

REPORT FOR INTERNSHIP AT
SHIRAI GROUP.
TOKYO, JAPAN
BY
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AUGUST 30, 2017



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Executive Summary

The internship was undertaken at Shirai Group in Tokyo. The internship was in the Company's operations management department under the supervision of Mr Takiguchi, for a period of two weeks starting from August 17th to August 30th. Through the exposure I was able to develop skills in the application of theory to practical work situations. From the exposure I was also able to acquire good work habits. Attain a sense of responsibility. Through this internship, i got an opportunity to understand the informal and formal organizational interrelationships and also working in a Japanese company. Also learnt the Japanese business Culture. Which will be helpful in the future endeavors

1.0 Introduction:

I arrived in Shirai Group Company on the 17th of August and on the same day i was already visiting the Shirai Group offices. I had a great warm welcome in the morning and started training the same day. My first major experience with Shirai group was the introduction to all staff members and my presentation on Fleet Tracking & Fuel Monitoring System technologies already used in Kenya.

1.1 Objectives of the internship program:

The following were the objectives of the internship program

- 1) To learn the advanced, practical ICT programs in the waste management business field in Japan.
- 2) To learn Japanese business culture through working in a Japanese leading company, Shirai Group.
- 3) To find out a room to use my experience and knowledge for adding value on Shirai Group business.
- 4) To get an inspiration due to create valuable programs for the future in Kenya.

1.2 Scope of the internship

The internship program was undertaken at Shirai Group Company in Tokyo. The internship was mainly in the Company's operations department where ICT has been fully implemented, this was under the supervision of Mr Takiguchi, for a period of two weeks starting from August 17th to August 30th 2017.

2.1 Activities undertaken During Internship:

2.1.1 Orientation:

On the first day i was taken through the orientation process, briefed on the expectations of the internship program: namely

- a) Gathering of Knowledge and experience.
- b) Fact finding - explore implemented ICT technologies at Shirai through field study.
- c) Shirai group facts: requirements, resources & conditions- identify gaps in the business operations and propose ideas for Shirai.

2.1.2 Shirai Group Kenya project meeting

I joined the Shirai group Kenyan project team meeting during this meeting i was briefed on the proposal for the Kenyan project, the already laid plans, the business processes/ work flow model: right from Hazardous waste collection, weighing, offloading, sorting, storage, loading/incilation and final output(bottom ash & fly ash).

2.1.3 Inception report presentation to the Shirai Board members.

I presented the inception report to the Shirai board of directors' members at Shirai group company Headquarter. The presentation was good and the board members were happy to understand the current situation in Kenya, and the various technologies already adopted to track the fleet and fuel monitoring technologies which are absence in Japan.



2.2 Visits

2.2.1 Kenyan Embassy visit:

We paid a courtesy call to the Kenyan embassy with Mr. Takiguchi on 21/8/2017, we were given a warm welcome by the Deputy ambassador Mr Paul M. Kaliih, he as well thanked Shirai group company for granting me an opportunity to take an internship program in their company.



2.2.2 Visit to the clean Authority of Tokyo

I visited Clean Authority of TOKYO, this organization is in charge of Treatment of combustible waste, incombustible waste and large-sized waste. They also run waste processing facilities and handle waste Incineration plant.

2.2.3 Visit to Med Trust Tokyo Company Ltd

The company collect all kinds of medical waste such as syringe, disposable diaper, waste acid, waste alkali etc. Mr. Chiaki their CEO also explained to me how they use GPS tracking to monitor their collection and disposal activities. Using the digital tachograph linked with GPS, not only show the trajectory of the vehicle, but also show the driving content of the day to reflect on the daily report so that the driver are encouraged to be eco-driving and safe driving, the CEO also confirms the operation content. Mr. Chiaki also mentioned that they are introducing back eye camera and drive recorder to all vehicles including sales vehicles to monitor field activities.



2.2.4 Visit to Tokyo Environment Public Corporation (Tokyo Kankyo Kosha)

This is a public corporation focusing on public service and environmental conservation, they dispose large and bulky waste that residents have. They also operate a call center where Tokyo residents from the 23 wards call and make orders, However, the transportation plans are organized from the respective wards. They also follow up with reminders prior to the collection date, reminders comprise of client details, requirement date of collection, disposal and time. Also to control illegal dumping they act as Application service provider of real time medical tracking system for private waste management companies, to track medical waste. From this visit i learnt a lot on large refuse collection process in Tokyo metropolitan, also got exposure on the medical waste tracking systems, i also got an opportunity to visit a call center.



