University of Strathclyde Business School

Market Research for EcoStamp Waste Compactor - Final Report

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Executive Summary

As global waste volumes escalate, innovative solutions like EcoStamp Waste Compactor are imperative to empower sustainable waste management practices. This report synthesises qualitative market research insights to inform commercialisation strategies for launching EcoStamp's novel automated compactor technology.

The research was commissioned to evaluate consumer and business demand, gauge pricing thresholds, and identify optimal positioning for EcoStamp. This innovation densifies trash by eliminating void space, enabling increased bin capacity between pickups. Reduced collection needs post-compaction to create quantifiable cost and emissions savings - a compelling value proposition.

Innovations face inherent challenges in market education and persuading conservative customers. Hence, EcoStamp required an in-depth understanding of target segments to craft tailored strategies addressing adoption barriers. Customer testing is invaluable for entrepreneurs commercialising disruptive inventions like EcoStamp, signalling unmet needs and guiding positioning.

An exploratory, qualitative methodology was adopted involving 15 in-depth interviews with target consumers - larger households and hospitality/retail businesses. Qualitative techniques were selected given limited secondary data on this unprecedented product and the need to probe complex consumer attitudes and behaviours regarding waste management innovations. The conversational interviews elicited detailed narratives to gain a holistic understanding of pain points, perceptions and positioning considerations.

Key findings revealed customers frequently battle overflowing bins, affirming demand alignment for EcoStamp's core compaction value proposition. However, unaided awareness of compactors was very low, indicating an imperative for educating the market. Participants expressed interest in the convenience, sustainability and simple operation, but also concerns about costs, safety, noise and integration risks. Enabling hands-on trials was deemed important to experience benefits before purchase. Motivations diverged between residential

users focused on simplicity and families versus businesses prioritising operational continuity and cost reduction, requiring tailored messaging.

Key observations centred on leveraging demand drivers through waste reduction messaging while proactively reassuring consumers. Recommendations include penetrating pricing from £150-260 with creative financing, developing ROI calculators, launching an intensive educational campaign, fostering hands-on trials and demos, tailored positioning per segment, certifications for safety and seamless integration, and PR to establish thought leadership. Ongoing PESTEL analysis was also advised to monitor external forces shaping strategy.

Through the course of this research, qualitative insights revealed key customer needs, values and reservations that must inform commercialisation planning to fulfil the demand for improved household and business waste management. While limitations exist regarding sample size and research scope, the findings offer a robust launch pad to introduce an impactful innovation aligned with growing environmental consciousness. Meticulous execution of product experience quality, strategic communications, partnerships, and overcoming adoption uncertainties can enable EcoStamp to achieve its mission of enabling sustainable consumer and enterprise behaviours. This research provides a crucial direction to transform interest into measurable impact.

Table of Contents

1. Introduction

1.1 Background

The rapidly escalating global generation of municipal solid waste presents an urgent challenge demanding innovative solutions to manage waste sustainably. Current inadequate waste collection and disposal practices lead to severe environmental hazards from pollution, greenhouse gas emissions, and disease vector exposure (Sujitra Vassanadumrongdee et al., 2023).

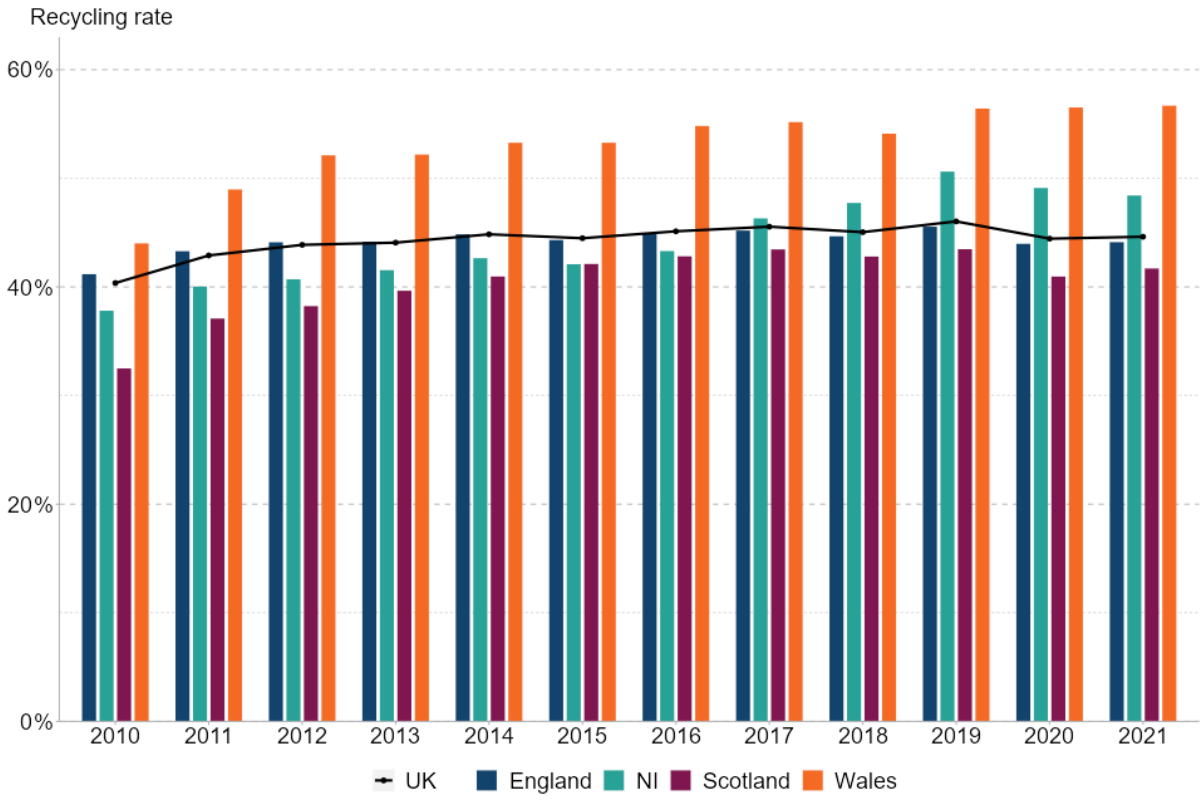
The UK faces significant challenges in sustainably managing its municipal solid waste. While some progress has been made, major systemic and infrastructural limitations persist that hinder further advancement. Achieving sustainable waste management requires an integrated strategy combining reduction, recycling, resource recovery and safe disposal (Datta, 2022). A key priority is minimising waste at the source before collection. Compacting trash is an effective technique for significant volume reduction by removing excess void space (Barma et al., 2022).

The EcoStamp Waste Compactor provides an innovative on-site compaction solution enabling enhanced consumer-level waste management. This automated device allows individuals to easily compress waste directly inside standard 120L wheelie bins. Studies confirm compaction can double or triple bin capacity by densifying contents (Chen, 2022).
This increased storage expands the period between collections, reducing fuel use, transport emissions, and traffic from fewer waste truck trips. Less frequent bin emptying also saves consumers time while limiting exposure to pathogens at municipal waste sites (Muheirwe, Kombe and Kihila, 2022).

For businesses managing large-scale waste, on-site compaction similarly optimises operations and overhead. Automated compression of trash, recyclables and other waste streams boost productivity and efficiency while meeting sustainability goals.

With environmental impact escalating, solutions like the EcoStamp Waste Compactor will become essential for both households and enterprises to minimise waste. Compressing at the source is a convenient, cost-effective strategy aligned with the circular economy.

Figure 1: Recycling rate from Waste from Households, UK and country split, 2010–2021



Source: WasteDataFlow, Defra Statistics

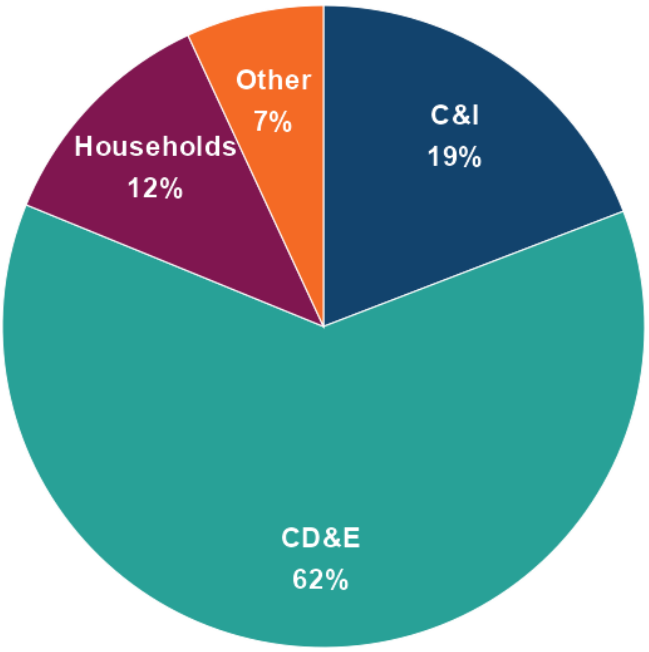
Figure 1 shows the UK achieved a 44.6% recycling rate for waste from households (WfH) in 2021, a slight increase from 44.4% the previous year (DEFRA, 2022). This rate includes incinerator bottom ash (IBA) metal recovery in the total recycled waste calculation, a practice that remains debated (Zaman, 2015).

Breaking down by country, the WfH recycling rate grew in 2021 across much of the UK except Northern Ireland. England recycling increased to 44.1%, while Northern Ireland dropped to 48.4% from its 2020 high. Scotland rose to 41.7% and Wales achieved the highest UK recycling rate at 56.7% (DEFRA, 2022).

While marginal, the broader recycling trend reflects incremental progress in managing household waste sustainably. However, the UK continues to landfill approximately 21.5% of municipal solid waste, above the European average of around 18% (Lebersorger and Beigl, 2011). Significant opportunities remain to divert and recycle more household waste through strategies like education, incentives, and enhanced separation (Miliute-Plepiene et al., 2016).

Achieving the UK's national recycling target of 50% WfH by 2025 will require addressing ongoing barriers like confusion about proper recycling and limitations of existing collection infrastructure (Pahl, Wyles and Thompson, 2017). Further, increasing residential recycling will be crucial for the UK to reach its legally binding goal of net zero greenhouse gas emissions by 2050.

