Report

October 2014

Re-use and Repair Centres/Hubs

Scoping of models and outline business cases

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Glossary

Term	Description
Consignment	Consignment is defined as placing goods with another agent, but retaining ownership until item is sold
Co-owned revenue distribution	This business case is a group of geographically common re-use organisations working collaboratively on a retail solution to provide sufficient goods to market and distributing the retail revenues back to individual organisations
Commercial guaranteed offtake	This business case is a commercial retailer operating as a guaranteed offtake for goods collected, repaired, refurbished by re-use organisations, purchasing goods at wholesale prices to offer guaranteed revenues but generating profits
Co-owned webstore	This business case is a re-use organisation or centrally owned webstore to operate as a lower cost retail solution that acts as a central point of sale for re-use organisations of all sizes and geographical locations
Goods	Any items for sale that generate revenues
Hub and spoke	A series of organisations (spokes) feeding into a central organisation (hub) or vice versa
Net Revenue	Net revenue is the total revenue minus the costs of sales and/or warehousing and stock management
Profit	After tax revenue retention for commercial organisations
Revenue	The total quantity of monies generated by the sale of goods at the point of retail or at the point of wholesale
Risk sensitivities	The minimum and maximum goods and revenues required to break even
Surplus	It is anticipated that third sector and not for profit organisations do not generate profits, but rather make surplus for investment in their core activities
TradeCo	A trading company established either as a not for profit or commercial organisation
Umbrella branding	Utilisation of a single brand to create uniformity and scale across individual stores
Webstore	A website with the capability of managing sales and payment

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We help reduce waste, increasing energy efficiency and promote responsible water use – all as part of a journey towards a low-carbon, sustainable economy.

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1 Introduction

1.1 Policy objectives

The Scottish Government policy document, Safeguarding Scotland's Resources refers to a key objective to increase the supply and demand for reusable goods. Action 11 specifically outlines the requirements to work across all sectors to develop supply, stimulate refurbishment and repair infrastructure, to generate demand for goods through the Revolve standard and to raise awareness of re-usable goods for households and businesses

1.2 Background and scope

The development of re-use and repair centre/hubs is aimed at progressing Scotland's ambitions towards a circular economy by providing centres of excellence which maximise re-use and repair, creating jobs and training opportunities with skills to extend the longevity of products and the re-use of materials. These centres/hubs are relevant to both urban and rural communities of Scotland, addressing social inclusion considerations.

This project is to scope out a range of re-use and repair centre/hub models which could undertake a range of services and preparation for re-use activities.

1.3 Research objective

The objective of this work is to:

- Collate and review all current and global evidence relevant to the feasibility of the re-use and repair centre/hub models in a Scottish context
- To identify any evidence gaps and
- To complete an outline relevant business case for Scotland, analysing critical viability factors to achieve success

1.4 Previous research

Our approach to modelling and evaluating business models to take forward has also been guided by the results of previous extensive research in the establishment of a central centre/hub model in the re-use and repair sector. Specifically, the results of this research has implications for the supply and demand of goods, hub models, and repair services.

1.4.1 Supply and demand

Table 1 - Prior research on supply and demand

Report Title	Client	Key Finding
Engagement with re-use and repair services in the context of local provision, Brooks Lyndhurst 2012	Zero Waste Scotland	Demand for products is partially based on re-use items being cheaper than new items and of good value (i.e. quality vs. price).
		Barriers to demand are quality and reliability of items, cleanliness and safety of products.
		Extending partnerships beyond local authorities to private organisations can boost supply of goods

Unpublished report from 2012		Supply of re-use items may require a number of organisations to work together to provide adequate supply to a central retail outlet
		Sale of re-use items online by charities is growing, providing competition to physical retail stores
Unpublished report from 2012		Some re-use organisations had limitations in holding stock, particularly large items
		Some re-use organisations they only accepted items that would sell in stores

1.4.2 Hub models

Table 2 - Prior research on hub models

Report Title	Client	Key Finding
Unpublished report from 2012		A central retail outlet is viable, but requires further feasibility
		Any central retail outlet would need to be run by dedicated and experienced retail managers
Unpublished report from 2012		Some re-use organisations stated they already used websites such as Gumtree to reach a wider audience
		Some re-use organisations had a 44/56% split in favour of not supplying a central retail outlet

1.4.3 Repair services

Table 3 - Prior research on repair services

Report Title	Client	Key Finding
Engagement with re-use and repair services in the context of local provision, Brooks Lyndhurst 2012	Zero Waste Scotland	Demand for repair services is at a low level, it also needs to be more affordable and cost effective, potentially by joining up with the re-use sector.
		Barriers to repair services are costs of repair, shortage of specific skills and supply of goods requiring repair.

1.4.4 Conclusions

From existing research a number of conclusions were drawn to influence the structure and design of the business models for assessment and evaluation, specifically:

- Demand for goods is based on a number of customer criteria, goods can require some extensive works prior to display and sale, and therefore a “warehousing and stock management” function is required.
- To achieve the required supply of goods requires a number of re-use organisations to work together.
- Re-use organisations need to turn over stock quickly and donated goods need to be in demand in order to be accepted due to stock holding issues.

- A central retail hub is possible but requires considerable retail expertise to operate.
- Repair should be an integrated part of the re-use activity, increasing the quantity of stock available for sale in a cost effective manner.

1.5 Revenues and funding

1.5.1 Inclusion of other revenues and funding

The revenues, profits and surplus' included in this analysis and modelling does not include any additional funds that can be accessed and awarded to third sector organisations. Grants, loans and other funding is often secured for training and employment and can make up a substantial part of the overall revenue generated by third sector organisations. Such organisations are however, diverse in their size, structure and funding streams, and it is not possible to find a generic model for additional funding. In addition, income from recyclate is generally not well understood at present and therefore recyclate revenues have also not been included.

This analysis and modelling therefore, is designed to assess the impact of various business models on the financial costs and revenues generated for the re-use and repair of goods with all costs being covered, or not, by the sale of goods. In this modelling therefore, the ability to secure grants and other funding can only assist in the feasibility of the business case, rather than success being contingent on such funding.

1.5.2 Revenue, profit and surplus

In this analysis and modelling there are various terms used to define the monies generated by sales activities, these are defined below for ease of use:

Table 4 - Descriptions of monies generated

Term	Description
Revenue	The total quantity of monies generated by the sale of goods at the point of retail or at the point of wholesale
Net Revenue	Net revenue is the total revenue minus the costs of sales and/or warehousing and stock management
Surplus	It is anticipated that third sector and not for profit organisations do not generate profits, but rather make surplus for investment in their core activities
Profit	After tax revenue retention for commercial organisations

2 Evidence building research

2.1 Scope

Research focussed mainly on larger scale models of re-use and repair centres, and looked to include commercial organisations as well as those in the third sector. Innovative models were sourced and included, as were structures of different operation and funding to those currently operating in Scotland to ascertain the key differences in their operation and success.

Evidence building research focussed mainly on the following countries:

- USA
- Canada
- Australia
- Europe (Germany and Belgium)

2.2 Data collection methodology

The evidence building was a desktop exercise with the majority of information obtained via internet research. Some organisations in the USA were initially identified from the Linsay Chalmers report[1] on enterprise and community re-use and internet research was used to verify and update the information presented in this report.

