# Serbigo *Serbisyo on the Go!*: Online job order mobile application for non-professional workers

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## ABSTRACT

The way we live, the way we conduct daily tasks, and the way our society are all profoundly impacted by the deep integration of technology into our daily lives. The research aims to develop and evaluate a web and mobile application that empowers vulnerable workers in the informal sector in marketing their services and locating employment opportunities, as well as offering convenience to users by connecting them with workers in the area who are qualified to manage the task at hand. The researchers were able to swiftly transform system requirements to system design and development which was carried out using the SCRUM software methodology. Black box methodology was utilized in the system testing and the Technology Acceptance Model and ISO/IEC 25010 software metrics were integrated during the evaluation phase. The system was tested in various test scenarios and revealed it was fully functional and ready for deployment. Mutually, service finders and providers of the developed mobile applications were very satisfied, acknowledging its convenience in user experience and future earning possibility it provides.

The evaluation also revealed that the developed system is timely, efficient and useful especially considering the current global situation. An implementation plan, business model and financial analysis should be established to generate profit for the community.

**INTRODUCTION**

Technology nowadays is firmly embedded throughout our everyday activities; the usage of Information Technology shapes the way we live, innovates daily life processes, and dramatically impacts various areas of our lives.  One field that has been impacted the most by this technological advancement is the service sector's post-industrial society. Technology has reached a point where it revolutionizes business processes and alters business patterns, empowering the service sector.

The recent global pandemic prompted people to stay at home and geared towards online shopping, Aryani et al. (2021) mentioned that consumers in Malaysia specifically the young generations opted to choose online shopping. Bhandari et al. (2021) discovered that there are more users of mobile applications for online shopping than there are non-users, demonstrating in the Kathmandu Valley, Nepal online shopping both products and services are on the rise. Information technology is the driving force behind many amazing breakthroughs that have occurred over the past several decades, like the rise of e-commerce, electronic platforms, checkout counters, and marketing evolution, to name a few. Even calling a taxi has undergone a transformation in recent years. Nowadays, the informal sector is mostly plugging their services through social media, or they are plugged by their friends online, and the most critical factor in any activity is communication. Communication is further improved with the use of technology, providing a better and faster way of communicating. Based on the current trends, the researchers will use this information technology to bring innovation to the traditional way of getting services that the people in the informal sector offer. The researchers will revolutionize the traditional way of getting services in solving everyday household problems, giving convenience and satisfaction to every household and at the same time creating income opportunities for the people working in the informal sector of the economy. Taking advantage of the prevalent use of mobile and handheld devices, the researchers will use these phenomena to empower income opportunities to those in the informal sector who have the skill and ability to accomplish the requested specific demands and tasks.

A mobile application called Takl is the most popular service app in the USA. This platform connects customers who need chores completed with providers who are willing to earn money and use their skills to handle those chores Upon an in-depth review, the researchers found no time selection when accepting a job on the app, which led to ignoring jobs. Jarrod (2019) mentioned that there are also no security measures in the application, which makes it vulnerable to fraud and misuse. The researchers noted those weaknesses and studied if they could be applied to develop their system. Another existing application called Swosh was also studied by the researchers. According to Dreyfus (2019), that Swosh as a mobile application made as a solution to get your laundry done efficiently and professionally. The application makes the client choose from trusted partners' roster and has the client laundry picked up, washed and delivered after 24 hours. Upon reviewing this platform, the researchers found out that there is no notification if the pick-up is missed or delayed. No real-time tracking of the pick-up and delivery. Additionally, the researchers identified these flaws and researched them to include them in the system's development. Likewise, in the study by Saha and Santra (2017) it was mentioned both the difficulty in forecasting a user's sentiment and the unpredictable nature of the interpersonal sentimental influence. This research concluded that mobile applications must focus on human contact in addition to extracting user preferences. Their research's goal is to identify and suggest Kolkata's top eateries, in this specific application the quantity and quality of the foods are evaluated. The reviews are divided into three categories: favorable, unfavorable, and neutral. They have learned the preferences of the users for the various food products at the various restaurants through these feedbacks. To get the overall rating of the restaurants, the sum of the reviews that are favorable, unfavorable, and neutral are computed. The users of this website must actively participate and express their ideas regarding the menu items from the eateries. Therefore, you must compute an average of the positive, negative, and neutral opinions from customers in order to accurately assess the quality of your product or business.