Figure 2: Waste generation split by source, UK, 2018



Source: (UK Department for Environment, Food & Rural Affairs, 2019)

Data indicates construction, demolition and excavation activities generated approximately 62% of total waste in the UK during 2018 (DEFRA, 2022). This waste stream from

infrastructure and building projects represents a major business opportunity and environmental imperative.

The remaining waste originated from commercial and industrial sources (19%), households (12%), and other activities (7%) (DEFRA, 2022). In England specifically, construction and demolition debris accounted for 64% of all waste - even higher than the overall UK figure. Reducing waste from construction and demolition is critical for the UK to meet its sustainability goals and comply with environmental regulations. Businesses providing services in construction waste management, recycling, and diversion can capitalise on this vast 62% portion to achieve growth while making a meaningful impact.

Specific solutions for reusing, repurposing, and recycling discards from construction and demolition sites will be essential. Businesses that can capture value from these large-scale waste flows and divert debris from landfills will gain a competitive advantage. Moreover, innovating to minimise construction waste at the source through better design, processes, and materials use will be a growing necessity. Substantial business opportunities exist across the construction waste ecosystem in the UK.

1.2 About the Client

Mr. Darren Hicks, initially an offshore wind farm technician, transitioned to establishing Lochside Catering following personal commitments in 2020. Despite its success, the business encountered a critical challenge with escalating waste generation and disposal costs, threatening sustainability. Leveraging Mr. Darren’s offshore expertise, the EcoStamp Waste Compactor was innovated, effectively reducing waste volume at its source. This technology significantly curtailed removal expenses, ensuring Lochside Catering’s viability. Hicks’ journey underscores the importance of adaptability and innovative thinking in business. Hicks’ offshore background equipped him with critical problem-solving skills, allowing him to devise a sustainable waste management solution, exemplifying the impact of entrepreneurial spirit in addressing business challenges. The EcoStamp Waste Compactor not only ensured the business's sustainability but serves as an inspiration for businesses navigating tough conditions through novel solutions.

1.3 About EcoStamp Waste Compactor

Our client has developed an innovative technology that densifies trash by eliminating excess void space, allowing increased storage capacity per bin. EcoStamp Waste Compactor is an automated device that compresses waste on location, reducing disposal costs through fewer collection needs post-densification. This technology is user-friendly and expands access to responsible waste practices, empowering sustainable consumer and business behaviours to collectively address the waste crisis. The company has been collaborating with Robert Gordon University to finalise the client's concept for a portable motorised EcoStamp Waste Compactor. This innovative technology will enable businesses and individual householders to compact and contain rubbish in Wheelie Bins more effectively.

Overall, EcoStamp Waste Compactor is an innovative, automated solution for large-scale garbage reduction. Marketing should emphasise storage optimisation, reduced collection requirements, smart waste management capabilities, and its role in supporting sustainable consumer and company behaviours. Highlighting these advantages would emphasise it as an intelligent, eco-friendly solution that allows stakeholders to tackle the urgent trash challenge together.

1.4 Products' Aims and Objectives

This market research aims to evaluate demand, usability, feasibility and pricing for EcoStamp Waste Compactor in consumer and business markets. Compacting waste on-site provides significant benefits like lower collection costs and improved waste management efficiency (Velis et al., 2023). EcoStamp Waste Compactor allows more trash storage per bin, enabling less frequent emptying (Muheirwe, Kombe and Kihila, 2022). This reduces transportation, labour, and disposal costs from fewer pickups. Compaction also boosts convenience for consumers and businesses. This study will quantify market demand and price tolerance to inform pricing and positioning strategies. Testing customer response is vital for capitalising on the immense need for improved waste management worldwide (Budihardjo et al., 2023).

1.4.1 Consumer Market Evaluation

A key objective is gauging interest among individual household consumers. Surveys and interviews will assess openness to purchasing the compactor for domestic use. Feedback on perceived convenience, cost savings, and other benefits will determine the most compelling

value proposition for homeowners (Chen, 2022). Testing price sensitivity from £150-£220 will identify optimal consumer pricing to drive adoption while capturing value.

The consumer market research will provide critical data to model sales potential among the residential segment. These demand insights can inform production planning, distribution strategy, and sales process design. Compiling competitive intelligence on alternatives and incumbent solutions can further strengthen the go-to-market plan.

By directly evaluating homeowner attitudes and preferences, the market research will derive actionable guidance for tailoring EcoStamp's positioning, pricing, and messaging to win over consumers. Capturing this large target segment will be essential for achieving scale and mainstream viability.

1.4.2 Business Market Evaluation

Equally important will be conducting market research to quantify demand and willingness-to-pay among business customers for EcoStamp. In-depth interviews with key decision-makers across target enterprise segments will assess their recognition of the potential financial and operational benefits from on-site waste compaction.

The interviews can explore business customers' receptiveness to the value propositions around lowered waste collection costs, enhanced sustainability, and efficiency gains in waste management workflows. Their feedback will elucidate how much value businesses place on effective on-site waste densification.

Additionally, testing business price sensitivity in the range of £150-£220 will enable pricing optimisation based on the segment's cost-benefit analysis and expected ROI from EcoStamp’s investment. Businesses often exhibit a greater willingness to pay for solutions that enhance productivity, lower expenses, or provide other enterprise benefits.

The market research insights will inform strategic decisions on how to best position, market, and sell Ecostamp to business customers across industries like hospitality, retail, healthcare, and facilities management. Capturing this major segment will be key to commercial success.

1.4.3 Total Addressable Market Sizing

Aggregating consumer and business demand signals will facilitate total addressable market modelling to estimate broader opportunities and guide strategies (Cui et al., 2022). Effective customer research provides intelligence to launch innovations successfully. For EcoStamp, testing response, willingness-to-pay and demand will be invaluable for commercialisation.
For any new product like EcoStamp, rigorous customer testing is essential to evaluate response, willingness to pay, perceived value and overall demand. These demand-side signals validate market needs and product-market fit.

Effective customer research illuminates customers' true problems and interests to position innovations advantageously. For EcoStamp, consumer and business testing will be invaluable to optimise pricing, positioning, sales channels and go-to-market strategies.

1.5 Journey So Far

EcoStamp has made significant strides in bringing waste compaction from concept to near commercialisation. We are now in the final project phase focused on customer insights analysis, environmental impact quantification, and product optimisations to ready this innovation for market launch.

Over the past month, in-depth interviews were conducted with 15 potential users across consumer and business segments. The qualitative feedback gathered through sessions provided rich insights into customer requirements, pain points, and willingness to pay.
The interview transcripts were coded and statistical analysis techniques were used to identify key trends and correlations in customer perspectives. These crucial findings are guiding final adjustments to optimise product-market fit.

Additionally, customers consistently valued the potential cost savings from reduced waste pickup needs after compaction. The marketing messaging will emphasise this along with environmental benefits to maximise appeal.

In parallel, the company has partnered with Robert Gordon University to conduct in-depth life cycle assessments on EcoStamp’s impact. By quantifying the greenhouse gas emission

reductions from lower waste transportation, we can promote the compelling carbon savings this innovation offers.

Moreover, Robert Gordon University has helped in establishing standardised testing protocols to simulate years of real-world use. Their engineering team is applying these accelerated stress tests on the final prototypes to validate durability and performance over an extended lifespan. The collective insights from customer interviews, environmental assessments, and accelerated prototype testing are being incorporated into manufacturing planning and quality control to ensure high standards are met.

Engaging in rigorous customer, sustainability, and technical validation during this final project phase has optimised the EcoStamp Waste Compactor for commercial success. Cross-functional coordination with Robert Gordon University and dedication to research-backed development have positioned EcoStamp to launch an impactful innovation that meets real market needs. We look forward to driving adoption at scale as customers experience the benefits firsthand.

2. Methodology

2.1 Rationale for Qualitative Methods

This research adopted an exploratory, qualitative methodology to meet the complex aims of generating nuanced consumer insights to inform the client's novel wheelie bin compactor marketing strategy. As emphasised by Creswell and Poth (2018), qualitative approaches are advantageous when seeking to explore and understand multi-layered phenomena within their real-world contexts. The rationale for a qualitative approach aligned with three key factors.

Firstly, the innovative nature of the compactor product meant that secondary data sources were extremely limited, underscoring the value of direct data collection from target consumers, as Quinn (2002) highlights. Secondly, the aims centred on complex behavioural aspects, including values, attitudes, pain points and decision motivations regarding waste management and technology adoption. Watkins (2012) notes qualitative data is crucial for investigating such subjective contextual factors.

Finally, the client's product was still in the early development stages, necessitating an exploratory, inductive and flexible research approach, rather than hypothesis testing, as endorsed by Gephart (2004). In light of these contextual factors, qualitative techniques were selected as optimal to generate the required consumer insights.

2.2 In-Depth Interviews for Insight Generation

Within qualitative methodology, in-depth interviews were specifically chosen as the data collection technique based on their recognised capacity to elicit detailed perspectives from individuals, as emphasised by Schultze and Avital (2011). The conversational, open-ended nature of in-depth interviews empowers participants to expand on their experiences and beliefs, enabling researchers to gain a holistic understanding of their mindsets, as Rubin and Rubin (2012) discuss.

Furthermore, interviews allow not just surface descriptions, but richer explanations of why participants think and feel the way they do. As King et al. (2018) note, this establishes the vital context for consumer perceptions that questionnaires cannot deliver. These strengths aligned neatly with the research aims of generating actionable insights into consumers' waste management realities and how the compactor product might address their needs and concerns.

2.3 Exploratory Multi-Method Qualitative Design

A multi-phase exploratory design was adopted, as advocated by Stebbins (2001) for flexibility. Firstly, secondary sources on waste management practices, consumer attitudes and industry trends were reviewed to orient the focus. Semi-structured in-depth interviews formed the core phase, building on the initial findings to zero in on emerging topics of interest.
Each member of the 5-person research team conducted interviews individually with participants. This approach allowed a broader range of perspectives to be captured through the unique interaction between each interviewer and participant, as highlighted by Chenail (2011). Having multiple interviewers also reduced the potential for individual interviewer bias to influence the results, as noted by Englander (2012).

