Oracle's Depot Repair Implementation

Driving Product Take-Back and Recycling at Oracle

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.

Abstract

An efficient and sustainable reverse supply chain enables companies to improve risk management and better address regulatory and compliance requirements regarding hazardous waste. Increased take-back improves supply of spare parts to enable extended support life to customers, lowers the cost of parts, and protects the environment while complying with government mandated recycling programs. Oracle now automates and manages its returns and take-back programs through the Oracle Returns Management System (ORMS). The implementation went from proof-of-concept to go-live in just over three months. When integrated with other program improvements, it led to 61 percent increased volume of systems returned compared to the previous year. Improved customer ease of use triggered dramatic changes with more than 1,800 systems received, and about 4,000 spare parts harvested for reuse at half the cost of open market purchase through the System Return for Credit (SRC) program. Reduced spares for Last Time Buy (LTB) savings amounted to $8.2 million.

Introduction

As more and more companies establish and embrace sustainability initiatives in their reverse supply chains, it is increasingly clear that there is a positive correlation between environmental and financial benefits. The more sustainable the reverse supply chain becomes, the more cost efficient it becomes. Companies can achieve reduced procurement costs and reduced resource depletion through parts harvesting and recycling, and improved customer satisfaction and fewer returns because of improved product designs. Companies can also improve risk management while addressing regulatory and compliance requirements regarding hazardous waste.

As a responsible producer of hardware products, Oracle offers various take-back programs to allow customers and suppliers to return excess used products or retired equipment:

» **eWaste Program** – enables customer returns for retired Oracle branded products
» **Upgrade Advantage Program (UAP)** – offers trade-in discounts toward new Oracle systems when returning qualified used products
» **System Return for Credit (SRC) Program** – offers financial credit for customers returning retired product based on Oracle's need for spare parts
» **Excess and Obsolete (E&O) Program** – recovers material from external suppliers and internal manufacturing operations
» **Return to Reman (RTR) Program** – recovers products or material for remanufacturing

These programs help protect the environment and provide valuable services to our customers as well as substantial cost savings.

Oracle now automates and manages its returns and take-back programs through the Oracle Returns Management System (ORMS), an implementation of Oracle Depot Repair.

The Oracle Depot Repair solution enables businesses to profitably recover, re-use and recycle products and parts by providing best-in-class tools and intelligence. It enables agile and effective reverse logistics allowing organizations to reduce environmental waste and recover the highest value from returned materials, reduce unnecessary shipping miles and packaging, properly handle hazardous substances, set environmental impact goals, and measure results.

The ORMS platform enables Oracle to manage the take-back of retired computer equipment from customers for asset recovery and recycling. The platform is available for both external customers and internal labs and data centers, enabling the organization to save money and ensure environmental compliance.

Business Drivers

Oracle's hardware organization must provide its customers with support for the hardware that they own in accordance with the Oracle Lifetime Support policy. In order to meet this commitment to customers, the Hardware Support and Reverse Supply Chain Operations (RSCO) groups must be able to source parts for aging and retired equipment, fulfilling service part demand either by purchasing parts or by salvaging them from customer returns.

It is vital that Oracle recovers as many used products and parts as needed by implementing quick and easy-to-roll-out programs and minimizing employee time spent entering, processing, and troubleshooting the orders. The business drivers include:

» Take-back and spares harvesting reduces the volume of new spares purchases, which in turn lowers costs and conserves natural resources

» By increasing the percentage of retired product being returned from customers to Oracle, there are fewer spares available in the market for third-party maintenance service providers and less risk for counterfeit materials

» Collecting retired computer equipment for asset recovery and recycling from customers guarantees environmental compliance and correct handling of hazardous materials

» Incentivizing customers to upgrade gets them on the latest Oracle products and less likely to switch to competitive solutions and also gets them onto systems with newer parts that are easier to procure and maintain

» The ability to take-back old equipment from its own data centers allows Oracle to use parts to support customers while keeping its data centers on the cutting edge

» Similarly to peers in the industry, Oracle has significant internal waste-to-landfill reduction goals

Growing Pains

By 2013, Oracle's returns process was discouraging some customers from returning their retired and unwanted materials. For example, with the Upgrade Advantage Program (UAP) returns users were directed to a third-party website with cumbersome login and password controls. This often resulted in customer frustration requiring at times the need for Oracle's intervention. The poor user experience led to customers turning to other solutions to dispose of their retired assets. As a result, materials not returned to Oracle were harvested by competitors leading to Oracle having a weaker position in the market place for spare parts and not maximizing revenue.

