

Case Study Title: Musgrave Deposit Return Scheme Rollout (DRS)

Company Overview | MUSGRAVE DRS | musgravegroup.com

Musgrave is Ireland's largest grocery distributor, with a strong portfolio of market-leading brands including SuperValu, Centra, Daybreak, Frank & Honest and Donnybrook Fair. Musgrave and its retail partners support more than 40,000 jobs, in more than 1,400

stores and offices across seven brands in three markets, with total sales of €5 billion. Most of the retail stores are owned and operated by independent retailers across the country.

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Overview & Background to the Lean Initiative

In February 2024, The "Separate Collection (Deposit Return Scheme) Regulations 2021" came into effect in Ireland. From this point on, customers were charged a deposit on the purchase of plastic bottles and aluminium cans with the Re-Turn logo. Under the new legislation, stores with a retail floor area greater than 250sqm must offer a return point for in-scope containers, to enable customers to redeem their deposit. The purpose of the legislation is to meet compliance with the EU Single Plastics Directive, which stipulates a 77% separate collection rate by 2025, and 90% by 2029. The implementation of DRS was a significant change to retail operations, which presented unique challenges for small, independent retailers. From the outset, independent retailers welcomed the scheme but faced barriers such as the investment costs and a relative lack of experience in comparison to their multinational competitors. Furthermore, the scheme go-live date was clouded with uncertainty as DRS in Scotland was due to launch in 2023 and was delayed until 2027. The implementation of DRS in Musgrave was a large complex project consisting of several workstreams including IT, Finance, Store Development, Trading, Sales, Marketing and Learning & Development. This case study focuses on the rollout of 620 reverse vending machines (RVMs) in 520 SuperValu, Centra, Daybreak and Donnybrook Fair stores, and how Lean thinking and tools were fully leveraged to meet our objectives.



Figure 1: SuperValu Reverse Vending Machine.

Lean Initiative Undertaken – Lean Thinking, Tools, Techniques

The rollout team was established in September 2022 and comprised of a Rollout Manager; 2 Project Managers, Rollout Coordinator and CAD Administrator. Our first task was to define value from the customer perspective in the case of our chosen reverse vending machine. This was done by working cross functionally with our Sales, Marketing and IT teams with our objective being to nominate one RVM supplier to minimise complexity and leverage economies of scale. This was based on performance trials held in January 2023. Customer value was analysed from two perspectives:

1. Customer (end-user): the RVM had to be intuitive, reliable and visually appealing.
2. Retailer: hassle-free maintenance, rapid service response, real-time data, wide machine range, competitive price.

Following successful trials with global suppliers, RVM Systems were nominated as our reverse vending partner. Their wide machine range includes a 21" screen and wheelchair accessibility feature which was unique to RVM Systems. This was backed up by a well-resourced

service team and mobile app delivering alerts to the store in real-time.

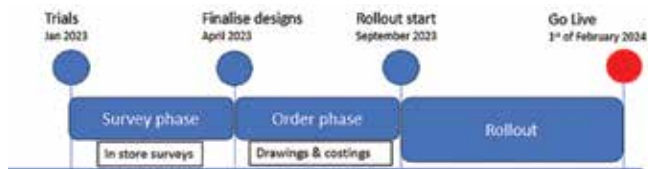


Figure 3: Project Plan and Phases

An overall project plan was developed to map our implementation journey, broken down into 3 phases. During the trial period, the team commenced store surveys to ensure our database of store drawings was accurate. The order phase followed, which was supported by proposed drawings and costings. Finally, the rollout phase commenced in September. To deliver each phase, value stream mapping became a crucial tool.

