need attention, addressing problems live instead of trying to diagnose them the next day. "When we see a machine doesn't start producing parts until two hours after a shift starts, we know there's an issue—either training or staffing—that needs to be addressed. It's all about awareness," said Tim.

Over time, the information gathered by Datanomix is put to use uncovering longer-term trends that are opportunities for improvement. According to Tim, "We have one part with a cycle time of three minutes and 10 seconds. An engineer made some improvements and got the cycle time down to two minutes. When you run 21,000 parts a day, that's a lot of savings, and Datanomix gives us the feedback right away. It's extremely easy to see how your continuous improvement efforts are progressing."

Business is Booming

Datanomix makes it easy for Elos to interpret the daily operations of the machines in the Datanomix cell with information and insights purpose-built to address the data needs of manufacturers. According to Tim, "It's easy to make sure our machines are being utilized the way they should be utilized. With Datanomix, we see if we're getting the part counts we need, and if the cycle times are where they should be. We identify issues quickly, and communicate with the operators to uncover the issue, such as an extra brush detail, an issue with the machine, or if there's a need for additional training."

"It's easy to make sure our machines are being utilized the way they should be utilized. With Datanomix, we see if we're getting the part counts we need, and if the cycle times are where they should be. We identify issues quickly, and communicate with the operators to uncover the issue, such as an extra brush detail, an issue with the machine, or if there's a need for additional training"

—Tim Martin, engineering manager, Elos MedTech

"Every month, we have to report OEE to our corporate office, and the section of the factory with Datanomix is done automatically and accurately," said Tim. "OEE calculations for the machines in the rest of the factory are still done by hand and take much longer. In addition, Datanomix has been very helpful in showing us what the machines in the Datanomix cell can actually do, instead of a theoretical value of what we think they should do. With Datanomix, it's easy to provide our board and our CEO good information on what our capacity needs are now, and when we may need to add machines."

"With Datanomix, it's easy to provide our board and our CEO good information on what our capacity needs are now, and when we may need to add machines."

—Tim Martin, engineering manager, Elos MedTech

.....

"With no operator input required, Datanomix can give us a lot more information about our automated operations. Context is provided automatically, and the insights driven by the Datanomix software will help with overall factory operations, including automated cells."

—Tim Martin, engineering manager, Elos MedTech

Looking Ahead

Elos Medtech can see the value in having data that exposes the truth about how each of their jobs are performing. "Right now, the Datanomix cell is only producing five SKUs, but with a little over 3,000 unique SKUs, there's a lot of opportunity to make data-driven decisions across all of our jobs in this facility. We used to plan based on how we thought a machine would perform. Datanomix takes the guesswork out of planning because we have exact numbers, and even better, the actual data to see where we have opportunities for improvement."



Elos Medtech has implemented a lot of automation into their operations, including robotics and palletized production. With Datanomix, Tim is interested in getting more information on palletized operations and lights out automation. "With no operator input required, Datanomix can give us a lot more information about our automated operations. Context is provided automatically, and the insights driven by the Datanomix software will help with overall factory operations, including automated cells."

Find Out How Datanomix Can Help Your Factory

Request a live demonstration by contacting a Datanomix sales representative at sales@datanomix.io