The information used to populate the database came from a variety of sources including published research, unpublished research, case studies, funding programmes, company report and websites.

Many organisations were identified but not all were entered into the database. Organisations were included if they met one or more of the following:

- Scale of operation large in terms of geographical coverage
- Scale of operation large in terms of tonnage re-used, repaired or recycled
- Business model demonstrated particular innovation or difference to organisations currently in Scotland

The evidence and data identified was tabulated into an MS Excel library with each organisation given a unique ID number. An initial list of criteria was developed using the main data requirements for the business models as a starting point. This initial list of criteria was tested with a couple of organisations from each geographical area; the criteria list was subsequently rationalised to achieve an appropriate balance between the timescales for research and having adequate information coverage. The main sections of the library worksheet are as follows:

- Location
- Organisation - overview: year established and description of organisation
- Organisation – type e.g. corporate structure, related organisations, and beneficiaries
- Organisation – partners and networks
- Activity – re-use, repair, recycling, other activities
- Site information e.g. number of sites, size of sites
- Material inputs e.g. source of materials, types of materials accepted
- Staff e.g. number of staff, volunteers, training
- Operational costs
- Revenue sources

[1] Linsay Chalmers, Winston Churchill Memorial Trust Report, 2010

2.3 Data gaps

Generally, in terms of the business model data required, data availability was of poor quality across all organisational types and geographies. More information is available for the non-profit sector than for the profit sector, this most likely reflects the commercial nature of those organisations.

The key data gaps for the business models emerging from the research are described in the table below. The table also highlights the actions taken to fill these data gaps for the business model development.

Table 5 - Data gaps from evidence building

Data	Availability	Data quality	Solution
Material inputs	Comprehensive information available on the source of the material streams and the type of material streams dealt with.	Medium/Good	This information to be compared with local Scottish data collected to identify any core differences prior to business case modelling.
	There is also some information on the tonnage inputs or recovery rate.	Medium	Recovery/utilisation rates compared to Scottish data prior to inclusion as a variable in the business model.
	Very little data is available on the breakdown by individual material stream.	Poor	Collation of Scottish data where possible by individual material streams
Staffing	Some data available on the number and type of staff and training programmes in place.	Medium	Analysed for compatibility with legal requirements prior to inclusion in modelling.
	Very limited information on the costs of staff.	Poor	Replace with Scottish costs data and minimum wage data.
Operational costs	Detailed financial statements or a breakdown of costs in percentage terms are available for some non-profits.	Medium	An evaluation of operational costs and comparison to the local Scottish context will be undertaken prior to using any such data.
	Other operational costs data are very limited.	Poor	An operational cost profile built based on experience and current costs/rates for utilities etc.
Revenue	The source of revenue is apparent for all organisations but otherwise data availability is limited	Medium/Poor	Sources of revenue will be used as a structure for potential Scottish models, especially where revenues are diverse, but quantification of revenue undertaken separately.
	Often only a breakdown given in percentages in terms of the different sources of revenue.	Poor	Data collated from enquiries to re-use organisations in Scotland on material breakdown.

3 Evidence building findings

3.1 Business models

There are a range of business models identified across a large geographical search area. Our research identified some innovative and successful approaches. The table below summarises the organisations identified by business model type. Organisations involved in advocacy and quality are identified in the database but haven't been detailed here as they are not business models in themselves.

Table 6 - Evidence building business models identified

Business models	Operator types	Umbrella organisations	Profit/non profit	Goods destination	Organisations and ID
Repair and re-use centre	Social enterprise	Yes	Non-profit	Householders	US10 – Goodwill Industries of Central North Carolina US11 – Goodwill Industries International Ltd US14 - SCRAP US17 - Habitat for Humanity - ReStores – Buffalo G05 – Werkstatt Frankfurt G06 – Weisee Rabe G07 – network MiTTWEIDA G12 – Volksverein Mochengladbach G10 – Werkhof gem. GmbH BE5, BE6 – 3R, Caract'R BE3 – Trans'form AU04 - Brotherhood of St Laurence and Brotherhood Fridges
Repair and re-use centre	Social enterprise	No	Non-profit	Householders	US09 – St Vincent de Paul Society of Lane County US12 - ReBuilding Centre, Portland, Oregon US13 - The Rebuilding Exchange, Chicago AU01 – The Bower Repair and Re-use Centre AU03 - Reverse Garbage
Repair and re-use centre	Social enterprise	No	Non-profit	Socially disadvantaged	US01 – Furniture Bank of Ohio US06 – Cleveland Furniture Bank CA01 – Toronto Furniture Bank US05 - Sharing Connections

					US15 - FreeGeek
Repair and re-use centre	Commercial	No	Profit	Businesses / retail partner	US02 – Ozark Electronics Repairs US07 – The Refinishing Touch
Hub and spoke - Trading platform	Network organisation	No	Non-profit	Public sector	US03 – CSR Eco-solutions US04 – Asset Network for Education Worldwide
Hub and spoke - re-use and repair partnership	Diverse	Part.	Mix	Householders	G01 - RECOM project G02 - RecyclingBörse! G03 - SWK-Herford G04 - IGE Henneman Recycling]
Hub and spoke - network-branded re-use and repair	Social enterprise	Within network brand	Non-profit (majority)	Householders / Socially disadvantaged	BE2 - La Ressourcerie du Val de Sambre BE4 - Ressourcerie du Pays de Liege BE7 - Kringloop AU02 - Workventures
Consignment[2] retail	Social enterprise or commercial	No	Mix	Householders	US16 - Divine Consign - Vancover US08 - Divine Consign

[2] Consignment is defined as placing goods with another agent, but retaining ownership until item is sold

3.2 Key geographical observations

The evidence building research made some key observations about the differences in the way in which different geographical areas manage some core aspects of business models:

Table 7 - Evidence building geographical observations

Observation	USA & Canada	Europe	Australia
Revenue	Non-profits in the USA rely on philanthropy and enterprise for income	Revenues tend to be a mix of product sales and employment subsidies	Mainly from sales
Tax	Value of donated goods can be written off against personal tax increasing donations	Different tax incentives are available for charitable organisations	Value of donated goods can be written off against personal tax increasing donations
Other activities	Organisations tend to do a lot of fundraising events not directly linked to re-use	Some evidence of emerging partnerships between third sector and private sector	Computer refurbishment and repair seems to be the key activity, evidence of Microsoft accredited refurbishers
Scale	The cheaper cost of land means that re-use and repair centres are of a much larger scale than elsewhere	Scale tends to be achieved using umbrella organisations, branded networks and franchises	Large scale re-use is mainly focussed in Melbourne, Sydney and Brisbane, otherwise limited to smaller charity shops

3.3 Key differences to Scotland

Generally the re-use and repair organisations identified were similar to those in Scotland in terms of the waste streams managed and that non-profit organisations were motivated largely by diverting revenues to social objectives.

There are some key differences however between the business models identified and those present in Scotland. The key differences have been summarised in the table below together with an indication of the impact these differences have on the business. The ability to replicate these differences in Scotland is also discussed.