The interviews were interactive and dialogic to elicit detailed sharing of experiences, perceptions and narratives from participants. The dual-method design allowed the interviews conducted by all team members to yield rich, multifaceted data.

2.4 Participant Recruitment and Sampling Strategy

An information-oriented, purposive sampling strategy was utilised for participant recruitment per Palinkas et al.'s (2015) recommendations. The sample comprised 15 Glasgow Residents from priority segments – larger households (3-4 members) and hospitality/retail businesses. These groups were expected to generate sizable waste volumes, and hence offer useful insights on issues and compactor value propositions. Participants within target segments were deliberately recruited based on relevance, not representativeness, as endorsed by Gentles et al. (2015) for qualitative research. All sampling decisions were underpinned by the goal of including data-rich cases.

2.5 Interview Procedures, Protocols and Data Management

Individual in-depth interviews were conducted, lasting 30-40 minutes on average. Rubin and Rubin's (2012) responsive interviewing techniques were used to promote open sharing of experiences, perceptions and stories. Questions were semi-structured around key themes, but flexible to allow organic exploration of topics that arose. With permission, interviews were recorded and professionally transcribed to enable granular analysis while retaining participant perspectives intact, as advised by McLellan et al. (2003). Data were de-identified and securely stored with restricted access to protect participant privacy.

2.6 Thematic Analysis Approach

Data were systematically analysed using Braun and Clarke's (2006) rigorous six-phase thematic analysis framework. The phased process involved repeated reading of transcripts to achieve immersion, inductive coding to identify concepts, extracting codes into potential themes and reviewing and refining themes to ensure accurate representation of the qualitative insights. This allowed methodical identification of patterns across the dataset concerning waste management realities, needs and product perceptions.

2.7 Ethical Considerations

Meticulous ethical guidelines were implemented, guided by the University of Strathclyde's approval before research. Participants were fully informed of the purpose and nature of the study. Written consent was obtained from all participants, emphasising voluntary participation and freedom to withdraw from the research at any time. Participant anonymity was preserved through de-identified data. Data were handled securely and confidentially at all stages, accessible only to the researchers. Participants were protected from any harm or adverse impacts. The analysis and reporting maintained high ethical standards and participant perspectives were represented accurately.

2.8 Issues of Trustworthiness in Qualitative Research

While qualitative research offers rich insights, validity and reliability concerns arise from researcher subjectivity and interpretation involved in data collection and analysis, as discussed by Noble and Smith (2015). Strategies were instituted to enhance trustworthiness, guided by Lincoln and Guba (1985). Prolonged engagement with transcripts and iterative analysis boosted the findings' credibility. The researchers critically reflected on their assumptions to mitigate bias. Interpretations were discussed within the research team to achieve analytical triangulation. Thick descriptions captured contextual insights and perspectives in participants' own words. An audit trail detailed the research process. These steps maximised analytic rigour.

2.9 Limitations and Delimitations of the Qualitative Methodology

The research had limitations regarding generalisability and sampling constraints. The small, geographically limited Scottish sample prohibits broad generalisations to wider populations, though qualitative research does not aim for representativeness. Resource limitations restricted sample size and diversity. Participants may have exhibited social desirability bias during interviews. The study was exploratory, not designed for theory testing. However, transparency regarding these limitations fosters rigour, as Simundic (2013) emphasises. The methodology achieved the delimited, exploratory aims of generating rich consumer insights for the client despite the limitations.

In conclusion, the carefully designed qualitative methodology delivered meaningful, context-rich data based on an in-depth exploration of target consumers' perspectives on waste realities and the comparator product opportunity. Ethical principles were upheld throughout. Limitations must be acknowledged transparently, but the approach succeeded in generating invaluable strategic insights for the client. The methodology forms a robust foundation for devising a consumer-informed marketing plan tailored to the innovation goals. Further quantitative research can build on these exploratory qualitative findings.

3. Findings

This section presents the key findings from 15 in-depth interviews conducted with potential consumers and business users of EcoStamp Waste Compactor. The interviews provided rich qualitative insights into customer perceptions, needs and preferences to inform product development and marketing strategies.

As outlined in the introduction, the research aimed to evaluate demand and pricing for the EcoStamp device in consumer and business markets. Compressing trash on-site yields benefits like lower collection costs and efficiency gains (Velis et al., 2023). The EcoStamp allows more storage per bin through compaction, enabling less frequent emptying (Muheirwe, Kombe and Kihila, 2022).

Primary research is invaluable for quantifying market demand and testing product-market fit (Cui et al., 2022). The interviews enabled direct customer engagement to evaluate responses to the EcoStamp value proposition. Feedback on willingness-to-pay and perceived benefits revealed key considerations for pricing and positioning this new-to-market innovation.

Current Waste Management Approaches

The first objective was to understand customers' existing household and business waste management systems. This benchmarking highlighted pain points and upgrade opportunities.

Across the sample, standard council wheelie bin collection was the predominant method for managing residential waste. 12 out of 15 participants (80%) relied solely on regular council pickup services using 120-240L wheelie bins. None reported using supplementary private waste collection.

Collection frequency for these council services varied from weekly (53% of participants) to every 2 weeks (27%). The remainder did not specify their exact council collection cycle.

Participants reported their wheelie bins typically filled up fully 1-3 times per week, before scheduled council pickup days. Only 20% said their bins lasted the entire cycle without overflowing.

Just 33% of participants stated they were satisfied with their current residential waste collection methods. However, like how interviewee 3 iterated, “The biggest pain point is the wheelie bins reaching capacity too quickly”, most (67%) expressed some dissatisfaction, mainly due to limited bin capacity.

Among business customers, standard council wheelie bins were also the primary waste management method for the restaurant, care home and university accommodation manager participants. The grocery store and construction engineer participants used large commercial waste compactors and cages, given their high waste volumes. Like residential users, business customers reported needing additional bin capacity and collection frequency. Wheelie bins filled up rapidly for the restaurant, care home and grocery store users.

Overall, the interviews found high reliance on standard council wheelie bins across both target segments. However, most participants faced capacity constraints, resulting in overflowing bins and dissatisfaction. This establishes a strong customer need for enhanced residential and business waste management solutions like the EcoStamp.

31. Waste Management Pain Points

All participants cited limited wheelie bin capacity and frequent overflowing as their top waste management pain points. With bins reaching full capacity multiple times a week, excess waste piles up and unpleasant odours are emitted.

The restaurant, care home and grocery store users specifically highlighted struggling to cope with their high waste volumes using standard council wheelie bins. Their bins overflowed constantly despite their large sizes (660L).

Small business users like the retailer identified overflowing less frequently - when they had busy periods or large inventory deliveries. However, residential users reported constant capacity constraints, with family size, shopping and food waste contributing.

As interviewee 13 rightly mentioned, “taking the trash out requires a lot of I would say energy, a lot of work as taking those bags out is not an easy thing.” Other noted pain points

included bad odours when bins overflow (40% of participants), difficulty moving overfilled wheelie bins (20%), and contamination from animals when bags spill outside bins (13%).

These challenges demonstrate a strong customer need for expanded waste storage between pickups. The EcoStamp's compaction capabilities offering 2-3x capacity align perfectly with this demand. Messaging should emphasise relieving these capacity constraints through on-site densification.

3.2 Bin Usage Frequency

Interview findings revealed most participants needed to empty overloaded wheelie bins multiple times per week. 53% said their bins filled up fully 2-3 times weekly, while 20% reported needing daily emptying. Just 13% said their bins lasted the once-weekly council pickup cycle without overflowing.

Again, business users like restaurants and care homes had the highest usage frequency, needing to empty bins up to 3-4 times daily during busy periods. Compacting could drastically reduce this workload through increased capacity.

By allowing longer durations between emptying, the EcoStamp can deliver convenience benefits for households along with operational efficiencies for businesses. This advantage should be stressed in messaging to resonate with these frequent users.

Familiarity With Compactors

The interviews gauged customers' existing familiarity with and perceptions of waste compacting solutions. This provided a benchmark for tailoring communications based on current awareness levels.

The vast majority (93%) expressed no or very limited familiarity with residential and small business waste compacting devices. When asked directly, 12 out of 15 respondents said they had never heard of such solutions before.

20% were aware of large industrial compactors used in waste management and recycling centres. But none had seen or used smaller-scale compactors designed for homes and businesses.

This reveals a major awareness gap around compactors for personal and commercial waste streams. It signals a strong need for educating target users on EcoStamp's capabilities and value proposition. Demonstrations and free trials would be particularly effective for these unfamiliar customers.

3.3 Desired Compactor Features

Despite the low familiarity, participants responded positively when introduced to the EcoStamp concept. They readily identified the desired features and benefits of a residential compactor.

The most commonly cited features were:

- User-friendly, simple operation (60% of respondents)
- Fast/effective waste compaction (33%)
- Durability and reliability (20%)
- Safety features (20%)
- Noise reduction (20%)

Ease of use was a consistent priority, as participants wanted compactors to seamlessly integrate with existing waste routines. Intuitive operation is critical for ease of adoption.

Participants also placed high importance on compression performance, expressing interest in doubling or tripling bin capacity. Maximising storage between pickups was a major goal.

For residential users, quiet operation was highly desirable. However, business customers like the construction engineer placed less emphasis on noise reduction due to industrial contexts.

Overall, the findings reveal customer demand for an efficient, convenient and durable residential compactor. EcoStamp should excel in these dimensions while ensuring safety.

3.4 Sustainability Importance

The research also gauged the role of environmental sustainability in customer choice of waste solutions. This informs messaging strategies on eco-friendliness as a unique selling proposition.

A strong majority of participants (73%) agreed sustainability is an important factor in waste management decisions. Only 20% expressed neutrality on environmental impact.
Customers recognised the link between effective waste management, reduced landfill dumping and environmental benefits. They saw value in solutions that support the circular economy.

However, 60% said cost and usability are bigger priorities than just sustainability credentials alone. This indicates that EcoStamp must convey sustainability gains through tangible user benefits like convenience and cost savings.

An environmentally-conscious customer segment exists, but messaging should focus on the operational wins from compaction and smart waste management. This engages customers motivated primarily by usability and costs first.