Numerous mobile apps are available to promote business activities to consumers; these mobile apps are developed to reach customers easily through advanced technology. Alkhafaji (2016), mentioned that the respondents were extremely satisfied with the mobile apps because they provide enough, timely information about

various business activities. This study proved that mobile should be used as a modern medium for business activities like SerbiGo in which maximizing the reach of the service provider's services to the customers is the general mobile function. Furthermore, He et al., (2015) stated that the pace of updating conventional cell phones to smartphones is tremendous. One of the most appealing highlights of cell phones is the accessibility of many applications for clients to download and introduce. It also implies that programmers can appropriately malware to cell phones without much of a stretch, propelling other assaults. This issue ought to be tended to by both preventive methodologies and successful discovery procedures. However, Latif et al. (2016) stated that the utilization of mobile technologies is ascending on a surprising scale. Because of this, all the more remarkable and compelling versatile applications are required to stay aware of this pattern. Since there exist a few versatile stages (iOS, Android), everyone with various SDK (Software Development Kit) devices and explicit improvement capacities, application advancement turns out to be increasingly entangled and costly. Grønli and Ginea (2016) mentioned that software testing is generally utilized as a technique to improve quality and decrease hazards. In any case, because of the unpredictability in programming, it is viewed as infeasible to forestall and locate every conceivable deformity inside the time window and spending plan of a typical programming improvement venture. Programming testing is hence centred on the most hazard-lessening methods inside the limitations given the informal sector of the economy offers people alternative ways to generate income and creates temporary financial security. It serves as an option for self-employment and an opportunity for people who fall short in the formal sector of the economy. People from this informal working class are usually self-employed, providing services that are necessary in small communities such as plumbing, carpentry, nail cleaning, and more. These workers are not benefited from any minimum wage increase and yet are affected by the rising commodities prices. In choosing a locality, the researchers chose the Municipality of Sta Cruz, Laguna, as the locale of the study wherein the data gathering process was conducted. Based on the initial survey in the chosen locality, 76 out of 80 respondents prefer a home service to handle their common household problems. This demand in a community creates an opportunity for the informal sector workers to market themselves, showcasing their skills and ability. This concept is the main focus of this study, improving the response to these demands to create more opportunities for the people working in the informal sector and provide convenience to every household.

Based on the rigid observation of today's trends and the current situation the world is experiencing, the global pandemic COVID – 19 resulted in a desperate need for income and limited unnecessary outdoor activities due to the quarantine restrictions. The researchers came up with an IT solution that utilizes the most common gadget being used nowadays. Based on the dominant concept of cab-hailing applications in terms of providing services and convenience to their customers, the researchers developed a mobile platform dubbed "SerbiGo (Serbisyo on the Go): An Online Job Order Mobile App for Non-Professional Workers," which will assist target users in resolving common household problems through a home service setup. The proposed platform is also a great help in providing aid to the workers in the informal sector, allowing them to generate profit and serving as an alternative source of income for the underemployed.

**OBJECTIVES**

Generally, the study aims to gather data, develop, test and assess a mobile application that would provide a platform for skilled and unskilled workers in the informal sector of the economy to find income opportunities and generate profit and a mobile application that provides instant access to numerous nearby service providers equipped with skills and ability to do the requested specific task. A system that handles service provider and service finder accounts, service requests, recommends service providers, review services, and generates service records. A system that connects service finders and service providers to make a fast, effective and convenient transaction between both users.

Specifically, the study aims to do the following: (1) to design and develop a mobile application catering to both service finders and service providers that serves as a channel in making service request transactions in an effective, efficient and convenient manner, using a recommendation system with the integration of the Global Positioning System (GPS).; (2) to test the functionalities of the two developed mobile applications that will be used

by the service provider and service finders (3) to obtain user feedback and evaluate the satisfaction level of the users towards the developed mobile application in terms of quality factors, perceive ease of use, perceived usefulness, experience, attitude towards using, behavioral intention to use

## METHODS

### Design

In this study, the researchers utilized the descriptive design and developmental research design method. The descriptive design enables the researchers to obtain relevant information needed, identifying current situations and trends through observation, interviews, surveys, etc. The developmental design approach identifies the needed specification specifications, necessary features, and functions that are needed in order to address the identified problems and deficiencies during the descriptive research process Together with the Descriptive Research Design, Developmental Research is also utilized by the researchers to obtain necessary data and identify the specific requirements needed to develop the software solution. It has been described as the methodical study of creating, testing, and assessing improved software and processes that must adhere to internal consistency and effectiveness standards.

### Data gathering

In order to attain a deeper analysis of the complications we encountered during the gathering process, designing, software development, and technology acceptance, the researchers used various fact-finding techniques. An interview was conducted to ascertain the potential issues that established platforms may encounter. The researchers conducted face-to-face interviews with employees of the Management Information System Office (MISO) in the Provincial Capital of Laguna and with the head of the Provincial Employment Service Office (PESO) in Laguna to elicit data and statistics about the research study's potential users. Online Research and Technology Gap Analysis were fully utilized in this study to determine the possible functions and features of the desired output application of the study. Moreover, surveys and questionnaires were formulated for the preliminary survey for system specification.

