Retail Returns: Turning cost into profit at a UK 3PL

GORST, Jonathan <http://orcid.org/0000-0002-3606-8766> and BALLANTYNE, Erica

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Abstract

Returns can be a costly process compared to forward logistics due to the increased complexity of handling returned items that arrive at a Returns Centre in a random order in batch sizes of one. In order to recover value from returned items, it is necessary to undertake additional activities from inspections through to preparation for re-sale. This case study looks at a UK based 3PL and the value-adding activities that they have implemented to improve the efficiency and minimise costs of managing returns with four of their clients. Over an 18 month period the authors worked with Prolog Fulfilment Ltd. to identify financial efficiencies, sustainability improvements, and general changes to working practices. A Reverse Logistics toolkit was applied across the four clients to help determine new and innovative ways of processing returns. The paper applies a returned items classification continuum to demonstrate how improving processes can move products up the continuum and hence recover more value. The case study illustrates how returns management services can both add value for retailers and improve the reusability and recyclability of returned products and their component parts, thus reducing the amount of product going to landfill.

Keywords: Retail returns, Returns management, Reverse logistics, Returned Items Classification Continuum, Cost reduction, Value-adding, 3rd Party Logistics

Introduction

Efficient forward logistics processes are commonplace in Western supply chains. However, reverse logistics processes are often overlooked and considered secondary to traditional forward logistics that are efficient and streamlined as opposed to random and less organised[1]. In the retail sector, this has created an opportunity for operational savings, particularly as internet shopping has increased year on year[2], which has resulted in an explosion of online returns. Approximately 80% of consumers in the United States of America (USA) and the United Kingdom (UK) consider the returns policy before even completing the online purchase[3]. Shoppers commonly order multiple sizes and/or colours, safe in the knowledge that they have a convenient returns option if they don't like it. However, this convenience comes at a cost to the environment and retailers alike.

The operational costs for handling returns are generally higher than for forward logistics processes due to increased complexity associated with batch sizes of one, additional inspections, checks, sorting processes; as well as the management of possible repairs, refurbishment, and recycling costs[4]. It is estimated that in 2020, returned purchases will cost retailers in the USA around $550bn[5]. In the UK, the comparative figure is estimated to be

over £60bn[6]. Typically, over 95% of returned clothing can be processed and made available for resale[7,8], however, sometimes the returns process can be lengthy and therefore the product can become too dated to sell at full price. This potentially wasted inventory has an environmental, as well as an economic cost - often ending up in landfill after being produced, delivered and returned - all of which are energy intensive processes. The same can be said for other returned items, although these often need more processing before they can be resold - for example a part may be missing or broken. Return rates vary by product category and channel of purchase, but typically research indicates return rates of around 8% for in-store purchases rising to 25% and more for online acquisitions[9].

The authors are part of a broader Reverse Logistics Research Group which comprises researchers from the Universities of Sheffield, Sheffield Hallam and Cranfield. Over the last 16 years the group has worked with various retailers, 3PLs and manufacturers to develop techniques, knowledge and ultimately a Reverse Logistics (RL) Toolkit. The RL Toolkit is designed to help companies self-assess their current approaches to managing retail returns and consider how they can be improved. This has become increasingly recognised as crucial in terms of profitability, customer service and competitor positioning[10,11]. The RL Toolkit[12] was initially funded through the United Kingdom's Department for Transport (DfT) and is freely available to download from the following website: http://reverselogistics.sheffield.ac.uk/

This case study will investigate some of the work carried out by a UK based Third Party Logistics provider (3PL) and the two authors where they have implemented the RL Toolkit. Prolog Fulfilment is a privately owned UK 3PL based in the Midlands who specialise in forward and reverse logistics. They operate their own distribution and fulfilment centres and have a variety of clients from different areas of the retail spectrum. Predominantly, Prolog's clients are non-clothing consumer products ranging from footwear to furniture and home electricals. In addition, they also run their own contact centre to provide a full end-to-end solution service from order taking, picking, and despatch through to returns of unwanted products. Their functions span across three sites in Nottingham and Sudbury with 300,000 square feet of warehousing space. They also have the skills and capabilities to process and dispose of unwanted products efficiently and cost effectively through a variety of different channels. Prolog employs approximately 350 people on a two shift basis, Sunday to Friday, with capacity for a night shift as and when the need arises.