3.5 Influencing Factors for Adoption

Evaluating key factors that influence adoption provides guidance on marketing elements to emphasise. Participants cited the following factors as most important if considering a waste compactor purchase:

- Cost (60%): Affordability was the top factor for both residential and business customers. Getting ROI data could convince potential users.
- Ease of use (53%): Seamless integration and simple operation were critical. Complicated devices face barriers to adoption.
- Maintenance needs (33%): Reliability and low maintenance requirements were valued, especially among businesses.
- Noise level (20%): Residential users highlighted the desire for quiet operation. This was a lower priority for business customers.

Cost and ease of use considerations should feature prominently in EcoStamp messaging. Maintenance aspects should also be addressed. But noise could be deemphasised based on the low overall importance for business segments.

3.6 Willingness to Pay

Pricing threshold questions gauged customers' perceived value of the benefits of on-site waste compaction. This guided viable price points and revenue modelling parameters.

The strong majority (73%) indicated willingness to pay a premium for EcoStamp given its benefits and added value. However, 20% were uncertain about paying a premium currently.
Like interviewee 11 mentions, "I don't see myself paying a premium for such a product without proven results. If any trials can be done to prove the product's benefits, I'd be willing to pay a premium only then."

For residential users, an acceptable price range was typically £150-£200. Business buyers showed greater willingness to pay up to £240-£260 due to ROI considerations.

Participants wanted evidence of potential cost savings on waste collection fees to justify the pricing. But overall, responses indicated meaningful price flexibility exists.
Between £150-£260 appears a viable range for further pricing optimisation modelling based on cost inputs. Significantly undercutting competitors on price is not advised based on indicated willingness to pay. Financing options could reduce barriers to high upfront costs.

3.7 Usage Frequency

Examining prospective usage frequency provides data on scaling revenue and earnings models. More frequent utilisation results in greater avoided waste pickup costs and compactor payback.

Most participants envision frequent compactor usage as part of their waste routine:

- Daily usage: 33%
- 2-3 times weekly: 27%
- Weekly: 27%
- Unsure: 13%

Residential users are skewed towards weekly usage to supplement council pickups. Business customers described daily usage scenarios to manage high volumes.

Usage spans a wide spectrum depending on customer type. However, the model averaging 2-3 weekly usages across the installed base provides a reasonable assumption for revenue

modelling. Higher utilisation should be emphasised for small businesses managing food, packaging and high waste output. Infrequent users may struggle to justify the ROI.

Effective Messaging Strategies

Collecting perspectives on convincing communications approaches provides direction for integrated marketing activities.

The most effective techniques identified were:

- Free trials and demonstrations (53%): Hands-on experience was considered the best way to demonstrate value and ease of use.
- Data on potential cost savings (40%): Quantifying possible waste fee reductions and ROI would get attention.
- Testimonials from users (20%): Social proof from other satisfied customers helps build trust.
- Clear concise summaries of benefits (13%): Many are unfamiliar with compactors so education is key.
- Showing environmental impact (13%): Quantified landfill reductions and carbon savings appeal to the sustainability-focused.

The research indicates sampling and ROI-backed messaging should feature heavily alongside traditional advertising. Creative partner co-marketing could also build credibility.

3.8 Differentiation Factors

Understanding perceived differentiation helps refine positioning versus alternatives. When asked what features would distinguish compactors, responses included:

- Noise reduction (33%): Quieter operation than industrial compactors would appeal, especially for residential models.
- Enhanced safety (20%): Guarding and sensors increase comfort with powerful compaction.
- Durability and reliability (20%): Longevity expectations are high given the upfront investment.
- Ease of maintenance (20%): Low maintenance needs are preferred, though some capability to self-service minor repairs is appreciated.

- Smart features (13%): Respondents saw advantages in compactors integrating digital features like fill sensors and smartphone controls.

These insights indicate areas of focus for achieving premium pricing. Smart connectivity could differentiate EcoStamp strongly from manual competitors. Performance should match commercial-grade reliability.

3.9 Barriers to Adoption

While broadly interested, participants identified barriers that could inhibit converting initial purchase interest into sales.

The main obstacles raised were:

- High upfront cost (60%): Affordability reservations were most prevalent, making financing options advisable.
- Ongoing maintenance concerns (33%): Apprehension around maintenance costs and complexity could deter buyers.
- Noise (20%): Noisy operation could annoy residential users and care homes.
- Compatibility issues (13%): Ensuring compactor-bin interoperability and avoiding process disruption is key.

To overcome barriers, EcoStamp pricing must hit the identified sweet spot between affordability and premium quality. Low-hassle maintenance services and noise-damping features also help de-risk purchases.

In summary, the interview findings reveal a clear target customer demand for residential and small business waste compactors. Participants frequently battle limited bin capacity and want smart compaction solutions.

They have very low existing familiarity with compactors, underscoring the need for education. But EcoStamp as a concept resonates strongly based on desired ease of use, performance, cost savings and sustainability benefits.

Between £150-£260 appears a viable price range, with ROI and financing options overcoming barriers. Differentiation can be achieved through premium reliability and smart features.

By addressing customers' urgent needs and reservations, EcoStamp is primed for successful commercialisation. This research provides evidence-based customer insights to inform strategic decisions and launch planning. Acting on these findings will maximise EcoStamp's impact on the growing waste crisis.

4. Observations and Recommendations

Based on the synthesis of the qualitative interviews and secondary research, the following 10 key observations and associated recommendations are presented to optimise the commercial success and sustainability impact of EcoStamp Waste Compactor:

4.1 Observation 1: Frequent Bin Overflow Issues

The interviews consistently revealed that standard wheelie bins are frequently overflowing before scheduled collection days across both residential and business settings. For example, one homeowner expressed frustration over their bin quickly reaching maximum capacity (Interview 12), while businesses reported disruptions from loose waste buildup when bins overflow ahead of pickup days.

This aligns with findings by Bernstad et al. (2013) that traditional bins often fill up faster than expected based on collected volumes exceeding estimated rates. The reasons cited for excess waste generation include inaccurate household occupancy data, changing consumer behaviours, and limitations in current container sizing options.

EcoStamp's core value proposition directly addresses this prevalent pain point by offering enhanced bin capacity through automated on-site compaction. Market research indicates this provides a timely solution to a widespread consumer and business problem.

Recommendation 1A: Develop personalised waste volume calculators

To quantify and convey the waste reduction value proposition, it is recommended to develop online calculators for residential and business users to estimate their personalised savings potential. By inputting factors like household occupancy, business type, existing bin size, and collection frequency, the calculators can provide tailored overflow reduction projections.

For example, a family of 5 with 240L bins collected fortnightly could be shown a forecast of 52 fewer annual overflows post-compaction. Reference classes based on waste generation profiles can supplement user inputs.

Recommendation 1B: Highlight relative capacity increases

Alongside calculators, messaging should emphasise proportional capacity increases like "2X more storage" and "x% less overflow" based on compaction performance data. These relatable metrics tangibly showcase waste storage gains versus regular bins. Environmental savings can further reinforce value.

Recommendation 1C: Target high-volume segments

Marketing should prioritise customer segments prone to frequent overflows like large households, hospitality businesses and retail outlets. Their acute pains make them ideal early adopters. Focused testimonials and demonstrations with these segments can catalyse word-of-mouth.

4.2 Observation 2: Limited Consumer Awareness

The interviews revealed limited awareness regarding compactors suited for wheelie bins, though some respondents were familiar with large industrial compactors from waste management contexts. As one interviewee frankly stated, "I'm not familiar with any waste management devices" (Interview 7).

This lack of unaided awareness indicates an opportunity to proactively educate target consumers on the concept of wheelie bin compactors. As Rogers (2003) notes in Diffusion of Innovations theory, improving comprehension of innovations fosters adoption by dispelling uncertainties. EcoStamp has significant scope to claim a first-mover advantage and category leadership through savvy early marketing focused on awareness-building. However, as Hill (2020) cautions, the innovator must also demonstrate the value proposition clearly to consumers for adoption.

Recommendation 2A: Launch a multi-channel educational campaign

An intensive educational marketing campaign is advised even before direct sales outreach to explain wheelie bin compactors and their consumer benefits. Tactics should include:

- Demo videos - Explain key functions and waste reduction capabilities
- Infographics - Quantify statistics on household waste and overflow prevention potential
- Website FAQs - Outline compactors' space-saving mechanics and environmental benefits
- Retail store displays - Hands-on educational models for experiential learning

This "marketing to educate" strategy will make target users receptive to the innovation ahead of a sales push.

Recommendation 2B: Seed organic advocacy

As Rogers (2003) notes, interpersonal channels are powerful for awareness diffusion. Identifying and enlisting organic advocates like green influencers and community leaders to demo and review EcoStamp can catalyse viral word-of-mouth education.

Recommendation 2C: Attend trade shows

Exhibiting at sustainability, facilities management and waste management trade shows offers engagement opportunities with key audiences. Booth demos and booth talks can efficiently build awareness.

4.3 Observation 3: Desired Product Features

Participants consistently emphasised ease of use, quiet operation, durability and robustness as highly desirable features in a domestic waste compactor. Parents also cited child safety protections as important. Other attributes like odour mitigation and fullness sensors were noted as valued potential capabilities.

These user requirements closely align with key perceived innovation attributes from the Diffusion of Innovations theory - relative advantage, compatibility, complexity, trialability and observability (Rogers, 2003). EcoStamp's design should correspond to target customer needs on these dimensions.

Recommendation 3A: Intuitive user experience design

To fulfil ease of use expectations, concerted efforts are advised on customer-centric design of interfaces and overall user experience. User workflow analyses and usability testing can uncover pain points and guide intuitive product architecture. Simplified operation and maintenance will also communicate compatibility with customer lifestyles and routines.

Recommendation 3B: Noise reduction technologies

The use of sound-dampening materials, vibration cushions and other acoustic engineering techniques is recommended to minimise noise emissions. This fulfils user desires for unobtrusive operation compatible with home and front-of-house business settings.

