

Machine learning assignment 3

**Oral-English Training Marketing Investment Analysis**



Subject Number: 32513

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# Project Background

As people all know that Chinese students are very diligent, many of us have learnt English for many years, our English foundation is very steadily, however, most of us are just good at reading and writing, the English practical application ability is very poor, when we need to speak or listening, we are weaker than many other countries’ students.

China has open herself to the whole world for many years and China is still developing very fast. English is the number one worldwide language, if we can acknowledge English, then it means we have the key to know the world. Our Chinese students should improve the English practical application ability, can understand what other people are saying and expressing our thoughts clearly as well. We should communicate with the world, go to a bigger world, to be international.

Quality-oriented education is the trend of future education, I used to operate this program in Wuhan, China from 2012 to 2014 which is to open an English training center to train people’s English listening and speaking ability. This is a very good program with great future which is aiming to help people who want to improve their English communicate ability. I was very optimistic about this program, I thought that many people will love my ideas and come to study in my training center, before I did marketing investment, I did not do any data analysis but just invest a lot money in marketing with my subjective judgment, and the result is that I lost a big amount of money in marketing investment with very low revenue.

At the same time, I find out that even though the Oral-English training marketing still have get a hug part to share, but since most of the students are not interested in Oral-English, they think that it’s useless, what they want is to have CET-4 and CET-6 trainings to pass those English exams, so find the target people and make an efficient marketing investment is very necessary instead of spending money in each place to try good luck.

Because of those fail reasons, now I need to do data analysis and project planning ahead to improve the successful rate of the project.

# Project Value Statement

The purpose of this paper is to give information about Oral-English training marketing investment in Wuhan, China. This is a project which helps the Oral-English training center to make accurate marketing analysis and marketing investment decisions based on the marketing data analysis.

The exam-oriented education makes us forget what’s the real meaning of studying, studying should be because we want to study, we love that domain but not just for passing the exams. There are some people who want to learn English really well, or want to study abroad, or want to work in the foreign companies, all of them want to have a good and real communication with the world, but because of poor English communication ability, it has limit their chances to go further.

This project will only be executed in Wuhan, China, so all the data I collect in this paper are based in the Wuhan marketing. In Wuhan, the Oral-English training is still very new, there is a big potential marketing in this domain. There are only a few training centers who provide Oral-English trainings such as New Oriental and Meten English. So, the marketing competition isn’t that intense yet, with the Oral-English training demanding is increasing, seizing the market opportunity is very important.

The project value statement is providing the best solutions to make marketing promotion strategies. Deciding where to put the advertisements, how and when to make promotions to approach the best value to target customers. This project will be done in one year.

# Project Objectives

The following are the objectives of the project:

* Offering a good oral-English training service to customers
* Increasing the portion of oral-English training market controlled by the company which I created
* Finding right target customers and the best model to improve marketing investment efficiency

# Project Scopes

The project scopes are as below:

* Gathering the marketing requirements
* Implementing requests for proposal for project approval
* Create network environment for data collection, analysis and presentation
* Collecting past marketing data from other Oral-English training organizations
* Building database for data analysis preparation
* Building models to analyze the past marketing data which coming from other Oral-English training organization
* Deciding what marketing solutions to be implemented
* Designing marketing processes
* Implementing marketing solutions online and offline
* Collecting new marketing data and evaluating whether the marketing models are working great in marketing
* Validating marketing processes based on the marketing data evaluations.
* Creating a new marketing strategy
* Implementing new marketing solutions online and offline
* Opening classes to start Oral-English training and keep tracking marketing data

1. **Work Breakdown Structure**

The Work Breakdown Structure is the most important part of the project management process. The Work Breakdown Structure offers the project manager and its team a chance to break a high-level scope statement down into smaller, better manageable units of work.

The task list of the project is showing in the tables as below:

Table 1: Scope Item: Request for Proposal (RFP) Approval Process

|  |  |
| --- | --- |
| **Scope Item: Request for Proposal (RFP) Approval Process** | |
| **Task Name** | **Deliverable** |
| Gather the marketing requirements | Initial RFP process completed |
| Assemble team to assign tasks. |
| Creating an RFP timeline |
| Write the RFP |
| Identify stakeholders to receive the RFP. | RFP has been successfully presented to stakeholders. |
| Distribute the RFP |
| Review and meet as a team to decide on stakeholders for final presentation. | Project has been presented successfully and awaiting proposal decision |
| Prepare final presentation to stakeholders. |
| Give the presentation to Stakeholders. |
| Implement requests for proposal for project approval |

