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Case Study

Developed Custom Enterprise Modules For an e-Waste Management Company To Handle Their Waste Recycling and ITAD processes.

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Summary

We worked with a government-authorized e-Waste management company and assisted them to successfully develop dedicated enterprise modules for waste recycling and ITAD processing. Their proposed software model focused on converting e-waste into reusable material through sorting, lot auditing, dismantling and ITAD mechanisms. Our expertise in ERP development helped the client to strengthen their existing services architecture and offer additional features such as e-waste recycling, ITAD, repairing/refurbishing, and quality assurance.

Industry
Electronics manufacturing/repairing/ refurbishing and IT services

Users/customers
Business Stakeholders, Project Managers, Developers, Quality Engineers, Business Analysts, etc.

Tech Stack
Flectra
PostgreSQL 9.5.21
Python 3.5

Challenges

Our client was an e-Waste Management service provider based in India that offers ITAD, AR (Asset Recovery), Data Sanitization, and e-Waste Recycling Services to business customers. They initially used traditional accounting methods and data processing methodologies to handle e-waste procured from different sources. The client sought our ERP development services to build two custom modules respectively for e-waste recycling and ITAD processing. The scope of work (SoW) required us to develop these modules to facilitate safe disposal of outdated technologies, while also recovering maximum value. The application required the following features:

1. Lot Auditing

The client required a dedicated module for lot auditing that would track sorted items that are available for auditing. Besides, it would store additional information such as quantity, audit details, and weight of the commodities.

2. EPR (Extended Producer Responsibility)

EPR refers to the commitment or responsibility of a producer to facilitate a reverse collection mechanism for the disposal of e-waste in an environment-friendly manner. The client required this feature to efficiently manage their EPR targets for safe recycling of procured e-waste within the given time frame. At the same time, it would help them recover and reuse the resources embedded inside the waste

3. ITAD (Information Technology Asset Disposition)

The goal of ITAD is to recycle or refurbish retired technology in a secure way, while also protecting the company's data. It generally incorporates advanced software procedures like data collection/wiping, detaging, grading, repairing, parts harvesting, and quality assurance. The client required this feature to help enterprises maximize the potential value recovered from their IT assets.

4. Grading

The grading feature was required to perform effective segregation of IT assets based on their age, condition, and extent of reusability. Once grading is performed, the assets can be processed for recycling, parts harvesting, or quality assurance.

5. Parts Harvesting and Dismantling

They required these features to offer seamless reuse and recycling services based on the functional condition and age of assets. After parts harvesting, the remaining parts are processed further for dismantling.

6. Quality Assurance

It is the final step that determines the reusability of an asset based on several predefined quality metrics. In our client's proposed ITAD model, an asset can be processed for reselling if it passes the quality assurance test.

Solution

Our ERP development team conducted a detailed evaluation of the client's project requirements. Upon careful assessment of our client's business model and value proposition, we formulated an execution strategy to achieve the required features and functionalities. Our development team provided the following solution to the client with a focus on addressing the aforementioned challenges.

1. Developed The Proposed Module For e-Waste Recycling

We used the aforementioned tech stack to develop a custom WEEE (Waste Electrical and Electronic Equipments)

module that facilitates e-waste recycling in an environmental-friendly manner. Our solution also enabled the client to recover maximum value from recycled commodities, providing easy reusability for newer production jobs.

2. Developed The Proposed Module For IT Asset Disposal (ITAD)

We developed a full-scale ITAD module from the ground up to facilitate safe recycling and recovery of a company's IT assets. Our solution enabled the client to recycle or refurbish outdated IT assets (while recovering potential value) in a secure manner.

While developing these modules, we successfully implemented all the required features. At the same time, we integrated both modules with their existing inventory systems as well as sales and purchasing modules.

Results

We successfully completed the project within the stipulated time-frame and achieved our client's requirements with the following deliverables:

1. Developed the proposed modules from scratch with all the required features
2. Developed two different portals for vendors and companies
3. Integrated the modules with sales and purchase management systems
4. Integrated their inventory with the custom-built ITAD and e-recycling modules
5. Provided automated tools for generating invoices, custom PDFs, excel reports, and certificates for sales orders
6. Provided advanced features like lot auditing, grading, parts harvesting, and EPR
7. Developed an application that simplifies managing the sustainable recycling of e-waste

About Oodles ERP

Oodles ERP is a software services company that offers complete enterprise software development services with a focus on implementing next-gen technologies. With a proven track record in custom ERP development, we have successfully completed 50+ software projects related to CRM, HRM, inventory/warehouse, eCommerce, supply chain, and logistics. We are mainly focused on helping startups and small-to-medium enterprises to achieve digital transformation through cost-effective ERP software solutions.

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