Recommendation 3C: Durability testing and guarantees

Rigorous stress testing and quality assurance should validate durability claims. Component life cycle analysis can identify potential failure points. Extensive trials also enable the observability of robust performance. Durability guarantees can further assure customers.

Recommendation 3D: Child safety features

Parents' concerns underscore the need for child lock functions and tamper-proof designs. Visible safety warnings and emergency stop buttons also provide reassurance. These signals are compatible with family needs.

4.4 Observation 4: Pricing Sensitivity and Affordability Concerns

The customer interviews highlighted considerable price sensitivity regarding compactors, with acceptable price thresholds ranging from £150-250. Willingness to pay marginally increased for business buyers. This indicates that while overall user reception appears positive, high costs could deter adoption. As economic theory suggests, consumers undertake implicit cost-benefit analyses when evaluating new solutions (Mankiw, 2020). To maximise trial and sales, a value-based penetration pricing strategy is recommended to balance profitability goals with minimising financial barriers. This can transition to premium skim pricing once familiarity and loyalty is established.

Recommendation 4A: Penetration pricing strategy

An initial market penetration pricing strategy in the range of £175-200 is advised and rationalised through waste collection savings messaging. At-cost introductory pricing or financing options could also spur trial. The subsequent goal is raising prices towards the £220-260 range based on demonstrated user value.

Recommendation 4B: Develop ROI calculators

To justify pricing, it is recommended to provide residential and business ROI calculators quantifying potential waste fee savings from reduced pickup needs. User inputs on current costs can be contrasted with projected savings. Highlighting quantified ROI will help convey the value proposition.

Recommendation 4C: Explore financing partnerships

Tie-ups with lending partners to offer credit plans can further tackle affordability barriers, especially for business buyers. This allows spreading payments over time to reduce high upfront costs. Consumer financing also opens supplementary revenue streams.

4.5 Observation 5: Safety and Reliability Concerns

Despite interest in compactor functionality, some concerns emerged around potential safety risks from automated machinery and uncertainty about the lifespan of newer technology. As

one business owner noted, "compatibility with my existing waste disposal routine" was a worry (Interview 12). As Rogers (2003) notes, perceptions of uncertainty and risk can impede adoption. Proactively reassuring consumers about seamless integration and rigorous safety protections is critical to creating confidence and trust.

Recommendation 5A: Highlight compliance certifications

Obtaining and prominently displaying reputed safety certification marks like UL, CSA and CE can signal compliance with machinery standards. Explicit warranties also assure reliability claims.

Recommendation 5B: Intuitive safety features

Guard shields, emergency stops, alarm systems, child locks and other visible safety mechanisms should be incorporated. These signal uncompromised user protections for peace of mind.

Recommendation 5C: Drop-in integration

Designing for effortless drop-in fitting with all standard wheelie bins reassures customers about integration. How-to guides and onboarding assistance further ease implementation.

Recommendation 5D: Limited trial guarantees

To counter uncertainty, initial sales can carry "no questions asked" return guarantees if the compactor fails to integrate seamlessly into existing customer waste routines. This shifts the risk to help overcome adoption barriers.

4.6 Observation 6: Strong Hospitality Industry Reception

The hospitality sector expressed significant enthusiasm for EcoStamp Waste Compactor's potential, with a manager stating, "I would personally love to adapt one device into my business" (Interview 1).

Their high waste volumes and frequent bin overflows make compactors an impactful solution. Securing advocacy from these influential early adopters can win trust across sectors. As Hill (2020) notes, innovators should focus initial marketing on favourable customer segments willing to adopt despite uncertainties. Hospitality is a prime segment based on promising interviews.

Recommendation 6A: Offer free trials to hospitality businesses

Providing free pilot trials to selected restaurants, hotels, caterers and event venues can catalyse exposure. On-site use enables tangible waste reductions, fueling positive word-of-mouth.

Recommendation 6B: Co-brand marketing partnerships

Joint promotional campaigns with hospitality partners highlighting their EcoStamp adoption help build credibility. Their vocal advocacy legitimises benefits.

Recommendation 6C: Sponsor hospitality industry events

Events sponsorship creates brand-building touchpoints with the target community. Engaging exhibitions and speaking opportunities at hospitality conventions should be pursued.

4.7 Observation 7: Desire for Hands-On Demonstrations

When probed on effective marketing approaches, multiple consumers emphasised wanting to see compactors physically demonstrated before purchase consideration. According to Rogers' (2003) DoI model, trialability is pivotal for adoption as direct experience helps users better grasp functionality and dispels perceptions of risk or complexity.

Recommendation 7A: Free 1-month trials

To enable first-hand product experience, free 1-month trials are recommended for both residential users and businesses. Guided demos at suitable retail outlets can similarly boost exposure.

Recommendation 7B: Video testimonials

User videos explaining ease of use, waste savings achieved, and seamless integration can make adoption processes more observable and relatable when in-person trials are infeasible.

Recommendation 7C: Trade Show demonstrations

Exhibitions at industry events and hands-on demographics at pop-up community activities offer further avenues for trialability. These allow for showcasing operational flow and waste compression efficiencies.

4.8 Observation 8: Distinct Waste Management Needs

Needs and pain points varied considerably between residential and business segments based on factors like waste composition, existing bin types, collection models, staff availability and regulatory mandates. For example, businesses emphasised operational disruptions and complexity from overflowing bins more than residential users. This underscores the need for tailored customer segmentation. As Dibb et al. (1997) emphasise, a nuanced understanding of divergent needs allows targeted communications matched to each audience. A uniform strategy risks failing to resonate.

Recommendation 8A: Differentiated messaging

Separate waste volume calculators, ROI projections, case studies, testimonials and overall marketing collateral tailored for each user group should be developed. This mosaic segmentation approach will better address the unique motivations, language preferences and technical requirements of residential versus business users for persuasive resonance.

Recommendation 8B: Industry-specific positioning

For business marketing, EcoStamp's operational continuity and cost-saving benefits should be emphasised over sustainability. Industry-specific data on waste volumes can quantify ROI. In contrast, family safety and environmental stewardship are more impactful frames for residential consumers. Waste fee reduction potential still matters but is secondary.

4.9 Observation 9: Limited Competitor Awareness

The customer research uncovered minimal unaided awareness of competing wheelie bin waste compactor products, brands or vendors. When prompted, respondents struggled to recall options potentially available. This finding reveals an apparent gap in competitors' marketing and EcoStamp's significant scope to proactively claim a cognitive leadership position even as a new entrant through savvy early education. However, Chaney et al. (2018) caution that mere innovation knowledge is insufficient for adoption - the benefits must be observable and memorable. Consistent branding builds crucial awareness.

Recommendation 9A: Invest in thought leadership marketing

To cement category leadership in consumers' minds, the launch strategy should incorporate consistent thought leadership communications conveying EcoStamp's position as the pioneering expert brand for wheelie bin compaction technology through channels like:

- Media appearances and partnerships highlighting industry leadership
- Educational waste management events to establish authority
- Compactor performance benchmarking to showcase superiority
- Scientific whitepapers co-authored with universities
- Award applications to gain external validation
- Strategic patents and trademarks development to gain "exclusive innovator" status

Early investment in brand-building as the authoritative voice on waste compaction can confer lasting competitive advantage. However, authentic expertise is crucial alongside messaging to sustain leadership perceptions.

Recommendation 9B: Foster word-of-mouth advocacy

According to Misner (1999), word-of-mouth is the primary factor driving growth for new brands. Fostering organic advocacy through client success stories and referrals can magnify reach. Satisfied early adopters sharing first-hand EcoStamp experiences within their networks may prove more influential than impersonal advertisements.

4.10 Observation 10: Need for Ongoing Macro Environment Analysis

PESTLE Analysis

Political Factors

- UK waste management policies like landfill taxes and pay-as-you-throw schemes could impact demand for compactors (Zaman, 2015). Changes to these policies may affect ROI propositions.
- Initiatives like the Resources and Waste Strategy for England emphasise circular economy and waste minimisation (HM Government, 2018). This provides tailwinds for compactor adoption.
- Local council partnerships and approvals will be key for integration with municipal collection systems. Building relationships is crucial.
- Data privacy regulations regarding any smart compactor features that collect usage information need to be followed.

Economic Factors

- Rising inflation and cost of living could make consumers and businesses highly price-sensitive, impacting marketing and pricing strategies (Mankiw, 2020).
- Potential economic downturns may reduce the appetite for new purchases due to uncertainty.
- Compactor ROI will be contingent on the costs of existing waste collection services. Changes to standard fees will alter value propositions.
- Financing partnerships can help overcome affordability barriers. However, rising interest rates might affect consumer credit appetite.

Sociocultural Factors

- Increased environmental consciousness and activism around sustainability provide tailwinds for EcoStamp's waste reduction mission (Pickett-Baker & Ozaki, 2008).
- Using influencers, social media and relatable messaging can boost adoption by tapping into growing eco-conscious consumer values.
- However, converting intent into action remains challenging. Bridging the value-action gap will be key (Hassan et al., 2016).
- Younger demographics tend to be more receptive to innovative environmental solutions (Arnocky et al., 2014).

Technological Factors

- Integration capabilities with smart cities could enable intelligent waste monitoring features (Mohanty et al., 2016).
- Data analytics harnessing cloud computing can derive usage insights to optimise operations, pricing and marketing.
- Online sales channels, digital ads and social media leverage technology for enhanced reach and lower customer acquisition costs.

Environmental Factors

- As stakeholders pressure companies for sustainability, EcoStamp's waste reduction purpose provides strategic value.
- Quantifying landfill diversion, carbon footprint lowering and other ecological impacts can attract buyers motivated by environmental performance.
- However, justifying ROI will still be necessary even among sustainability-driven segments. The business case must be clear.

Legal Factors

- Trademarking, patenting and protections against IP infringement will be crucial as innovations gain market traction (Blackburn, 2020).
- Certifications like CE marking for health/safety compliance and UL markings for electrical safety are essential.

Product liability disclaimers and safety warnings need to be rigorously incorporated into packaging, manuals and warranty terms. While the research focused heavily on customer

perspectives, a comprehensive analysis of the broader PESTLE macroenvironment is equally essential for a well-rounded assessment.