Table 8 - Evidence building key differences to Scotland

Item	Region	Difference	Impact	Ability to replicate
Commercial sponsorship	USA	Commercial sponsorship and donation culture is strong in USA. This approach is not used amongst re-use organisations in Scotland.	Improves revenues	It is Scottish Government policy to support social action ideas that have a real ability to change the levels of giving, by making it easier for people to give their time, money, skills and assets to charity.
Corporate social responsibility	USA and Europe	CSR appears to be used as a driver to a higher degree in the areas researched. In tandem with commercial sponsorship or donation, CSR is used as a	Improves donations and revenue	Re-use organisations can adopt a strategy to increase financial donations through CSR. However, this is not a short term strategy for

		tool to bring in commercial revenues and/or materials for sale. This approach is not used amongst re-use organisations in Scotland.		improving revenue. CSR is an approach that could be more widely adopted to increase donations of material streams suitable for re-use or repair.
Use of online activities	All	From booking collections to selling items and operating trading floors, the creative use of websites and social media was found to be prevalent.	Improves donations and revenue	The re-use sector is working to professionalise but few of the re-use organisations in Scotland demonstrate similar levels of use of digital communication. Ability to replicate in Scotland subject to access to suitable skills and funding.
Public engagement Consignment / Donations	USA and Australia	Utilising the public appetite for second hand sales of goods (EBay/Magpie culture) to derive benefits via large scale consignment and sales is comparatively underused in Scotland.	Improves sales.	Ability to replicate in Scotland subject to access to suitable skills and funding.
Umbrella retail branding and operation	All regions	In the USA, Belgium and Germany there is use of umbrella branding to consolidate a range of organisations into a single trading entity or brand.	Improves sales.	Ability to replicate in Scotland particularly through greater partnership working or through creation of networks.
Diversity of activity	USA and Australia	Many of the business models identified were different to Scotland in terms of the diversity of activities that they were involved with. This diversity spreads risk and also widens the stakeholder base.	Diversifies revenue streams. Improves donations.	Ability to replicate in Scotland particularly through greater partnership working or through creation of networks.
Accreditation, standards and quality standards	Germany, Belgium and Australia	Returns policies, fair pricing policy, specification standards were in evidence across many of the business models identified. By increasing material supply and quality and product quality and improving the sales outlet and pricing.	Improves sales	Revolve standard has professionalised the re-use sector in Scotland but not in all areas identified by research. Ability to replicate in Scotland particularly through greater partnership working or through creation of networks.

3.4 Evidence building conclusions

Table 9 - Evidence building conclusions

Business model	Evaluation	Model taken forward	Useful elements to be incorporated
Re-use and repair retail – umbrella organisation	It is felt that business models taken forward should support existing organisations. Existing organisations have their own branding and local brand recognition that should be retained.	No	Some elements of good practice and innovations can be incorporated within models.
Re-use and repair retail – stand-alone organisation	The only key differences of models identified in research to current Scottish market is in terms of economies of scale, which is determined by aspects such as population, quantity of goods etc.	Incorporated	Creation of a stand-alone organisation that is comprised of more than one organisation to achieve the same economies of scale.
Re-use and repair centre – non retail distribution to socially disadvantaged	The only key differences of models identified in research to current Scottish market is in terms of economies of scale. Models identified are also heavily reliant on public funding rather than a commercial business case.	No	Some elements of good practice and innovations can be incorporated within models.
Re-use and repair retail - commercial	Commercial business models have some credibility in terms of establishing that such operations can operate without any other funding stream.	Incorporated	Including a commercial organisation that has a core profit motive to support the third sector effort, who act as a core customer
Hub and spoke – repair and re-use partnership	Business models are based on a regional co-operation of organisations and service providers to establish economies of scale in supply pooling and sharing of resources	Yes	Increases the quantity of goods and relieves some supply issues identified in previous research.
Hub and spoke – trading platform	This model provides some significant benefits in allowing for distribution of goods over a wider geographical area and increasing market access. Limited overheads and flexibility allows smaller organisations to competitively trade.	Yes	Allows flexibility of solutions in less densely populated and rural Scotland. Also allows smaller organisations to trade effectively.
Hub and spoke – network branded re-use and repair	Models represent option for the organised promotion of the Revolve standard throughout Scotland whilst developing improved systems for collection at a regional level and carrying out ongoing work to further professionalise the sector.	Incorporated	Use of the Revolve standard as the baseline retail operational standard for all business cases.
Consignment	These models are used generally to increase the quantity of goods sold by attracting the public to selling goods via the enterprise, attracting the market to the point of sale and revenues are distributed.	Incorporated	Allowing re-use organisations to “consign” goods to a retail outlet and be paid based on a distribution of revenue.

4 Business case design

4.1 Design influence from evidence building

The conclusions drawn from our evidence building meant that we proposed that business case design should:

- Include a business case with the concept of a single, larger re-use and repair retail organisation to achieve economies of scale
- Incorporate a business case where there is an ability for a profit driven commercial organisation to work to the benefit of re-use organisations
- Ensure the hub and spoke operation, where partnerships are created is included
- Ensure that a trading platform of some form is included to allow smaller and more rural re-use organisations to trade competitively
- Incorporate network branding
- Incorporate the idea of consignment as a means of increasing the quantity of goods sold, attracting as larger market to the point of sale

4.2 Design influence from prior research

One of the core aspects taken into consideration in designing the business models was the previous research outputs and conclusions. To this extent we proposed that business case design should:

- Include re-use organisations, in their current form, operating largely the same activities as present, with only the retail function under consideration.
- Include the opportunity for re-use organisations to work together collaboratively to maximise revenues to put to beneficial use.
- Include opportunities for re-use organisations to maximise their current activities including training and skills development in repair for example.
- Include a warehousing and stock management function which should include repair, upcycling, and recycling as complementary core activities.
- Include the retail function as a core, separate and specialised activity.

4.3 Business case descriptions

Based on the evidence building and prior research conclusions, three baseline business cases were designed and evaluated for financial viability and risk. These are as follows:

Table 10 - Business case descriptions

Model	Description
Co-owned revenue distribution	This business case is a group of geographically common re-use organisations working collaboratively on a retail solution to provide sufficient goods to market and distributing the retail revenues back to individual organisations
Commercial guaranteed offtake	This business case is a commercial retailer operating as a guaranteed offtake for goods collected, repaired, refurbished by re-use organisations, purchasing goods at wholesale prices to offer guaranteed revenues but generating profits
Co-owned webstore	This business case is a re-use organisation or centrally owned webstore to operate as a lower cost retail solution that acts as a central point of sale for re-use organisations of all sizes and geographical locations

