Case Study Title: Taking ideas from Inception to Impact: Ardmac's ISO 56001 Innovation Management System as a Lean Value Stream

Company Overview | ARDMAC | ardmac.com

Ardmac is an international construction specialist, established in 1977, that designs and delivers complex, high-value workspaces and technical environments — cleanrooms, data centres, laboratories and advanced manufacturing facilities — for clients in the life sciences, technology and mission-critical sectors. Headquartered in Dublin and part of the Purever Group, Ardmac employs around 1,500 people across 21 offices in Ireland, the UK and mainland Europe, representing more than 40 nationalities. The business pairs off-site manufacturing with on-site delivery and a five-decade commitment to innovation, safety and certainty of outcome for its clients.

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Overview & Background to the Lean Initiative

For most of its history, Ardmac innovated the way many construction firms do — informally. Talented people solved hard problems on live projects, but the ideas behind those solutions were rarely captured, compared, funded, or exploited to their full potential. Good thinking was lost between projects, effort was duplicated, and the value locked up in the company's research and development, including funding potential, was only partially realised. In lean terms, the innovation process itself was full of waste.

From 2025, Ardmac set out to change this by treating innovation as a managed value stream rather than a happy accident. The company adopted ISO 56001:2024 — the first international standard for innovation management systems — and applied to it the same management-system discipline it already uses for quality, safety and environment through its Integrated Management System (IMS). The goal was straightforward: build a repeatable, systematic pathway that takes an idea from inception to impact, eliminates waste along the way, and makes the company's innovation visible, governed and fundable.

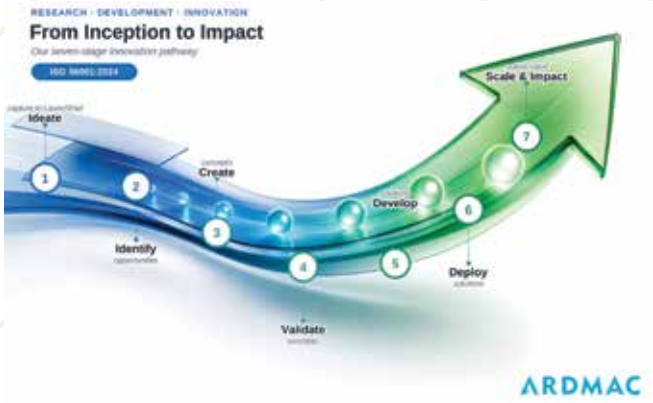

Figure 1: Ardmac's Innovation Value Stream — from Inception to Impact.

Lean Initiative Undertaken – Lean Thinking, Tools, Techniques

Mapping the innovation value stream

The initiative began by defining innovation as a flow of value — a value stream — with a clear start and end: taking ideas from inception to impact. Ardmac mapped the journey an idea makes, from first capture through evaluation, development and deployment to measurable benefit. Viewed through a lean lens, that flow exposed the classic wastes: over-processing of ideas that should have been stopped early, waiting on decisions, lost knowledge (a form of defect), and the under-use of people's creativity. ISO 56001 provided a ready-made framework to design the value stream deliberately rather than leave it to chance. Framing the work this way also gave teams a shared language for describing where an idea sits in the flow and what is needed to move it to the next step.

Standard work: policy, strategy and a documented system

Lean depends on standard work, and the team built the innovation system on three controlled documents. An Innovation Policy Statement sets leadership intent and signals that innovation is "a key enabler for everyone in Ardmac." An Innovation Strategy, aligned to ISO 56001 Clause 5.3 and carrying the tagline "taking ideas from inception to impact," translates that intent into sector-aligned priorities and a connected pathway from strategy to certified, fundable innovation. Underpinning both is an Innovation Management System Manual that defines the processes, roles, records and controls and supports a documented Innovation Strategy. Crucially, the system was built inside Ardmac's existing IMS, so innovation now sits alongside quality and safety under the same

document control, internal-audit and management-review disciplines — not as a bolt-on.

