douglas
improving lives

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INDUSTRY 4.0
Network

Making a difference by improving people's lives

Background

Douglas Pharmaceuticals are a family-owned, award-winning company with a reputation for high manufacturing standards, quality products, and outstanding client service. They work with innovative partners from around the world to research and develop, manufacture, market, and distribute prescription and over-the-counter pharmaceutical, nutraceutical, and consumer healthcare products.

Opportunity

Being a pharmaceutical company, the need to comply with ever-tightening regulations is an ongoing challenge. Douglas has a wide range of products requiring specialised, complex testing and analysis to exacting standards and regulations before the product can be released to consumers. As the business has grown and developed, the complexity within the testing labs has increased exponentially and the paper-based systems of the past were struggling to support the lab team's needs.

Compounding these issues is the complex systems putting pressure on the capacity of the team, with more people needed to administer the systems and record the data. Another key issue with paper-based systems is the possibility of transcription errors where the number recorded isn't always the number passed on, either through poor handwriting or "fat fingers" when entering data. This requires additional resource to verify every step.

Solution

The team at Douglas saw the opportunity to bring the management of the lab, testing workflows, and approvals into a centralised software system. This system, in a scientific context, is called LIMS – Laboratory Information Management System.

LIMS directly interfaces with the lab equipment, reducing the risk of transcription errors, and allows the interoperability of the key systems, eliminating the need for people to enter data from the analysis equipment. This allows the operator to

interpret the values rather than just mechanically typing the numbers from the machine.

The LIMS software allows Douglas to create structured workflows for product testing protocols. It provides controlled Standard Operating Procedures for conducting tests while giving immediate feedback to the technicians on whether the results are erroneous and require further investigation.

LIMS also interfaces with the Enterprise Resource Planning system, allowing the seamless release of conforming product without the need for additional processes. This speeds up the response time and means goods ship more quickly, spending less time in the warehouse.

Deploying a solution which touches so many aspects of a complex business was no easy feat, however the team saw the benefits of the new

technology and were willing to change the way they work to embrace the potential of Industry 4.0. This has been the key to Douglas's success with the implementation of the system.

Key learnings from change management

- Review processes before implementation
- Don't bring waste into the new system
- Reduce complexity and take the time to maximise the benefits
- Targeting paper-based systems to onboard

Good project management and resources, and a clear vision with drive from senior managers were crucial to keeping on track even when the going gets rough. Despite the challenge of changing four project managers, Douglas built a strong team capable of tackling such challenges head-on.

Benefits

The benefits of implementing the LIMS software cannot be overstated. The team are now able to process more assays with the same amount of resource, and to higher levels of regulatory complexity.

It automated the link between performing the Quality Control testing protocols and communicating that the product is ready for release, eliminating tedious and repetitive processes. The highly skilled lab teams could apply their skills to more value-adding activities, while delivering a more robust process. This integration of process through the business is called vertical integration.