Product return volume went down by 80 percent after 2011, impacting the supply of parts to hardware support as well as presenting a potential risk for Oracle's environmental performance due to lost control over managing the end of life of the assets. A stricter trade-in discount control also contributed to the decline in take-back volume.

At the end of 2013, Oracle also rolled out the Oracle Lifetime Support program with which hardware products no longer had an end of service life date. In order to support existing contracts and also to grow hardware support revenue, Oracle needed a predictable flow of returns for needed spares. This led to the introduction of a corporate goal to maximize the recovery of spare parts while at the same time restricting the purchase of spares on the open market so as to minimize costs.

Since Oracle used third party systems to manage the return of assets, it could not always control the routing to the optimal processing site to recover maximum value, or plan disposition or allocation of returned material without part number and serial number details. Products returned for recycling, as opposed to reuse, may also require the carrier to have waste carrier licenses and are subject to tighter restrictions in regards to cross-border movement, thus adding costs and time-consuming processes to ensure compliance when required information is missing.

Like other hardware producers, Oracle was subject to periodic government audits for environmental compliance in Europe. The inability to properly track and process these returns was potentially hindering Oracle's ability to fulfill mandatory e-waste reporting requirements. The Oracle Environmental Compliance team and RSCO had to invest considerable amount of time and resources referencing data manually in multiple systems. This caused valuable resources to be tied up in burdensome and inefficient processes.

The lack of a proper tracking system also forced Oracle to collect key performance indicator (KPI) information from partners to measure their performance without being able to validate the data with its own systems.

Finally, Oracle needed stronger product take-back and spares harvesting programs to provide an alternative supply source to reduce exposure to supply risk and lower the upfront inventory investment required in Last Time Buy

(LTB)[1] situations. LTB forces organizations to buy and hold inventory for years before the actual need – without an alternative supply source in event of under-forecast – and adds the risk of part damage or shrinkage while in storage.

Oracle Returns Management System (ORMS)

In response to these growing challenges Oracle decided to implement the Oracle Depot Repair solution to provide a returns portal, called Oracle Returns Management System (ORMS). With Depot Repair, Oracle enhanced the automation of its return requests and tracking for all customers and return types (Upgrade Advantage Program, eWaste, System Return for Credit, Excess and Obsolete, and Return to Reman).

Depot Repair addresses the gaps outlined previously by enabling more intelligent and efficient parts recovery and tighter management of the process to ensure compliance with environmental laws.

