

“After extensive research into a number of different solutions, we decided on SAP and Waste and Recycling One. The fully integrated industry solution provides us with a seamless transition of business critical data throughout our supply chain. We have everything in one solution from accounting, CRM, procurement, sales, reporting and legal compliance, waste logistics, stock management, workflow and plant maintenance. We also have a partner, ISB Global, who have in depth industry expertise, lead the project and will support us as we continue to grow.”

Jeff Holder
Director
ECO Plastics



ECO Plastics
Business Transformation Study



Quick Facts

- Industry – Plastics Recycling
- Employees - 176
- UK's largest independent food-grade plastics recycler & Europe's most advanced mixed plastic bottle sorting facility
- Head Office & Plant Hemswell, Lincolnshire, Sales & Logistics Newcastle-Upon-Tyne, UK; Export/Import Office, Kowloon, Hong Kong
- Solution - SAP Business One, Waste & Recycling One, Maintenance One (M1), SAP Crystal Reports
- Implementation Partner – ISB Global
- www.ecoplasticsltd.com

Introduction

ECO Plastics Ltd, established in 2000, operates the largest and the most advanced food-grade plastic recycling facilities in Europe. Operating two main sites in the UK; Plant and Operations at Hemswell, Lincolnshire and Logistics in Newcastle.

ECO Plastics sources and reprocesses over 150,000 tonnes of plastic a year mainly sourced from UK waste contractors and local authorities but is increasingly sourcing from the EU to satisfy demand.

In 2011 there was further a £15m capital investment, as ECO Plastics entered a joint venture with Coca Cola Enterprises increasing reprocessing capacity, creating new jobs to ensure rapid growth. The traceability, profitability and manufacturing efficiency needed to be monitored and controlled more effectively. Ultimately, this led the management team at ECO Plastics to investigate internal operational efficiency and to look at a more effective software solution.

All areas of the growing business were proving challenging to manage on separate software solutions and therefore ECO Plastics looked at ISB Global's Waste & Recycling One to overcome these challenges and provide a replacement for Sage L200 and Sales Logix CRM. There was also a reliance on spreadsheets, for reporting and data capture.



Project Highlights

Key Challenges

- Integrate all areas of the business, including the procurement of raw materials, transport, inventory management, reprocessing, outbound sales of goods, automated financial transactions, asset management, reporting and business intelligence
- Eradicate the need for several different software applications and increase functionality, lower the need for manual intervention, data duplication and re-entry
- Increase the ability to report and query different divisions, gaining information and intelligence that allow for benchmarks to be set for further cost savings and competitive advantage
- Combine business sites in order to offer more visibility on the entire process, aiding in communication, operational planning and scheduling for procurement of raw materials, haulage and capacity utilisation

Objectives

- Provide a full integrated software platform to aid further rapid growth
- Cut administration time by 30% integrating entire business process and introducing automation where possible
- Integrate procurement, haulage and inventory process to ensure further production capacity and supply chain optimisation
- Ensure that data and information is widely available to those staff that require it for in depth analysis of financial and operational efficiency opportunities
- Start to be able to utilise IT and software to aid proactive decision making practices on numerous strategic objectives

Implementation Best Practices

- Simple Return on Investment (RoI) figures delivered very short payback period three times that of the initial software and services investment
- Pre-project workshop detailed scope, areas of operational and financial efficiencies, quantified deliverables for the business case
- Project plan and blueprint scope document detailed clear areas of project responsibility, Master Data requirements and implementation deliverables
- Ongoing monitoring of project risks, changes and milestones kept the project on agreed time lines in order for an effective cutover, go-live and support handover
- SAP's ASAP/AIP and PRINCE2 Project Management methodologies allowed for tight controls and accelerated implementation around milestones, risks and change management to deliver the project with minimum disruption to daily activities