By going through the implementation in a structured way, examining process first then automating, gains were made immediately. This underscores how Industry 4.0 is not all about shiny new machines and software, but also about good efficient business processes.
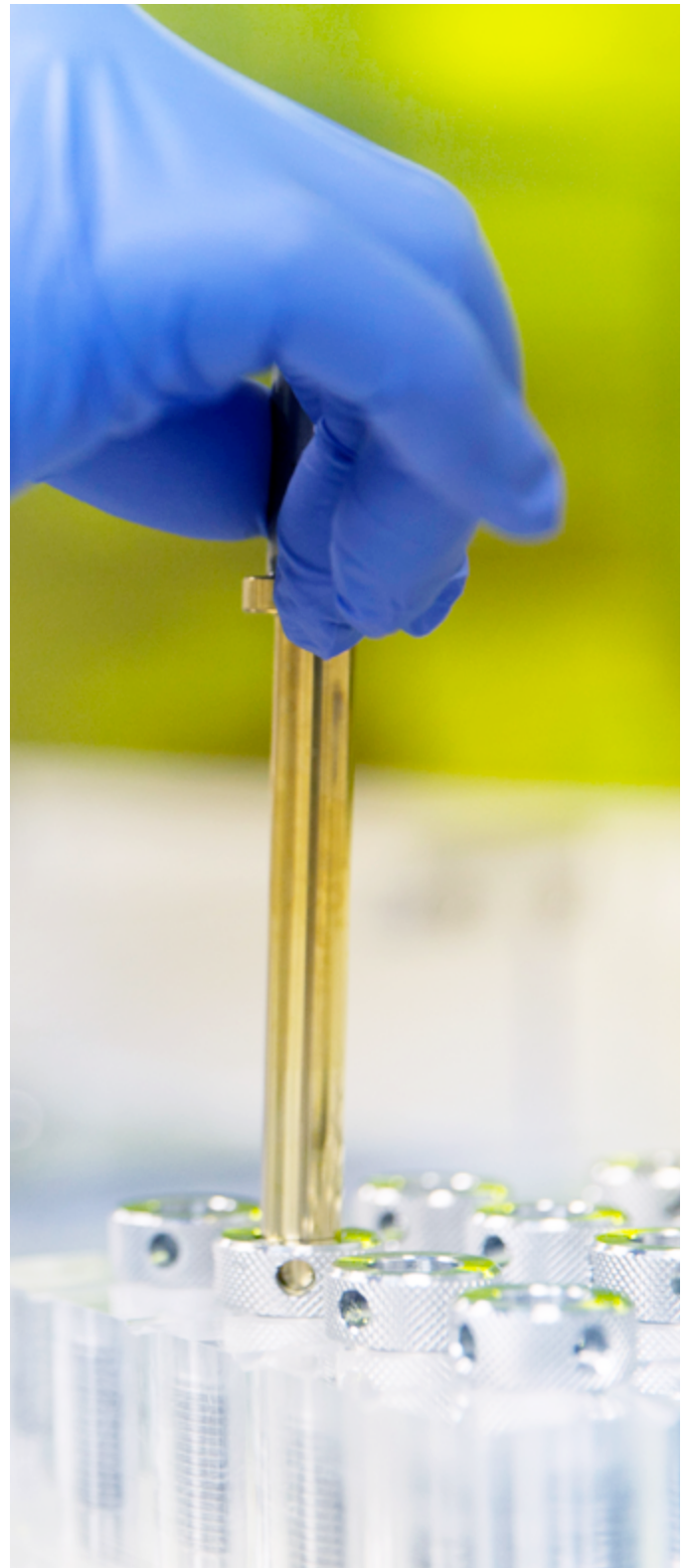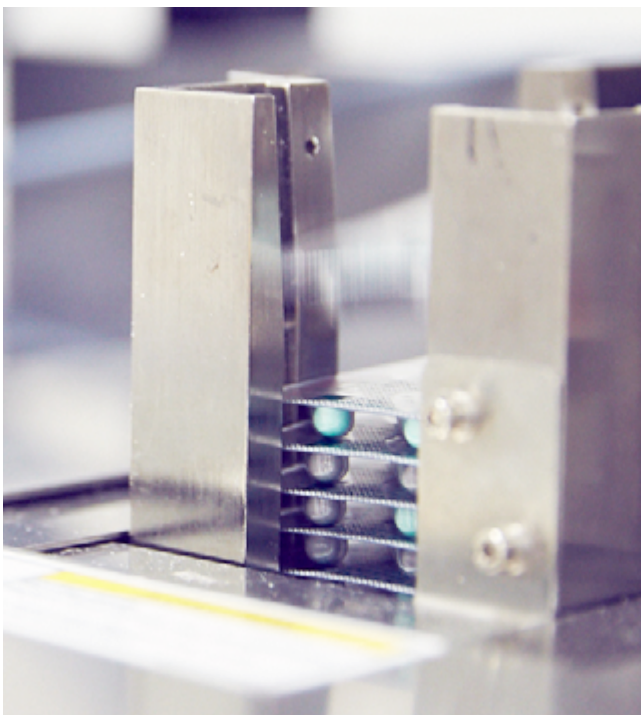
About the site visits and Industry 4.0

The purpose of the Demonstration Network is to drive uptake of Industry 4.0 technologies among New Zealand manufacturers with the aim of increasing their productivity and global competitiveness. The Network of Site Visits (NSV) are part of the Industry 4.0 Demonstration Network, which also includes a mobile showcase and smart factory showing cutting-edge Industry 4.0 technologies in action. The NSV takes selected companies through a fully-funded assessment process to help them accelerate their own journey towards Industry 4.0, and sees them share their knowledge with other manufacturers.

Further questions?

To find out more please contact

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