### Respondents

The study population is focused on the households residing within the locale of the study – Sta. Cruz Laguna. Among the 123,574 residents, the researchers extracted a sample size of 250 respondents of the total population, which are potential service finders. On the other hand, 50 service provider respondents are also targeted. These are the people working in the informal sector who are equipped with skills and offers the following services – plumbing, carpentry, home painting, laundry services, manicure and pedicure, electrical services, television, refrigeration, and washing machine repairs.

### Sampling procedure

The researchers used a probability sampling method during the initial gathering and investigation to produce results based on the representatives of the whole population. The researchers used the cluster sampling method type of probability sampling in selecting respondents. Cluster sampling involves dividing the population into subgroups and randomly selected subgroups to be a sample that is very suitable for the initial investigation of the study. During the evaluation phase, Quota sampling was used by the researchers with the utilization of the Technology Acceptance Model to obtain user response and level of satisfaction of the possible users towards the developed mobile applications. From the 250 target population, we came up with 155 accessible population for the Service Finders and 50 for the Service Providers.

**Software development**

The researchers utilized the Scrum model as the software process model in the development of the application. The Scrum model works by doing the development simultaneously rather than sequentially. Scrum provides flexibility and adaptability, which means changes can be supported and integrated into the project currently in progress. Scrum works by breaking projects down into tiny bits of user functionality, prioritizing them, and then continuously delivering them in the shortest possible period. The team continued to communicate with the possible stakeholders to solve concerns about a specific function. This method allowed the researchers to respond early to the changing requirements of the project. According to Okhrimenko (2018), using the scrum model for mobile development improves the time management of the development of the application. It also increases the adaptability of the application because changes can be made during the process, plus it enables you to oversee each stage of product creation, have discussions about it, and make changes. He also noted that the scrum methodology is one of the best techniques for teamwork and makes it easier and more effective, which is great in this project. In this study, the researchers have come up with the model Schwabel and Sutherland developed, which was valuable and significant in developing the system. They claim that in order to promote an environment where Scrum can work: (1) the effort to solve a complicated problem is ordered into a product backlog by a product owner or potential stakeholder. (2) during a sprint, the scrum team turns a portion of the work into an increment of value. (3) the scrum team examines the outcomes with its stakeholders and makes adjustments for the following Sprint. (4) Repeat.

**System testing and evaluation**

A testing tool is needed to evaluate the performance and functionality of the two developed mobile applications. The researchers used the black box testing technique to validate the developed mobile application's performance and functionality. The black box technique, according to Writer (2019), is an effective testing method for examining the software from the standpoint of the user. This testing strategy concentrates on the input that the program receives and the output that is generated. The cause-effect technique was used in this test, which entails defining the cases (input circumstances) and effects (output conditions), creating a cause-effect graph and then creating test cases in accordance with it. Each test sheet was divided into test cases based on the mobile applications' process. 4 test cases for the SerbiGo: home service partner and 3 test cases for the SerbiGo: service provider. Test sheets were constructed and validated as lifted from the operational scenario identified in system requirements specifications.

In conducting the actual test, the research tool adopted a dichotomous scale – "pass" or "fail" to check if the developed mobile platforms performed the expected response based on the actual tests' inputs—dichotomous scales whether the developed mobile applications passed the test or failed. Researchers constructed two self-made questionnaires for each user group which is the tool to obtain user feedback and the satisfaction level of the users. The questionnaires are based on the technology acceptance model's factors of quality, perceived ease of use, perceived usefulness, experience, attitude towards using, and behavioral intention to sse, Davis (1989) and incorporate the ISO/IEC 25010 software quality metrics as a sub-criteria to provide a more accurate and reliable assessment statement to capture the users' perceptions. The survey questionnaire was subjected to multiple quality assurance checks to guarantee its consistency and trustworthiness in question form and substance. First, we designed questions using various survey approaches and tailoring them to the study's objectives and relevance. Following that, the researcher formed a team or group of three faculty members – two ICT experts and one development communication specialist – to examine and evaluate the questions' appropriateness, given that the majority of the questions were adapted from foreign circumstances. The researcher included all ideas, criticisms, and comments received from reviewers in the final survey questionnaire. A sample survey of 30 fourth-year BS Information Technology students was conducted outside of the study's sample. The questionnaires using five point likert scaling - level of satisfaction were disseminated to the target respondents of the study in the form of an online survey through Google Forms and a face-to-face survey for the SerbiGo service finder and service provider users,

respectively. The online survey form of the service finder users was distributed directly and indirectly. The online survey form was also posted on the locale's social media page to achieve the desired quota. On the other hand, the survey form for the service providers was delivered face to face to ensure that the target respondents were potential service providers to obtain a reliable and unbiased result. The gathered data were analyzed and interpreted to determine satisfaction with the two developed mobile applications.