Strategic & Financial Benefits

- Due to Master Data, integration, contract planning and orders, inbound materials, processing, sales and reporting administrative time saving has improved by over 30%
 - Visibility and insight into procurement process and scheduling inbound materials results in cost control, capacity utilisation and optimised inventory levels
 - Planning procurement, order and reprocessing capacity leads to stabilised and optimised manufacturing processes and the accuracy of delivering raw materials for increased customer satisfaction
 - Scheduled and on demand business intelligence allows for greater insight on areas for improvement and opportunities for competitive advantage
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Sourcing, Buying & Sales

Waste & Recycling One instantly replaced core accounting, finance and Supplier/Customer Relationship Management functions, presenting distinct advantages as it is one integrated solution. The current buying spreadsheets were moved to Waste & Recycling One's 'Waste Order' process, creating instant efficiencies by managing forecasting, contracts, source, available quantities of raw materials, contacts, price, time and scheduling delivery of raw materials.

The legacy process, managed on a separate spreadsheet tool, captured data on purchasing raw materials that in turn initiated a requisition and the purchasing documents in Sage. Although an organic process, the spreadsheet meant that work effort was being duplicated and instead of master data being controlled centrally, there was room for error. The process was standalone with a manual process 'downstream' into another spreadsheet to schedule transportation.

By moving the process to Waste & Recycling One, supplier contact data, price, haulier and material is requisitioned, authorised and ordered in one process. This is then ready for refined inbound transport scheduling, delivery and confirmation of exact weight over the weighbridge. The raw materials are receipted into stock, and batched tracked ready for the production order that releases the baled stock into the manufacturing process.

By administering Master Data in one solution 'upstream' in the process, there is greater control over a number of factors such as customer and supplier price. By controlling the price at the purchasing and requisition process and receipting those ordered batches into stock gives more accurate information on the profitability of a consignment of raw materials when reprocessed and sold out of stock via the weighbridge.



Procurement & Production

Receiving purchased goods into the plant saw a lot of data captured managed on spreadsheets. Materials were weighed, weights captured in a different stock spreadsheet, tickets printed, delivered back to the office, given to drivers and stuck to bailed plastic. Weights were re-entered into the original purchasing spreadsheet in order to confirm the actual purchased weight.

The raw materials are stacked, waiting to be put into production and were monitored by a sort line production spreadsheet, re-entering a number of details including material, supplier, weights, averages, and input into the manufacturing process. Once put into production they're assigned to different reprocessing lines according to type, grade and value.

Each stage of the production process had its own spreadsheet that monitored what was output from the process on a particular day. Conversion calculations that provided a mass balance input/output result were used due to the inability to know exactly what was in the containment facilities. Batches were manually labelled with date, grade, tracking numbers and weights, ready for selling over the weighbridge onto the customer.



Now that Waste & Recycling One has been installed, the manual processes and spreadsheets associated with this stage have been eradicated, saving a great deal of administrative time.

The new Waste Order has the weight, contract, supplier and purchasing price defined as part of the process. A requisition and authorisation can be generated directly from the Waste Order to progress. The weight is refined when the materials are accepted downstream via the integrated weighbridge function, this captures the exact load weight directly in the Waste Order, confirming the precise cost of the material.



Raw materials are issued into the production environment within Waste & Recycling One, tracking batch, supplier and value of Work In Progress by the plant touch screen device. The material can be assigned into the different production process manually or automatically depending on the material and if it is being tested by ECO Plastics as part of initial quality checks.

The new automated production process eradicates a large amount of manual work that used to be captured and tracked by multiple spreadsheets. In turn data is collected and passed from the buying process, confirmed and passed to production with minimum effort. Not only does this save time but also gives the ability to trace the batch of goods from buying to reprocessing and WiP, subsequently managing cost, traceable through the production process, then control of sale price and therefore, exact profitability.



Finance & Control

Waste and Recycling One is fully integrated with SAP Business One, providing all the usual features you would expect in the area of Finance and Control. This includes a comprehensive General Ledger, Chart of Accounts, Automated Banking, a Payment Engine to integrate with your bank, and the key finance tasks including Budgets, Journals, Exchange Rates, Profit Centres and Project Codes.



