

INDUSTRY 4.0 NETWORK SITE VISITS

Plazmax Technologies



Plazmaz Technologies is a cutting and profiling machine building company with 10 staff that operates from Rotorua.

Business Overview

Using a combination of their own proprietary engineering and partnerships with world leading suppliers, Plazmax manufactures some of the most advanced machines in the world. They export from their site in Rotorua to manufacturing businesses that require precise, efficient and reliable equipment to cut metal profiles. They are constantly looking to advance their product and business offering to compete on a global scale with some of the largest machine builders in the market, by leveraging technology to differentiate themselves.

Background

When Plazmax first started to build Plasma cutting machines almost a decade ago they quickly understood the possible advantages of leveraging technology to improve their offering and reduce costs.

Back then clients were repeatedly highlighting errors with the machines, which Plazmax found was mostly the result of incorrect processes and inexperienced operators, with the machine consistently running correctly. Providing this level of support to

clients was becoming a costly way to help them troubleshoot and resolve issues.

Plazmax identified that the training, education and often process improvement services could all be done if they were able to troubleshoot the machine parameters remotely. This situation was often exacerbated by the fact that operators would occasionally not disclose the history leading up to a potential problem, which was often human error. This made it a real challenge to devise the best course of action to get the client back up and running.

These issues were compounded by the fact that most clients only had one Plazmax machine as part of their manufacturing process, and without it their processes stop completely. For example, a recently installed machine may require slight recalibration to optimise its efficiency after a period of bedding in. Where previously this required Plazmax to travel to site to do the recalibration, this can now be done in matter of minutes remotely. Plazmax expanded this offering to commissioning, with detailed and visual instructions allowing client engineers to physically set up the machine, which freed up Plazmax to focus on the software set up.

The solution

Using a windows-based digital controller integrated into the machines meant Plazmax could quickly connect to their clients' networks and get basic visibility of the machine, seeing exactly what the operator sees. They trialled readily available off-the-shelf software, settling on a corporate Teamviewer as the solution. It satisfied all the security requirements that inevitably must be overcome when connecting to a client's network, and the ease with which this solution could be integrated with their windows-based system meant they could be up and running very quickly.

Conclusion

The above represents part of the transition that is becoming more and more common with the introduction of Industry 4 technologies - moving from offering a product to a service. This transition forms some of the key next steps that Plazmax are looking to implement. Plasma cutters require a regular input of consumables to work effectively, these consumables represent a cost to clients and an inventory cost to Plazmax themselves. Optimising the supply chain in this area therefore has benefits to both parties. As such Plazmax are introducing capability into their machines to monitor and optimise consumable usage, which in turn pushes data back to them allowing them to set more efficient supply chains in the future. This capability has seen them expand their internal skill set developing their own controller system, which opens

This saw a change in philosophy from the team at Plazmax, with any electronic component in their machines requiring to be connected to the controller and therefore providing maximum visibility of the history and performance of a machine. It allowed them to see more about the machines than the operator standing next to it. This protects the scripts and software that optimises the machines performance from being altered by operators, while providing a wealth of data to Plazmax to enable it to best service the clients.

up options for sensor and software connections in the future.

Moving towards more remote access and service opportunities through technology, such as the above consumable examples, simplifies clients operations while adding value to both parties. Innovation such as these can act as significant differentiators, allowing New Zealand based manufacturers to compete globally by providing a higher value product without the hinderance of expensive travel costs from our remote location. Further to this it is slowly becoming an expectation from clients that machine and equipment suppliers take more initiative in delivering value to them. With technology and off the shelf solutions becoming cheaper all the time it allows SMEs to target markets they would have previously not considered viable.

Key Learnings

- New technologies are changing the way companies can work with their suppliers.
- Service level agreements with industry specialists can maximise the efficiency and accuracy of non-core elements of your business while removing risk and providing flexibility.
- It is important to challenge traditional work flows and ask whether new technologies can open doors to work best with suppliers.
- Using new technologies to deliver better outcomes from suppliers is a great way to introduce Industry 4.0 into a business.

Further questions?

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