Table 2: Scope Item: Analyze past data and make marketing plans

|  |  |
| --- | --- |
| **Scope Item: Analyze past data and make marketing plans** | |
| **Task Name** | **Deliverable** |
| List marketing goals | Decide marketing structure |
| Find target customers |
| Analyze current situation | Analyze past marketing data and make marketing investment plans |
| Create network environment for data collection, analysis and presentation |
| Collect past marketing data from other Oral-English training organizations |
| Build database for data analysis preparation |
| Build models to analyze the past marketing data which coming from other Oral-English training organization |
| Design marketing processes |
| Develop marketing communications tactics |
| Set marketing budget |
| Decide content of Oral-English training promotion | Promotional content designed |
| Decide what marketing solutions to be implemented |
| Decide publishing advertisements |
| Decide where and how to publish advertisements to the target customers |
| Decide content of promotional activity | Distribution and Advertisement of promotional content successful |
| Conduct meeting with stakeholders before implementing marketing plans |
| Implement marketing solutions online and offline |

Table 3: Scope Item: Evaluate Past Data and Analyze New Data

|  |  |
| --- | --- |
| **Scope Item: Evaluate Past Data and Analyze New Data** | |
| **Task Name** | **Deliverable** |
| Evaluate whether the marketing models are working great in marketing | Evaluate past data |
| Gather the input and marketing feedback. |
| Collect new marketing data and build the new database in a database. | Analyze the new marketing data and make changes. |
| Build new model and analyze the new data received from marketing |
| Validate marketing processes based on the marketing data evaluations. |
| Create a new marketing strategy | Plan and implement a new Marketing Strategy |
| Conduct meeting with stakeholders for new plans |
| Communicate between project teams about the strategy and challenges. Explain to the staff and stakeholders how the strategy might affect them |
| Implement new marketing solutions online and offline |

Table 4: Scope Item: End of the project

|  |  |
| --- | --- |
| **Scope Item: End of the project** | |
| **Task Name** | **Deliverable** |
| Open classes to start Oral-English training | Make a good ending for the project and get data for future analysis |
| Continue on tracking marketing data regularly to ensure that the project team is still on the track towards the objective |

# Project Timelines

**6.1 Project Time Estimate Gantt Chart**

The table below shows project’s time estimate for each scope and the whole project:

Table 5: Project Time Estimate Gantt Chart

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Project Time Estimate Gantt Chart** | | | | | | | | | | | | | |
| No. | Project Tasks | 1 Month/Per Unit | | | | | | | | | | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | Gathering the marketing requirements |  |  |  |  |  |  |  |  |  |  |  |  |
| 2 | Implementing requests for proposal for project approval |  |  |  |  |  |  |  |  |  |  |  |  |
| 3 | Create network environment for data collection, analysis and presentation |  |  |  |  |  |  |  |  |  |  |  |  |
| 4 | Collecting past marketing data from other Oral-English training organizations |  |  |  |  |  |  |  |  |  |  |  |  |
| 5 | Building database for data analysis preparation |  |  |  |  |  |  |  |  |  |  |  |  |
| 6 | Building models to analyze the past marketing data which coming from other Oral-English training organization |  |  |  |  |  |  |  |  |  |  |  |  |
| 7 | Deciding what marketing solutions to be implemented |  |  |  |  |  |  |  |  |  |  |  |  |
| 8 | Designing marketing processes |  |  |  |  |  |  |  |  |  |  |  |  |
| 9 | Implementing marketing solutions online and offline |  |  |  |  |  |  |  |  |  |  |  |  |
| 10 | Collecting new marketing data and evaluating whether the marketing models are working great in marketing |  |  |  |  |  |  |  |  |  |  |  |  |
| 11 | Validating marketing processes based on the marketing data evaluations. |  |  |  |  |  |  |  |  |  |  |  |  |
| 12 | Creating a new marketing strategy |  |  |  |  |  |  |  |  |  |  |  |  |
| 13 | Implementing new marketing solutions online and offline |  |  |  |  |  |  |  |  |  |  |  |  |
| 14 | Opening classes to start Oral-English training and continue on tracking marketing data |  |  |  |  |  |  |  |  |  |  |  |  |
| Total Time Estimate (Months) | |  |  |  |  |  |  |  |  |  |  |  |  |

**6.2 Project Schedule Management**

To do a better project schedule management needs to look at the project schedule from different angles to uncover problems and find out what to do about them. Managing the project schedule involves determining the delivery dates and milestones whilst taking all of the known constraints into account.

Managing the project schedule involves planning the work and working the plan as follows:

* Defining the activities, building the WBS to state all the tasks in details
* Sequencing the Activities, using Gantt chart to record the timelines
* Estimating the Required Resources, make sure all the resources are already ahead
* Estimating the Time Required, keep project timeline in head to make sure it’s all on track
* Developing the Schedule, making accurate schedule for each task, breaking big timelines into every small task timeline
* Controlling the Plans and Schedules. The plans might be adjusted all the time when they are implemented, sometimes, the project might be rescheduled as well, but it doesn’t mean that no way to control changes and schedules, to reach the aims, they still should be controlled in a good way.