ECO Plastics used Sage L200 to manage accounting and to report key activities to the business. Sales, purchasing and inventory management transactions were carried out manually. Most financial reports were completed on spreadsheets, this left the administrative team with a great deal of double handling of data, compiled from a number of spreadsheets to try and provide business intelligence to monitor data on a number of outputs from operations and finance.

Sales quotes, pricing, purchase requisitions and orders were raised externally, authorised, entered into Sage, and reconciled manually checking inbound or outbound inventory transaction spreadsheets and paperwork. Separate banking transactions were managed, recorded, and subsequently reconciled manually.

Financial and operational comparative reporting was lengthy, manual and relied on the capture of data from a number of different spreadsheets. Subsequently, data was manually reconciled into more spreadsheets in order to report on key activities in the business.

With Waste and Recycling One and SAP Business One there is only “One Version of the Truth” for ECO Plastics. Data is captured throughout a controlled end to end process, without the need for re-entry of data from one system to another, or manipulation on spreadsheets. This eradicates the need for excessive time compiling data from multiple sources, and instead gives real-time visibility on any related subject.

Due to the integration, all transactions to and from finance have a full audit trail, date, time and user stamp. Sales and purchase documents can be reprinted at any time and resent to business partners. Transactions can also be subject to a workflow approval process, or controlled within a defined set of parameters. This speeds up the processing allowing for the team to manage exceptions rather than every single transaction.

Global financial protocols are standard within Waste & Recycling One. Parallel general ledger accounting can be completed at the same time to support local and international standards. Cost centres are available in multiple dimensions providing in depth financial analysis. Separate Charts of Accounts can be utilised for each company or country of operation. Journals and Postings can be automated by set parameters, and account assignment so that more in depth analysis can occur on global departmental, user defined segment or project level.



Plant Maintenance

ECO Plastics has one of the most advanced reprocessing plants in Europe. State of the art equipment sorts the variety of plastic grades to reprocess. Further optical sorting, washing and extraction of bi-products ensures plastic is in a saleable condition for reuse. The machinery and equipment needs to be maintained as high performing assets, ensuring optimum reprocessing time, minimum downtime, continuity of quality and output.



Rather than manage complex scheduling, work orders, warranties and parts on spreadsheets, Plant Maintenance (M1) allows centralised control of Predictive, Corrective and Preventative Maintenance. As ECO Plastics runs a 24/7 operation, maintenance of equipment must be scheduled in alignment with optimum production time and with other equipment as part of the overall predictive maintenance schedule, when equipment needs inspection, recalibration or replacement.

Plant Maintenance (M1) allows the ECO Plastics operations team to generate a maintenance schedule according to equipment recalibration and service guidelines. Develop a knowledge base on maintenance procedures and enter equipment inspection results to generate a work order request with a detailed set of activities to carry out the type of maintenance required.

On the scheduled time frame, work orders are released and if required, warranty claims for parts and labour are automatically generated if the equipment is under warranty. Timesheets capture internal or subcontractor activity and parts are issued from inventory to perform the maintenance activity. Parts are issued to the work order, the activities are carried out, the work order is closed, and the associated accounting entry is made if the materials or time were used in the works order.

Due to the integration of SAP Business One, parts can be assigned directly to the works orders in M1, parts can be ordered in alignment with the schedule of maintenance activities by the Parts Requirements Planning (PRP) function. Bills of Materials (BoM) can be compiled for equipment maintenance hierarchies. Documents can be managed in the system with technical specifications saved to Equipment Master Data. All Equipment Master Data specifications and suppliers can be saved so purchasing and receipting equipment and parts is handled optimally. A comprehensive set of dashboards and alerts also allows the user to keep up to date with scheduling and work load.



Business Intelligence, Reporting & Document Management

A critical part in any business is the reporting and intelligence that management can use to understand what is going on in the business. Ensuring data is retrieved in a timely manner and available to the right people, at the right time.



Sage 200, Sales Logix CRM. And the multitude of spreadsheets did not help ECO Plastics with document generation, reporting or business intelligence from their applications. Running separate applications invites discrepancies in the data produced, silos of information, segregation of working communities, no end to end process, multiple reporting lines and numerous versions of what is actually going on in the business.