4.4 Co-owned revenue distribution model design

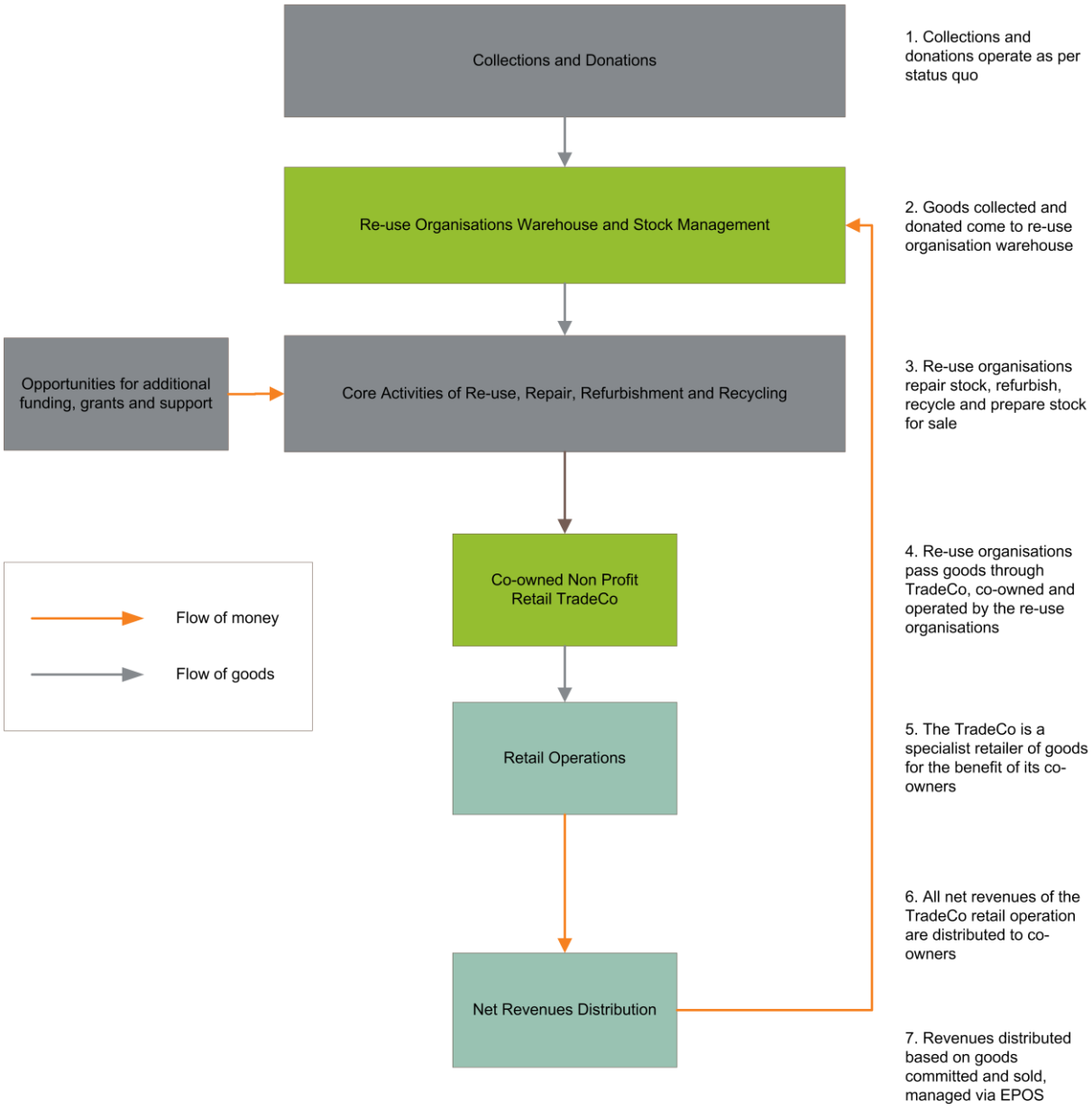

Figure 1 - Co-owned revenue distribution model

4.5 Commercial guaranteed offtake model design

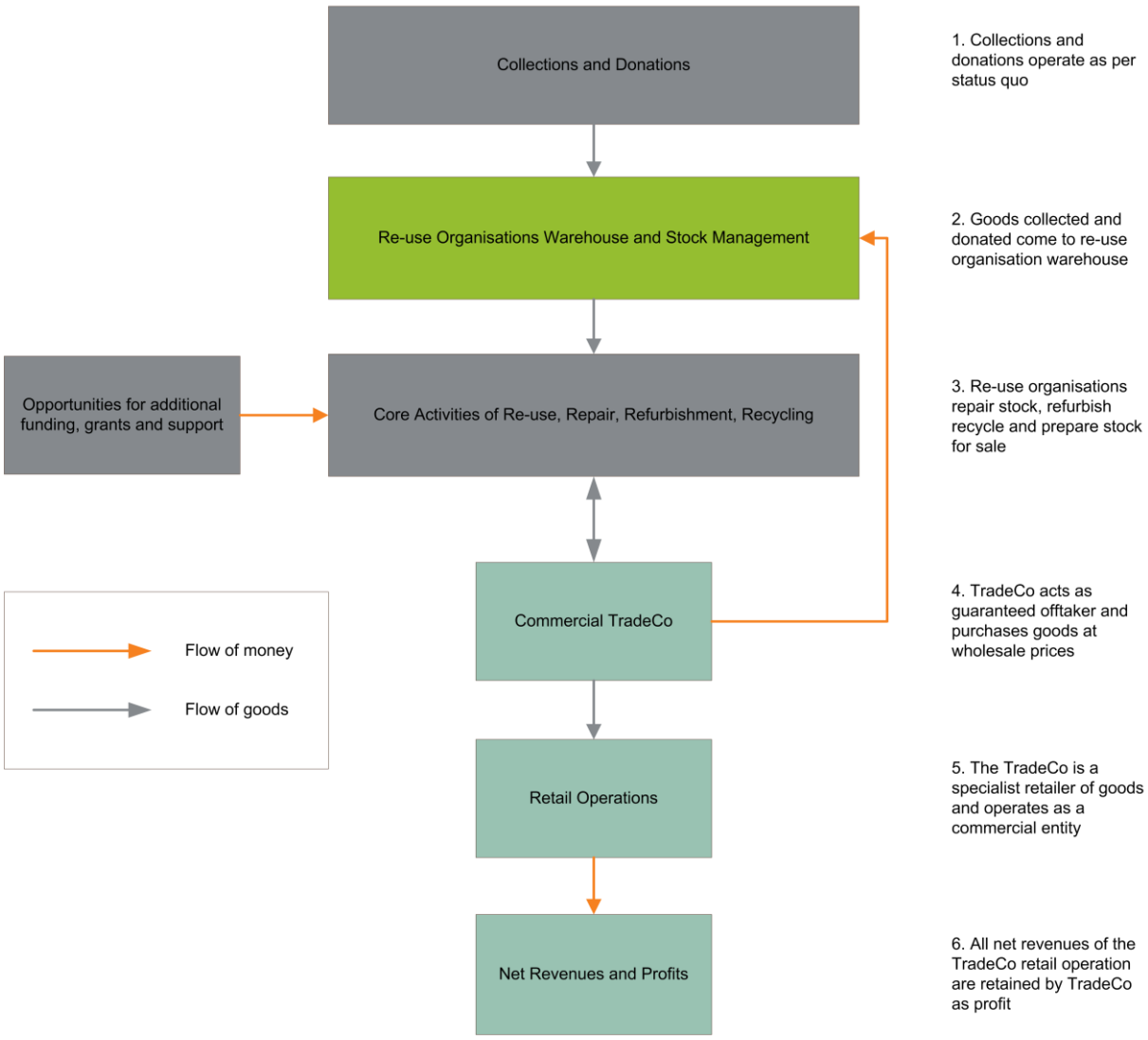

Figure 2 - Commercial guaranteed offtake model

4.6 Co-owned webstore model design

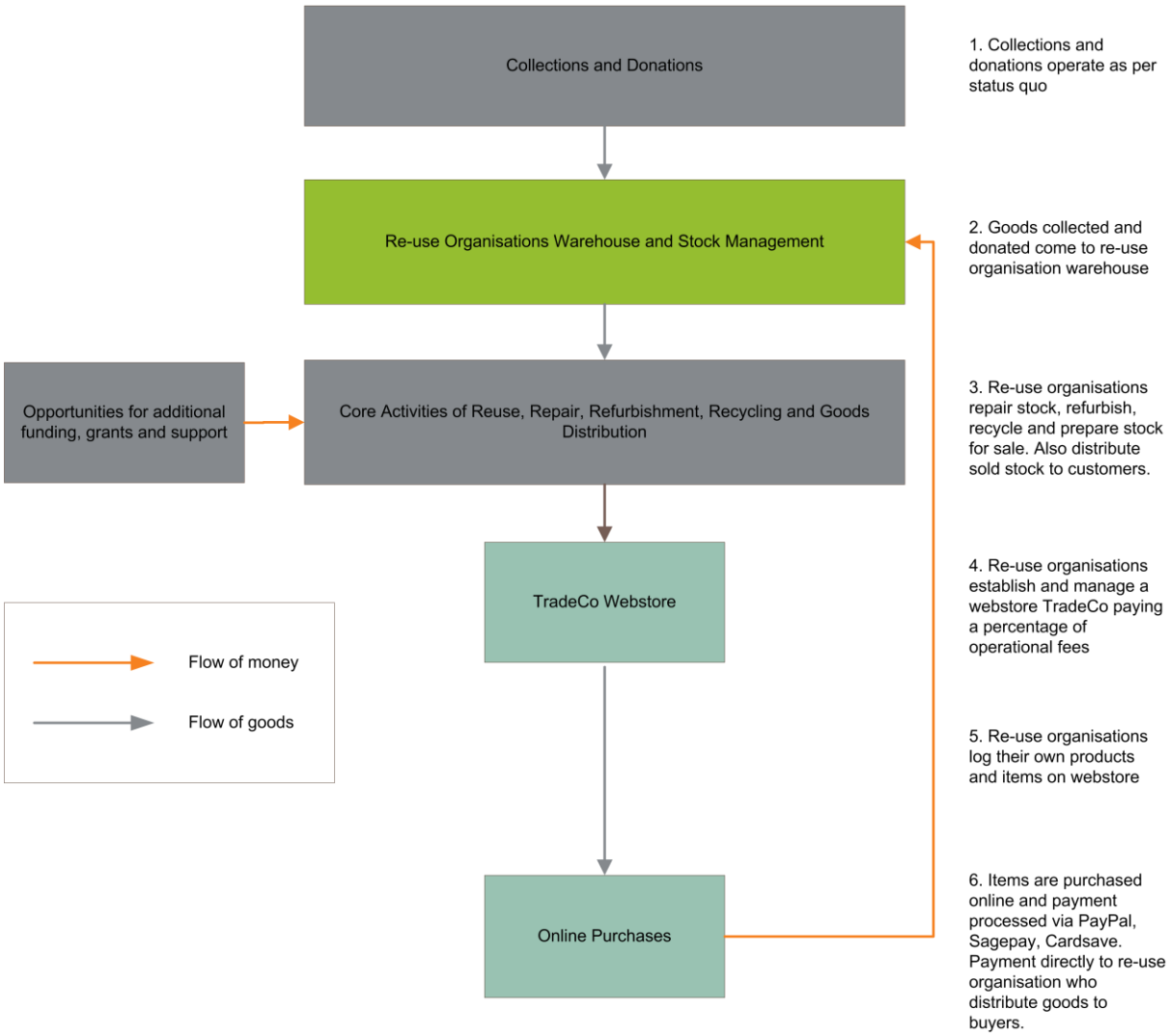

Figure 3 - Co-owned webstore model

4.7 Business case baseline for modelling

The business case data and operational character has been derived from the evidence building research, previous research and our data gathering from existing re-use organisations. In order to set a baseline for the business cases the operational activities, the scale of inputs and composition and quantity of goods available was required.

4.7.1 Operational activities

The key operations undertaken by each party in the two physical asset models are as follows:

Table 11 - Business case operational activities

Organisation	Operations
Re-use organisation	Collection of goods from householders, local authorities and commercial donations
	Repair and refurbishment of goods
	Deconstruction of goods for parts or recyclates
	Upcycling of goods to make them fit for sale
	Function and safety testing of electrical items to recognised standard
TradeCo retail hub	General retail management in line with Revolve standard
	Staffing, rotas, HSE
	Acceptance and pricing of stock
	Retail operations including EPOS management
	Sales, returns and arranging collection, distribution
	Advising on stock preparation, product lines, upcycling etc.
	Managing stock movements, making stock requests

4.7.2 Organisations and inputs

Table 12 - Business case organisation inputs