## RESULTS AND DISCUSSIONS

### System design

The researchers have conducted a preliminary investigation of the system requirements and several fact-finding techniques have been useful in the system specifications. The researchers conducted several interviews with the office staff of Management Information System Office (MISO) in the provincial capital of Laguna to gather possible data about the informal sector workers within the municipality's jurisdiction and the head to the Public Employment Service Office (PESO) to further increase our probability of gathering data of non-professional workers on the informal sector but unfortunately there is one.

Technical gap analysis is the core of system requirements discovery of the SerbiGo mobile application. This method are widely used to come up for an IT solution and used to compare weaknesses and strengths of different applications. With all the cab-hailing and service delivery trends such as Grab, Uber, Food panda etc., these applications have a common purpose to provide services and convenience to its customer through virtual transactions. Through in-depth analysis and brainstorming the researchers came into a strategy of utilizing the strengths of the processes of these pre-existing apps incorporating it to the abstract concept of revolutionizing the traditional way of hiring temporal service providers to every household. This data collection method resulted into determining the necessary functions and features of the SerbiGo mobile applications. The following are the strengths that the researchers extracted from the different pre-existing applications: (a) recommendation engine (b) embedding geolocation and map API (c) feedback and rating (d) profiling and profit calculation (e) real-time data exchange and (f) voice streaming. During the technology gap analysis, the researchers also determined that the two user groups of the study must have each separated platform. Grab and Uber utilized this user separation of platform strategy to minimize exploitation of the software. The researchers incorporate this strategy into the study, making two separate platforms for each user – thus SerbiGo: Home Service Partner mobile application and SerbiGo: service provider mobile application was conceptualized. In addition to further observations on the current business technopreneurship in today's market, the researchers also understand the importance of an administrator of the two platforms for monitoring, restraint, and control to mitigate future risk and exploits, as a result, a 3rd platform is needed, and the SerbiGo: web admin platform was conceptualized. The researchers gain so many insights and learning in this data collection method, the reason why the study consists of 3 different platforms: (1) SerbiGo: home service partner  -  service finder users (2) SerbiGo: service provider - service provider users and (3) SerbiGo: web administration platform -future SerbiGo admin.
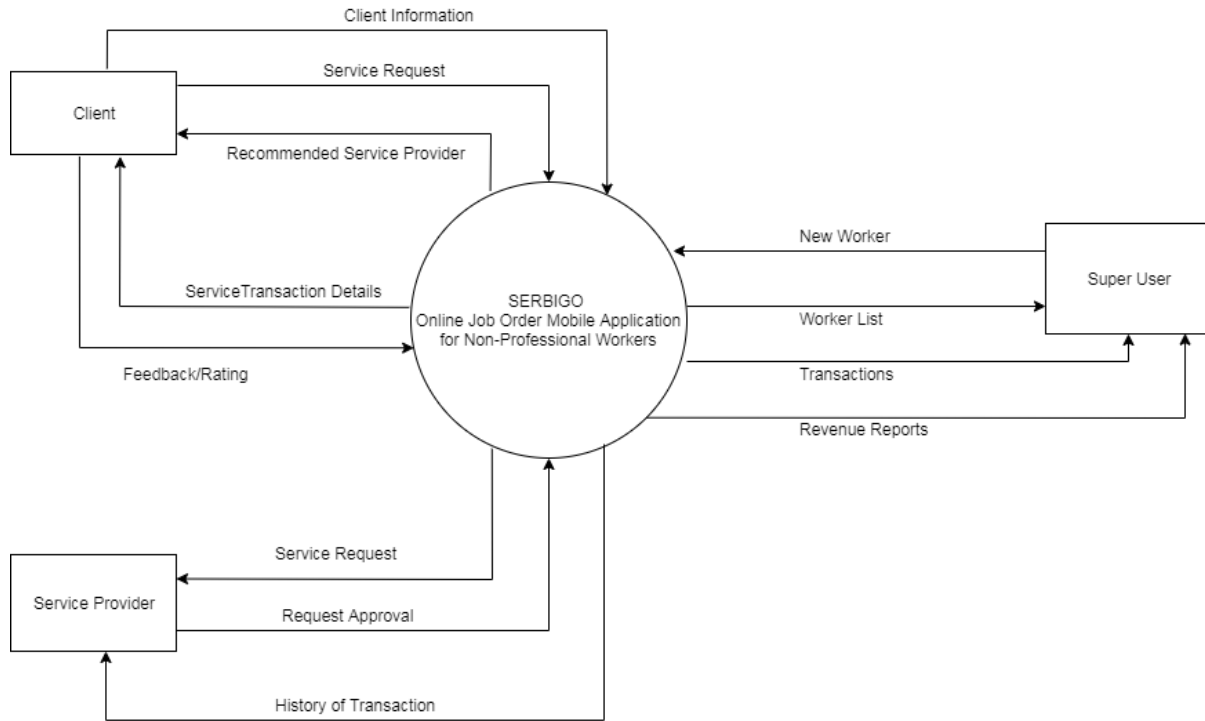
Figure 1. Context Diagram of Serbigo

The above figure shows the relationship of the developed platform to the external entities such as the Super User, Client and the Service Provider which illustrates the transaction flow design of the developed system.

