



Worldwide Protective Products
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Industry



Textiles

Employees

325

Headquarters

Hamburg, NY, USA

Worldwide Protective Products:

FUTUREPROOFING GROWTH

Many companies turn to upgraded IT only when it's unavoidably clear that they have no other choice. Worldwide Protective Products has taken a different route and made IT strategy the cornerstone of its growth and development. A bold investment in LYNQ MES enabled marginal gains in productivity and cost control to add up to rapid ROI and solid financial foundation for future expansion and automation of production.

The protective clothing market is growing and extends across a range of activities, from oil and gas exploration through food production and processing, to highways maintenance and law enforcement. It also splits into two subsectors: commodity and premium.

Worldwide Protective Products is definitely on the premium side. Headquartered in Hamburg, New York, and with production facilities in North Carolina and Massachusetts, it relies on a US supply chain for the manufacture of its bespoke range of protective gloves.

"Our value proposition is that we will engineer and design custom solutions for specific requirements," said Brandon Mesanovic, Strategic Planning Director for Worldwide Protective Products. "We work with our customers to cater for their precise needs. One may come to us and say 'we need something that will meet ANSI (American National Standards Institute) Level A4 standards, that will help us reduce abrasions' or some other issue. We will take that customer's requirements and deliver a product that will satisfy their specific requirements."

Bespoke products for special applications

Worldwide makes gloves that comply with ANSI standards A1 to A9. They range from cut-resistant gauntlets for right-handed meat cutters' left hands and forearms, through protection for automotive production line transfer workers and Kevlar gloves for SWAT teams, to thermal gloves for outdoor construction and infrastructure workers. One market that might be expected to be big would be energy – the oil and gas rigs – but that is not the case here.

"Gloves for the oil and gas industry have a lot of interesting features but they are supplied in bulk, in huge numbers, and are really a commodity product; pricing is very competitive," Mesanovic said. "Our business model is 100 per cent manufacturing in the United States with the focus on the premium sector."



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Cost consciousness

Concentration on the premium end does not mean that price is unimportant to Worldwide and its markets. Specialist and bespoke or not, products still have to be costed competitively. Controlling operations, inventory and supplies in specialist areas is no less challenging for the specialist than for a commodity producer.

Its customers are overwhelmingly (80 per cent) in the USA, with about 10 per cent of output destined for Canada and Mexico and about the same for Australia, South America and the European Union. It focuses on the areas the larger, commodity suppliers do not operate in: bespoke yarns, such as those that react to sunlight and heat up; Kevlar for law enforcement; and low-run, specialist and specific product lines.

“We need specialised enterprise resource planning and manufacturing execution software, because you can’t put standard lines into it, just press the button and say: we’ll have some of these, some of those, and some of those,” said Mesanovic. While a single customer order may involve thousands of gloves, each run will be bespoke; the finished goods inventory is practically zero.

The challenges of growth

Worldwide’s Hamburg, NY facility houses 475 machines, which are engaged in a range and unending variety of small runs – although those small numbers may add up to several million units a week. For the first 10 years after it was founded, in 2004, the production of specialised, bespoke products with non-standard yarns could be handled with spreadsheets, experience and a lot of time, effort and manual checking. It worked to a point and helped to build Worldwide into a multi-million Dollar enterprise.

However, a growing company will inevitably reach the point where tried and tested systems simply cannot cope any more. The normal chain of events is that the old ways will be patched and band-aided until the reality has to be faced, before too many customers are lost: the system is broken. It’s time to invest in an upgrade.



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Worldwide Protective Products took a different approach.

Preparing for success

When Mesanovic and his colleagues started looking for an appropriate, contemporary IT system, they were ahead of the game: Worldwide was not on a “burning platform”. No customers had been lost and hiccups were being dealt with routinely, albeit that they took time that could be spent more productively. However, they knew they had to gear up their systems in order to take the next step, just as an automobile has to upshift to go faster without blowing the engine.

“What we needed was visibility. For example, we had a raw materials inventory report, that would be right for about 30 seconds after it was issued!” he said. “A commodity manufacturer will have all its machines the same style. In contrast, what we do is a lot of small runs; we could have each of those 475 machines making a different style of glove, all running at the same time.”

It was a very fluid environment and a big challenge for one or two production schedulers to operate and control.

“Transparency was one of the essential requirements we identified as we started looking for solutions,” Mesanovic said. “What brought us to LYNQ was the opportunity to get that visibility, to know what is being produced on every single piece of equipment at any given point in time.”

Making the case

But while the production department was convinced of the need, the company’s owners had to be persuaded of the benefit of the investment. With so many other calls on resources, why risk breaking something that seemed to be working?