Leadership and governance — respect for people

Lean systems are led, not delegated. Governance for the innovation system runs to the top: it is sponsored by the CEO and steered by an Innovation Steering Committee, with a dedicated Innovation & R&D team providing day-to-day ownership. Clear roles and a cross-functional forum give people at every level a defined route to raise ideas and see them acted on — the lean principle of respect for people, applied to creativity.



LaunchPad — a front door for every idea

If the stage-gate is the engine, LaunchPad is the front door — and one of the biggest drivers of the system's success. Launched on the My Ardmac home page, it is Ardmac's open ideation platform: a single channel where anyone can log an idea, big or small, technical or practical, inviting "outside the box" thinking from every corner of the business. Crucially, ideas are not lost in a suggestion box — every submission is formally reviewed by the Innovation Steering Committee (a mix of senior leadership, cross-functional management and external consultants), so contributors know their ideas are seriously considered and can lead to real change. In this way LaunchPad signals Ardmac's commitment to open innovation and drives a culture of curiosity, experimentation and continuous improvement.

A stage-gate funnel: pull, and stop the wrong ideas early

At the heart of the value stream is an idea-to-impact funnel governed by innovation stage-gates. Opportunities are captured, then assessed at defined gates against consistent criteria, so that resources are pulled toward the ideas most likely to deliver value while lower-value concepts are stopped early — before they consume design and engineering effort. This directly attacks the waste of over-processing.

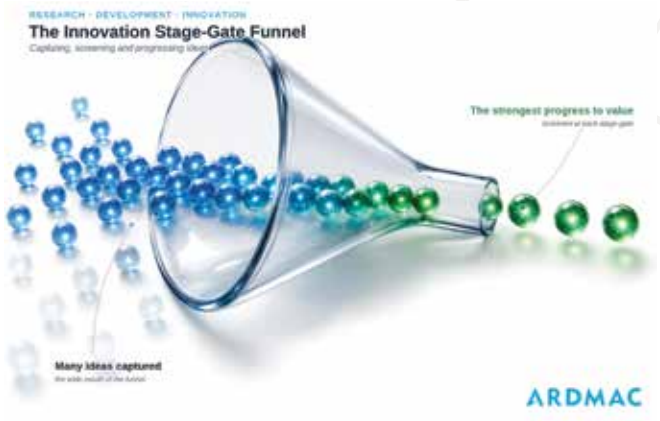

Figure 2: The Innovation Stage-Gate Funnel — capturing, screening and progressing ideas.

An AI Estimating Tool, for example, was taken through a documented mid-development stage-gate assessment (a prototype review) rather than being allowed to drift, giving leadership an evidence-based go/no-go decision point.

Managing the innovation portfolio

Ardmac manages innovation as a single portfolio, structured in line with its R,D&I Strategy as a set of interdependent Horizontal and Vertical R&D programmes. The Horizontal programmes are the engine of the system: cross-functional and broad-based, they build the foundational, scalable capabilities and enabling technologies — such as data analytics and AI — that benefit every part of the business and align to Ardmac's long-term strategic goals. Five are defined:

- **H1 — Optimised Modular Critical Controlled Environments:** optimised modular controlled environments (cleanrooms, laboratories and data centres) across all sectors.
- **H2 — OSM Components & Product Development:** standardised components and products for controlled environments, built through off-site manufacturing (OSM).
- **H3 — Digital Innovation:** digital transformation through BIM, IoT and automation for more efficient, data-driven environments.
- **H4 — Design & Engineering / Process Enhancement:** emerging technologies and improved approaches to enhance design, engineering and operational workflows.
- **H5 — R&D Hub:** a systematic approach to R&D supporting training, continuous improvement and the compliant documentation and management of innovation.

Intersecting these are the Vertical programmes — Ardmac's sectors of focus, the high-specification, controlled-environment markets that sit at the core of the business and its value proposition. Each vertical applies the Horizontal capabilities to the targeted, customer-centric challenges of its sector, turning shared capability into competitive advantage where it matters most to clients.

The two are deliberately interdependent. The Horizontal programmes hand enabling capability — a data platform, an AI tool, a standardised modular system — to Ardmac's sectors of focus, which tailor it to their specific challenges; in turn, the demand and problems surfaced in those sectors steer where the Horizontal programmes invest next. Every initiative sits where a capability meets a sector, so the grid of Horizontal programmes against Ardmac's core sectors becomes the portfolio itself.