The central business process is the "Return Request to Disposition" flow illustrated in Figure 1. This process captures a customer request for an asset return, determines the best use and routing for the material, signals a carrier to pick up the material, arranges pick up between carrier and customer, transports the material, and tracks the disposition of all materials.
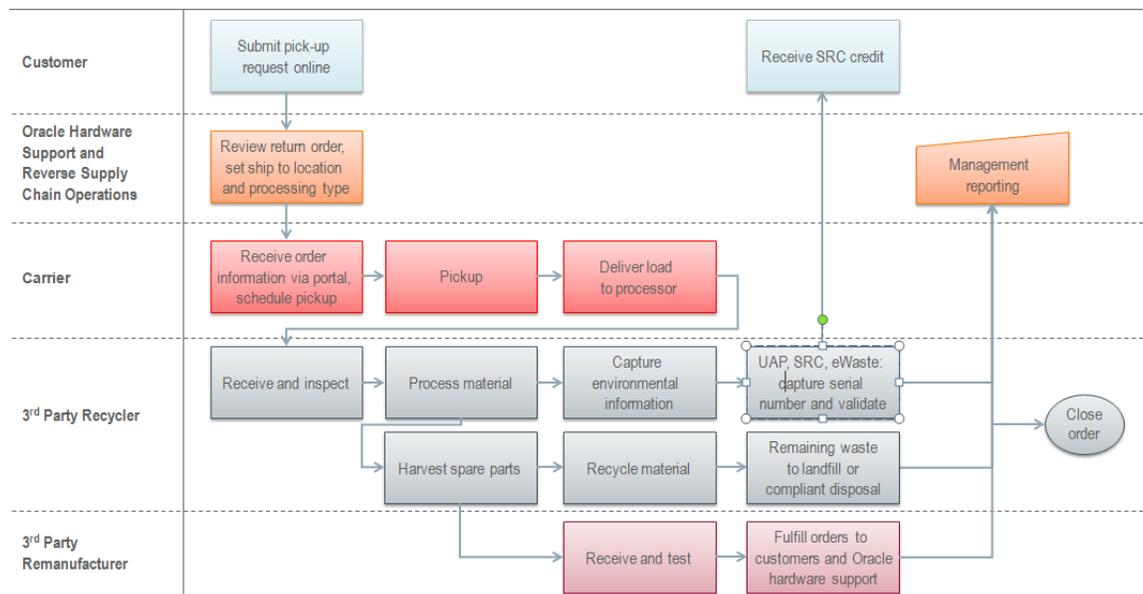

Figure 1: Return Request to Disposition

In Oracle's case, users of the solutions include:

» Oracle's hardware customers
» Oracle hardware support teams managing a customer de-install
» Oracle data centers and labs

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1 Last Time Buy occurs at the end of production life, when spares will become obsolete. Service organizations typically place last time buys to cover their customers' needs through end of support life (from five years onwards).

- » Oracle sales loaner pool (Oracle's hardware sales investments in equipment for demo purposes)
- » Suppliers in Oracle's supply chain
- » Oracle partners

Once a return request is submitted, the system will determine the best return routing and disposition; provide return instructions to the customer; and signal the carrier that will pick up each piece of equipment from the customer site for delivery to its intended destination. The routing can be to a remanufacturer, low-touch recycler, or high-touch recycler depending on the asset, its location, material demand and other factors.

Return statuses are updated by the carrier when material is picked up and by the processor when the material is received. Using this data, the Reverse Supply Chain Operations (RSCO) team can match the service part demand to parts available in the returns pipeline and confirm that customers have returned material for which they have been credited.

Through this platform, the RSCO team can also generate legally mandated e-waste reports and measure cycle times and return trends by program and region.

Project Strategy

As with all software solution implementations, the Oracle Return Management System (ORMS) project started with the engagement of the key stakeholders involved and the outline of the business case.

Given the strong need to streamline the process undertaken to collect requests for returns, the business case focused on building awareness of the issues with the existing processes – inefficiencies, revenue loss and environmental risk management concerns – and the need to automate the processes in order to increase returns volume, grow revenue by selling more competitive service level agreements (SLAs), and provide better service.

Regular meetings were held at Oracle to determine the definition and scope of the business requirements, engaging a cross-functional team that included Finance Operations, Reverse Supply Chain Operations (RSCO), Install Base (IB) Management, Global Process Owner (GPO), Oracle Applications Lab (OAL), and Environmental Health and Safety (EHS) functions.

Requirements were defined from a global as well as a local perspective – with the awareness that identifying requirements for a particular region or country too late in the process would have caused delays or missed opportunities. It was critical to satisfy the process requirements for opening and closing return requests, carrier signaling, pick-up and delivery visibility, serial number capture and install base (IB) update, UAP receipt and obligation close, and commercial invoice generation for international shipments.

There was also a significant focus on improving user experience for customers (revenue customers and partners, Oracle sales and service, and Oracle internal data centers) as well as for suppliers (e.g. Oracle's third party recyclers such as Sims and LifeSpan).

