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CASE STUDY

Call2Recycle Automates Battery Recycling Across North America

THE CLIENT:

Call2Recycle

Call2Recycle, North America's largest battery recycler, operates as a successful multi-million-dollar nonprofit organization, collecting more than 200 different end-of-life batteries and battery-powered products from both home and industry usage. Not only does this divert potentially hazardous materials from landfills, but also it facilitates the recovery of valuable materials such as cobalt, nickel, and iron, which can be used to manufacture new products like dishware and new batteries.

Founded in the 1990s as a volunteer, industry-run initiative to keep heavy metals from batteries out of the solid waste stream, Call2Recycle has grown exponentially since its inception. Today, there's a good chance that if you've ever recycled a battery, Call2Recycle was involved. While batteries are an eco-friendly alternative to fossil fuels, as battery use increases, the need for safe battery disposal options to avoid harm to the environment and human safety becomes ever more important. In 2021 alone, Call2Recycle collected over 8.1 million pounds of consumer batteries for recycling. As the battery production market grows, it stands to reason that Call2Recycle will need to continue to expand its growth.

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The Problem

Despite its dramatic growth, Call2Recycle was still reliant on an **Enterprise Resource Planning (ERP) System** purchased fifteen years ago. Given the complexities of the recycling supply chain, Call2Recycle's ERP system was heavily customized to fit its unique business processes with multiple stakeholders. However, the system was aging and with the endless customizations, Call2Recycle ended up paying tens of thousands of dollars annually in fees, licensing, and hardware support, not to mention developmental expenses. "To manage our work with hundreds of corporate customers and municipalities, at scale, requires a sophisticated self-service system, and that's going to be all the truer the bigger we get," explained Leo Raudys, Chief Executive Officer at Call2Recycle.

> *We've catapulted into an intense period of electrification in all sectors of society, and batteries are at the heart of that. There's an increasing thirst for information about how batteries are managed at end of life, which requires us to get smarter about the overall impacts on the value chain and knowing where individual batteries go. We're seeing a massive expansion in our scope, which we couldn't manage without a modern system."*
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> **Leo Raudys, Chief Executive Officer, Call2Recycle**

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Call2Recycle decided It was finally time for a better technology platform. But as the research began, it was evident that no out-of-the-box (OOTB) solution could meet its needs. "We wanted to take advantage of the latest in technology and move to an integrated, user-friendly platform, but no off-the-shelf solution existed specifically for what we do in the world of reverse logistics," says Rob Latham, E-Bike Program Manager at Call2Recycle.

Call2Recycle had a substantial number of hurdles to overcome to fit a new ERP solution to its unique business model and requirement set, including:

UNIQUE STAKEHOLDERS & REGULATIONS

As North America's largest battery recycler, Call2Recycle liaises with many municipalities, all with their own recycling regulations which dictates where/how recycling can be done. Additionally, Call2Recycle works with different businesses, individual consumers, and other stakeholders in each municipality. This means there are numerous distinct scenarios that need to be managed. "They may collect batteries from a retailer in one city, then sell them to a different facility in the next city, and the two cities can have drastically different regulations," Erik Hougaard, EFOQUS Co-Founder, Microsoft MVP & Project Lead, explains. "They needed a system that can account for that, which isn't available out-of-the-box."

UNIQUE TYPES OF USERS

Call2Recycle is much more than a one-trick pony. It runs a variety of recycling programs, like its Steward program for battery and product manufacturers, and its Collection Partner program for businesses that host collection sites. They engage with individuals and businesses in a wide variety of different capacities, such as battery producers, collection partners, e-bike program members, safety training participants, and more. The variety of portals needed for these external users to access the system didn't exist in any OOTB solutions.

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UNIQUE ACCOUNTING AND LOGISTICS PROCESSES

Ultimately, the greatest challenge stemmed from Call2Recycle's distinctive business processes. In typical accounting practices a standard transition is a product is sold and money is collected by the business (products flow out and money flows in). Most **ERP Systems** are designed to handle these traditional ledger transitions.

Call2Recycle is far more complex operationally. The entity itself doesn't actually do the recycling. Instead, it serves as the organizer and connector to orchestrate the recycling of batteries along with all those involved with each step of the recycling process. This, combined with the variety of stakeholders and programs noted above, means that there is a great diversity in the types of debit/credit flows Call2Recycle needs to accommodate. Instead of a simple "money flows in, product flows out" set up, Call2Recycle has different scenarios in which:

- ⊘ **Both recycling product and money flow in.**

- ⊘ **Both recycling product and money flow out.**

- ⊘ **Recycling products flow in and money flows out.**

- ⊘ **Recycling products flow out and moneys flow in.**

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And that's just the tip of the iceberg. A single battery may be the subject of a variety of inflows and outflows before Call2Recycle is finished with it. For example, a battery flows into a Call2Recycle collection center (an inflow) and is transferred to a processor (an outflow). Then credit is received from battery manufacturers for the recycling process (an inflow). Afterwhich, Call2Recycle pays the recycler for the recycling process (an outflow). Finally, the battery is transferred to its final recycling location (an outflow). There is a different process orchestrated for each battery type. Although the batteries themselves never enter a Call2Recycle facility, each is run through the Call2Recycle logistics system every single step of the way.