As Baines et al. (2017) emphasise, marketing strategies formulated solely through microlens risk blindspots to external shifts that require flexibility. Economic, technological, political and sociocultural forces must be continuously monitored. For example, local-level waste management policies, recycling standards, landfill taxes and public CCTV adoption could all impact EcoStamp's projected demand and optimal marketing approaches.

Recommendation 10A: Build PESTLE monitoring systems

It is strongly advised to implement structured systems to continually scan the macroenvironment across PESTLE factors:

- Political - Regulations, policy changes, taxation
- Economic - Inflation, interest rates, recessions
- Sociocultural - Activism, environmental consciousness
- Technological - Automation, digitisation, smart cities
- Environmental - Sustainability pressures, climate impacts
- Legal - Waste laws, health and safety, patents

This 360-degree perspective safeguards against blindspots and missed opportunities. Horizon scanning uncovers risks and openings to capitalise on.

Recommendation 10B: Foster industry connections

Joining relevant trade associations, regulatory bodies and standards councils provides valuable immersion in the external ecosystem. Industry events and networking unlock insights into trends, challenges and innovations. According to Menon and Varadarajan (1992), embeddedness in the market environment enriches innovation strategies and outcomes through collective knowledge benefits.

4.11 EcoStamp Waste Compactor Towards Net Zero

The EcoStamp Compactor encourages sustainable waste behaviours by enabling enhanced onsite storage and collection efficiency. This directly reduces transportation emissions from fewer waste truck trips. Compaction also diverts organic and recyclable materials from landfills, lowering methane impacts. Additionally, managing waste at the source aligns with circular economy principles and can change consumption habits over time. If widely adopted, the compactor can meaningfully contribute by cutting emissions, empowering decentralised waste practices, and evolving infrastructure in line with net zero policy priorities.

4.12 Relevant Models

4.12.1 SWOT Analysis

SWOT analysis is a strategic planning technique used to evaluate the Strengths, Weaknesses, Opportunities, and Threats involved in a project or business venture (Gürel & Tat, 2017). It provides a comprehensive framework to assess the internal capabilities and external landscape of an organisation or offering. As Helms and Nixon (2010) discuss, SWOT analysis is a crucial step in the marketing planning process as it identifies key factors that can influence commercial success.

For EcoStamp Waste Compactor, developing a SWOT analysis based on the conducted market research insights helps identify favourable conditions to leverage, risk factors to mitigate, and strategic gaps to address. Evaluating the intersection of the external market environment and the innovation's inherent attributes provides an evidence-based foundation to craft an optimal go-to-market strategy and marketing mix. The SWOT framework ensures a holistic view across all forces shaping the new product's market viability and adoption potential.

Strengths

- Compression technology provides 2-3x wheelie bin capacity, directly addressing customers' major pain point of frequent overflows

- Automated operation and intuitive design fulfil desires for simplicity and ease of use (Rogers, 2003)
- Quantifiable waste savings and emissions reduction appeal to sustainability-motivated segments (Pickett-Baker & Ozaki, 2008)
- Cost savings from fewer waste pickups provide convincing ROI rationale for businesses (Mankiw, 2020)

Weaknesses

- High upfront costs could deter price-sensitive consumer and business segments (Han et al., 2001)
- Low existing public awareness of compactors signals the need for an intensive education on a new concept (Rogers, 2003)
- Concerns around potential maintenance complexity and noise may inhibit adoption (Davis, 1989)
- Product weight might not be feasible for some audiences.

Opportunities

- Growing environmental consciousness and circular economy priorities create favourable conditions (Geissdoerfer et al., 2017)
- Partnerships with retailers for in-store displays and demos can boost visibility (Rogers, 2003)
- Integration potential with smart city as part of waste tech evolution (Mohanty et al., 2016)
- Financing options can overcome affordability barriers and expand the target market (Mankiw, 2020)

Threats

- Market uncertainty from potential economic downturn impacting new purchases (Mankiw, 2020)
- Competition from consumer reluctance to change habits and the "do nothing" option (Samuelson & Zeckhauser, 1988)
- Imitation from competitors with substitute products eroding market share (Porter, 2008)

- Changes to council waste collection costs alter expected ROI for customers (Zaman, 2015)

4.12.2 Marketing Mix

The Marketing Mix is a classic framework for designing and executing a product's marketing strategy using the 4Ps - Product, Price, Place, and Promotion (Borden, 1964; McCarthy, 1960). As Goi (2009) explains, it provides an actionable toolbox to integrate solutions around the offering itself, pricing models, distribution channels, and communications activities.

For EcoStamp Waste Compactor, developing a data-driven marketing mix based on qualitative research insights is essential to introduce this innovation successfully. The Marketing Mix framework enables holistic and strategic decision-making across the key levers that drive adoption, revenues, and customer value. By analysing customer preferences, the competitive landscape, and market dynamics, we can determine optimal configurations for the 4Ps to maximise commercial impact. As Singh (2012) notes, intelligent marketing mix design is even more crucial for new products like EcoStamp that have no established presence. The Marketing Mix gives a structured approach to strategically position and promote EcoStamp for sustainable market success.

Product

- Flagship automated wheelie bin compactor offering 2-3x waste capacity through on-site densification
- Intuitive, user-friendly design for drop-in integration with existing waste routines
- Differentiated by smart features, noise reduction, safety, durability, and eco-conscious purpose
- Financing options address affordability barriers to expand market potential

Place

- Direct online sales on EcoStamp's website enable national reach and a D2C model
- Retail partnerships give physical exposure e.g. demo models at home stores like B&Q
- The field sales team for key account business acquisition e.g. hospitality, facilities management

- Council partnerships critical for waste integration e.g. co-promotions on municipal platforms

Price

- Penetration pricing of £150-200 for launch to balance profit and trial incentives
- Premium skim pricing introduced later once familiarity and loyalty are established
- Business and channel partner discounts for volume purchases
- Financing plans break purchases into instalments to ease consumer payments

Promotion

- Digital marketing through search, social, and video builds broad awareness
- PR and media outreach to position EcoStamp as the expert voice on waste compaction
- Direct marketing nurtures leads through demo requests and trials to convert interest
- Trade Show exhibits engage key business users in facilities management and hospitality
- Influencer seeding and partnerships to build authentic word-of-mouth advocacy

In summary, the marketing mix provides a competitive, integrated strategy across the 4Ps to drive the adoption of EcoStamp through resonating communications, differentiated distribution and pricing models, and strategic partnerships. Tailored messaging and promotions will target residential and business segments based on their distinct needs and purchasing behaviours. Agile optimisation of the marketing mix will be crucial as the external environment evolves.

5. Conclusion

In conclusion, this exploratory market research study generated crucial qualitative insights to inform the strategic commercialisation and positioning of the EcoStamp Waste Bin Compactor as a new-to-market innovation.

The rationale for a qualitative methodology aligned with the lack of existing secondary data on this novel product and the aim to uncover complex consumer perceptions that quantitative surveys cannot provide. In-depth interviews were optimal for eliciting detailed narratives from target users on waste management realities and attitudes towards the compactor concept.

Key findings revealed clear target segment pains around limited bin capacity and frequent overflows, establishing demand drivers that EcoStamp's core value proposition of enhanced compaction directly addresses. This timeliness could enable swift market education and adoption. Participants also expressed broad receptivity towards the intuitive, convenient and sustainable capabilities of automated compactors.

However, the study exposed limited unaided public awareness of compactors for wheelie bins, signalling a crucial need for an intensive educational marketing campaign to explain this new-to-consumers innovation and its workings. According to Rogers' Diffusion of Innovations theory, improving comprehension through demonstrations fosters adoption by dispelling uncertainties towards unfamiliar products.

The research further highlighted consumer price sensitivity thresholds and concerns around noise, safety and reliability that must be tackled through value-based pricing, financing options, certifications and trial guarantees. Quantifying ROI and waste savings is particularly important to justify costs. Customers consistently desired hands-on trials to experience benefits firsthand.

Tailored messaging also emerged as key to persuasively targeting residential users motivated by simplicity and households versus businesses focused on operational continuity and cost reduction. Distinct needs require differentiated positioning.

While the qualitative insights cannot provide statistically representative market sizing, they elucidate customer sentiments, perceptions and purchase criteria to optimally orient positioning, pricing and partnerships. Acting on these human-centric insights can profoundly shape market viability and adoption of this socially impactful sustainability innovation.

In summary, this exploratory research dispels uncertainties by providing a detailed consumer perspective to inform commercialisation strategies and activate EcoStamp's immense potential amidst growing waste challenges. The methodology succeeded in generating real-world customer insights to guide targeted messaging, strategic partnerships, pricing and positioning. Further quantitative research should supplement these discoveries.

Rigorous execution on driving awareness, product experience, tailored communications and financing options can enable EcoStamp to graduate from prototype to widespread impact. As Darren Hicks' journey demonstrated, solutions born from dedication and necessity can thrive through intelligent leveraging of market insights. The research optimistically provides a constructive data foundation and recommendations to propel EcoStamp towards fulfilling its considerable environmental promise.

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Appendix I

Project Initiation Document

Marketing Works Project

Project Initiation Document

<table>
<tr><td colspan="4"><u>MWP: Project Initiation Document</u>
Year: 2022
Date:
Distributed to:</td></tr>
<tr><td rowspan="6">MWP Group Name/Number/ Course

Group Members and Contact Details</td><td colspan="3"></td></tr>
<tr><td>Student Name</td><td>e-Mail Address</td><td>Tel. No.</td></tr>
<tr><td>Pranaya Tripathi</td><td>pranaya.tripathi.2022@uni.strath.ac.uk</td><td>7443697590</td></tr>
<tr><td>Aishwarya Sathyan</td><td>aishwarya.sathyan.2022@uni.strath.ac.uk</td><td>7443697463</td></tr>
<tr><td>Prithvi Singh</td><td>prithvi.singh.2022@uni.strath.ac.uk</td><td>7442277695</td></tr>
<tr><td>Ragavi Ravikumari</td><td>ragavi.ravikumar.2023@uni.strath.ac.uk</td><td>7769074042</td></tr>
<tr><td rowspan="3">Company Name and Contact Details</td><td>Aditya Shetty</td><td>aditya.shetty.2022@uni.strath.ac.uk</td><td>7936783033</td></tr>
<tr><td colspan="3">Company Contacts: DH Ecosolutions Ltd.
07378251315</td></tr>
<tr><td>Name and Title</td><td>e-Mail Address</td><td>Tel. No.</td></tr>
<tr><td>Company Profile

Insert brief profile of the company, main products, services, target markets, customers etc; include brief summary of current export activities and objectives.</td><td>Darren Hicks</td><td>dhecosolutions@gmail.com</td><td>07378251315</td></tr>
<tr><td colspan="4">The EcoStamp Waste Compactor is a user-friendly and portable device designed to compress household waste in wheelie bins. It can be utilised by individuals of all abilities, including those with limited strength or mobility. By compacting the waste, the compactor maximises the storage capacity of the bins, ensuring efficient storage of rubbish between scheduled waste collection pickups by the local council. This approach of managing waste at its source and creating additional space within domestic bins helps minimise the risk of infection from rodents and seagulls. Moreover, it reduces the frequency of visits to local recycling depots, contributing to a more environmentally friendly ecosystem.