**System development of the mobile and web application**

After gathering important system specifications including requirements, the researchers adopted SCRUM, an efficient agile technique for developing mobile applications that can help with time management issues. It presents a framework of "sprints," or brief intervals of time devoted to various phases of app development. Agile development is particularly helpful for the development of bespoke products because a single model, such as waterfall or prototype, is insufficient to meet the product needs (Srivastava et al., 2017).

The researchers first developed the SerbiGo: Home Service Partner mobile application intended for service finder users. The researchers constructed a product backlog or the processes identified during the design phase of the study. The researchers break down the development into 4 divisions based on the processes of the platform such as (a) Account registration, (2) Service requesting (3) Rating and feedback process, and (4) User complaint report function. Each process has its own different functions and features that are represented in the product backlog. The SerbiGo: service provider mobile application began its development after the initial release of the first platform. In building the 2nd platform researchers constructed another product backlog with the features and functions identified during the design phase of the study. The researchers break down the development into 3 groups – (1) Account registration, (2) service attending, and (3) profit calculation. The researchers arrange the priority of the process and its functions which is for the short run development and for the long run development. After identifying and arranging the functions for short sprints and long sprints the researchers proceed to the development of the functions. The researchers used Java with Android SDK and Objective-C in the development of the mobile application. In addition to this it can be used in Android platform specifically Android system version 4.0 and higher.
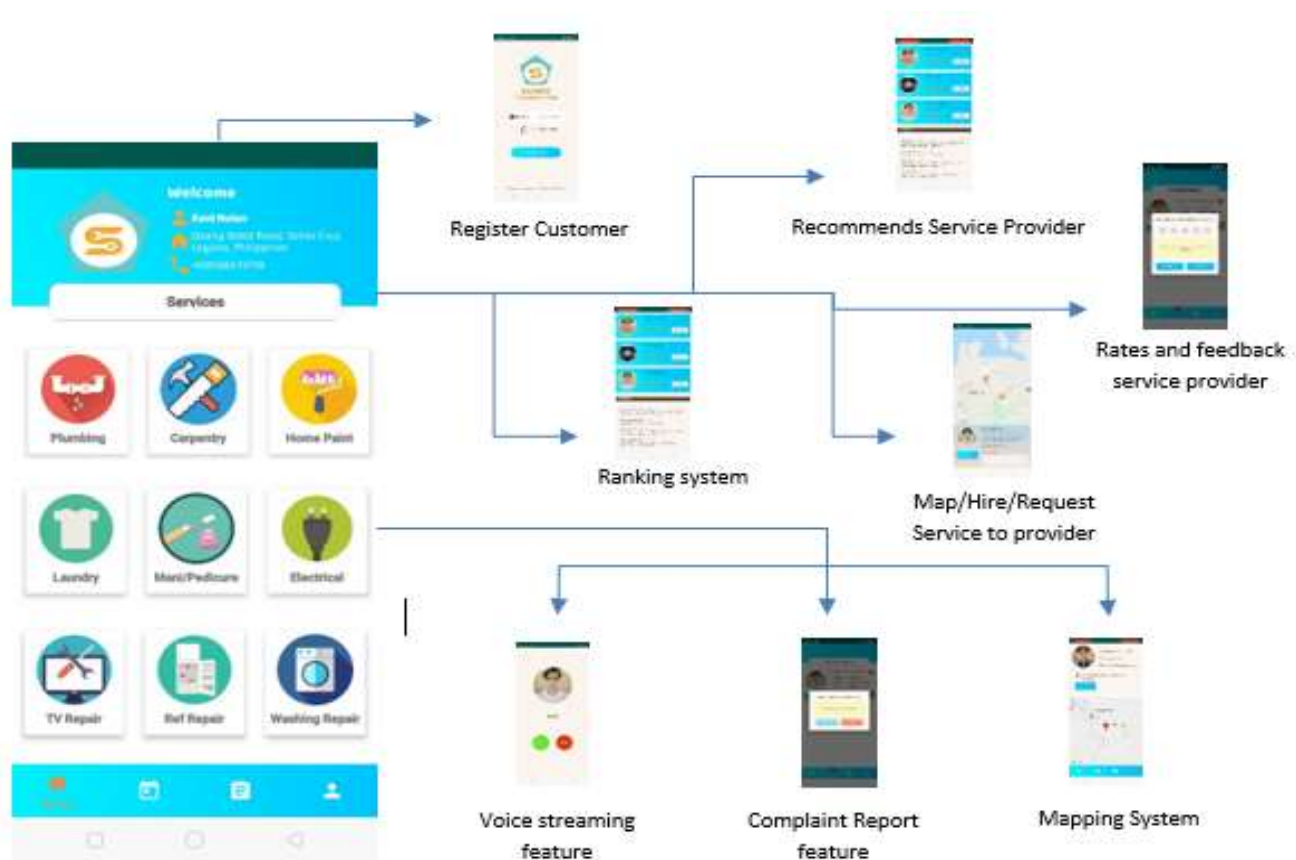
Figure 2. Mobile application iInterface-for SerbiGo: Home service partner-service finder