2.2.5 Visit to Tokyo Hydrogen museum:

This is a show case facility for the hydrogen society that Tokyo is aiming to be as an environmentally advance city. From this facility i was able to learn and see the future image of a potential hydrogen society while viewing, touching and experiencing hydrogen. I also got to view a hydrogen powered engine car (Mirai).



2.2.6 Visit to Shin-Koto Incineration plant

I also visited Koto Incineration plant which is one of the largest incinerating facility in Tokyo metropolitan government. Every day the Shin-Koto Incineration Plant can burn 1800 metric tonnes of garbage and produce a power output of 50,000 kilowatts. Incineration process is computerised.



2.2.7 Visit to Japan industrial waste information center.

We paid a courtesy call to Japan industrial waste information center. The JW provides various education and training courses for generators, and transporters and disposers of industrial wastes so as to let them acquire the specialized knowledge and skills required for the proper management of industrial wastes. They also act as Application service providers for the E-manifest system. During this visit, i was trained on how to use the E-manifest system for industrial waste management in Japan.



3.1 Shirai Group waste management ICT Technologies.

3.1.0 Traceability system (confidential

documents disposal and tracking system)

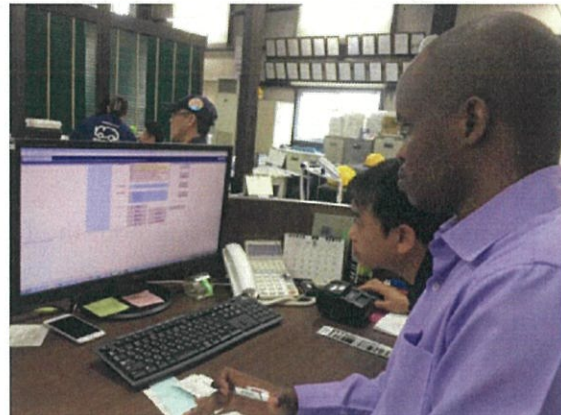
I learnt the various steps followed during the disposal of confidential documents by use of the Shirai traceability system which is a real time solution, it incorporates the following key aspects of the waste to be disposed. Image of the package at initial collection point, barcode of the package, location and number of packages at the collection point all these details are entered into the system and



the client can monitor the waste as its being transported. At the point of disposal all the details initially captured have to be verified again to correspond with the details captured at the point of collection. Also a final report is generated and immediately sent to the client. However at times there are some challenges encountered where barcode information may be erased, to complete the report the client has to be consulted to authorize the anomalies.

3.1.1 E-track vision (task allocation system)

E-track vision is a special system used by Shirai to do task allocation and order processing system, the follows details are captured: Client's serial number, name address, collection number and designated time by client. This system has helped to increase efficiency and also helps to monitor overtime clocked by the drivers if any.



3.1.2 Shirai's optimal planning system

The system is independent for each department, However all departments shares a common database.

4.1 Data Collection/Fact finding:

This sections highlights the various method I used in the gathering of information and information and fact finding.

4.1.0 In-depth Interviews

An in-depth interview is a qualitative research technique that allows person to person discussion. It can lead to increased insight into people's thoughts, feelings, and behavior on important issues. This type of interview is often unstructured and therefore permits the interviewer to encourage an informant (respondent) to talk at length about the topic of interest.

The in-depth interview uses a flexible interview approach. It aims to ask questions to explain the reasons underlying a problem or practice in a target group. You can use the technique to gather ideas, to gather information. By use of this method I was able to gather information from operations manager who trained me on the use of the E-trackvision and the Shirai Optimal Planning System.

4.1.1 Observations

Observational techniques are methods by which an individual or individuals gather first hand data on programs, processes, or behaviors being studied. They provide evaluators with an opportunity to collect data on a wide range of behaviors, to capture a great variety of interactions, and to openly explore the evaluation topic. By directly observing operations and activities, the evaluator can develop a holistic perspective, i.e., an understanding of the context within which the project operates. This may be especially important where it is not the event that is of interest, but rather how that event may fit into, or be impacted by, a sequence of events. Observational approaches also allow the evaluator to learn about things the participants or staff may be unaware of or that they are unwilling or unable to discuss in an interview or focus group.

