

#DIGINNOBEST: ADVANCED TECHNOLOGIES AND SOLUTIONS ARE THE RECIPE FOR MANUFACTURERS' COMPETITIVENESS. HODA AND SARGASAS CASES

For years, entrepreneurs and industrialists have been talking about the concerning and ever-widening gap between rising wages and labour productivity. According to the Bank of Lithuania, wages in the country increased by 19 %, and productivity by as little as 2.9 % in 2012-2016 alone. But industries are encouraged to invest in progressive solutions and technologies that improve operational efficiency not just due to the above circumstance.

“After reviewing the range of our manufactured parts, we realized that there was a number of products the price of which went down over the last ten to fifteen years, leave alone going up. This happened primarily due to growing competition. After all, manufacturers nowadays often compete not on the national or regional, but on the global level. Thus, to prevent losses and to make profit, we had to invest in solutions that increase productivity,” says Raimundas Gražys, CEO of Hoda, manufacturer of plastic components.

Reducing manual labour

Located in Molėtai district, Hoda is the largest manufacturer of plastic products in the Baltics. The company moulds parts for the automotive, furniture industry, and home appliance manufacturers.

To increase its productivity, last December the company completed a project to expand its manufacturing facilities, and acquired 17 new plastic injection moulding machines and 27 industrial robots.

Raimundas Gražys refers to the latter as additional, automatic working hands. At the factory, the robots operate the injection molding machines and pack the manufactured parts.

“I would not dare to say that our factory has already entered the so-called Industry 4.0 development phase, where big data, artificial intelligence, and robotics are used in production. The production process has not been fully automated yet. For example, even though the packaging machine is Swiss, it also makes errors, so the packages undergo careful human inspection. But the amount of manual labour gradually reduces at Hoda,” says the CEO.

The investment of the factory in the premises expansion and equipment upgrades reached 3.8 million EUR. A project part amounting to one million EUR was funded by the European Union.

According to Raimundas Gražys, the upgrade benefits are obvious: Hoda's labour productivity jumped by a third. He says that with full production load, the investment could pay off in five years.

“However, we estimate that the investment will fully return in ten years. Such a timeline is perfectly normal, the acquired machines are reliable, made by European manufacturers, and they will certainly last long,” says the factory CEO.



UAB Hoda production site

Doubled productivity

Inga Šileikytė, the Head of Sargasas, another engineering industry company, which produces high precision metal mechanics, gives a slightly different view. The company, predominantly manufacturing parts for the laser and optics industry, is completing a production digitization project to install smart sensors on the machines for real-time measurements.

The company's investment in these technologies developed by a Lithuanian company Prodivi amounts to about 150,000 EUR.

“According to our calculations, the investment has already paid off. The turnover increased significantly, and we do much more with the same capabilities. With the implementation of digital solutions, the company's productivity doubled: the amount of products manufactured during the same time unit has increased, and the useful working time has grown up,” - comments Inga Šileikytė.

Sargasas mainly produces parts for Lithuanian laser and optical companies, and exports about one fifth of its produce. Production orders are small, and precision parts are predominantly manufactured individually, so there is no need to robotise production.

However, getting accurate data at all times is critical in such high precision manufacturing.

“Until now, we could not even accurately estimate the cost of our products as we did not know the duration of some production cycles. We realized the need to get real-time information on what was happening with our machines every moment. By installing smart sensors, we can monitor the production process, react promptly in case of faults, monitor productivity and efficiency indicators, assess loads, capacities, and evenly distribute works and schedule orders,” she says.



UAB Sargasas product

Artificial intelligence will be used

Sargasas is among the top and most advanced companies in Europe engaged in such activities. However, the company does not intend to stop looking for ways to apply digital solutions to drive operational efficiency. The company's further plans are to improve manufacturing processes through the use of artificial intelligence.

“The factory-installed digital solutions now provide a wealth of data that we can monitor in real time. However, the next step includes software that would both track data, and suggest how to use available capabilities, plan equipment and human work most efficiently. Based on information too vast for a man to process, artificial intelligence will be able to help in organising the company's operations,” says Inga Šileikytė.

Hoda also intends to keep improving its productivity with the help of advanced technologies. Solar modules have already been delivered to the factory and, according to the CEO, a solar power plant will be installed there in the upcoming 2-3 months. The next development stage is a modern raw material warehouse with a central system for raw material feeding.

According to Raimundas Gražys, such a system would allow feeding raw materials to plastic injection molding machines directly from the warehouse instead of keeping them near the machines in the manufacturing premises. This would allow for a more efficient use of the occupied space, speeding up the production process, and reducing manual labor.

However, machines should not take labour away from humans. The Sargasas team, which is rapidly implementing smart technologies, has even grown considerably in recent years, from 54 to 78 employees.

According to the company Head, the number of orders and new machines is growing, so the number of employees is not reducing. On the contrary, the company faces a shortage of staff, predominantly operators. To this end, they cooperate with Jeruzale Labour Market Training Centre, which trains workers with required skills.

According to the Hoda CEO, the company does not currently face a major challenge due to a lack of specialists. The company employs population of Molėtai district and the surrounding towns, while higher qualified engineers commute from Vilnius.

However, the Company CEO admits that in general, Lithuanian plastic industry suffers greatly from gaps in the education system. There are many plastics manufacturing companies, but no educational establishment trains plastic molding operators because such a training program does not exist at all.

“Of course, when production is robotized, low-skilled workers are less needed. But the need for specialists capable of servicing and maintaining the machines remains, and it will only grow,” says Raimundas Gražys.

A way to stay competitive in the world

Operations of the country's engineering industries like Sargasas or Hoda grow rapidly. Darius Lasionis, the Head of Lithuanian Engineering Industries Association LINPRA that unites these companies, estimates that production in the sector has grown by 64% over the last decade, while the engineering industry generates about 6% of gross domestic product a year, and it is still growing.

However, the Association Director emphasizes that ensuring the subsequent sectoral development and global competitiveness require targeted efforts by the private and public sectors aimed at developing an investment-friendly environment in the engineering industry, which is still often overlooked.

“Rapid employment of advanced solutions and technologies is also important for Lithuanian business. Only then it will be able to remain competitive in a global environment, which is the key to driving the industrial revolution forward. Digital technologies are already dramatically changing the way we design, produce and sell various goods and services. They will also shape the future markets and business models,” comments D. Lasionis.

Business people agree with this view. According to Inga Šileikytė, increasing the operational efficiency is the only way for business to stay competitive.

“The opportunities to make our products extremely cheap are highly limited. We will not forge our parts any nicer than our competitors do. Thus, efficiency is the only area where we can stand out, and gain advantage. Therefore, hopefully, the highest possible number of national companies will implement advanced solutions, technologies and digitization,” says the Head of Sargasas.