Prolog decided to implement the RL Tool Kit with four of their clients, each from different retail segments, to help them determine new ways forward, to identify innovative solutions and to measure the benefits of the different changes that they introduced. They were able to identify operational good practice as well as select areas to prioritise for further development. Alongside this, their overarching objective was to improve their business sustainability, and in turn, improve cost effective returns practices for each client. Table 1 summarises the different processes that Prolog provides for each of the four selected clients examined in this case study.

Table 1 - Added value services by client

Client	Category	Added value services				
		Process Returns	Repairs	Parts Salvage	Preparation for Re-Sale	Value Engineering
A	Children and Baby	x	x	x	x	x
B	Professional Beauty	x		x	x	
C	Furniture	x			x	x
D	Homeware	x			x	

As shown in Table 1, Prolog provides various services to its clients. These services are designed to add further value to the client's brands and retain greater value from returned products that were previously regarded as an inconvenience and disposed of from the client's supply chain. The following is a short explanation of each type of process improvement provided by Prolog:

- *Process returns* - accepts returns on behalf of the client and then processes and prepares the products for the next stage of their life cycle
- *Repairs* - carries out repairs of certain products as part of the client's warranty processes
- *Parts salvage* - harvest good parts which can then be used to fix other faulty products either as part of the warranty process or as a good will gesture to an end customer, or to feed back into the new product production cycle
- *Preparation for re-sale* - for some products that need to be disposed of and removed from the supply chain, a greater return value can be achieved with minimal re-work or assembly
- *Value engineering* - as the company's engineers repair returned products, they are able to provide feedback to the clients manufacturing suppliers about the common problems that they encounter. They make suggestions on how the product can be improved to ensure greater reliability and therefore fewer returns due to failure in the future

Prolog has used the RL Toolkit with four of its clients. Whilst the identity of the clients has been anonymised within this paper, a short summary explanation of the four clients discussed in this case study are as follows:

- Client A - UK trading division of a traditional high street company with an online offer. Product Sector - Children

- Client B - serving B2B and B2C clients / customers through trade outlets and online. Product Sector - Professional Beauty
- Client C - an independent retailer of children and baby items including some in-house designs, sells directly to consumers and via concessions in other general retailers. Product Sector - Children / Furniture
- Client D - developing company (new venture) with strong financial backing, many opportunities realised through the evaluation for improvement and value retention, trading solely online.
  Product Sector - Homeware

Research approach

The paper has adopted a qualitative case study approach[13] employing a single case study of returns processing at a UK based 3rd party logistics service provider - Prolog. Whilst this approach provides a reduced degree of generalisability of findings[14], it does create an opportunity for observation and identification of relevant real-world practices not previously discussed in existing literature[15,16].