Observations can be useful during both the formative and summative phases of evaluation. For example, during the formative phase, observations can be useful in determining whether or not the project is being delivered and operated as planned. In the hypothetical project, observations could be used to describe the faculty development sessions, examining the extent to which participants understand the concepts, ask the right questions, and are engaged in appropriate interactions. Such formative observations could also provide valuable insights into the teaching styles of the presenters and how they are covering the material. Also by use of this method I was able to analyze various scenarios and made appropriate decisions.

4.1.2 Face -to -face interviews

This method has a distinct advantage of enabling the researcher to establish rapport with potential participants and therefore gain their cooperation. These interviews yield highest response rates in survey research. They also allow the researcher to clarify ambiguous answers and when appropriate, seek follow-up information. Disadvantages include impractical when large samples are involved time consuming and expensive. Also it is challenging especially where there no willing respondents. I was able to use this method especially when collecting

information on various applications used within the company and how end users interacted with those applications.

4.2 Gaps identified

Using the above data collection and fact finding techniques i noted challenges in the Adachi office, where there is massive clients' document management which is handled manually, also noted that the invoicing system is done manually.

4.2.1 New idea 1:

Suggested idea is that i propose an integrated financial record management system and electronic clients billing system to reduce lots of paper work hence increasing efficiency and easier client's data access.

4.2.2 Benefits of the proposed idea:

Centralized Financial Data

There will be business agility when all your contracts and invoices are in one central place- thus eliminating integration issues and increasing visibility and payment turnarounds.

Improved Operational Efficiency

Leverage your Customer Relationship Management investments by automatically generating invoices for the various types of services offered without manual intervention.

Support for All Sales Channels

The system will improve retention and responsiveness when customers and partners get accurate invoices that are tied directly to their latest orders.

Flexible Invoicing and Billing

The system will produce more ways to increase your revenue with highly configurable options to bill and present invoices in a timely manner.

360 Degree Financial View

The system will increase visibility in how much you owe and how much you get paid with all your financial and asset data in one place giving a 360 degree view of all billing, payments and financial history.

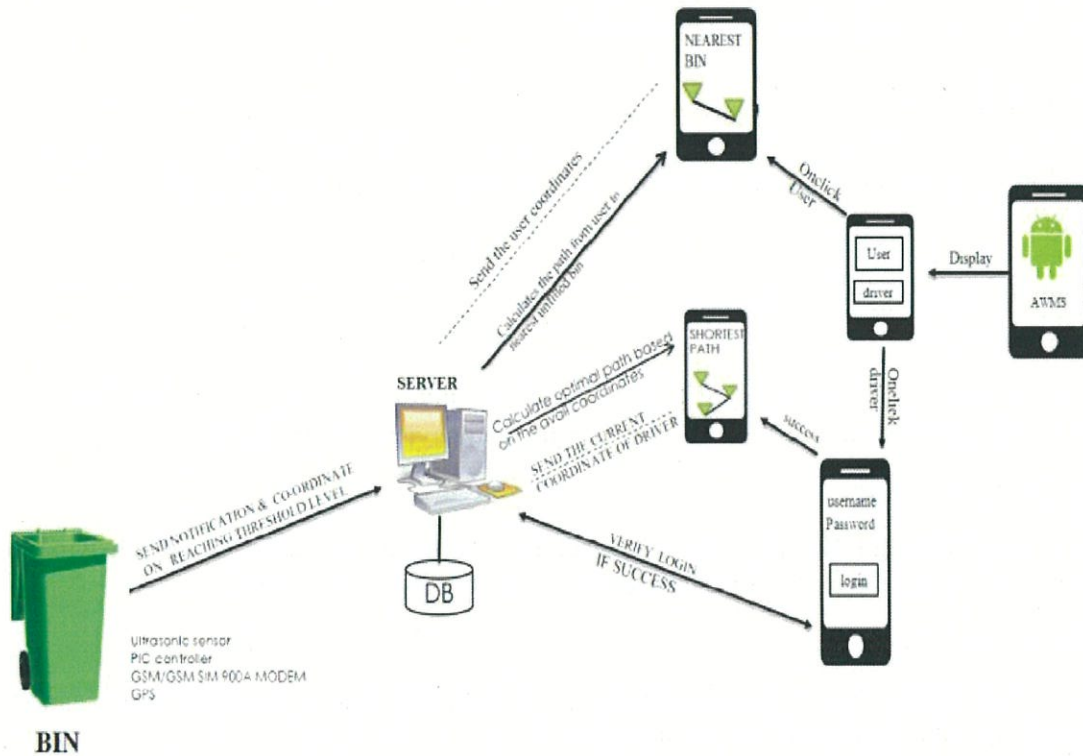
4.2.3 New idea 2: Smart Waste Management System

The waste collection process is a critical aspect for the service providers. The traditional way of manually monitoring the wastes in waste bins is a complex, cumbersome process and utilizes more human effort, time and cost which is not compatible with the present day technologies. Irregular management of waste typically domestic waste, industrial waste and environmental waste is a root cause for many of the human problems such as pollution, diseases and has adverse effects on the hygiene of living beings. In order to overcome all these problems, am proposing the idea of smart waste management system which helps in auto-management of waste without human interaction in order to maintain a clean environment.

