**Project proposal**

## Abstract

Retail stores, commonly referred to as supermarkets in Kenya, are a core part of an urban community. A majority of the goods purchased by urban area dwellers are from these stores and their presence in major shopping Centers in the country goes further to prove their significance.

As a result of the continued increase of shoppers visiting these stores, long queues have continued to riddle supermarkets and retail stores that use a traditional cashier operated Point Of Sale systems. To the disgruntlement of the store owners, long queues have become a pain to many customers at major retail outlets. A quick visit to any of the retail stores in the capital to purchase a bottle of soda in the evening will have you queuing for close to twenty minutes awaiting your opportunity to get served by the often-tired cashier. This leaves you with the wish for a faster and more convenient mode of payment.

A Self-checkout mechanism is proposed to try and overcome this problem. the objective of this project is to develop a mobile app that will enable customer to scan and bag items while shopping. This will enable the decentralization of the goods payment process thus reducing the time required to obtain the service.

## Problem definition

Long queues continue to be a bottle neck in the retail stores business model leading to customer frustration and reduced efficiency. According to a survey by Box Technologies and Intel in the UK, 90% of shoppers actively avoid stores with long queues. 70% even said they might not go back to a store with long lines. Hardware based self-checkout machines have been proposed, that are similar to the tills cashiers operate, as a solution.

The high cost of purchasing a hardware based self-checkout system has continued to discouraged store owners from installing these systems in their retail stores. Being business people, return on investment is always a key factor they consider and there is concern on the viability of the hardware option. This option is often left to multi-national companies that have the requisite financial muscle.

## Proposed solution

Decentralizing the payment system by introducing app based self-checkout technology.

An application will be developed to allow the shopper to scan the barcodes of the goods as they pick them up and develop a list on their phone that can then allow them to pay using their mobile wallets , once they are done shopping, and a receipt is instantly sent to their phones with little or no human contact speeding up the shopping experience.

## Objectives

To provide shoppers with a faster way to pay for goods purchased.

To reduce time spent in retail stores.