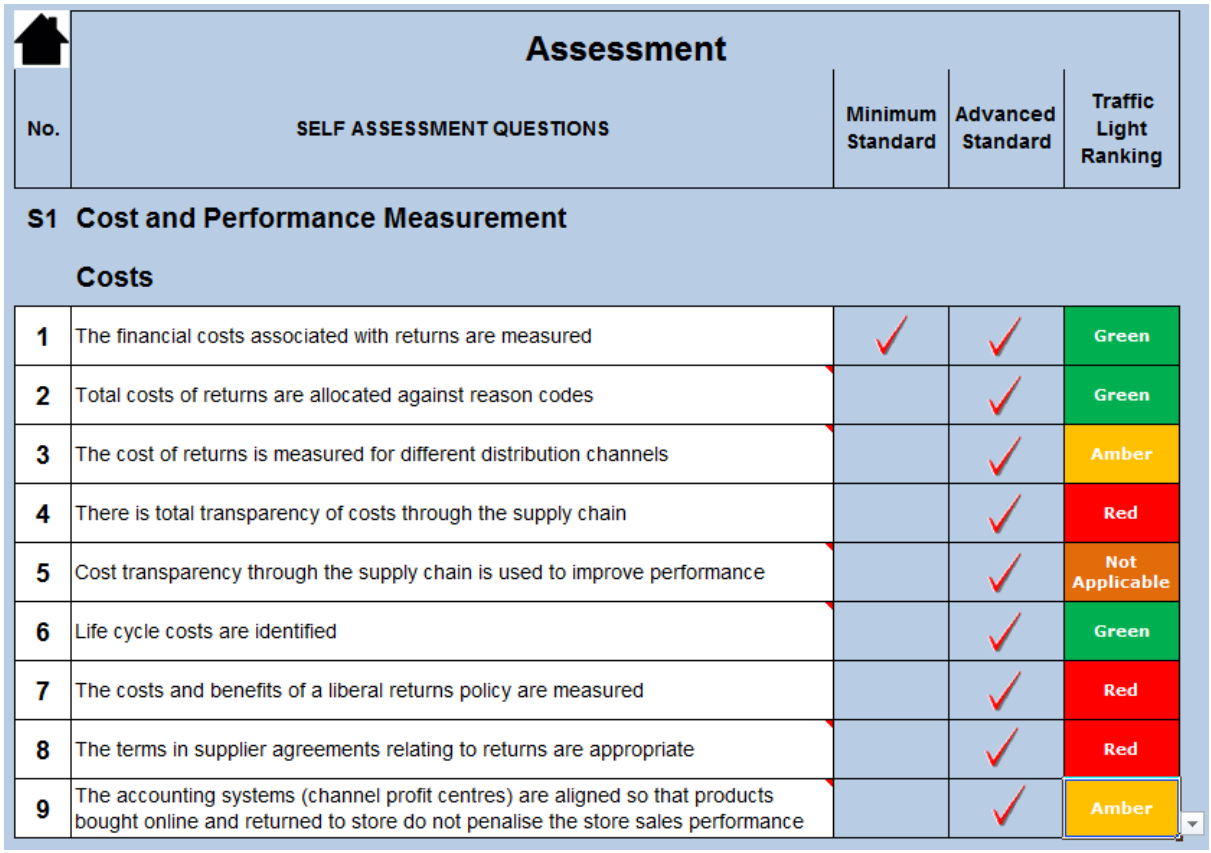
The research findings discussed in this paper are based upon multiple visits by the researchers to Prolog over a study period of 18 months. These visits incorporated meetings with the senior leadership team, the whole of the returns processing team, engagement with task groups organised around identified areas for potential process improvements, and regular shop floor walk-a-rounds to observe physical processes in place. All Prolog staff involved with the management of product returns were initially briefed by the authors who explained the background to the project and the approach that was to be adopted. The task groups included account managers for the four clients, logistics managers, operations managers, team leaders, and involved the two company directors as and when required.

Facilitated discussions with the operations team and company directors utilised the RL Toolkit to provide a starting point for analysing the current processes used to manage the returns for each of the selected four clients. The RL Toolkit is a MS Excel spreadsheet and uses a traffic light ('RAG' - Red, Amber, Green) rating system and a series of statements across 14 different sections, which are:

S1 - Cost & Performance Measurement
S2 - Avoidance of Product Returns
S3 - Process Management
S4 - Physical Network
S5 - Inventory Management
S6 - Information Communication Technology
S7 - Material Handling Container/Totes
S8 - Sustainable Distribution
S9 - Circular Economy
S10 - Compliance with legislation
S11 - Omni Channel
S12 - Customer Experience
S13 - Role of the Returns Manager
S14 - Social Media

On completion of each section, a graphical representation of the summary statements for each toolkit section is produced, which is particularly useful for engaging the broader workforce at all levels to highlight areas for development and implement operational changes. A visual representation of the RL Toolkit can be seen in Figure 1.

