# Report No.1 Introduction

## Project Information

* Project name:  **Scrap Collector**
* Project Code: **SCH**
* 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 scraps. 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 homeowner.

Based on our researches and analysis, we came to a solution for scrap collector and people who want to sell scrap in Viet Nam. We build a system which help the scrap collector to find near-by scrap posted in the defined radius of 5km or 10km, 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 homeowner who want to sell scrap to post scrap and contact the collector easily.

## Current Situation

## Now, there is no mobile application that helps both homeowner and collector to organize their work in a smarter way yet. Every day, the collector go around his/her living place to collect scrap, and the homeowner 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 homeowner 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 homeowner 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 workflows 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 homeowner and collector):
  + Homeowner can post scrap for sale
  + Homeowner can update profile
  + Homeowner can contact the collector
  + Homeowner can manage posted scrap
  + Homeowner can review the collector
  + Homeowner 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 homeowner and the collector
  + Support the homeowner to sell scrap for further recycling instead of throwing scrap
  + Save time and effort for both homeowner 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 Homeowner:**

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

## Role & Responsibility

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **No** | **Full Name** | **Role** | **Position** | **Contact** |
| 1 | Lại Đức Hùng | Project Manager | Supervisor | hungld5@fe.edu.vn |
| 2 | Nguyễn Duy Đạt | Developer | Leader | datndse63093@fpt.edu.vn |
| 3 | Tiết Lê Bảo Khánh | Developer | Member | khanhtlbse62247@fpt.edu.vn |
| 4 | Nguyễn Hoàng Anh Trung | Developer | Member | trungnhase62282@fpt.edu.vn |
| 5 | Nguyễn Hoàng Nhân | Developer | Member | nhannhse63259@fpt.edu.vn |

Table 1 - Roles and Responsibility