Figure 2 illustrates the system flow as shown service finder account must first register to the mobile application, allowing the device location and providing a valid contact number. A One-time password (OTP) will be provided by the system for user verification. Once verified, the user should provide basic information such as First Name, Last Namen, eMail address and automatic pinpoint of the address for the account to be created. After user account created, Homepage and Service Requesting can be accessed. The home page of the mobile application for customers which different services are provided by the mobile application. Every service indicated is provided with a unique description of the service, limitations and service fee. The Service Finder mat choose the services offered such as plumbing, carpentry, home painting, laundry, manicure/pedicure, electrical, tv, refrigerator and washing machine repair along with the service description, limitation and amounting fee. Upon choosing a service list of service providers available on the specified service with ratings and reviews and the user can send notes to the service provider prior to hiring. Once hired, request will be directed to the Ongoing requests tab which the Service Provider can accept or reject service request. Avoice streaming feature provides communication to further discuss the needed services. Once completed services, the user – Service Finder can provide a rating on feedback on the service provider depending on how the service went through. A User complaint report function is also available to accommodate complaints against the service provider regarding their mischievous acts. A transaction history tab provides the Service Finder user to view all completed transactions with the service provider wherein the date, time, type of service, which service provider, total cost, and service rate are presented.
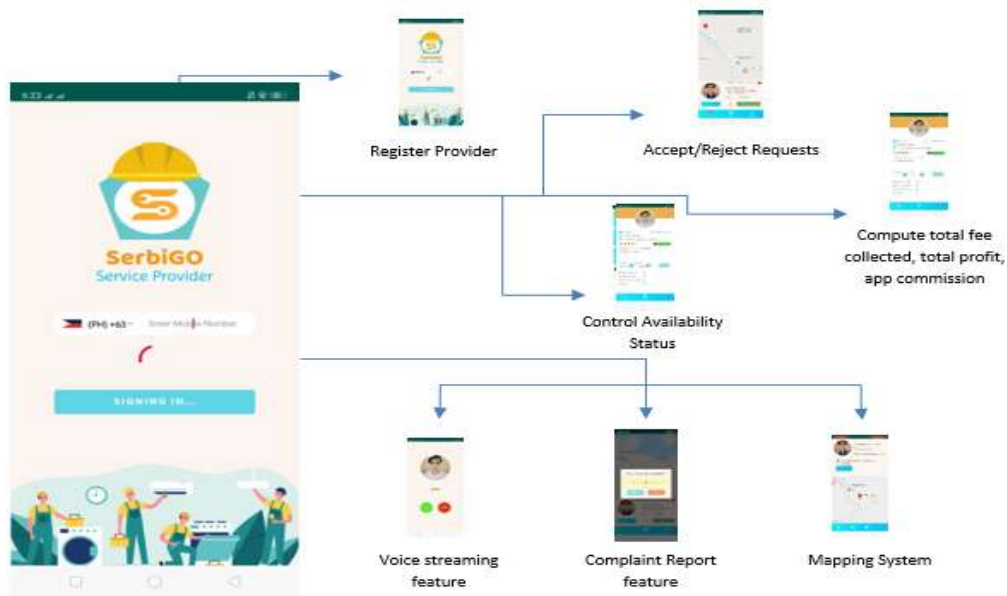
Figure 3. Mobile application interface-for service provider