Figure 1 - Excerpt from RL Toolkit self-assessment Section 1



No.	SELF ASSESSMENT QUESTIONS	Assessment: Minimum Standard	Assessment: Advanced Standard	Assessment: Traffic Light Ranking
S1	**Cost and Performance Measurement**			
	Costs			
1	The financial costs associated with returns are measured	✓	✓	Green
2	Total costs of returns are allocated against reason codes		✓	Green
3	The cost of returns is measured for different distribution channels		✓	Amber
4	There is total transparency of costs through the supply chain		✓	Red
5	Cost transparency through the supply chain is used to improve performance		✓	Not Applicable
6	Life cycle costs are identified		✓	Green
7	The costs and benefits of a liberal returns policy are measured		✓	Red
8	The terms in supplier agreements relating to returns are appropriate		✓	Red
9	The accounting systems (channel profit centres) are aligned so that products bought online and returned to store do not penalise the store sales performance		✓	Amber

NB: Toolkit example for illustrative purposes only

The RL Toolkit was used iteratively to continually evaluate Prolog's operational performance across the 14 RL Toolkit categories (S1 to S14). Some sections of the toolkit were more relevant than others; for example, section 8 and section 14 were outside the scope of the services provided by the company. Based on this diagnostic analysis, Prolog has identified ways of improving their reverse logistics processes utilising best practice from the academic literature and learning from other industry practitioners.

Sorting and classifying returns

The process of sorting returned products, whether for remanufacture, re-sale or other desired output, involves testing and categorizing items into a finite number of nominal quality categories, commonly considered as good, better, or best[17]. Such sorting strategies however can have a direct influence on the profitability of the chosen route for a returned product[18], as quality categories are invariably associated with different degrees of value-adding activities.

Prolog sort returned items according to a simple A, B, C grading system that is generally based upon the quality of each item, thus adopting a similar process to the classification continuum demonstrated in Table 2. On assessment of a returned product, the grades A to C are generally applied to complete items, therefore two further sorting options are needed

for classifying incomplete, broken or part-used items. We nominally refer to these categories as 'disposal' and 'destroy' options for returned products that provide limited returned value. For items destined for disposal, this usually involves either some degree of parts salvage for onward use in repairs and maintenance programs, in which case the value actually increases with the quality of the salvaged parts; or recovery of materials bound for recycling, in which case the value is independent of the level of quality[19].

Table 2 - Returned Items Classification Continuum

Classification Option	Type of Stock	Quality Descriptor	Destination
1	A	Pristine / full value	Good stock for re-picking and re-sale
2	B	Good / some value	Clearance area of client website / Jobber / auction - high price
3	C	Low / little value	Jobber / auction - low price
4	Disposal	Low / limited value	Salvage parts
5	Destroy	Very low / no value	Landfill - charges for removing

Prolog's aim is to reduce processing costs for their clients and maximise the recovery value of returned products. This is achieved by moving returned items up through the different classification options on the continuum (Table 2) by incorporating value-adding activities, and thus enabling a higher return or increased value to be achieved for the returned items. For example, initially entire returned products were being sent to landfill, however on inspection, it was revealed that four components out of five were either unused or in a 'visibly' perfect condition. This highlighted an opportunity for Prolog to salvage these good parts and propose alternative uses for them, such as replacement parts, or send them to the client's packaging line to be re-boxed. Therefore, this returned product was initially treated on arrival at Prolog as an option 5. Following improvements to the inspection process, Prolog was able to treat these products as option 4 and salvage out unused perfect components. In some cases, following re-boxing on the packaging line the returned components contributed to become a new item for sale and distribution - option 1.

Case study outcomes

Over the 18 month study period, working with the authors, the staff and directors at Prolog applied the RL Toolkit across 4 clients selected by Prolog. Amongst the benefits are financial improvements, sustainability benefits, and changes to working practices to improve operational efficiency. The commercial arrangements between Prolog and their clients are confidential but usually involve a payment for the services that Prolog provides. By focusing on efficiency improvements in returns processes, Prolog was able to achieve cost savings which were shared with the client providing financial benefits through returns recovery.

