



Network Site Visit Case Study

Gallagher

Unpicking warehouse simplicity & efficiency

INDUSTRY 4.0
Network

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New Zealand's Innovation Agency

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Company Profile

As a company steeped in 85 years of history and innovation, Gallagher's business units focus on protecting what matters most for its customers across the Animal Management and Security industries, with a strong focus on using technology to solve real problems.

With headquarters in Hamilton and a global footprint across ten key markets, Gallagher is one of New Zealand's most successful private companies, employing over 1300 people worldwide and building lasting relationships in over 160 countries. Its annual revenue is over \$350m.

The company is led by CEO and Executive Director Kahl Betham. Sir William Gallagher and Dr John Gallagher remain involved in the business at a governance level.

Problem / Opportunity

Picking product from multiple warehouses across site is an essential function in the Gallagher operation. This includes picking spares and finished goods to dispatch to customers and dealers worldwide, as well as picking parts to match the fast-paced assembly environment internally. Those familiar with these environments will know the challenges it can pose. Firstly, to keep pace with the required orders to satisfy internal and external customers, the efficiency of a picking team collecting and packing items from across the warehouse is imperative; and secondly, the accuracy of picking and putting away inbound goods ensures that the business ERP system and planning team can deliver achievable and accurate plans to meet customer demand. In short, if done poorly it can 'unpick' your operation and customer satisfaction very quickly!

Gallagher has a strong track record of continuous improvement. Always seeking a better way, they had consistently changed their picking processes

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to make them more efficient and accurate year on year. These improvements were cumulative, but as growth has accelerated in recent years, compounded by space constraints, the team were finding it harder to get return on investment for their warehouse projects. Although errors are infrequent, with huge growth in recent years, any errors cause a significant knock-on effect for customers or production. Movement between locations, confirmations of picking and other transactions essential for data accuracy still had a significant manual element that needed to be removed.

To match the projected growth and the ever-increasing functionality of products (which increase picking volume and time) and to ensure they were consistently meeting customer demand, the team knew they had to look beyond iterative gains to a brand-new solution. In particular, employing more people in the picking team was unsustainable with space restrictions in the warehouses possibly leading to safety concerns down the road.

The Gallagher Teams key objectives were:

- To keep up with projected growth without continually adding labour.
- To improve pick and pack accuracy.
- To reduce production delays due to accurate and timely tracking of stock movements.
- Simplification of processes allows greater versatility and flexibility in the work force, reducing training time and skill levels required.

The Solution

Looking for an intuitive, easy to use, accurate system began with a detailed tender and

evaluation process. This was importantly underpinned by a clear vision of what the employee experience and process outcome should be. This meant very early stakeholder engagement, bringing in change management skills from the people and brand team to understand key concerns and gather ideas from those who know the job best. As part of their improved maturity around Information Systems best practice, Gallagher focused on bringing together a team of very specific skills, both internal and external. The tender process relied heavily on successfully deployed case studies in similar sized / structured organisations, bringing the right hardware and software to the table. The selected solution (a Voice Deployed Software and Hardware solution fully integrated into SAP), facilitated by external support from consultants with experience in similar projects. Although KPIs were established early in the programme to monitor return on investment, the fit and likely success of the solution were considered in more detail than the investment cost, knowing that the right solution would provide payback over many years of predicted growth.

The physical solution is a voice controlled and activated system that fully integrates with their ERP to communicate live via audio to the picking team which parts and locations require attention. The flexible system allows the operator to be efficiently directed to locations, informed of pick, or put away quantities and confirm transactions are completed. The data latency of stock accuracy is reduced dramatically with stock movements occurring live. In addition, issues that occasionally arise whilst picking, such as a stock shortage at a location, are flagged for immediate investigation by team leaders or supervisors, which allows the operator to continue unhindered with the next steps. This real-time flagging of issues allows for a more rapid response time, with operator interactions fresh in people's minds. When combined with the fact

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that the system provides traceability of operator interactions with bins automatically, it is possible to resolve inaccuracies much quicker than previously.

Although the hardware and software to deliver this solution have been around for many years, if now somewhat more refined and fit for purpose, the key Industry 4.0 aspect to this project has been the backend integration with SAP. Ensuring a seamless experience pulling requirements through to the operators is essential for project longevity and return on investment. Historically, interim steps using spreadsheets and downloads may have been required creating other process steps, opportunities for inaccuracies, and often single-person dependencies for critical processes.

Not all picking and warehouse movements are small components, so the team have ensured that they have included vehicle mounted units with keypads to allow pallet movements and bulky items to be tracked in the same way.

In line with the project objectives, ensuring that the system sped up training times and removed the need for specialist knowledge and skills may create opportunities for a more diverse range of people in warehousing roles. Whilst also providing exposure and development of existing staff to new ways of working and skills. For example, accompanying the solution is a live dashboard of the team and functions, alongside insights around shift workloads and requirements. This central console will change frontline leader's roles towards solving problems before they occur, delivering more value to the supply chain. An example of this is the required labour requirement for a shift can be quickly calculated and visualised, allowing team leaders to rapidly allocate daily responsibilities. This removal of manual calculations allows leaders more time to consider training requirements and process improvements each day.

Gallagher is a global business with operations in all major markets. The detail and focus on the successful implementation of this project has upskilled the internal delivery team to be able to leverage the solution elsewhere in their future operations, with shorter development cycles and reduced implementation costs.

With a phased rollout, Gallagher have allocated the necessary internal and external resources to ensure any bugs identified through deployment can be rapidly resolved. Ensuring first impression from employees is positive, and operations aren't disrupted. Combining this with a phased rollout, starting small and scaling fast has helped the team manage the extra workload and complexities that the pandemic introduced to the project. All this is exemplified by the positive project feedback that employees are providing.

Key Takeaways

- Get the right team on the job and don't underestimate the value of real experience in delivery of similar projects. External support was invaluable to delivering this project smoothly.
- Early engagement, feedback and change management activities were essential to bring users on the journey, starting early (pre-tender) with communicating the vision is essential.
- Blueprinting and scoping the solution was a thorough process drawing on the whole team's experience and operator feedback.
- What would they have done differently? Expand the team – with COVID-19 increasing workload, having a wider team to share the responsibility may have helped during peak periods.
- Never underestimate the importance of being flexible in your approach to delivering a project of this magnitude – flexibility offers a greater chance of user adoption, as well as project success.

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 the EMA or Frank Phillips at LMAC

EMA

+64 (9) 367 0900
manufacturing@ema.co.nz

Frank Phillips

+64 (0) 27 223 3077
frank.phillips@lmac.co.nz

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