

COMPANY OVERVIEW



COMPANY WEBSITE
www.ardmac.com

Ardmac is an international construction specialist delivering complex high-value workspaces and technical environments. Headquartered in Dublin, and with offices in Manchester, Craigavon, Cork and Brussels, Ardmac employ over 300 people and provide specialist construction services to the commercial fit-out, life sciences and

data centre sectors. Ardmac’s vision is to be “the contractor of choice for clients and the workplace of choice for great people”. Ardmac’s mission is “to consistently provide the ultimate solution for high-value working environments through continuous investment in the best people, technology and processes”.

OVERVIEW & BACKGROUND TO THE LEAN INITIATIVE

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Ardmac’s Lean journey started in 2015 with the implementation of the Last Planner® System (LPS) on a pharma cleanroom project. From the benefits of this pilot project in the areas of on time delivery, budget, quality, and safety, leadership at Ardmac further educated themselves in the area of Lean through Yellow Belt training and conferences. This provided leadership with an understanding whereby Lean goes beyond Lean tools, and that its long-term benefits involve the integration of leadership behaviours, full enterprise alignment, and a process-based approach to manage the business.

As a result, leadership were fully committed to the deployment of Lean to deliver its 2022 Strategy Goals. Leadership engaged the organisation to develop a shared Vision and Guiding Principles. The next step involved creating a Lean Business Strategy that would align critical business processes

that would support the delivery of Ardmac’s strategic goals across Ireland, the UK, and Europe. Figure 1 outlines Ardmac’s Lean journey to date, and this case study will focus on specific elements, including:

- i. Set up of the Lean Governance Team.
- ii. Leadership Development Program and Constructive Conversations.
- iii. Continuous Improvement through the Do Your BIT program.
- iv. Visual Management.
- v. Digital Project Management Program.



Figure 1. Timeline for Lean

LEAN INITIATIVE UNDERTAKEN – LEAN THINKING, TOOLS, TECHNIQUES

Lean Strategy and Governance Team

To transition from a Lean tools-based approach to a strategic approach of Lean Deployment, Ardmac set up a Lean Governance team in early-2018. This team is composed of key sectoral leaders of the business. The purpose of the process is to:

1. Align current business strategies into one business strategy to deliver strategic goals.
2. Identify and manage key Lean programs.
3. Assign ownership of Lean programs across the business.
4. Support program leaders when they provide an overview of their programs.
5. Engage employees in Lean deployment.
6. Support Lean training requirements to support the delivery of Ardmac’s strategic goals.

Figure 2 provides an overview of the alignment of key business strategies that will enable the business strategy.

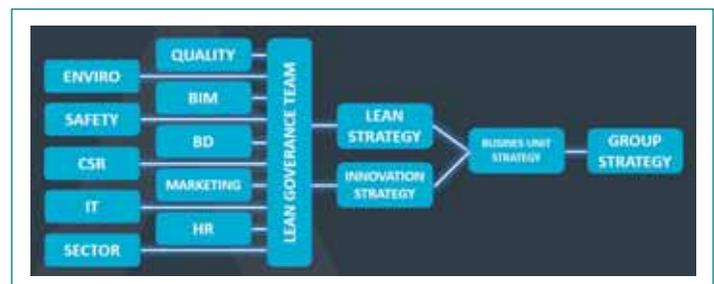


Figure 2. Alignment Across the Business

The Lean Governance team meet monthly and review the status of each program. Program leaders rotate monthly and present an update of their individual program. In the event that any program requires support and/or continuous improvement, the governance team provide direction and support when required. It is also an opportunity for the Governance team to recognise the positive improvements that

project leaders contribute to the business.

Leadership Development Program

A critical element of Lean deployment centres around the consistent behaviours of leaders in the business. Alignment of consistent behaviours support the business both internally and externally. From a client perspective, and regardless of who is managing the project, the client will experience a standardised approach to managing a project. As a team member within Ardmac, consistent behaviours internally will also drive consistent behaviours within each team, thereby supporting our vision to be “the contractor of choice for clients and the workplace of choice for great people”.

To ensure that Lean will be successful in the future, Ardmac has supported 17 leaders in undertaking a leadership development program at Trinity College Dublin. The program focuses on a number of areas including Operational Excellence, Strategy, Design Thinking, People Management, Integrated Project Management, and Benchmarking visits. The outcome of the program is the delivery of five strategic projects that will support the delivery of Ardmac’s strategic goals. Each member of the Lean Governance team has completed this program, which provides a deeper knowledge and understanding of Ardmac’s Lean journey.



Figure 3. Graduates from the Ardmac “Building Better Leaders” Program 2019

Constructive Conversations Program

To further support leaders as people managers, Ardmac has also launched a “constructive conversations” program. This program has trained leaders to perform 2-way constructive conversations with employees, thus transitioning managers from a directive to a coaching and mentoring role.