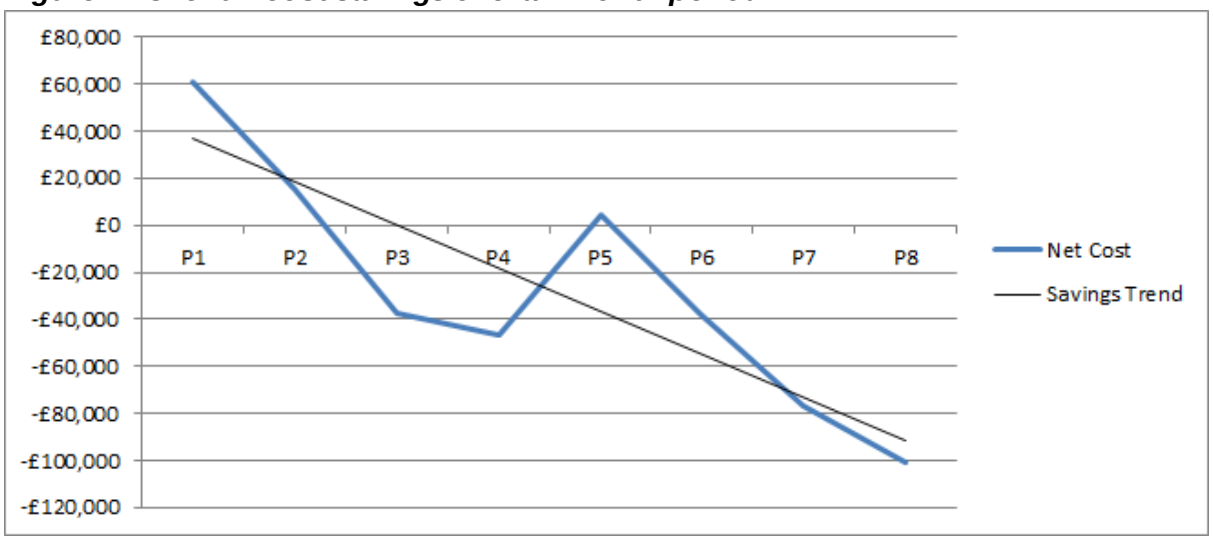
The analysis of existing returns processes using the RL Toolkit highlighted areas where the company was already demonstrating good returns practices. By facilitating internal conversations at Prolog opportunities have been identified for sharing good practice across the different clients the business services. Prolog has used the Toolkit with a range of its clients and have achieved a number of operational savings and efficiencies. Each of the clients examined within this case study are at different places on their retail returns journey and have been presented in order of maturity. The remainder of this section reports on the work achieved with the four selected Prolog clients, with reference to the returns options identified in the returned items classification continuum in Table 2.

Client A

At the start of the project, Prolog was offering a basic returns process (option 2) in line with the client's requirements. This initial process included inspection and fitting of new parts as appropriate that were supplied from the manufacturer, before sending product onwards to clearance channels. Client A was paying c.£800k p.a. for Prolog to process returns. This involved various activities including repairs and preparation for re-sale.

Over the duration of the returns project for Client A, Prolog was able to turn this processing cost into an income stream. This was achieved through several initiatives that were instigated by the Prolog team. These included: parts salvaging (option 4) which reduced the need for using new parts from the supplier; re-boxing of product (moving from options 2 and 3 to option 1); grading returns for jobbers or eBay re-sale (adding value to option 3); combining carriers to reduce costs; salvage and repair (gaining greater value through option 4) used to create stock of loan items during customer's repairs; repairing returned items for disposition through outlet stores (moving options 3 and 4 to option 2). These activities created value and over a seven month period Prolog were able to make significant cost savings for the client. Figure 2 shows the cost savings that Prolog were able to make on behalf of Client A.