EcoStamp Waste Compactor wants to target not just the domestic market for individual householders but also the business market including hotels, caterers, retailers, bed and breakfasts, private care homes etc.

In alignment with the global goal of achieving Net Zero, the EcoStamp Waste Compactor not only reduces the carbon footprint associated with waste collection by decreasing the frequency of collections but also significantly reduces the volume of household waste transported to landfills. This reduction in waste volume leads to a substantial decrease in CO2 emissions, thus supporting national and global targets for environmental sustainability.</td></tr>
<tr><td colspan="4">Project Definition</td></tr>
<tr><td>Project Background

Insert Summary of Initial 'Terms of Reference'.</td><td colspan="3">Considering the nature of the client's innovation, the product is one of its kind and to help the product perform better in the market. The team will conduct thorough market research to get insights and understand the audience better, this, in turn, will help us set the appropriate tone for communication and engage with the desired target audience.</td></tr>
<tr><td>Project Title</td><td colspan="3">Market Research for EcoStamp Waste Compactor</td></tr>
<tr><td>Project Objectives

Insert bullet point summary of key project goals and objectives.</td><td colspan="3">We aim to cover all the nuances of the market research for our designated product which are as follows -

1. Market Demand and Customer Needs
2. Competitive Analysis and Pricing Strategy
3. Feasibility and Viability Assessment
4. Target Market Segmentation and Marketing Strategy</td></tr>
</table>

Marketing Works Project

Project Initiation Document

Key Deliverables *A clear statement of what the key project outputs and deliverables will be and when these will be delivered*	**Key Deliverable**		**Due Date**
	Market Demand		5th Aug
	Understanding customer needs		30th July
	Competitive landscape		10th Aug
	Pricing Strategy		10th Aug
	Feasibility and viability assessment		20th Aug
	Target Market segmentation		21st Aug
	Marketing and communication strategy		30th Aug
	Environmental impact		25th Aug
	Distribution Channel		30th Aug
Project Planning			
Project Phases and Key Milestones *List Key Project Phases and Milestones*	**Project Phase**	**Key Milestones**	**Due Date**
	Phase 1 Research & Analysis	**Market Assessment:** Assess market demand for waste compactors among households and businesses. Identify potential customer base and their needs. Understand market trends and dynamics. **Competitive Analysis:** Analyse existing market players and their waste compactor offerings. Evaluate their strengths, weaknesses, pricing strategies, and distribution channels. Identify gaps or opportunities for differentiation.	15th July
	Phase 2 Planning & Strategy	**Product Feasibility:** Briefly evaluate the technical feasibility of producing the EcoStamp waste compactor. Assess economic viability, including production costs and potential return on investment. Consider any necessary modifications or improvements to the product concept. **Pricing and Positioning Strategy:** Determine the optimal pricing strategy for the EcoStamp waste compactor. Consider factors such as production costs, market demand, and competitor pricing. Define the unique value proposition and positioning of the product in the market.	5th Aug
	Phase 3 Targeting & Execution	**Target Market Segmentation:** Segment the market based on demographics, geographic location, waste generation patterns, etc.	25th Aug

Marketing Works Project

Project Initiation Document

		Identify the most attractive target segments for EcoStamp. Tailor marketing efforts and product positioning for each segment. **Marketing Strategy Suggestions:** Suggest effective marketing campaigns. Determine the most suitable channels and tactics to reach the target audience.	
	Phase 4 Evaluation & Recommendations	**Customer Feedback:** Collect feedback on usability, performance, and overall customer experience. Identify areas for improvement and refinement of the product. **Environmental Impact Measurement:** The potential environmental benefits of using the EcoStamp waste compactor. Evaluate reductions in waste volume, landfill usage, and carbon emissions. Highlight the product's contribution to sustainability and align with global Net Zero targets. **Evaluation and Adaptation:** Monitor customer feedback and market response. Assess the achievement of objectives and make necessary adjustments. Continuously refine the marketing strategy and product offering based on insights gained and suggest recommendations based on the research.	10th Sept

Work Breakdown Structure

Provide a detailed breakdown of all key tasks required for the successful delivery of the project stating clearly who will be responsible for each task, start and due dates.

Task ID	Task Description	Who	Start Date	End Date	Comments
1	Client communication management Market research In-person interview (Qualitative) Marketing strategies	Pranaya Tripathi	15th July	15th Sept	
2	Designing data collection instruments Data collection and preparation Data organisation and management Data coding and analysis Data interpretation In-person interview (Qualitative)	Ragavi Ravikumar	15th July	30th July	
3	Final presentation development Overlooking all the content Maintaining a professional tone and consistency throughout	Aishwarya Sathyan	15th July	15th Sept	

Marketing Works Project

Project Initiation Document

	In-person interviews (Qualitative) & secondary data collection				
4	Market research Coordinator Deploying the necessary tools to collect information from the audience to support the marketing plans. Secondary Data collection from online resources (Netnography, articles, journals etc.)	Prithvi Singh	15th July	5th Aug	
5	Managing the entire project Making sure deadlines are met Ensuring the smooth operation and completion of all the phases of the project In-person interview (Qualitative)	Aditya Shetty	15th July	15th Sep	

Group Responsibilities *Please list clearly the Project Management roles and responsibilities of each Group Member*	**Group Member**	**Roles and Responsibilities**
	Pranaya Tripathi	Client Manager
	Ragavi Ravikumar	Data Analyst
	Aishwarya Sathyan	Creative Lead
	Prithvi Singh	Market Research Coordinator
	Aditya Shetty	Project Manager

Group Communications *A clear statement of how the group will communicate/ frequency of meetings/ when etc.*	Weekly cadence on Tuesdays and maintaining diary forms on discussion forum

Estimated Time Commitment

For each key task listed earlier, estimate the number of person-hours required to complete the task.
Estimate Total Project Person-Hours adding 25 hours for Project Management/Admin etc
Total Project Person-Hours should be approximately 250 hours per Semester.

Task ID	**Task Description**	**Estimated Hours to Complete Task**
	Market Demand	30
	Understanding customer needs	30
	Competitive landscape	35
	Pricing Strategy	20
	Feasibility and viability assessment	35
	Target Market segmentation	35
	Marketing and communication strategy	35
	Environmental impacts	20
	Distribution Channel	10
	Sub Total	250
	Plus	**25**
	Total Project Person-Hours	275

ALL group Members

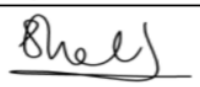
Marketing Works Project

Project Initiation Document

The Project Initiation Document (PID) should be signed by ALL group members and returned to your Project Supervisor. Once your supervisor has approved the PID it should also be sent to the company for 'sign-off'.

Declaration *- I, the undersigned, understand and agree to the following terms and conditions for participating in a Marketing Works project:*

- *ALL aspects of the Marketing Works project are absolutely confidential;*
- *I will NOT use any open social media platforms or disclose information about the company or project before, during or after completion of the project;*
- *I understand the critical importance of maintaining the confidentiality of this project thus ensuring that the Intellectual Property of the company is not jeopardised.*

Group Member (Name)	Signature
Pranaya Tripathi	
Aishwarya Sathyan	
Prithvi Singh	
Ragavi Ravikumar	
Aditya Shetty	

Date: _____26th June'23_____

Company Sign Off

Name_____ **Signature_____**

Date: _____

Appendix II

1. Interview Questions

1. What is your current waste management method and cycle/timeline? (Are you satisfied with it?)

2. What are the biggest challenges or pain points you face when it comes to waste management in your home/organisation? (How often do your wheelie bins get filled up?)

3. How familiar are you with waste compacting devices or solutions? (Have you used any before? Are you aware of any that are currently available in the market?)

4. What features or functionalities would you expect in a waste compacting device to make it valuable to you?

5. How important is sustainability or environmental impact when considering waste management solutions?

6. What factors influence your decision to adopt a waste management device? (Cost, ease of use, aesthetics, etc.)

7. What would be your primary concerns or reservations about using an automatic waste management/compacting device?

8. What price range would you find reasonable for an automatic waste compacting device, considering its significant benefits of waste compaction, increased capacity for rubbish bags, and added value in terms of its health and hygiene aspects?
£180-£200
£200-£220
£220-£240
£240-£260
Other (Please specify)

9. How do you envision integrating a waste compacting device into your current waste management routine? (How often do you see yourself using a waste management device on a daily or weekly basis?)

10. What would be the most effective way to communicate the benefits of a waste compactor device to you?

11. Are there any specific features or aspects that you believe would differentiate one waste compactor device from others in the market?

12. Can you think of any potential barriers or challenges that might prevent you from adopting a waste compactor?

13. Is there anything else you would like to share or any other feedback you have regarding waste compacting devices?

2. Interview Transcript

Aditya (Interviewer)

My name is Aditya Shetty. And today I will be taking an interview for DH EcoSolutions and their wheelie bin compactor. So, my interviewee will be introducing himself now.

Romir (Interviewee)

Hi, my name is Romir Vinayak More. I'm currently living in Glasgow at 102, Ken Murray Street, and I am a student at the University of Strathclyde.

