# Report No.1 Introduction

## Project Information

* Project name:  **Scrap Collector**
* Project Code:
* Product Type: **Mobile Application**
* Start Date: **January 13nd, 2020**
* End Date: **--**

## Introduction

In this document, we introduce a new solution for those who are doing the job as collecting scrap. Scrap is understood as unusable materials such as iron, aluminum, plastic bottles, cans, etc… which can be recycled. Current job of the scrap collectors is to go around the place where they are living and ask if anybody has scrap to sell. That traditional way is such an inconvenient way for both the collector and the customer.

Based on our researches and analysis, we came to a solution for scrap collector and the people wanting to sell scrap in Viet Nam. We build a system which help the scrap collector to find near-by scrap posted in the radius of 5km, and based on those location, we help the collector to find out the smartest way to go and collect all the scrap that they have dealt. Beside of that, we also provide a mobile application that help people who want to sell scrap to post scrap and contact the collector easily.

## Current Situation

## Every day, the collector go around his/her living place to collect scrap, and the customer have to wait for the collector. Some large scrap collector service post their contact information onto websites, Facebook pages or E-commerce websites for those who want to sell scrap can contact. The customers can call and require the scrap collector service to go to their house or can bring their scrap to the address of that service.

## Problem Definition

Below are the disadvantages of the current situation:

* The collector spends all day outside but cannot find any scrap.
* The collector forgets to go to collect the scrap that has been dealt with the customer.
* The collector cannot optimize their routes.
* The customer has to wait for the scrap collector to go by and call the collector.

## Proposed Solution

Building a mobile application known as a scrap collector helping system named “Scrap collector”. It helps scrap collectors to enhance their productivity in daily work. The following workflow and features should be implemented:

### **5.1 Feature functions**

* Web application (for admin):
  + Admin can manage category of
  + Admin can manage account of customer
  + Admin can manage account of collector
  + Admin can manage posted scrap
* Mobile application (for customers and collectors):
  + Customer can post scrap for sale
  + Customer can update profile
  + Customer can contact the collector
  + Customer can manage posted scrap
  + Customer can review the collector
  + Customer can negotiate scrap price
  + Collector can find near-by scrap
  + Collector can view detail of the scrap
  + Collector can contact the customer
  + Collector can view dealt scraps
  + Collector can find the best route to go and collect scrap
  + Collector can update profile

### **5.2** **Advantages and disadvantages**

The advantages and disadvantages of the proposed solution:

* **Advantages**:
  + More effective way for the collector to collect scrap
  + The good interaction between the customer and the collector
  + Support the customer to sell scrap for further recycling instead of throwing scrap
  + Save time and effort for both customer and collector
* **Disadvantages**:
  + Only support for scrap collectors in Viet Nam.
  + Not all scrap collector has smart phones to install this application

## Functional Requirements

Function requirements of the system are listed as below:

**6.1 Admin:**

* Admin can create, activate, de-activate or update account.
* Admin can create, activate, de-activate or update category of scrap.
* Admin can activate, de-activate or update scrap posted by customer.

**6.2 Collector:**

* Collector can find near-by scrap with defined radius.
* Collector can view detail of each scrap.
* Collector can contact with the owner customer of the scrap.
* Collector can negotiate the price of scrap with customer.
* Collector can view the list of dealt scrap.
* Collector can find the best route to go to collect scrap.
* Collector can update or de-active account.

**6.3 Customer:**

* Customer can post scrap for sale.
* Customer can contact the collector.
* Customer can negotiate price of scrap with collector.
* Customer can cancel, update status of posted scrap.
* Customer can review collector.
* Customer can update or de-activate account.

## Role & Responsibility

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| --- | --- | --- | --- | --- |
| **No** | **Full Name** | **Role** | **Position** | **Contact** |
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Table 1 - Roles and Responsibility