By implementing Waste & Recycling One, one integrated solution, there is one set of data, in one solution, one process and as the data is all interdependent and related the company has one unified view of what is going on in the business.

Throughout the end to end process in Waste & Recycling One there are points where data needs to be output, the weighbridge is a good example of this. As the expected inbound load is captured at an early stage in the process by forecasting what is going to be called off from an entire contract. The data is in the system and the load is refined and confirmed exactly, ticket generated and then the process moves on.

The advantage with Waste & Recycling One as an integrated solution is that the unconfirmed weight came from purchasing, moves and is tracked through operations, and confirmed so that payment can be dispatched quickly from finance. The exact paid-for price is confirmed, tracked, so that once reprocessed the exact profit can be identified when sold. Profitability is tracked on a batch and load level rather than mass balance level which is not accurate enough in dynamic commodity conditions.

Data can be taken manually from any part of this process or due to regular requirements from different areas of the business, SAP Crystal Reports, packaged with the Waste & Recycling One solution, can trigger a report, update a dashboard, publish a report to email or a website.

Reports can be designed and published to look exactly how the recipient wants them to look whether a manager needs to slice and dice for “what if” scenarios in a dashboard or a customer wants an invoice in a particular format.



ECO Plastics have also made great use of ISB Global’s partner Draycir’s Spindle Professional Document Automation solution. The solution allows the user to set rules on certain documents so that the invoice for example is automatically sent to the customer via email and archived in the SAP’s Supplier/Customer Relationship Management (S/CRM).

Roadmap & Progress

Waste & Recycling One for SAP Business One provides a stable, robust platform for growth. SAP and their partners provide an unparalleled environment in which to include additional functionality to the core solution set. Ensuring integration, operations and activities are kept within the core solution in order to provide maximum control and intelligence.

When investigating software solutions for business the decision making team need to be aware of the future of the software. Due to SAP's size, infrastructure, expertise and growth in the small to mid-size market, ECO Plastics can draw comfort and security that the solution has longevity and commitment to continue to be developed to offer the industry vertical the best possible solution.

ISB Global and ECO Plastics have identified a number of opportunities on a program of continuous improvement to further efficiency, cut cost, enhance operations and offer their customers a better service. Plant Maintenance is a good example of the project phases and additional vertical functionality according to business and industry requirements. M1 has been scheduled for a go-live in Q2 2012.

ECO Plastics business is focussed on sourcing raw materials for reprocessing, optimising the supply chain in order to recycle more and supply ECO Plastics customers ready for processing.



This scenario is good for all ECO Plastics stakeholders and that includes the environment!

Extending functions within the internal environment will always be an ongoing activity. It is to the wider stakeholder group that ECO Plastics can see the benefit of extending and optimising their new found efficiency.



ISB Global has suggested a number of ways to increase the automated collaboration between ECO Plastic's customers and suppliers. This can be achieved in several ways and focuses on gathering master data in transaction by extending the business process to integrate external partner (customer and supplier). This could happen with directly linking two SAP solutions to automate back to back ordering via the pre-configured interfaces. There are a number of points along the end to end process that can prove beneficial to integrate, to gather, confirm or pass on data master data to further speed transaction and automate process, saving time and money for all involved. Scope and business case are currently under investigation.



Partners

ISB Global and Waste & Recycling One have been awarded Software Solutions Partner (SSP) by SAP.

This gives customers the security in knowing that SAP fully supports the solution. There is a wide range of support offered to the SAP customer that includes: a customer web portal, free patch updates, free upgrades, knowledge forums, expert communities, online training and learning sessions, complimentary content, white papers and access to the largest business software company community in the world.

Implico has been established for over 25 years and offers its SAP recognised business management software solutions to the public and private sector in Waste, Recycling, Energy Utilities, Oil and Gas. It supplies software and services to the largest municipal waste organisation and the second largest private waste and recycling company in Europe. Five out of the top ten Oil Companies in the World use Implico software, has offices in the UK, Germany, USA, Switzerland and Malaysia.



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