Model	Input	Reason
Number of re-use organisations for physical asset retail models	4	Easily divisible number, could clearly be more or less depending on quantity of goods and regional concentration

Quantity of goods per organisation	10,000	Number of goods is based on average presented in research to nearest 5,000 items, however what is more critical is the sensitivity on the minimum number of goods per organisation required to break even

4.8 Quantity and composition of goods for re-use

The quantity and composition of goods collected by re-use organisations for repair, refurbishment and eventual sale has clear implications for viability in terms of the distribution of high value to low value goods and overall revenue generation.

4.8.1 Methodology

In order to assess the quantity and composition currently present in Scotland, we contacted 58 re-use organisations to request data, and 14 local authorities to ascertain if they receive good quality data from their respective contractors that would facilitate data collection.

Five re-use organisations were able to commit good quality data. The majority of local authorities had a combination of no reply or a lack of any detailed information collated as part of re-use contracts/agreements (tonnage only in a lot of cases).

Of the 5 good quality returns, these were stratified into product categories as follows and percentage compositions ascertained:

- Occasional Furniture
- Flooring
- Soft Furniture
- Bric a Brac
- Miscellaneous
- Small WEEE
- Large WEEE

4.8.2 Quantity and composition

The quantity and composition of goods were created and an “average” quantity and composition was taken forward into calculations:

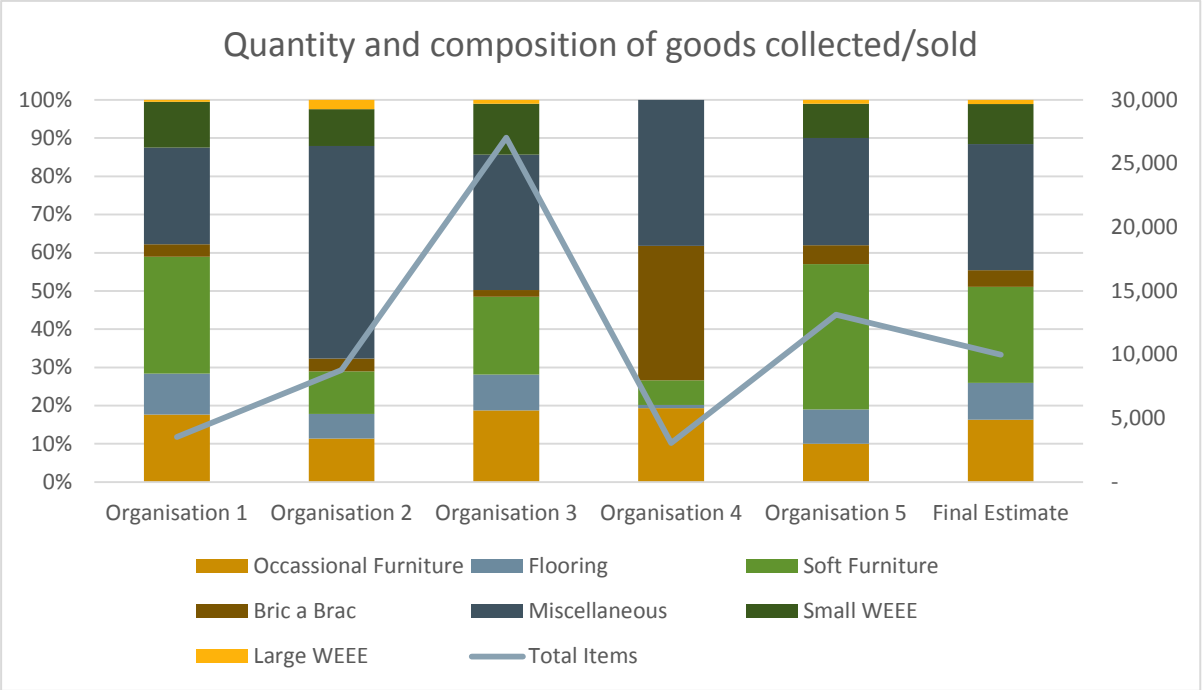

Figure 4 - Quantity and composition of goods

There is clear differences in the quantity of goods collected and sold, ranging from the lowest at 3,000 items up to the highest at 27,000 items, the average of this small sample was 11,000 and 10,000 was used as the final estimate. Only organisation 4 moved away from a reasonably consistent pattern of composition, with significantly more bric-a-brac and miscellaneous items. The final composition taken forward into modelling represents the averages of these contributions and is as follows:

Table 13 - Business case composition of inputs

Item	Average
Occasional Furniture	16%
Flooring	10%
Soft Furniture	25%
Bric-a-brac	4%
Miscellaneous	33%
Small WEEE	10%
Large WEEE	1%

5 Business case findings

5.1 Co-owned revenue distribution model

5.1.1 Key non-financial benefits

For re-use organisations the main benefits of the co-owned revenue sharing model are:

- Allows for a large, specialised retail hub that can attract greater footfall
- Allows geographically common organisations to achieve economies of scale
- Allows smaller organisations access to a retail outlet of a scale that would otherwise be unaffordable
- Allows re-use organisations to focus on activities such as warehousing, repair and upcycling that can attract additional funding streams (grants etc.)
- Organisations retain the net revenues of retail sales
- Organisations are directly rewarded for their relative contribution
- As a charity run enterprise gift aid is more easily managed

For the retail hub the main benefits of this model are:

- Access to a greater range and quantity of stock via re-use organisations collaboration
- Retail hub is managed by the organisations that supply it, allowing for possible pooling and sharing of other resources
- The retail hub, as a non-profit organisation, does not pay corporation tax
- The retail hub, as a non-profit organisation, receives 80% business rates relief

5.1.2 Key non-financial risks

For re-use organisations the main risks of the co-owned revenue sharing model are:

- Depends entirely on ability to work collaboratively
- Dependent to an extent on geographical location of participating organisations
- Revenues derived from ability to successfully co-manage the TradeCo retail hub

For the retail hub the main risks of this model are:

- Depends on the ability for re-use organisations to secure enough goods for re-use, repair and refurbishment
- Depends on finding suitable retail premises with high footfall and meeting sales targets

5.1.3 Sales and revenues

In all models the sales and revenues are dependent on the extent of activities undertaken, and the scale of operation and sales, the results here are for the retail hub based on the baseline model developed with Zero Waste Scotland.

Table 14 - Co-owned revenue distribution sales and revenues – retail hub

Item	Average	Notes
Total number of goods	40,000	Modelled scenario
Total goods sold at full price	32,000	80% sold at full price
Total items sold at discount	8,000	20% sold at 25% discount

Total operational cost	£222,240	Modelled scenario
Total sales revenue	£1,065,956	Based on average sales prices[3] plus gift aid at 20%
Total net revenues to be distributed	£801,530	95% of cash distribution to co-owners[4]

Table 15 - Co-owned revenue distribution sales and revenues - re-use organisation

Item	Average	Notes
Total number of goods	10,000	Modelled scenario
Total operational cost	£83,981	Modelled operational costs[5]
Total sales revenue	£200,382	Based on 25% distribution of net revenues
Total net surplus to re-invest	£116,401	No corporation tax applied

5.1.4 *Risk sensitivity*

The risk sensitivity of each model is based on the extent to which sensitivities on model inputs influence the viability of each model.

Table 16 - Co-owned revenue distribution risk sensitivities

Risk	Description	Value[6]
Minimum goods quantity	The minimum quantity of goods required by the retail hub for the re-use organisations to break even via their cash distribution on current scenario	21,605 total or 5,401 per participating organisation
Minimum revenue requirement	The minimum revenue required by the retail hub for the re-use organisations to break even via their cash distribution	£575,760
Net revenues to retail hub at lower prices	Net revenue at the modelled quantity of goods but at lower market prices	£593,012
Net surplus for re-use organisation at lower prices	Net revenue at the modelled quantity of goods but at lower market prices[7]	£56,880

[3] See appendices for sales price range estimates
[4] 5% profit retention by retail hub operating capital for operating float, ad hoc costs etc.
[5] See appendices for operational cost estimates
[6] Based on current modelled goods composition, values and sales performance
[7] See appendices for sales price range estimates

Support funding to break even at 5,000 items	If a participating organisation requires the same operating profile and costs to engage in this activity but only has access to 5,000 items what level of support funding is required	£10,258

5.1.5 Conclusions

The key conclusions from the development of this business case, based on the baseline model are that this business case:

- Can deliver revenues back to participating re-use organisations
- Also works at lower revenues for goods
- Only works to a positive revenue when each participating organisation can contribute upwards of 5,401 items for sale, at the baseline scenario, this may change with increased participation by more organisations
- When participating organisations contribute 5,000 items whilst still bearing the baseline re-use organisation costs funding support of over £10k will be required

5.2 Commercial guaranteed offtake model

5.2.1 Key non-financial benefits

For re-use organisations the main benefits of the commercial guaranteed offtake model are:

- Allows for a consistent turnover of goods at guaranteed prices
- Allows re-use organisations to focus on activities such as warehousing, repair and upcycling that can attract alternate funding
- Allows re-use organisations to benefit from the successes of profit motive organisations

For the retail hub the main benefits of this model are:

- Access to a greater range and quantity of stock via re-use organisations collaboration
- Focussed profit driven organisation adding to national GVA
- Ability to derive profit and reinvest in retail experience

5.2.2 Key non-financial risks

For re-use organisations the main risks of the commercial guaranteed offtake model are:

- Offtake model requires private sector collaboration to work effectively
- Liability of quality of goods supplied and quantity demanded
- Possibility of loss of gift aid in transactions

For the retail hub the main risks of this model are:

- Depends on the ability for re-use organisations to secure enough goods for re-use, repair and refurbishment
- Retail operation acting as guaranteed offtake creates liability of continual stock purchase
- Key risk is not meeting sales targets

5.2.3 Sales and revenues

In all models the sales and revenues are dependent on the extent of activities undertaken, and the scale of operation and sales, the results here are for the retail hub based on the baseline model developed with Zero Waste Scotland.