BATTERY MANUFACTURERS

$+

Credit is received from battery manufacturers for the recycling process

$+

CALL2RECYCLE COLLECTION CENTER

$-

Call2Recycle pays the recycler for the recycling process

$-

The battery is transferred

PROCESSOR

FINAL RECYCLING LOCATION
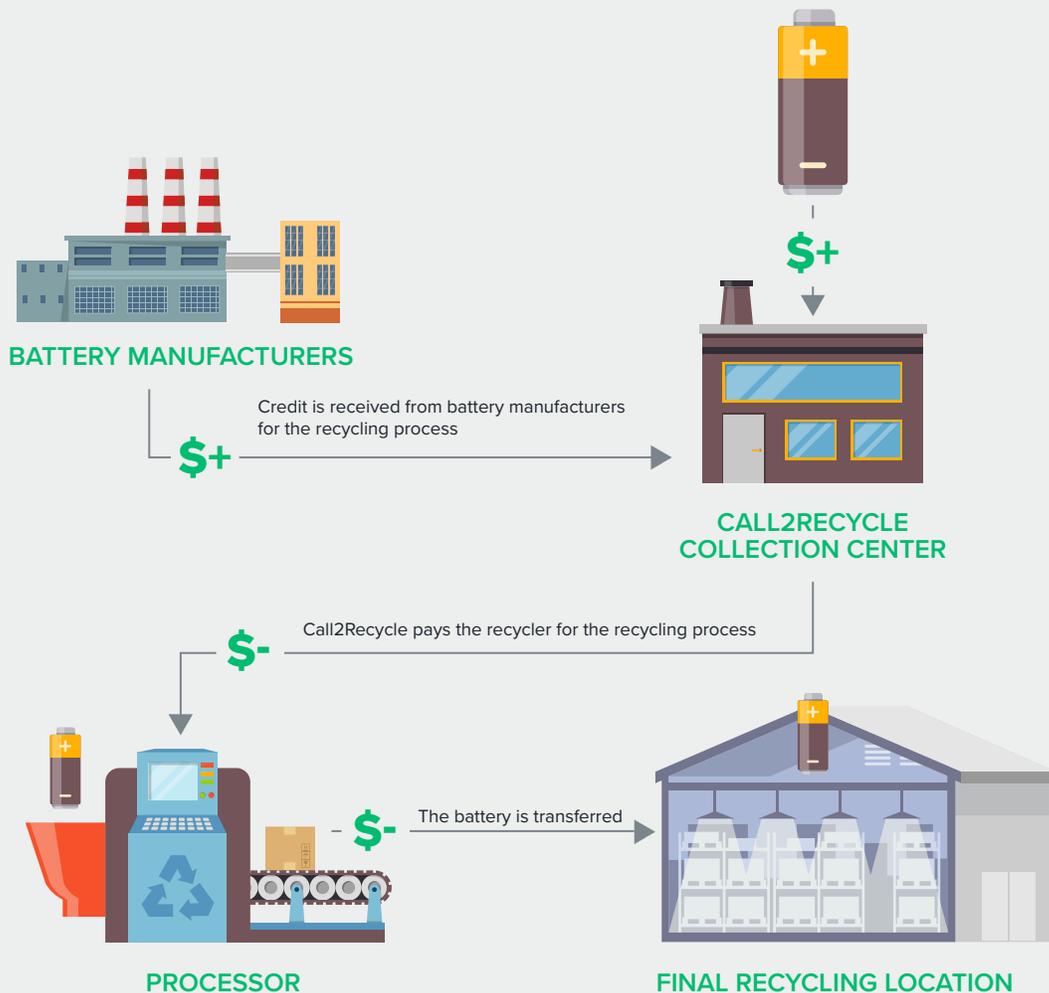
Traditional out-of-the-box (OOTB) ERP solutions are simply not built to support this variety of transaction types from a logistics or accounting standpoint.

On top of all these requirements, Call2Recycle also worried about data being siloed and the difficulty of getting up-to-date analytics. With its continued aggressive growth pattern, Call2Recycle needed an ERP system that could evolve with the organization and stay updated without costly and time-consuming fixes.