The concept of smart waste management is implementable in cities where waste production

is domestically high but the effort put to control it is relatively very low. This idea is compatible mainly with the concept of smart cities. The smart waste management mainly avoids the congested collection of waste generated domestically which creates difficulty to manage its disposal.

System Architecture of smart waste management System.



The bin with ultrasonic sensor, PIC controller, GSM and GPS will notify the coordinate and bin status to the database. Here GSM is used to communicate with the server, which will contain the SIM with the basic speed internet. The ultrasonic sensor which uses ultrasonic waves will check the bin status. The PIC controller board will be used to control ultrasonic sensor, GSM and GPS.

The server will maintain the details of the unfilled bins, filled bins and authority registration. Whenever the normal user or authorized bin collect or request from the database the information will be given to them. The information to the normal user is about the nearest unfilled bin and authorized person will be given the coordinated of the filled bins.

The user end will contain the android app which works on android compatible phone. There will be two separate buttons for user and authority. The user will notify the unfilled nearest bin with path and authorized person will be notified by the filled bins with path. The working is as follows, User inserts trash into the bin. Bin checks for threshold level, Bin sends the status and coordinates to the Control center on reaching the appropriate level, Control center uses the coordinates sent by multiple Bins and provides an optimal path to the garbage vehicle, The bin if emptied by the vehicle, a notification is sent by it to Control center. This helps in easy monitoring. The bin should also have automatic lock of which would help in securing the bin from any kind of damage or theft.

Monitoring the fullness of bins through the use of sensors, it is possible to achieve a more efficient system than the current existing. The idea of “Smart waste management system”, mainly concentrates on Monitoring the waste management, providing a smart technology for waste system, avoiding human intervention, reducing human time and effort and which results in healthy and waste ridden environment.

The proposed idea can be implemented for smart cities where the residents would be busy enough with their hectic schedule and wouldn't have enough time for managing waste. The bins can be implemented in a city if desired where there would be a large bin that can have the capacity to accumulate the waste of solid type for a single apartment. The cost could be distributed among the residents leading to cheaper service provision.

5.1 Lessons Learnt:

My experience in Shirai Group Company has helped me greatly, widen my expertise knowledge, since I was able to interact with the various technologies used in Japan to control illegal dumping these technologies include

1. Traceability system (confidential documents disposal and tracking system) and Optimum planning system- Shirai Group Company Japan.
2. Large-size refuse collection, ordering system, electrical tracking documentation system- Tokyo Environmental Public Corporation.
3. Medical waste tracking system technology- Shirai Group Company & Tokyo Environmental Public Corporation.
4. Electrical appliances recycling management system.
5. The manifest system for industrial waste management- Japan industrial waste information center.

With the above knowledge gained this give me an edge in working at a waste management company.

Besides ICT skills i have also acquired other essential skills like, time management, to pay more attention to detail and not just to finish my work.

I have also learnt the difference in Japanese and Kenyan-run business culture, and saw that, there is a lot of emphasis on time management and quality of work.

In future now I can easily apply what I have learned in Shirai Group Company Japan, including KAIZEN (continuous improvement), and other aspects of the Japanese culture and help companies thrive.

Through the internship I have also improved my interpersonal skills by dealing with different people of multicultural backgrounds. This has greatly boosted my confidence.

5.2 Appreciation

I would like to acknowledge Mr. Toru Shirai the CEO of Shirai Group Company and board of management for giving me the opportunity to undertake my internship in this company. Also I acknowledge Mr. Takiguchi for his daily guidance. Also the entire staff members for incorporating me as one of their own and for their cooperation and support in my day to day activities.

The internship period was of great help to me, it was a great opportunity to do fact finding and exchange of knowledge, and by so doing i acquired something new every day.

I learnt many skills which have made me more efficient and confident in what I do as it prepares me to meet the requirements for future careers. With warm regards, long lives Shirai Group.