Aditya (Interviewer)

Okay, thank you Romir for the introduction. So, I'll be asking you a few questions today to let us get an understanding of how you manage your waste. So, the first question I'd like to ask you is, what is your current waste management method? And what is the cycle or timeline of the waste collection in your neighbourhood? And are you satisfied with it?

Romir (Interviewee)

Well, we now have a curbside scheme in our area, and usually, the collection for general waste is around four to five days, for food waste, it's around eight days, and for packaging and cardboard waste, which is five days.

Aditya (Interviewer)

All right, okay. And what are the biggest challenges or pain points you face when it comes to waste management in your home? And how often do your wheelie bins get filled up?

Romir (Interviewee)

Well, in the area where I live the bins fill up very quickly, before the collection days. The main problem that we face is when we try to dispose of our food waste because I think food waste is the most that's been collected in our area.

Aditya (Interviewer)

Okay, so the next question I'd like to ask is, how familiar are you with waste compacting device solutions? Have you used any before? Are you aware of any waste compactors currently available in the market?

Romir (Interviewee)

Well, to be honest, I have not heard about any waste compacting device. And with respect to compacting our waste, generally, at my house, all my flatmates and I have done it using our hands at times wearing gloves if the waste is too pungent and bad to touch. So yeah, that's how we try and combat our waste, but as for knowing about any waste compacting devices, no I haven't heard of it.

Aditya (Interviewer)

Okay, so we have this new device coming up, which would, make it easier for a normal person to compact their waste. So, if such a product was released in the market, what features or functionalities would you expect in that kind of device, so that it's valuable to you?

Romir (Interviewee)

Well, if I were to ever come across a waste compacting device, then I think it would be beneficial to all households in terms of managing food waste because the problem with food waste is at times you dispose of a lot of liquids and a lot of food, which you know when compressed can release residues. And if I can use a waste compacting device to compress food waste, then I would prefer for it to collect the residue from the food waste, so that it remains as dry as possible. And then it becomes easier for the council members to collect the food waste and dispose of it. And another advantage that can, you know, is that people who have gardens in their houses can use their own food waste as compost in the garden pits.

Aditya (Interviewer)

Okay, and how important is sustainability or environmental impact when considering waste management solutions?

Romir (Interviewee)

With respect to sustainability and environmental impact, his waste management is crucial, because you can't have overloaded bins that are not being collected. That will only lead to people fly-tipping all their waste in their areas. And honestly, it will increase all pollution levels, and it won't keep our streets or houses clean. So with respect to sustainability and environmental impacts, yes, I think waste management solutions are very important. And if done regularly, we can obviously maintain the cleanliness in our areas, prevent, you know, all types of microorganisms that can possibly grow if we don't tend to collect our waste on time.

Aditya (Interviewer)

And do you think a compactor or machine which tackles/which manages waste would help in the sustainability or environmental aspect?

Romir (Interviewee)

Well, yes, I think a waste compacting device can play a major role in helping and in achieving sustainability when it comes to waste collection. And, you know, also it might, it might be able to increase the amount of, you know, waste that can be collected, because, because we don't have any such devices, you know, the big bins that the Councils collect are generally full, but then you can tend to collect more of them, if you compress, compress the bins, compress the waste inside the bins. So, yeah, I think it will play a big, big role in terms of waste management.

Aditya (Interviewer)

And what factors would influence your decision to adopt a waste management device? So you know, factors like cost, ease of use, aesthetics?

Romir (Interviewee)

Well, yes, if you were to use such a device in a locality, or in a household, then it has to be easy to understand for the user, meaning, it should not be that complicated, wherein you're forced to use a lot of buttons or anything. And I mean, the simpler it is, the easier it becomes to dispose of the waste. If you make it harder to understand, and people might not use the device, they might end up using their old ways, meaning using their hands, or maybe some other stuff to compress the waste, and I don't think that is a good idea. So, if I were to use any waste compaction device, then it has to be very simple to use, and it should be simpler to use for people of old age as well.

Aditya (Interviewer)

And would cost or aesthetics play a part in you wanting to buy the device?

Romir (Interviewee)

Well, if, if I am shown how good the product is, if I'm shown how useful the product can be, then I don't think investing in buying one will be an issue for me. Because then I will know

that it makes my job easier when it comes to disposing of the waste in my house. Also, I can recommend it to older people who have difficulties in disposing of the waste. And, yeah, I mean, all I would prefer is some proven tests that show the layman that okay, this product is good enough to be used, and can possibly change the way you know waste management is being done.

Aditya (Interviewer)
And what would be your primary concern or reservation about using an automatic waste management or compacting device?

Romir (Interviewee)
My primary concern about using an automatic waste compaction device would be about it being safer for children to use. Because there is a possibility that you might have small children who might end up getting their hands on the product and simply do something harmful to themselves. So, from the product perspective, it should be safe for children. And the other thing is it should not have any sharp blades. If at all, there were to be so nothing sharp should be there. Because I think that will just be dangerous enough for anyone to use, not just children, but for anyone to use. And yeah, that's just my primary concern.

Aditya (Interviewer)
Are you willing to pay a premium for an automatic and efficient waste compacting device that offers significant benefits or added value?

Romir (Interviewee)
Well, again, as I said, it has to be proven. I mean, for me to trust such a new product, I'll always prefer the tests and always prefer the articles about it that have been written. And then I'll try and use it. I can't. I mean, I don't see myself paying a premium for such a product without any proven results. So yeah, I mean, if any lab trials or if any public trials can be done with the product to prove to the public as well that, yes, the product has a lot of benefits. And the product can make life easier for the consumer. So yeah.

Aditya (Interviewer)
Okay. And so if, for example, you decide to buy such a product, what would be the average price point you'd like to pay?

Romir (Interviewee)

Well, I am an international student. And honestly speaking, I have never come across a wage compaction device. So with respect to price points, I can't say an exact price point about it. But if I were to sell such a product at a premium also, I don't think it should be costing more than 130 pounds to 135 pounds, I may be wrong, because I don't know what technology will be used. But if it was to be a very basic simple device, then I don't think it should have more than 135 to 140 pounds.

Aditya (Interviewer)

And how do you envision integrating a waste compacting device into your current waste management routine?

Romir (Interviewee)

Well, if I were to use such a device in my waste management routine, then I think I would be using such a device for my general waste and my food waste bins, because those are the two bins that are pretty hectic to manage. Because at times you feel like the bins are full, but then you tie them up and you can see okay, maybe you could have collected a bit more in the bag, and then thrown your bags off. So, with respect to those two types of waste, yes, I would be using such a product because firstly, I don't like to put them in my hands and get them dirty that often. But at times, I've got to do it because there's no other option. So, the device can also prevent me, you know, from making direct contact with the waste and exposing me to any kind of microorganisms that can enter my body and possibly expose me to a lot of diseases. So yeah, that's the way I can see myself using a waste compaction device in my daily routine.

Aditya (Interviewer)

And what will be the most effective way to communicate the benefits of a waste compactor device to you.

Romir (Interviewee)

Honestly, if I were to communicate this product to someone, the best way I would do it is to physically show them how it works. And also to show them how safe it is to be used. That is the way I might let other people know that okay, you have such a product which can make

your life easier when it comes to managing your waste and combating your waste in your houses. Possibly, you know, help you dispose of the waste in a proper manner. So yeah, that's the way I see it.

Aditya (Interviewer)
Okay. Are there any specific features or aspects that you believe would differentiate one waste compactor device from others in the market?

Romir (Interviewee)
Well, maybe if you focus on preparing a waste compaction device for every type of waste, if you can understand like, you've got a separate design for food waste, you've got a separate design for general waste, you've got a separate design for possibly all the recyclable stuff, because with general waste, you can simply separate all the hard plastics and possibly any other polymer type packaging that is used, in respect to the recyclables Yes, possibly separating cardboard and glassware. And then with the food waste, you cannot separate all the liquid waste from all the fruit and vegetable waste separately. So yeah, if you can have such designs for all the different types of waste, then I think it will be a good buy.

Aditya (Interviewer)
Okay. And can you think of any potential barriers or challenges that might prevent you from adopting a waste compactor?

Romir (Interviewee)
Well, if you think about it from a household perspective, I don't think anyone will pay a premium to use such a product, I can see the product being used in a locality, wherein if they have a collection point for all the houses, then you can place a waste compactor next to the bins. So if at all, a resident goes and tries to dispose of their waste, sees that the bins are full. They can use the compactor and compact the waste bin that they want to use. And after compacting they can simply dispose of the waste that they have. So, I think I don't see the product being used on a household scale, meaning that I don't see people buying three or four waste compactors just in the house. It doesn't make sense. The only way the product makes sense is that when it is used, possibly like you have three or four competitors for one particular building. So when people try to go and dispose of their waste in the collection

points, they can use those compactors in whichever bin they want, compress it, and throw in their stuff.

Aditya (Interviewer)
Is there anything else you'd like to share any other feedback you have regarding these compacting devices?

Romir (Interviewee)
I have not come across any waste compaction device. So I don't have any feedback as such, but the way the product has been described, to me, the only feedback that I can give is, I think, maybe there is a high potential for the product to be used, you know, in a public setting, rather than a personal setting, which means, you know, you can show this product to all the buildings, and possibly let the landlord know that, okay, you can buy this device so that you can manage your waste properly. And that can help the city council collectors as well. So yeah, that's the way I see the product being used. I can't imagine using such a product in a household. Yeah, even the restaurant business might, you know, benefit from this product, because the kitchens are almost working everyday. So for them to have a food waste compactor for their bins will be a win win scenario.

Aditya (Interviewer)
So, since you said it could be difficult to use in households, do you think that if the compactor was portable, it would be much easier to use in households?

Romir (Interviewee)
Well, I mean, I don't know because see, the way people dispose of their waste in households is still tricky to understand. Because some people dispose of their waste in a proper manner, some people don't. So, it might involve educating people on how to use the product, which might also involve educating them on how different types of waste need to be dealt with in the proper manner? So yeah, I hope it can be used in a household setting, but as of now, I can't see a way it can be.

Aditya (Interviewer)
Alright, okay. All right. Okay. Thank you so much for your time, Romir. And thank you for answering our questions.

Romir (Interviewee)

Thank you. Thanks a lot.