Table 17 - Commercial guaranteed offtake sales and revenues - retail hub

Item	Average	Notes
Total number of goods	40,000	Modelled scenario
Total goods sold at full price	32,000	80% sold at full price
Total goods sold at discount	8,000	20% sold at 25% discount
Total operational cost	£698,552	Includes purchasing of stock
Total sales revenue	£888,297	Based on average sales prices
Net revenue	£189,774	Earnings before interest and taxation

Table 18 - Commercial guaranteed offtake sales and revenues - re-use organisation

Item	Average	Notes
Total number of goods	10,000	Modelled scenario
Total goods sold at wholesale	10,000	Bought wholesale 50% discount
Total operational cost	£83,981	Modelled operational costs
Total sales revenue	£116,881	Based on average sales prices
Total surplus for re-investment	£32,920	No corporation tax applied

5.2.4 *Risk sensitivity*

The risk sensitivity of each model is based on the extent to which sensitivities on model inputs influence the viability of each model.

Table 19 - Commercial guaranteed offtake risk sensitivities - retail hub

Risk	Description	Value[8]
Minimum goods quantity	The minimum quantity of goods required by the retail hub in order to break even	21,959
Minimum revenue requirement	The minimum revenue required by the retail hub to break even at the minimum quantity of goods	£487,662
Net revenues at lower prices	EBIT at the modelled quantity of goods but at lower market prices	£90,182

Table 20 - Commercial guaranteed offtake risk sensitivities - re-use organisations

Risk	Description	Value[9]
Minimum goods quantity	The minimum quantity of goods required by the re-use organisation in order to break even	7,183
Net revenues at lower prices	Net revenue at the modelled quantity of goods but at lower market prices	£5,431
Support funding to break even at 5,000 items	If a participating organisation requires the same operating profile and costs to engage in this activity but only has access to 5,000 items what level of support funding is required per annum	£25,520

[8] Based on current modelled goods composition, values and sales performance
[9] Based on current modelled goods composition, values and sales performance

5.2.5 Conclusions

The key conclusions from the development of this business case, based on the baseline model are that this business case:

- Delivers revenues to participating re-use organisations and profits to the retail hub.
- Works at lower revenues for goods
- Only works to a positive revenue when the retail hub is selling 21,559 or more items per annum
- Only works to a positive revenue when each participating organisation can contribute upwards of 7,183 items for sale
- When participating organisations contribute 5,000 items whilst still bearing the baseline re-use organisation costs funding support of over £25k will be required

5.3 Co-owned webstore model

5.3.1 Key non-financial benefits

For re-use organisations the main benefits of the co-owned webstore model are:

- Allows for a larger retail point of sale to pool goods and attract customers
- Allows smaller and more rural organisations access to a larger market
- Allows re-use organisations to focus on activities such as warehousing, repair and upcycling that can attract alternate funding
- Organisations retain the revenues of retail sales
- Able to manage gift aid automatically

For the webstore the main benefits of this model are:

- Lower costs than physical retailing
- Consistent flow of goods
- Webstore is managed by the organisations that supply it
- No losses of taxation

5.3.2 Key non-financial risks

For re-use organisations the main risks of the co-owned webstore model are:

- Requires re-use organisations to manage distribution effectively
- Online purchases tend to be at lower values than on street sales
- Geographical variations and transport distances can influence sales of larger items

For the webstore the main risks of this model are:

- Success depends on effective marketing of website and management of sales transactions
- Requires web traffic to succeed and competing against free options such as Freegle and local services such as Gumtree

5.3.3 Sales and revenues

In all models the sales and revenues are dependent on the extent of activities undertaken, and the scale of operation and sales, the results here are for a single re-use organisation with 10,000 items participating in the webstore model.

Table 21 - Co-owned webstore sales and revenues

Item	Average	Notes
Total number of goods	10,000	Modelled scenario
Total goods sold at full price	7,000	70% sold at full price[10]
Total goods sold at discount	3,000	30% sold at 50% discount
Total operational cost	£123,950	Modelled operational costs plus webstore commission at 5%[11]

[10] Less items sold at full price due to lack of sale staff interventions and engagement
[11] Commission to allow webstore to run positive operating balance for occasional staff inputs and upgrades

Total sales revenue	£238,437	Based on average sales prices plus gift aid
Total surplus to re-invest	£112,500	No corporation tax applied

5.3.4 *Risk sensitivity*

The risk sensitivity of each model is based on the extent to which sensitivities on model inputs influence the viability of each model

Table 22 - Co-owned webstore risk sensitivities

Risk	Description	Value[12]
Minimum goods quantity	The minimum quantity of goods required by the re-use organisation in order to break even	4,914
Net revenues at lower prices	Net revenue at the modelled quantity of goods but at lower market prices	£59,226

5.3.5 *Conclusions*

The key conclusions, based on the baseline model are that this business case:

- Can deliver revenues back to participating re-use organisations
- Works to greater benefit at lower revenues due to low retail costs
- Only works to a positive revenue when each participating organisation can contribute upwards of 4,914 items for sale, at the baseline scenario

[12] Based on current modelled goods composition, values and sales performance

6 Summary and recommendations

6.1 Summary comparison of business case outputs – re-use organisations

A comparison of the key aspects of each business cases impact on re-use organisations is presented below:

Table 23 - Summary comparison of business case outputs - re-use organisations

Item	Co-owned revenue distribution	Commercial guaranteed offtake	Co-owned webstore
Profit/surplus at average prices	£116,422	£32,920	£112,500
Net revenue at low prices	£56,880	£5,431	£59,226
Minimum goods required at average prices	5,401	7,183	4,914
Support required at 5,000 items	£10k+	£25k+	0

Clearly the co-owned models present the largest net revenue to re-use organisations for distribution to their respective social activities, consistent with the accrual of more of the revenues of each item sold, and the contribution to sales made by the gift aid scheme. This is however, also the higher risk model in non-financial terms as all revenues are dependent on meeting sales targets. Revenues in the commercial offtake model are lower, but are guaranteed therefore minimising risk. In terms of sensitivities, in co-owned models the minimum goods required (based on the modelled warehousing and stock management costs) is similar and should be set at 5,000 – 5,500 items. The support required for smaller organisations, with fewer goods for sale is highest in the higher risk co-owned model and lowest in the webstore model with the smallest retail operation costs.

6.2 Summary comparison of business case outputs – retail hubs

A comparison of the key aspects of each business case impact on the retail hubs is presented below:

Table 24 - Summary comparison of business case outputs - retail hubs

Item	Co-owned revenue distribution	Commercial guaranteed offtake	Co-owned webstore
Net revenue before tax at average prices	£801,530[13]	£189,774	n/a
Profits	n/a	£151,819	n/a
Net revenue before tax at low prices	£593,012	£90,182	n/a
Minimum goods required	21,605	21,959	n/a

[13] Distributed to re-use organisations

Minimum revenue required at average prices to break even	£575,760	£487,662	n/a

The co-owned revenue sharing model makes significant net revenues, and this is directly distributed to participating re-use organisations, therefore maintaining its non-profit status. As a result there is a minimum quantity of goods required to pay for both the re-use organisations the warehousing and stock management activities and also the retail store costs, thus a high quantity of goods and revenue is required.