In developing our value stream map, we identified complexities that posed serious challenges to the success of the rollout. These consisted of:

1. **Retailer buy-in:** Securing the buy-in of over 500 independent retailers was a challenge due to the delay of other schemes around Europe, political uncertainty and accessing the required finance to invest in RVM infrastructure. To mitigate against this, Musgrave launched a dedicated DRS fund in December 2022, which provided a financial contribution to each store to support the RVM investment. This demonstrated to our retailers that Musgrave were fully committed to the success of the scheme. Change management was also employed through regular national meetings and machine showcases. To secure the buy-in of our retailer councils, we travelled to mature DRS markets in Europe. This allowed us to demonstrate our chosen RVM supplier in a live retail environment, to build confidence that we selected the right partner.
2. **External installations:** 23% of our RVMs had to be installed externally to the store due to space restrictions. Installing internally was low complexity: services were installed for the RVM, and it was then dropped into place and installed by RVM Systems. External installations required waterproof housing enclosures and civil works, increasing the number of contractors and activities in our value stream. To mitigate, we minimised the number of external installations by recommending internal where possible. We developed a specification for a standardised housing which complied with the planning regulations and template civil designs that could be adapted by site. Without standardisation, the rollout deadline was not achievable.
3. **Retailer ordering:** Given our stores are independent businesses, Musgrave could not place orders on behalf of the retailer. This created supply chain challenges as we couldn't provide a definitive pipeline for production to our supplier. A detailed site survey was carried out for each store, followed by a proposed drawing and RVM recommendation based on store size, available space and existing sales of containers. The RVM recommendation allowed us to forecast the machine types of our retailers would need, to fast-track production. A deadline of the 30th of September for ordering was enforced, with clear



Figure 2: Centra Reverse Vending Machine

communication that machines could not be guaranteed on time beyond this date.

4. **Procrastination:** The go live date of February 1st was not ideal given the Christmas trading period fell during a crucial time in the rollout. Many retailers did not want to install the RVM before Christmas due to onsite storage constraints. We had to communicate that stores that did not receive their machine before Christmas would not be ready or compliant for the 1st of February deadline. January installation slots were reserved for more complex external installations that had longer lead-in times which mitigated against any delay in launching the scheme.

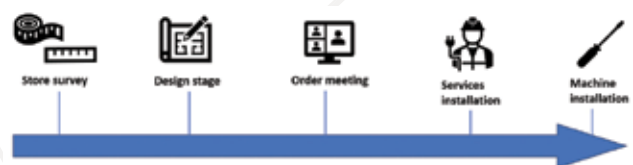


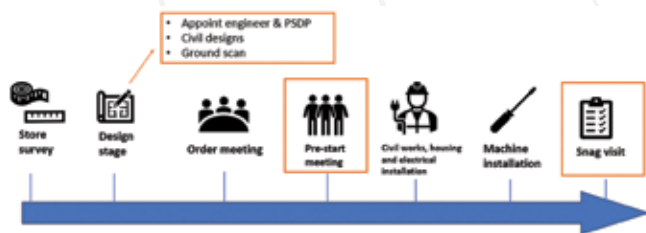
Figure 4: Internal Installation Process

The 2 Project Managers were responsible for managing in the installation process for stores in their region, supported by the Rollout Coordinator and CAD Administrator. Time was a valuable resource given the size of the team and tight timeframes. Store surveys required time spent in store and on the road, while the order meeting was conducted on Teams.

We also developed a standardised installation process for external installations, which was more complex with added steps, highlighted in orange on figure 5. For each project, the PM defined clear deadline for each stage to maximise flow and minimise delays.



Figure 6: SuperValu Housing Unit



Design standardisation was a key component for external installations. The housing had to accommodate 4 different machine types in varying configurations. The housing also had to be branded differently for SuperValu, Centra and Daybreak. This culminated in 7 different housing options to cater for different store sizes, which was presented in a clear catalogue for retailers. To maximise flow, our housing suppliers, Gaelite and Allied Retail, manufactured all units from aluminium profile and finished in the same colour, regardless of the store type. Components such as glazed gables and roller shutters were standardised across the range for maximum efficiency.

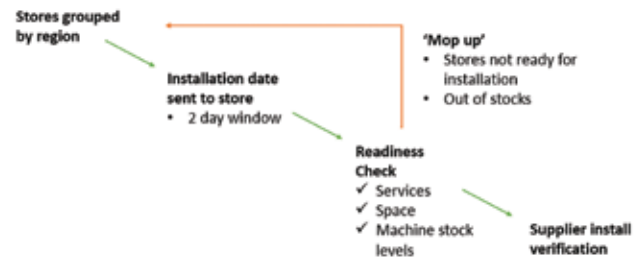


Figure 7: Rollout Process

Based on incoming orders, units were then branded and finished appropriately just-in-time. The units are fully modular, allowing for ease of alteration in future if required.