“What we said was that you can’t build a house on a shaky foundation. In order to be better and work smarter, we had to leverage technology as much as possible,” Mesanovic explained. The key point was the value proposition: is the company’s equipment working as efficiently as possible?



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“Whatever your answer is, if it’s yes or no, how do you know that for sure? And how do you know that it is the case, with every machine in every location?” he continued. The concept was accepted and understood but how was it going to be paid for? Answer: by the gains made through improved control.

“What if WIP (work in progress) was reduced by five per cent because you had the visibility of how your machines were producing? What if you had the visibility to reduce downtime by five per cent? What if you find you don’t have to keep buying new equipment to increase capacity, because you are better able to see what you already have and manage it more efficiently?” he said. “We were looking to make the shift to using equipment, smarter.”

Seeing more clearly

Worldwide focused on two areas: advanced planning and scheduling (APS) as part of wider move to a fully integrated manufacturing execution system (MES). From informed guesswork and ‘gut feel’ to having clear visibility in real time was a major step forward.

“We implemented LYNQ’s APS component two years ago and have been doing all our production scheduling on it since then,” Mesanovic said. “We have been slowly introducing shop floor tracking as part of the full MES offering. We expect to be fully implemented by the end of 2019.”

APS got inventory under control and properly tracked in real time, as well as making production capacity more visible. The difference that the introduction of LYNQ MES has made already is that effectiveness of production is becoming far more apparent, with improvements in cost and productivity. Scrap is better identified and the machines that aren’t working properly, that need some maintenance, can be spotted and taken out of production before they cause expensive damage.

“We thought we knew how much labour goes into producing a unit and how much raw material is used. We assumed that if it cost \$x to manufacture a glove, that it always and in every circumstance cost the same,” he continued. “But just as your car will not always return the exact same fuel efficiency on a trip because of a range of variables, so it is with manufacturing. In the case of driving, it could be traffic or terrain; in the case of glove manufacturing, it could be temperature, humidity, machine condition, energy supply, quality of raw materials – any of a number of things.”

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LYNQ has enabled Worldwide to see exactly how much raw material goes into each glove, measure exactly how much time it takes to produce and what variances exist, and enabled the company to find out why. Better visibility has greatly improved cost control, helped faster identification of problems and accelerated improvement.

Upping the game

“Our accountants and finance people are better and more productively involved as well. When something isn’t right they can say to us: ‘listen, guys, either our standards are wrong, costs are wrong, or something’s wrong in the production process,” Mesanovic said. “Why is it taking this person twice as long to manufacture this product as that person? Again, LYNQ provided us the ability to measure expected versus actual costs. That’s something that, as an organisation, we have never before been able to do. Seeing it in real time has given us some great advantages, to identify the people, machines or equipment that are giving rise to variances, to investigate why, and fix them.”

An unexpected – but very welcome – outcome was the effect on employees. Links were put onto individual machines that tracked not just machine condition but also operators and their performance. The data was published, anonymously but in such a way that everyone could identify their own statistics. There was concern that the monitoring could cause resentment; it turned out to be the opposite. The availability of employee performance data galvanised improvement: everyone wanted to be ‘above average’. Requests for training and support increased and the staff even optimised performance through informal workgroups that divided up tasks and focused on individuals’ identified strengths. All these marginal improvements added up to significant gains in effectiveness, efficiency and profitability.

Building the future: automation

The next moves along the road will be towards automation. Worldwide has deliberately chosen an incremental, step by step approach, making sure that the company’s customers and markets continue to be properly served and that its employees are on board as well. The fact that Worldwide staggered the implementation of LYNQ MES does not preclude moving forward; rather the opposite – it ensures a sound foundation for the next stage.

“Worldwide anticipates growing with LYNQ,” Mesanovic said. “We know that we need to find ways to work smarter and more efficiently and one of those ways is to automate as much as possible. The automation of data collection from machines, that LYNQ’s software supports is something that we certainly anticipate taking advantage of, and in the short term.”

Service, support and results.

Worldwide went through a painstaking process of assessment before selecting LYNQ. It then went through a careful design and preparation process before installation and implementation. Throughout, the company was impressed and delighted with the support it received from LYNQ, describing them as more open, accessible and easier to relate to, even though they are based in the UK.

“In preparing for growth, we determined that we would rationalise and minimise the number of systems we had in our organisation. Throughout the due diligence process we undertook in choosing systems, LYNQ far outperformed their competition, in terms of their organisational structure and customer service model,” Brendan Mesanovic concluded.