This figure illustrates the Service provider mobile application interface which shows registration of service providers which includes providing a valid contact number, the system will provide One-Time Password (OTP) for account verification, upon verification location or address should be pinpointed in the mapping system, selecting the services that can be offered by the provided, first name and last name. The administrator will confirm the profile created for the approval also an interview through phone call and submission of valid identification cards and supporting documents for further assessment and identity validation. After the approval of the account, the service provider can access the profile account and can now accept and reject services. The profile account also bears rankings and ratings from the customers as well as complaints.
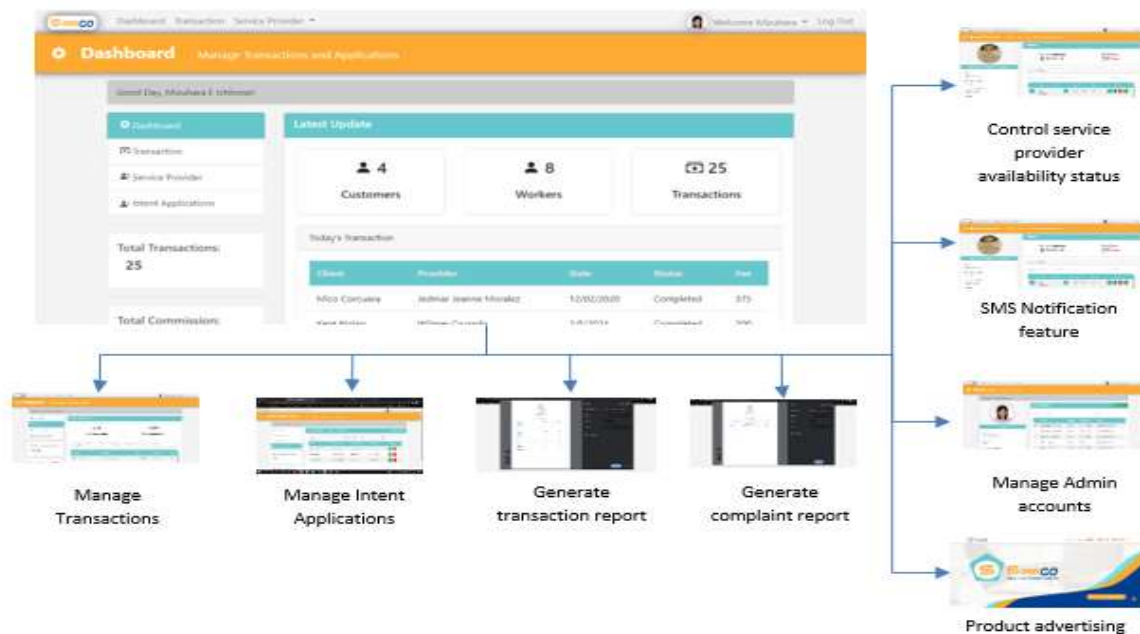


Figure 4. Serbigo administration website

The system also has an administration website as illustrated in Figure 7 the functionalities and processes of the SerbiGo web platform, an administrator website used to manage the mobile application's transactions, users, and business processes.

*Mobile application testing and evaluation*

Mobile application testing was tested through simulation to test the functionalities of each process of the two developed mobile applications, the researchers used the black box testing technique. Ten IT experts from the industry ranging from system developer – back-end and front-end developer, system analysts and testers and IT manager from a realty company were requested to participate in the conduct the black box testing, the researchers formulated a test case scenario. The testers were assigned to a specific account for the 1st round of the simulation testing 5 out 10 testers used the SerbiGo home service partner account, 4 testers were assigned to the SerbiGo home service provider account and 1 tester handles the system administration account. The 2nd round of the simulation testing took place after 1 scenario tested and the testers were assigned to the opposite account. After the 2 rounds of simulation testing, the researchers demonstrated the system administration account and the other 2 accounts service provider and service Partner to ensure that all data inputted was reflected in the audit trail and reports. The testing tool was provided to fill out the criteria of the test case scenarios to verify the functionality testing.

Table 1. Black box testing result- SerbiGo home service partner mobile application

| Process | No. of Testers | Frequency Passed | Frequency Failed | Percentage Passed | Percentage Failed |
|---|---|---|---|---|---|
| Account Registration | 10 | 10 | 0 | 100% | 0 |
| Service requesting | 10 | 10 | 0 | 100% | 0 |
| Rating and feedback process | 10 | 10 | 0 | 100% | 0 |
| User complaint process | 10 | 10 | 0 | 100% | 0 |

Table 1 shows the summation of the three actual tests on the developed mobile application. It represents the performance of the first mobile platform under test. The input-output design logic of the first mobile application was divided into four processes. The first process – account registration, has a perfect 10 out of 10 "passed" frequencies equivalent to a 100 % passing rate. The second process also has a 100% passed rate functionality of its process - service requesting, so is the third and the fourth processes- the rating and feedback, and the user complaint report, respectively. The above data concludes that the SerbiGo home service partner mobile application is 100% working and functional with no error occurring and meet the expected response versus the actual test response, thus justifies the first mobile application meets the desired requirement specification.

Table 2. Black box testing result. SerbiGo service provider mobile application

| Process | No. of Testers | Frequency Passed | Frequency Failed | Percentage Passed | Percentage Failed |
|---|---|---|---|---|---|
| Account Registration. | 10 | 10 | 0 | 100% | 0 |
| Accepting, rejecting and reporting service requests. | 10 | 10 | 0 | 100% | 0 |
| Profit Calculation and mobile app commission. | 10 | 10 | 0 | 100% | 0 |

Table 2 shows the summation of the black box testing results of the second platform SerbiGo service provider mobile application based on the conducted testing. The table above illustrates the performance of the second mobile platform under test, which is intended for service provider users. The results were based on three process identifiers. The first identifier – account registration of the service providers procured a 10 out of 10 "passed" frequency - 100 % passed rate. The second process – accepting, rejecting and reporting service requests also results in 10 out of 10 "passed" frequencies. Lastly, the profit and mobile app commission calculation process has garnered 10 out 10 passed frequencies. This concludes that the SerbiGo service provider mobile application's functionalities of each process is 100% working and functional, meet the expected response versus the actual test response, and meet the desired requirement specification. The testing results above conclude that the two developed mobile applications are perfectly functional and working and ready for the evaluation phase. The developed software also proved to be on par and passed the testers' standards, which are currently in the industry.