Do Your BIT Program

Lean involves a transition to all employees thinking about continuous improvement. To support this continuous improvement mindset, Ardmac has developed and deployed the “Do Your BIT” (“Building Ideas Together”) program. The purpose of this program is to support employees to have a voice in continuous improvement. Employees are supported in submitting ideas for review and execution. The Do Your BIT team review ideas submitted monthly and then provide employees with feedback on their suggestions. The program considers all ideas, from a 10-minute small improvement to large-scale capital investment ideas. Ideas can be submitted electronically or can be managed via the Visual Management Boards or during Toolbox Talks. On site in particular, the

daily huddle boards are a good opportunity to ensure that craft can participate in the program. This approach not only promotes continuous improvement, but also engages employees in our Lean journey and provides leadership with an opportunity to recognise an employee’s innovation that they may not otherwise be exposed to in the business.

Visual Management

A key aspect to Lean deployment is the management of metrics. From 2018, Ardmac has engaged craft within projects through the application of Visual Management Boards to manage the metrics that matter daily. Each of our projects across Ireland, the UK, and Europe utilise, as part of our daily huddles, a review of key metrics including Safety, Quality, and Schedule. This Visual Management board complements the LPS to ensure that the metrics that matter are reviewed and managed daily. The review of the visual boards involves the entire team, thereby ensuring that everyone is aware and accountable to the metrics that matter. Figure 4 outlines an example of a visual management board in action, including the Daily Huddle and our Safety Program. The Visual Management process in Figure 4 is replicated across all our projects in Ireland, the UK, and Europe. The key to the success is the involvement of the right people in this short stand up review (15-minutes max) as these are the people that can constructively action the status of each metric.



Figure 4. Visual Management at Project Level

Project Management Platform

From an analysis of the workload of site management in 2018, up to 20% of site management time was absorbed around data collection and reporting. This time included activities such as printing forms, filling in by hand, scanning, and emailing results or typing results in spreadsheets. There were also large amounts of time spent walking between the site office and the work zone collecting drawings and the latest information. A project was set up to identify a solution to minimise this non-value-added (NVA) time. A number of software solutions were identified to manage documentation in a Lean manner.

In early 2019, a software solution named “Procore” was selected and implemented to streamline project process on any mobile device. A significant project plan was developed to manage the integration of Procore into the business, starting with a pilot and identifying lessons learned around the program before full deployment. To support deployment, a significant training plan was developed and executed to minimise impact of change from a paper based system to an

electronic solution. Figure 5 outlines an example from this system.



Figure 5. Procore Software Solution for Managing Documents Electronically

Integrated Project Delivery (IPD)

IPD is a project delivery system that seeks to align and integrate all project team members' interests and objectives. The team includes the client, the main contractor, and subcontractors. IPD integrates people, systems, business structures and practices into a process that collaboratively harnesses the talents and insights of all participants to optimise efficiency and handover to client. Two projects were managed within Ardmac using an IPD method. For one project, Ardmac was the subcontractor. The collaborative IPD approach provided a specific focus on each contractor to utilise LPS to deliver a very aggressive schedule, with eight subcontractors working with this process throughout the lifetime of the project. Where constraints were identified, each sub-contractor realised the implications of owning and removing constraints for other subcontractors to ensure work would flow. LPS metrics were critical to the success of the project as the right metrics focused on flow and drove the right behaviours to ensure work could flow throughout the lifecycle of the project.

LEAN INITIATIVE IMPROVEMENTS & IMPACT

Ardmac has adopted a Lean strategy, going beyond the implementation of Lean Tools and adopting an integrated approach where engaged employees, supported by their Lean Leaders, continue to deliver the strategic business objectives. The Lean framework was outlined in Figure 2 and a number of elements from the Lean strategy are presented in this case study. Benefits from these examples include both qualitative and quantitative benefits. From a cultural perspective, through the development of Lean Leaders, management of the business is transitioning from a direct management approach to a leadership approach. With such an approach, leaders are enabling their teams to deliver business performance using their own initiative and the role of the leader is to provide direction and support.

Constructive conversations are resulting in positive improvements in behaviour, aligned to our guiding principles, where previously team members may not be aware of the impact of their behaviours. As a result of constructive conversations, this brings Ardmac's Guiding Principles to life.

From the various Lean initiatives undertaken as part of the Lean Strategy, which is managed by the Governance team, the following benefits were identified:

- Business Process in place to manage the Lean Strategy as a mechanism to deliver our business goals and objectives.
- Utilisation of IPD and LPS has delivered an aggressive project timeline of 1.5 years from the original estimate of 2 years.
- Engaged continuous improvement mindset across the

business through the identification of 30 improvement ideas managed through the Do Your BIT program.

- Increase in collaboration, consideration of activities, highlighting residual issues, and improved communication/engagement through the Do Your BIT program.
- 25% reduction of site management NVA time.

Next Steps for Ardmac

Ardmac is fully committed to Lean and the long-term benefits that it delivers, and we will continue to manage and monitor our Lean strategy and key business metrics through the Lean Governance team.

Over the coming year, the following activities are planned as part of our Lean Strategy:

- Improving the efficiency and management of LPS metrics through the application of KPI software across the business.
- Engaging Lean in Offices through the deployment of the Lean Housekeeping Program.
- Initiate a Lean Transform with Enterprise Ireland to improve value stream performance through the further application of Lean thinking.
- Cost savings and avoidance of just under €1Million.
- Improve connectivity across the business processes.
- Engage the next iteration of leaders through the leadership development program.