Subsequently a detailed review of product functionality was performed to compare the capabilities of the Oracle Depot Repair solution with the business requirements with the objective of minimizing customizations and standardizing processes using best practices. Use cases for customers (revenue customers and partners, Oracle sales and service, Oracle internal data centers), and suppliers (recyclers; Sims and Lifespan, Reman EM; Mitac, Returns carrier; DHL) were also analyzed.

Finally, a key component of the project was the definition of metrics and key performance indicators to identify measurable results.

To measure carriers' performance Oracle needed to track:

- » Initial customer contact (e.g. within 48 hours of receiving order notification from Oracle)
- » Pickup timeliness
- » On-time delivery performance
- » Reporting timeliness
- » Inventory accuracy

In addition to these KPIs, Oracle also wanted to audit and validate the amount and weight of material expected from the customer to compare it with the amount and weight received by the processor, thus preventing fraud and "shrinkage". Finally, Oracle needed to track the time taken from material delivery to processing complete and the recovery yield rates.

From a business process perspective, two strategic changes were implemented in parallel with the new software platform.

- » Regional goals were set for the hardware support organization and teams were formed to achieve these goals. Training material was developed to explain to customers the value of Oracle's take-back programs and on-site services. This was integrated into the hardware support contract renewal discussion. If customers chose not to renew their support agreement, the discussions would turn to upgrading the equipment or to supporting the removal of the retired equipment. Where before the removal of old equipment was an afterthought, it was now a more strategic facet of how Oracle supports its customers.
- » The System Return Credit (SRC) program was developed and implemented in FY14. Customers could submit their list of equipment for Oracle to determine what spares were included and quote a monetary credit value for taking back the systems.

A cost benefit analysis was executed in order to quantify estimated costs savings for each area (Order Management, IB and RSCO; Spend for Spare Part, Logistics Cost; and Hardware Support Revenue Retention) and the effects on environmental compliance.

Implementation Highlights

ORMS now enables users to create an Oracle Web account and complete the registration process by entering company name, customer number and country. Once registered, users can file a pick up request and select the returns program they are returning against (i.e. E&O, Internal, RTR, SRC, UAP or eWaste) which in turn will populate the appropriate template for the take-back program.

Users can upload an excel spreadsheet that contains the details of the hardware to be returned, indicating quantity, part, description and serial number and select additional criteria such as collection date, pick up location, shipment weight, order references, shipping units details, contact information and more.
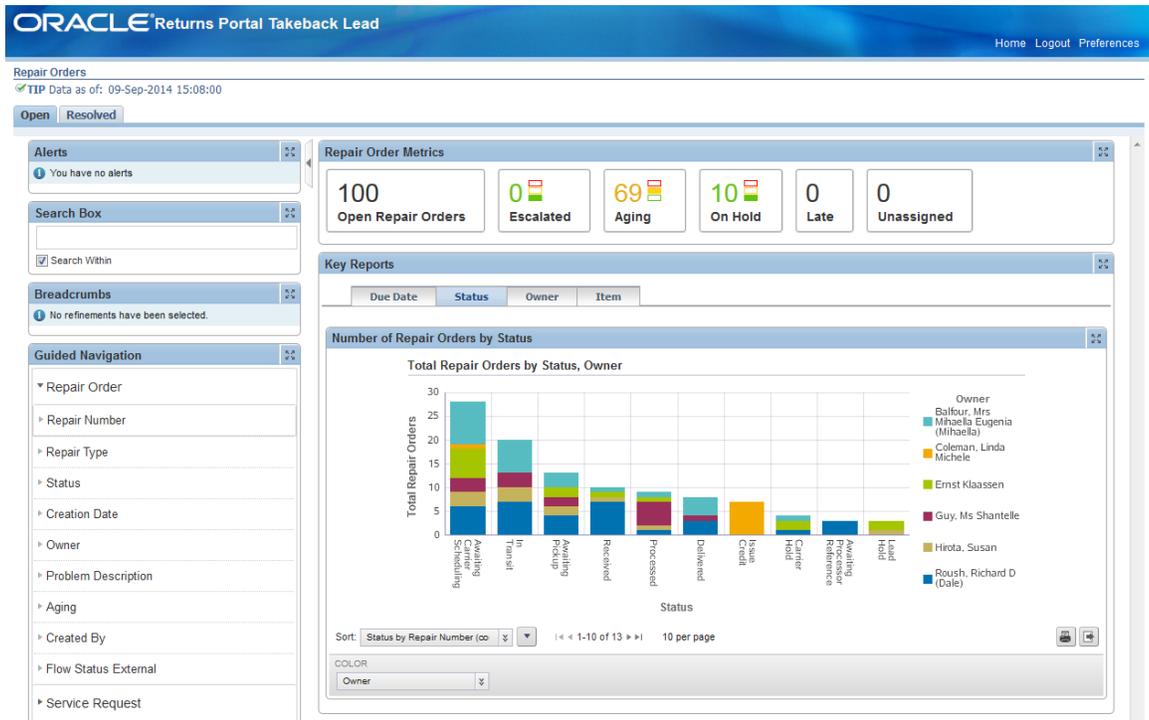
Figure 2 – Number of repair order by status and owner in the ORMS platform