Figure 2 - Client A cost savings over a 7 month period



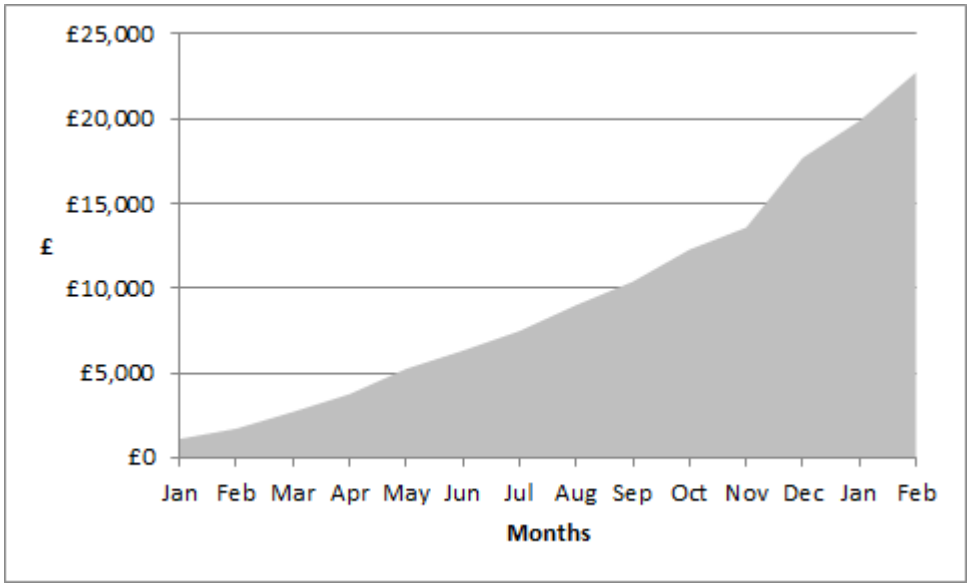
Each period (P) represents 4 weeks

As part of Prolog's day to day activities, the team constantly looks for ways to value engineer the returned products with the aim of reducing the volume of returns. For Client A, Prolog was able to make eight recommendations to the client's manufacturers on how the products could be improved to help reduce the number of failures.

Client B

Initially this client would insist on the majority of returned products being destroyed to protect the brand's integrity. This resulted in thousands of pounds of good product being destroyed and sent to landfill (option 5). Such practices are not uncommon where high-end brands burn unwanted stock to prevent their merchandise being sold at knockdown prices and protecting them from counterfeiters[20]. This presented a clear opportunity for Prolog to identify ways of processing returned products in a more sustainable manner whilst also returning value to the client. Primarily this was achieved through a parts salvaging programme that began with one product and expanded across a wider range of items. For example, returned electrical items were at first having the cable cut and the plug removed before being sent directly for WEEE[21] disposal unless the customer had specifically stated on the returns form that they had not used it in which case it could be retained for warranty replacements. Prolog set about identifying ways to reduce the high volume of waste and limit the amount of products being sent to landfill. Value retaining activities involved: saving individual unused components from a beauty kit which could then be sent to the client's packager where they were incorporated into a new kit; retained by Prolog for supplying end-customers with missing components; or salvaged for warranty replacements. The cost savings are summarised in Figure 3 below, where over a period of 14 months, approximately £23,000 was saved for Client B.