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The Solution

CHOOSING THE RIGHT PARTNER

Call2Recycle continued their learnings through attending the Dynamics NAV User Group Summit. It is there that the Call2Recycle team met EFOQUS Co-Founder and Microsoft MVP, Erik Hougaard. After discussing their unique organizational needs with Hougaard, who has worked on ERP solutions for the recycling industry since 1991, the Call2Recycle team decided to partner with EFOQUS to build its new ERP system.

"We required a technology partner who not only had mastery of the Dynamics NAV product, but also the new cloud platform Microsoft was moving to and their vision for the technology going forward," Raudys explained. "Erik [Hougaard, EFOQUS Co-Founder] was an early adopter of the latest cloud technology – plus, he had experience in reverse logistics with previous logistics and supply chain services customers, which helped him understand our processes quickly."

EFOQUS prides itself on getting to know clients' needs deeply and intricately to develop solutions tailored to existing business processes and requirements. "All businesses are unique if you really look for what makes them unique. The key is investing the time to find the uniqueness," explains Hougaard. "On the other hand, if the only tool you have is a hammer, every problem looks like a nail."

A CUSTOM SOLUTION BASED ON DYNAMICS 365 BUSINESS CENTRAL

EFOQUS leveraged Microsoft Dynamics 365 Business Central as the ERP base for the Call2Recycle solution. The choice of the cloud-based Dynamics 365 Business Central solution over NAV 2017 allows Call2Recycle to take advantage of current integration opportunities in the cloud, while remaining on a steady upgrade path. Even with the 50,000 lines of code EFOQUS wrote to customize the base Dynamics 365 Business Central solution, the solution precisely works for Call2Recycle's procesess while remaining agile.

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The full Call2Recycle solution reached far beyond Dynamics 365 Business Central integrating with Power Apps, **Power BI**, Power Automate, **Dynamics 365 Sales**, Dynamics 365 Customer Engagement, plus Hougaard apps WSFN and the SharePoint Connector. While the number of applications integrated into this single solution sounds complex, it amplifies the power of the solution for Call2Recycle.

POWER BI

Timely and hassle -free access to data was critical for Call2Recycle. EFOQUS utilizes **Power BI** to improve Call2Recycle's reporting capabilities. This enables access to the data Call2Recycle need instantly, providing insights into real-time data never seen before.

SHAREPOINT CONNECTOR

EFOQUS' integrated its app, the EFOQUS integrated Hougaard's app, the SharePoint Connector, into the solution to help Call2Recycle reduce data siloes by replicating documentation from Dynamics 365 Business Central to SharePoint and vice versa.

WSFN PORTALS

Call2Recycle's complex processes and variety of programs mean quite a few external parties require access and system integration. EFOQUS navigated this need with the concept of *a program* of dedicated portals for the different users using Hougaard's WSFN app, which allows external parties access. For example, a WSFN portal for the Steward Program allows members to log in and make payments to support Call2Recycle and to offset the environmental damage caused by the products each company manufactures.

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POWER APPS and POWER AUTOMATE

Power Apps and Power Automate are crucial to the functionality of Call2Recycle's new e-bike battery collection and recycling program, including providing recycling kits, transportation and logistics, safety materials, and rider education. In essence, a new e-bike recycling partner signs up on the website and completes an online training module for proper e-bike battery recycling protocol adhering to national regulations. This triggers a Power Automate flow to set up the new partner and create the first orders for recycling kits, etc.

DYNAMICS 365

Microsoft Dynamics 365 became much more than Call2Recycle's new ERP system. Call2Recycle is now seamlessly leveraging Dynamics 365 Sales, Service, and more alongside Dynamics 365 Business Central. This means Call2Recycle's customer support team tracking customer history, the operations team managing fulfillment and materials collection, regional program managers overseeing their leads, and senior leadership monitoring dashboards for organizational health are viewing the same data and customer information in a completely integrated system, thanks to EFOQUS' system integration capabilities. Getting the entire team operating in one unified system, without any information siloes, has had an enormous impact on the day-to-day operations for Call2Recycle.

HOLISTIC APPROACH TO ERP

Call2Recycle's entire recycling facilitation solution is based on Microsoft Dynamics 365 Business Central (with some artfully creative tweaks, including an astounding 50,000 lines of code that still allow for continuous upgrades) as the single source of truth. By using Dynamics 365 Business Central as the base creatively, while integrating other Microsoft platforms to expand the sytem's capabilities, as well as integrating apps, EFOQUS was able to deliver a future-proof, evolving solution. A holistic solution that works with the pre-established processes Call2Recycle has come to rely upon as North America's largest battery recycler.

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Annual Hours, Costs & Hardware Savings

Call2Recycle experiences the benefits of well-designed and programmed holistic system, centered upon its Dynamics 365 Business Central base, both daily and cumulatively.

