**Bhavjot**: (Completed)

***Introduction***

Resole is a UK-based footwear company that focuses on providing donated footwear to those in need while promoting sustainability by minimising/reducing shoe waste. The organisation collects, cleans, stores, and distributes shoes to groups in need for example, homeless individuals, families, young people, childrens, refugees, asylum seekers. The organisation works with food banks, and crep protects and many others.

However, the challenges they face is to efficiently distribute shoes due to factors such as storage limitations, funding constraints, data management issues. Also, it is important for Resole to know which areas need the most help and when demand for shoes is highest so they can improve how they distribute footwear.

This project aims to support Resole by analysing and modelling deprivation levels across the UK, using socio-economic data, population demographics, income levels, access to resources and location. By identifying areas with the greatest need and predicting distribution strategy, our analysis will provide key insights to improve Resole’s distribution strategy. This will be created using a dashboard which will present key findings in a clear format. This implies that this initiative will help Resole allocate resources more efficiently and establish a more sustainable and effective footwear redistribution system.

**Kel**:

***Introduction:***

Access to appropriate footwear is an important , yet overlooked aspect of well-being, particularly for people in deprived communities.

Resole, a London-based company, is committed to addressing this issue by cleaning and redistributing pre-loved footwear to those in need, such as the homeless , children in poverty, and refugees.

By doing so, Resole not only provides essential support to those in need ,but also promotes looking after the planet , by diverting recycling shoes that would otherwise go to landfills.

This helps reduce environmental waste while also helping those in need and encouraging physical activity.

Our project seeks to enhance Resole’s shoe redistribution efforts by analyzing and modeling areas of deprivation across the UK.

By looking at socio-economic data, population demographics, and resource accessibility metrics, we will aim to identify high-need areas and predict future demand.

The insights we create , will allow Resole to better understand its current strategies and allocate resources more effectively.

This report outlines the methods used for data collection, integration, and analysis, along with the development of a dashboard for visualizing key findings.

Additionally, we explore trends in deprivation and provide strategic recommendations to enhance Resole’s targeting. Through this work, we aim to equip Resole with actionable insights to strengthen its outreach and maximize its social impact.

**Mourad**:

***Introduction:***

Good Morning/Afternoon our team consisting of (our names) are excited to take this project with the participation of Resole. With the collective unique set of skills and takes we have will continue to the success of our work. Our objective is to leverage data analysis and modelling techniques to support Resole's mission in addressing footwear sustainability and redistribution.

Resole’s major activities is the redistribution of footwear to those in need priotising the homeless and refugees across the UK. Our team will aid Resole by running an in-depth analysis of socio-economic factors population demographics, and resource accessibility to identify regions across the UK where assistance is most needed. By using data driven insights our objective is to create an efficient model that shows key areas that require Resole’s attention thereby enhancing their impact.

Through this project we aim to allow strengthen Resole’s ability to support communities in need while promoting sustainability in the footwear industry. Allowing us to contribute to a meaningful cause is an honour and we look forward to making a impact through our work.

**Mo**:

***Introduction:***

**Rawad**:

***Introduction:***

The global sneaker industry is a significant contributor to environmental degradation, responsible for 1.4% of global greenhouse gas emissions, nearly as much as the aviation sector's 2.5%. With an estimated 20 billion pairs of shoes produced annually and 300 million ending up in landfills, sneakers represent an often-overlooked environmental challenge. This environmental impact is coupled with the social challenge of footwear accessibility, particularly for individuals experiencing poverty or homelessness.

Resole, founded in 2018 by Moosa Nsubuga, seeks to address these dual issues through an innovative model centered on recycling, reusing, and reducing waste. Operating from its Hub in Brixton Village, Resole has distributed over 25,000 pairs of trainers, worth £2 million, to vulnerable individuals, including low-income families, refugees, and the homeless. The organization also partners with charities, shelters, and soup kitchens across the UK, creating a network of support that bridges environmental sustainability and social welfare.

**Problem Domain**The challenges faced by Resole extend beyond the logistics of footwear redistribution. They include:

* Measuring the performance and efficiency of operations.
* Improving key processes such as the collection and preparation of footwear.
* Tracking and managing footwear inventory effectively.
* Quantifying the impact of their initiatives on the communities they serve.

These challenges fall within the broader problem domain of sustainable operations and impact measurement. Addressing these issues requires the application of problem structuring methods, including data analysis and operational modeling, to explore the root causes and potential solutions systematically.

**Objectives**This project aims to:

1. Analyze Resole’s operational data to identify inefficiencies and propose improvements.
2. Develop metrics and models to evaluate Resole’s impact on the communities it supports.
3. Provide actionable recommendations that align with Resole’s mission to reduce environmental waste and promote social welfare.

By structuring the problem through these objectives, this report will remain focused on delivering insights that are practical, measurable, and within the scope of Resole’s mission and project brief.

***(Guys write your introductions here so then we can decide on the introduction)***

***Final Introduction***

The global sneaker industry contributes significantly to environmental degradation, accounting for 1.4% of global greenhouse gas emissions—nearly as much as the aviation sector's 2.5%. With 20 billion pairs of shoes produced annually and 300 million ending up in landfills, the environmental impact of sneakers is substantial. Coupled with this is the social issue of footwear accessibility, particularly for individuals facing poverty and homelessness.

Resole, founded in 2018 by Moosa Nsubuga, addresses these dual challenges through its innovative "Reduce, Reuse, Recycle" model. Operating from its Brixton Village Hub, Resole has redistributed over 25,000 pairs of trainers worth £2 million to vulnerable groups, including the homeless, refugees, and low-income families. The organization partners with charities, shelters, and soup kitchens, bridging environmental sustainability and social welfare.

#### **Problem Domain**

Resole faces several operational challenges, including:

* Measuring the efficiency and performance of its redistribution processes.
* Identifying regions with the greatest demand for footwear.
* Improving inventory tracking and management.
* Quantifying the social and environmental impact of its initiatives.

These challenges highlight the need for systematic analysis and data-driven solutions to enhance Resole’s operations and maximize its social impact.

#### **Objectives**

This project seeks to:

* Analyze socio-economic, demographic, and resource accessibility data to identify high-need areas across the UK.
* Model deprivation levels to predict future demand and optimize distribution strategies.
* Develop a dashboard to visualize key findings, enabling data-driven decision-making.

By addressing these objectives, the project aims to provide actionable insights that strengthen Resole’s capacity to support communities, reduce environmental waste, and promote sustainability within the footwear industry.