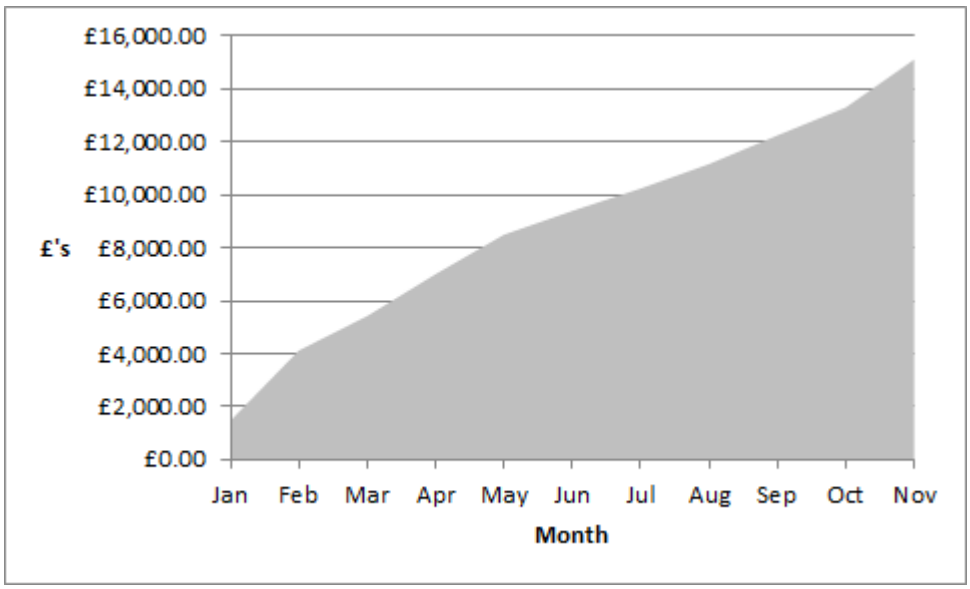
Figure 3 – Monthly cumulative cost savings for Client B



Client C

The project focused on the furniture retailer's children's product lines that were identified as starting at option 3 on the classification continuum (Table 2). All returned products were initially being sent to Client C's preferred jobber. Over the course of the project, the interactions with the jobber became more frequent and they demanded higher quality items to be supplied. Prolog observed this process and identified several different ways that their client could gain more value from their returned products. These included: re-boxing unwanted pristine product that had been returned in a damaged box so it could be sold as new under option 1 as opposed to jobbed-off for sale at a significant discount (option 2 or 3); salvaging component parts that could be re-used or supplied as replacements to the client's end-customer (option 4) which is part of a returns avoidance strategy and keeps the sold product in the consumer's home; Prolog are also contracted to test the furniture assembly instructions and the robustness of the finished item, and provide photographs for the Client's website. These assembled products were previously jobbed-off (option 3) although Prolog has suggested that these could be sold at a small discounted price by the client through a clearance section (option 2). For Client C, Prolog was able to save £15,000 across 22 SKU's (Stock Keeping Units) with an average unit value of £104 over a period of 11 months, shown in Figure 4.