"We worked with several rock star developers at EFOQUS," says Rob Latham, E-Bike Program Manager. "The team is outstanding, with supply chain experience, relevant contacts, and other resources that we needed."

Most notably, over 200 hours are saved annually in invoicing processes alone thanks to the Dynamics 365 Business Central automation, and $25,000 in annual fees, licenses and hardware support required by the previous system are eliminated.

Even more valuable, Call2Recycle's operations are now streamlined and efficient, freeing up staff time to focus more on their greater mission and less on the day-to-day minutia of data entry and tracking.

With their new Microsoft Dynamics ERP and CRM system, Call2Recycle's internal communication and collaboration between departments is improved, as is the visibility and accessibility of data.

Data that was once siloed and required a gatekeeper to access is now available to all in real-time. This means changes in customer needs, new trends in revenue streams, or operational issues are identified and dealt with right away. Staff have access to the data through the self-service portals and dashboards — something that will only become more crucial as the organization continues to grow. "The reporting capabilities and the data insight are two things that, in my opinion, are more important to the future of Call2Recycle than anything else," Lars Agger, Managing Partner at EFOQUS, notes. "That gives them the ability to make the right business decisions, which is quite powerful."

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> *In the past, we relied on a gatekeeper to provide metrics, create spreadsheets, and email documents to show how the organization was doing. But by the next day, those data points were already outdated. With real-time information in Dynamics 365, we immediately see trends with our revenue and customers, and we can act quickly if there's any kind of service disruption."*

Leo Raudys, Chief Executive Officer, Call2Recycle

The solution that EFOQUS built for Call2Recycle not only meets all their current needs, but is also ready to grow and evolve with the organization. "With our organization now in a growth phase, we find training new staff on our new systems much quicker than before," Raudys shares. "Audits are less tedious, and many of the transactions that used to take hours of effort to complete are now automated. We have already recommended EFOQUS to several companies. They are an essential partner for us, and we want to recognize them for their role in our success."

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About EFOQUS

Trusted Microsoft Dynamics 365 Business Central Solutions Partner EFOQUS eliminates the hassle SMBs and enterprise organizations face with custom ERP extensions while increasing the agility, capability, and scalability of essential systems. EFOQUS takes the time to understand your unique business in order to deliver business solutions that enable a 'deep exhale' while helping you achieve more.

EFOQUS truly empowers you to take full advantage of your technology, while helping you extend the life and increase the value of your investment in Dynamics 365 Business Central ERP. Take that 'deep exhale'
-- get in touch today to achieve more at **info@efoqus.ca.**
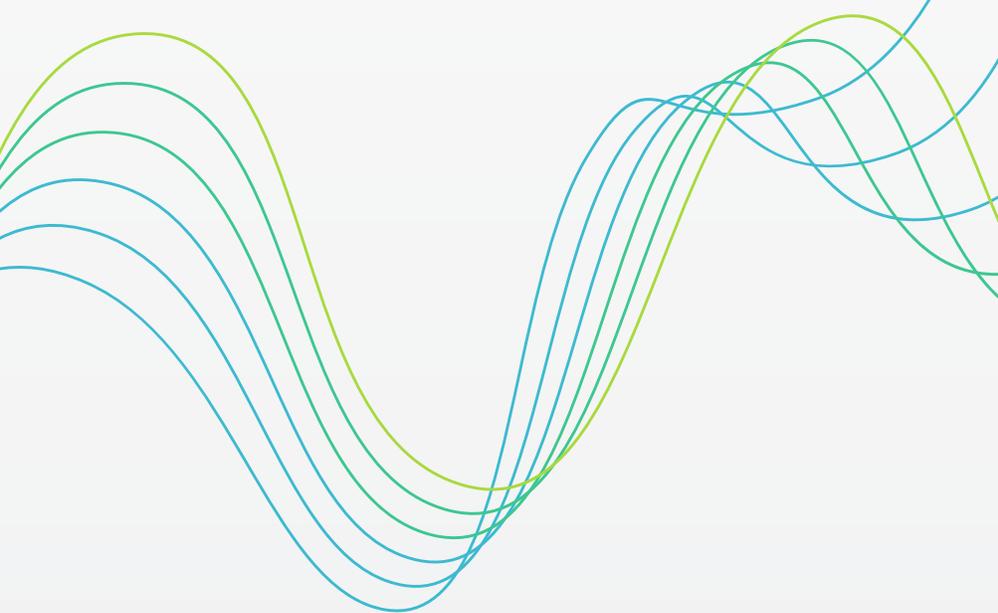
See How You Can Exhale More Deeply by Working with EFOQUS

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