The commercial guaranteed offtake model has the capability of making profits, but has significantly higher retail costs due to guaranteed purchasing of stock and requires more stock and revenues to break even.

The webstore model covers the vast majority of costs via its transaction costs and subscription from the re-use organisations. As such the success of the webstore is dependent on the re-use organisations rather than the webstore itself.

6.3 Recommendations

6.3.1 General recommendations

Based on the outputs of the business models evidence building, and the resulting outputs, various general recommendations are made here to improve the accuracy of the business cases:

- An understanding of the geographical clustering of re-use organisations to identify a core number of business cases that can be develop based on the minimum number of goods required
- The geographical clustering should create an understanding of the viability of business cases based on rural versus urban potential for each business model type
- An enhanced understanding of the quantity and composition of goods may allow for business cases to be made not only on geographical economies of scale, but also the ability to split models by goods (i.e. is it more valuable to sell small goods at a webstore, and larger domestic goods at retail outlets)

6.3.2 Recommendations for re-use organisations

For a re-use organisation looking to develop one or more of these business models the recommendations are:

- Based on this analysis, the creation of surplus is possible, if costs and sales are managed effectively
- Re-use organisations should assess their own desire for risk and reward in order to choose which business model may suit them best
- Re-use organisations, unless they are trading more than 21,000 items per annum will need to partner other organisations in order to make a larger retail hub viable
- The webstore concept may be more suitable for rural organisations, expanding the market at lower cost
- Greater understanding is required on quantity and composition of goods collected and sold by re-use organisations to assess their own viability
- More understanding is required by each re-use organisation on the overall potential for repair and refurbishment to be integrated into their core activities to increase supply

6.3.3 Recommendations for commercial retail organisations

For commercial organisations looking to become involved in the development of these business models, and in particular the commercial offtake model:

- An understanding is required of the appetite in the commercial sector to operate as a guaranteed offtake of goods, and any conditions that may be required to stimulate this activity such as minimum standards or grant support
- In order for the commercial offtake business model to be viable it is likely that commercial organisations will need to be located in geographical clusters to be supplied by surrounding re-use organisations, so location is a key issue for success
- Any commercial organisation looking to implement the offtake model would require the turnover of circa 22,000 items per annum to viable
- Profits are possible and can be significant if sales are managed in line with retail costs

6.3.4 Recommendations for local authorities

It is anticipated that, as a large supplier of goods into re-use organisations, local authorities will have a large part of play in the successful development of these business models, as such:

- Local authorities should assess to what extent they can increase the supply of goods, either via novation of collection to re-use organisations or via HWRC management
- Local authorities can also be a partnering organisation in the development of larger stores, with significant retail assets to bring to any partnership
- Local authorities should look to their own training and employment schemes to assess how these can facilitate greater repair and refurbishment of goods for retail

7 Appendix 1 – Business case assumptions

7.1 General assumptions

The basic assumptions used in the development of business cases is as follows:

Table 25 - Business case general assumptions

Item	Assumptions	Basis
Gift aid	20%	Basic regime
Corporation tax	20%	Tax regime from 2015
National insurance cost	12%	Based on 2014/15 rates assumed to remain the same in 2015/16
Pension contribution	3%	Minimum requirement for all employers
Minimum wage	£6.50	Based age of employees being 21+
Operating cost inflation	0.5%	Based on wage growth estimates
Water rate	Exempt	Charitable organisations, non-profits exempt

7.2 Warehouse and stock management costs

7.2.1 Costs for physical asset retail models

The costs for the operation of a warehouse and stock management "spoke" have been modelled based on assumed parameters as follows:

Table 26 - Business case re-use organisations warehouse and stock management costs for physical asset models

Item	Cost per annum	Assumptions
Total staffing costs	£50,232	Based on 2 x full time, 2 x part time and 3 volunteers
Total fixed overheads	£23,037	Based on rental of 400m2 unit, rates at 80% relief and insurance
Utilities	£4,400	Based on electricity only and relief on water rates
Office	£1,632	Based on line rental, broadband and office consumables
Vehicles	£4,660	Based on rental of 7.5t tail lift including servicing, fuel and MOT

Total	£83,961	Exclusions include volunteer payments, waste collections and basic office set up costs and disposal of unsold items

7.2.2 Cost for webstore model

The costs for the operation of a warehouse and stock management "spoke" for the webstore model are increased owing to the need for more extensive distribution including additional transport and mailing costs.

Table 27 - Business case re-use organisations warehouse and stock management costs for webstore model

Item	Cost per annum	Assumptions
Total staffing costs	£65,780	Based on 3 x full time, 2 x part time and 3 volunteers
Total fixed overheads	£28,786	Same as other models but including contribution to webstore costs
Utilities	£4,400	Based on electricity only and relief on water rates
Office	£5,370	Same as other models but with franking and postage costs
Vehicles	£9,320	Based on rental of 2 x 7.5t tail lift including servicing, fuel and MOT
Total	£114,015	Exclusions include volunteer payments, waste collections and basic office set up costs and disposal of unsold items

7.3 Central retail hub costs

The costs for the operation of a central retail "hub" have been modelled based on the assumed parameters as follows:

Table 28 - Business case retail hub costs

Item	Cost per annum	Assumptions
Total staffing costs	£58,006	Based on 2 x full time, 3 x part time
Total fixed overheads	£141,172	Based on rental of 1,000m2 unit, full business rates, EPOS rental, professional services, insurance
Utilities	£56,270	Based on electricity, gas, water and waste collection
Office	£1,632	Based on line rental, broadband and office consumables
Vehicles	£0	A no delivery option is modelled as baseline

Total	£257,080	Exclusions include deliveries, and disposal of unsold items

7.4 Webstore costs

The costs for the operation of a central webstore as a retail "hub" have been modelled based on the assumed parameters:

Table 29 - Business case webstore costs

Item	Cost per annum	Assumptions
eCommerce site build	£4,000	Estimate for one off cost
Ecommerce design consultancy	£3,000	Estimate for one off cost
Operating costs	£1,681	Based on domain, hosting, site management
Transaction fees	£20,247	Based on a 50/50 split between PayPal and Sagepay/Cardsave at current transaction costs for 38,000 transactions
Total	£21,929	Exclusions site build and design consultancy as one off costs

7.5 Estimated sales prices

Table 30 - Business case estimated sales prices

Item	Average	Low	High
Occasional Furniture	£20.00	£15.00	£25.00
Flooring	£25.00	£20.00	£30.00
Soft Furniture	£50.00	£40.00	£60.00
Bric-a-brac	£3.50	£2.00	£5.00
Miscellaneous	£3.50	£2.00	£5.00
Small WEEE	£30.00	£20.00	£40.00
Large WEEE	£62.50	£55.00	£70.00

Zero Waste Scotland works with businesses, communities, individuals and locals authorities to help them reduce waste, recycle more and use resources sustainably.

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