Figure 4 - Monthly cumulative cost savings for Client C



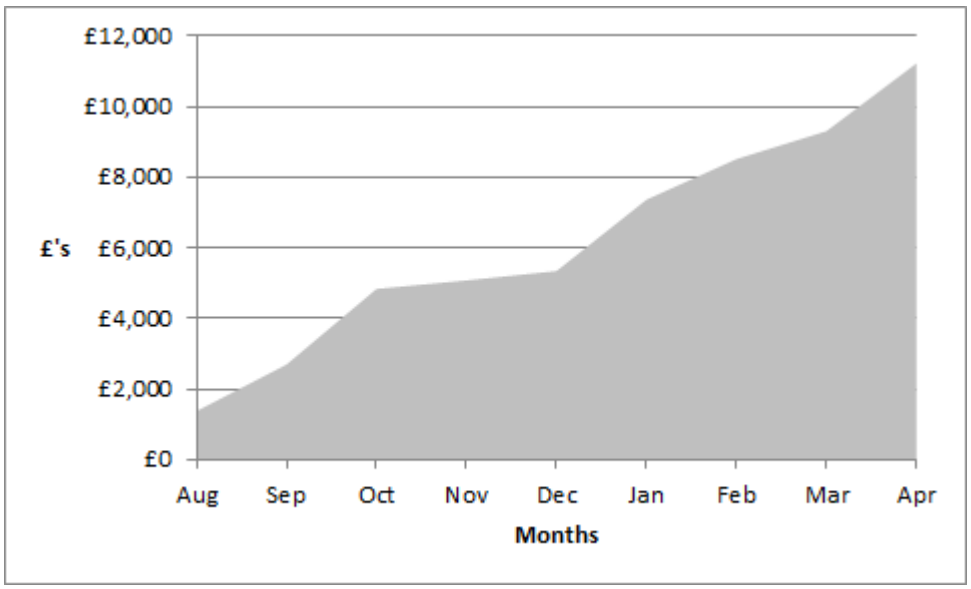
Client D

At the start of the project, Client D was relatively new to Prolog. The number of returns received were relatively low and Client D's approach was to donate all returns to a local charity. Therefore, this client started at option 4 on the classification continuum in Table 2. As the sales volume increased following advertising campaigns and repeat custom, inevitably the number of returns grew. With a larger number of returns to process, this led to an opportunity for Prolog to implement a more efficient process and propose value recovery options. For example, the bedding products are now inspected by Prolog and if deemed to be in pristine condition they are re-folded, re-packaged and replaced in the warehouse for

picking as new stock (option 1). If the items didn't reach the clients exacting standards, for instance evidence of a loose thread or slight mark then these items could be jobbed-off for sale at discount to recover some of the costs, and therefore returning products to either option 2 or 3. Further enhancements are also being considered, which include a move towards treating the bedding as clothing items, and incorporating other value-adding activities e.g. pressing, spot cleaning, and UV light testing. These additional value-adding activities would enable the items to be sold either as new via option 1 or as seconds/clearance (option 2) through the client's outlets or website. Prolog has identified the opportunity to retrieve value from approximately 20% of product that client D was initially disposing of via charity shops.

As online shopping has continued to grow in the UK, Client D has experienced increased sales, which have in turn generated increased returns volumes being received by Prolog. Despite being a relatively new business, over a period of 9 months, savings generated by Prolog's returns processing accumulated to £11,000 for Client D, as shown in Figure 5.

Figure 5 – Monthly cumulative cost savings for Client D



NB: please note the figures provided are for the period immediately prior to May 2020.

Conclusions

The authors have worked with the team at Prolog to consider their approach to returns management and how operational efficiency improvements can be made. Adopting a qualitative case study approach, the project focused on four of Prolog's clients and involved the different teams associated with those clients. The teams worked through the RL Toolkit to perform an initial diagnostic analysis from each client's perspective that considers the differences in their product ranges.

Various initiatives have been implemented across each of the four clients. These have led to cost savings and the introduction of value-adding activities, which have enabled Prolog to offer a higher level of returns processing on the classification continuum (Table 2). At the start of the project, returns were championed by a director of Prolog, but over the project's

duration, this has become incorporated into the role of an Operations Manager, which reflects a move towards a more bottom-up approach to returns strategy. This change has led to the incorporation of a Returns Manager role, reflecting the importance of a specific person having operational oversight of the return functions within Prolog and has the added benefit of creating the ability to easily work across different client portfolios. This strategic change provided the opportunity to share knowledge across different client portfolios, and enabled staff who were initially associated with a single client, to become involved with multiple clients, sharing good practice and initiatives from one client to another. For example, the practice of parts salvage was initiated with Client A, but as return's staff from the different clients were brought together in the discussion groups, this practice has also been applied to Clients B and C. A further benefit is the ability to flex staffing levels across different clients as each reaches its returns peak.

The findings from the returns project have helped Prolog to recognise the value of training and development within the workforce around returns management. This has been incorporated into the development of plans for a dedicated training programme at Prolog for all staff. The work has also highlighted the importance of regularly engaging with clients in order to offer them further value-adding activities beyond the requirements of the initial contract that can lead to a higher rate of return for returned products. Quite often the main motivation for clients engaging in a returns process is cost savings, however, recognising this is actually achieved through value-added activities and operational efficiencies.

Working through the RL Toolkit has enabled Prolog to develop and enhance their returns capability. By actively managing the returns process, the case demonstrates different ways of achieving cost savings and operational efficiencies associated with moving up the returned product classification continuum by performing value-adding activities. From a corporate social responsibility perspective, the case study demonstrates how returns management services can reduce the amount of product going to landfill and improve the reusability and recyclability of returned products and their component parts.

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