Table 3.  Summary result of the SerbiGo: Home service partnet mobile app

| Criteria | Mean | Verbal Interpretation |
|---|---|---|
| 1. Quality Factors | 4.51 | Very Satisfied |
| 2. Perceived Ease of Use | 4.50 | Very Satisfied |
| 3. Perceived Usefulness | 4.70 | Very Satisfied |
| 4. Attitude Towards Using | 4.52 | Very Satisfied |
| 5. Behavioral Intention to Use | 4.47 | Very Satisfied |
| 6. Experience | 4.50 | Very Satisfied |
| Overall | 4.54 | Very Satisfied |

The table shows that the respondents are very satisfied that the developed system is useful, user-intuitive, they would like to use it in the future, and the output that the developed system produced is in good quality.

Table 4.  Summary result of the SerbiGo: Service provider mobile app

| Criteria | Mean | Verbal Interpretation |
|---|---|---|
| 1. Quality Factors | 4.78 | Very Satisfied |
| 2. Perceived Ease of Use | 4.75 | Very Satisfied |
| 3. Perceived Usefulness | 4.7 | Very Satisfied |
| 4. Attitude Towards Using | 4.79 | Very Satisfied |
| 5. Behavioral Intention to Use | 4.69 | Very Satisfied |
| 6. Experience | 4.92 | Very Satisfied |
| Overall | 4.77 | Very Satisfied |

The table shows that the respondents are very satisfied that the developed system is useful, and user-intuitive, they would like to use it in the future, and the output that the developed system produced is of good quality. Both user groups have shown a great response to the developed mobile application and are very satisfied with its quality, usefulness, and convenience.

## CONCLUSIONS AND RECOMMENDATIONS

The feedback gathered after the testing and evaluation phase proved that the two developed systems were working well, and the respondents were satisfied and willing to use the developed system. In conclusion, the study was able

to achieve its specified objectives: (1) First, to design and develop mobile application catering to both service finders and service providers that serves as a channel in making service request transactions in an effective, efficient and convenient manner, using a recommendation system with the integration of the Global Positioning System (GPS); (2) to test the functionalities of the two developed mobile applications based on an actual test of the following: (a) SerbiGo home service partner mobile application; (b) SerbiGo service provider mobile application; (3) Lastly, to obtain user feedback and evaluate the satisfaction level of the users towards the developed mobile application in terms of: Quality factors, perceive ease of use, perceived usefulness, experience, attitude towards using, and behavioral intention to use of the users toward the SerbiGo mobile application.

In this study, the researchers therefore conclude the following: (1) The SerbiGo mobile application is useful and practical in terms of:(a) Finding the right worker to handle the service finder's request in dealing with their common household demands; (b) giving job opportunities to the workers from the informal sector by marketing their skillsets through the use of mobile application; (c)giving reliable data about the transactions made by the service provider as well as the calculations of their profit and app commission; (2) the GPS or the Global Positioning System is effective on giving the exact location of the both users; (3) the voice streaming feature of the app was effective on providing a means of communication between the service finder and service provider in discussing their ongoing transactions with clarity; (4) the use of extensive literature reviews, tech gap analysis as well as fact-finding techniques such interview, library research, online research, and survey helped the researchers to identify the research problem and all the necessary information that are needed to develop the mobile application; (5) the SCRUM methodology used by the researchers was effective in terms of developing the mobile application; (6) based on the interpreted result of the data obtained during the evaluation procedure, the users were "very satisfied" on using the SerbiGo mobile application.

The mobile application was created to serve as a free tool to assist households in delivering convenience by bringing the services they require innovatively and to provide income opportunities for informal sector employees by enabling them to market their abilities via the mobile application. The study's primary objective is to determine the most suitable service provider to provide to the service seeker via a recommendation system that considers the type of service, the closest distance, and the rating to produce the most suitable service provider to handle the service request. To further enhance the scope and effectiveness of the SerbiGo mobile application, the following are recommended below:

1. An implementation plan, business model, and cost-benefit analysis can be established aligned with the developed mobile application for technology transfer in the local community or technopreneurship.
2. The study is open to scaling to increase further the scope and services offered to grow and achieve the full potential of the developed platforms.
3. The next research endeavour should cover payment methods for every transaction made by integrating an online payment method.

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