Results

The successful implementation of the Oracle Returns Management System (ORMS) enabled Oracle to start monitoring how much material is being returned through each return stream, the associated cost savings, revenue generated, waste sent to landfill, and hazardous material handled. The system also facilitates the analysis of how materials are processed, the cost of processing and the value recovered. Additional benefits of the solution include improved customer satisfaction levels, higher rates of up-sell and cross-sell, reduced legal liability from illegally disposed products, and reduced risk of audit and fines.

In the first three months since the launch of the new return management system it has already achieved significant results including:

» A 61 percent increase in the volume of systems returned compared to the previous year with 12,045 total units across all programs (9.5 percent from internal returns)

» The newly launched System Return for Credit (SRC) program has been directly responsible for collecting more than 1,800 systems resulting in the harvesting of approximately 4,000 spare parts at half the cost of purchasing them in the open market

» Savings of $8.2 million in reduced spares from Last Time Buy (LTB), with 74 percent of five-year LTB requests deferred compared to only 18 percent in the prior year

» Dramatic improvement in all regions in the understanding of the strategic importance of the take-back program, how to manage the process, and how to communicate it to customers

» Improved customer ease of use with aggressive processing time benchmarks

» Quick uptake with 100 internal users and more than 20 key customers within weeks of the system going live

It is expected that the amount of savings will increase over time as service volumes increase.

Conclusion

Oracle now manages the take-back of retired computer equipment from customers for asset recovery and recycling through the Oracle Returns Management System (ORMS) platform. The platform has successfully enabled the organization to:

» Streamline and automate the return requisition process by submitting a request, scheduling pick up with Oracle's Carrier, and checking returns status and online credits on an integrated platform, thus enabling better coordination of complex de-installs and returns for credit between customer, Oracle hardware support, RSCO and the carrier

» Reduce the volume of new spares purchased by using returned material which in turn lowers cost and conserves natural resources

» Deliver accurate reporting on returns to measure progress against take-back targets, including the ability to adjust targets in response to unforeseen increases in hardware support demand forecasts

» Protect hardware support revenue on extended support products by improving supply to hardware support and reducing the parts availability to third party maintenance service providers

» Reduce Last Time Buy (LTB) with as-needed parts recovery from customers

» Improve Oracle's environmental performance by increasing total take-back volume and ensuring environmental compliance by collecting retired computer equipment for asset recovery and recycling

» Have increased visibility into the current service contracts and service level agreements (SLAs) and be able to plan and manage the stream of returns as needed, leveraging variable trade-in incentives

» Incentivize customers to upgrade on the latest Oracle systems with newer parts that are easier to procure and maintain

» Take-back old equipment from company owned data centers allowing Oracle to use parts to support customers while keeping its data centers on the cutting edge

» Send less than 0.8 percent of weight returned to landfill

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