For a lean organisation, this turns strategy into focused innovation without stifling it. Because the Horizontal programmes are shared, a single advance is built once and reused across every sector rather than reinvented — pulling effort toward value and eliminating duplication. Yet the framework stays open: any employee can log an idea to Launchpad against any programme, and a three-horizon maturity lens keeps the portfolio balanced across risk and timeframe — focused enough to concentrate resources, flexible enough to keep the innovation funnel fed.

PDCA, audit and continuous improvement

Continuous improvement is built into the system through a Plan–Do–Check–Act (PDCA) cycle — the same Kaizen discipline that underpins lean delivery. Internal audits and management reviews

test how the system is working, and their findings feed a structured root-cause and corrective-action loop that returns each lesson to the standard work, so the process improves with every pass. This discipline was exercised during Ardmac's ISO 56001:2024 certification audit, where the check-and-act steps operated exactly as intended. By combining deep client insights with innovation and Lean thinking, we continue to streamline on-site delivery, shorten project timelines, elevate safety standards, and consistently exceed client expectations, further reinforcing Ardmac's reputation as a trusted partner and industry leader in modular, off-site construction solutions.

Lean Initiative Improvements & Impact

The initiative has moved Ardmac from ad-hoc R&D to a governed, certifiable innovation capability, giving the business a single, visible pipeline and a common language for how ideas are captured, assessed, funded and carried through to benefit. The most significant outcomes to date:

- **LaunchPad, the ideation platform — a front door for ideas:** launched on the My Ardmac home page, it lets every employee log an idea — big or small, technical or practical — for formal review by the Innovation Steering Committee, giving every voice a channel and signalling Ardmac's commitment to open, staff-led innovation.
- **A complete, audited management system where none existed —** an Innovation Policy, Strategy and Innovation Management Manual, integrated into the company IMS and governed by an Innovation Steering Committee.
- **Independent assurance —** completion of a Stage 2 ISO 56001:2024 certification audit, placing Ardmac among the early adopters of the new standard in the construction sector.
- **A managed innovation portfolio —** spanning multiple sectors under a strategic framework that focuses on horizontally integrated fields of innovation across the business, complementing existing sectors and uncovering opportunities that promote staff led innovation ideation and a true culture of innovation.
- **Funding streams aligned to the system —** RD&I grant and incentive supports supplement an model that invests in innovation, turning innovation activity into reinvestable value.
- **Faster, more disciplined decisions —** stage-gate assessments give leadership clear go/no-go points, reducing wasted effort on low-value ideas and protecting resources for high-value ones.
- **A stronger innovation culture —** with policy backing that innovation is everyone's responsibility and regular visibility at Operations Board and leadership level, more ideas are surfaced and captured.

Quantitative measures are being embedded through the system's KPIs and management review with over fifty active portfolio projects by mid-2026. Because the portfolio is now reviewed on a regular cadence at Operations Board and management-review level, these measures are captured consistently rather than anecdotally, giving a reliable baseline against which future improvement can be tracked and reported in later editions of this case.



Figure 3: Live innovation portfolio framework

Summary and Lessons Learned

Ardmac's experience shows that innovation responds well to lean management-system thinking. Framing R&D as a value stream — from inception to impact — and wrapping it in standard work, stage-gates and a PDCA cycle has not constrained creativity; it has amplified it, by ensuring good ideas are captured, funded and carried through to benefit.

Three lessons stand out. First, leadership and integration matter most: hosting the system inside the existing IMS, with steering-committee ownership, gave it immediate credibility and discipline. Second, stage-gates are the single biggest source of waste reduction — stopping the wrong ideas early frees people to pursue the right ones. Third, certification is a means, not an end: the real value lies in the routine of audit, root-cause analysis and corrective action, where even a non-conformity becomes fuel for improvement.

For any construction business, the message is that innovation can be managed with the same rigour as quality and safety — and that doing so turns scattered good ideas into a repeatable, fundable source of competitive advantage.

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