While the Project Managers managed the installation process for each store, the Rollout Manager and Rollout Coordinator were responsible for the installation schedule with our partner RVM Systems. The rollout commenced in September 2023, with only 18 working weeks to install over 600 machines nationwide. Stores that had completed their order were pooled together based on their location. We estimated that each region would have two windows for installation from the logistics and engineering teams, between September and February. Each store received 10 days' notice for their installation window and the Rollout Coordinator and Project Managers carried out a readiness check, to minimise waste. Inevitably, some stores failed the readiness check which required a 'mop up' back into the pool to plan for a second delivery window.

Data sharing with our 3 key suppliers was crucial to ensuring success. One Drive folders were created sharing a master tracker document, specifications, store drawings and photographs. Change was constant throughout and having a live tracker document allowed the wider project team to react quickly and communicate effectively. It also allowed us to track successful installations in near real time.

Lean Initiative Improvements & Impact

By the 1st of February 2024, over 600 RVMs were commissioned for go-live making Musgrave and our retailers the largest Re-Turn point operator in Ireland. At the peak of the rollout, 49 stores were installed in a 5-day period. While initially the scheme received some negative publicity in the media, feedback on our RVMs from both customers and store teams was very positive. While our rollout objectives had been met, continuous improvement was applied to ensure our network continued to grow. We identified regional blackspots where RVMs were not widely available and encouraged these retailers to opt into becoming a return point. Based on initial data insights, we also identified stores that needed to add a second machine to cope with customer demand. This work led to the installation of a further 120 machines in the 12 months post launch. In the first 12 months of the scheme, our stores recycled 220 million containers, which is expected to grow to 310 million containers in year 2.

We had several different data sources for DRS which resulted in manual data analysis which was time consuming and slowing down decision making. We developed a Power BI dashboard, which pulls data from our partner RVM Systems and our internal systems to enable us to track KPIs daily. The dashboard automatically refreshes



Figure 8: SuperValu AsI Am Partnership

each day removing the need for manual data input, removing waste from our activities.

In June 2025, we launched a new DRS charity initiative to provide a new revenue stream to our charity partners and to grow recycling rates nationwide. Customers can press the donate button on

screen to donate their full deposit value to the Irish Cancer Society in Centra, and AslAm in SuperValu stores nationwide. This initiative has been hugely successful with over €176,000 raised in 15 weeks for the two charities.

In reassessing the value proposition to customers, we identified a gap for customers and community organisations returning large volumes of containers. Standard RVMs process up to 60 containers per minute through feeding containers one at a time into the machine.

This process is tedious and time consuming when returning in large volumes. In August 2025, we launched our first bulk RVM in Collins' SuperValu, Carrigaline. This RVM allows customers to deposit entire bags of containers at once, increasing processing speeds by 40 containers per minute. The launch has been hugely successful with a doubling in daily return volumes to the store. Our second bulk RVM will be installed in October 2025 and we intend to rollout a further 13 nationwide.

Summary and Lessons Learned

Embedding Lean principles and thinking into our rollout process was crucial to the successful deployment of DRS in Musgrave. There were several learnings that we will take forward to future equipment rollouts. By understanding what the end customer valued, we ensured that the right RVM manufacturer was selected for our business. Reviewing our KPIs through an automated power BI database enabled us to continuously improve, highlighting how we can meet the evolving needs of the customer. Standardising machine and housing options created flexibility and allowed us to produce in large batches.

With a tight rollout window of 6 months, eliminating non-value adding steps was pivotal. Extended value stream mapping and designing clear processes provided clarity and accountability to all stakeholders, particularly the rollout team to enable a successful outcome. Finally, working collaboratively with our suppliers using live documents ensured we could react as quickly as possible in the event of changes. Overall, the rollout was a huge success and leveraging Lean tools in our processes ensured we met our objectives on time and on budget.

The Musgrave logo is written in a black, elegant cursive script. Below the text is a horizontal line that starts with a green segment on the left and transitions into a grey segment on the right.