# 7 Building Model and Doing Data Analysis

Marketing data analysis is very important. The project team collect data from the past to build model and find the most suitable group of schemas to do promotion. By building model and making data analysis, we will find out where are our target customers, how to do promotion, where to reach target customers and when to do promotion. What’s more, from those data, we will find out that different schema has different weight, we will know that for each schema, how much percentage we will invest on it. For example, we find out that Wuhan university has the biggest amount of target customers, Wuhan Huazhong Normal University has the second biggest group of customer, and by giving speeches there attract more customer, giving out fliers get many customers as well, moreover, every year in September more customers will choose to study in Oral-English training center, February is another peak time which get more customers, etc., so by look at the data analysis result, the stakeholders can decide where, how and when to do marketing promotion, and how much they should invest in each schema to approach the maximization of revenue.

When the marketing promotion start to implement, the project team need to evaluation the model to see if it works great or not and the new data will be collected as well. After the first run of promotion is done, based on the evaluation result and analyze the new data to adjust the promotion strategy, then implement the new marketing plans, keep evaluation and tracking new data to adjust the promotion strategies on time.

**7.1 Identifying Target Customers**

The first step is to find out who are the target customers, there are four types of target customers which are:

* People who are interested in learning oral-English and know other countries’ culture
* People who are going to study or live abroad which require English communication
* People who want to work in companies and need to communicate in English
* People who already work in companies and need to communicate in English and need to improve their oral-English

**7.2 Target Customer Classifiers**

**7.2.1 Target Customer Distributions**

* **Sex**

Different sex among target customers. Analysis if most of the target customers are male or female.

* **Age**

Different ages among target customers. Analysis what age arrange of customers are more likely to learn Oral-English.

* **Occupation**

Different occupations among target customers. Analysis what occupations of customers are more interested in improving Oral-English skills, students, office staff or company managements?

* **Salary**

Different salary levels among target customers. Analysis what salary arrange of customers are more likely to learn Oral-English

* **Major**

Different majors in different schools will have different weight of target customers. For example, students whose major is mathematics, probably most of them will not be interested in learning Oral-English since they probably do not need this skill in future career but others who study in foreign trading will have bigger possibilities to work in foreign companies and need to improve their oral-English abilities more.

* **Grade**

Different grades of students may have different needs in studying Oral-English too. The first year and last year university students

**7.2.2 Target Customer Locations**

After finding out the target customers, we need to figure out where to find it. There are some ways to find out where they are, please see as below:

* **Region** **Distribution**

Different regions in Wuhan, China may have different amount of target customers. For example, in the CBD may have biggest amount of customer which is good for the companies to make promotions there. But some area such as tourist places may get much less interested customers.

* **Schools Distribution**

There are many different schools in Wuhan. Working with schools to get their help with making promotions among the students who study there and support us to make promotion activities there. Some schools such as some high schools will have more than half amount of students study abroad after graduating, and Wuhan university which have many students have a lot of chances to use English to communicate with foreigners, moreover, they have high standard in requiring themselves to gain English communication skills make it has more target students which worthy to spend money and time on it. Some schools like New Oriental cooking school which has very low desire in learning Oral-English, so it’s not necessary to have the cooperation with this kind of schools.

* **Locations inside Schools**

Making promotion activities in different locations in different schools may have different results. Making promotions such as attaching posts, giving out fliers and make promotion stalls in some locations such as outside of Canteen and library, in classroom, English corner and student dorms may attract more target customers than other locations in the same school.

* **Foreign Companies**

Finding companies who need to give Oral-English trainings to their staff to have the corporation.

* **Outside of English Testing Centers**

People who are going abroad to study or live need to take English tests such as IELTS, TOEFL or GRE. Etc., they are big target customers since not many people can get good score for the first time, their English still need improvements. So, making promotion activities outside of the English testing places to attract target customers is an important strategy.

* **Online Advertisements.**

Online advertising is a very important channel for marketing promotion. Find out the suitable platforms to do advertising promotion and analysis who are our target customers online to send special advertisements to get their attentions.

**7.2.3 Reaching Target Customer Methods**

After finding out where to find the target customers, the next step is to see how to make promotions to those people. There are several ways to do promotion which are:

* **Distributors**

Working with good quality distributors to get students resource, mark distributors with different star levels based on their past behaviors which work with companies. A good distributor should have wide student resource which we need, great marketing ability and strong executive force.

* **Speeches**

Inviting special guests such as famous person in the Oral-English training domain to give speeches in schools and foreign companies to help customers know the Oral-English training center better and gain interests.

* **Promotion events**

Making promotion events such as introducing company services and giving out small gifts or holding parties in schools, foreign companies and special English communication events to attract target customers.

* **Other English Related Events**

Working with organizations who always hold English communication events and attend English communication events to make promotions to the target customers

* **Poster**

Making good quality posters to post at schools, distributors, foreign companies, English communication events and other public areas such as big shopping centers.

* **Flier**

Making high quality fliers to give to target customers

* **Newspaper**

Finding newspapers which have a big amount of target customers to read.

* **Magazine**

Finding magazines which have a big amount of target customers to read.

* **Radio**

Finding radio channels which have a big amount of target customers to listen or make radios in schools.

* **Phone Call or Texting**

After getting some target customer information, can call or text them to introduce the company Oral-English training service.

* **Trail Class**

Encouraging target customers to try the trail class to know the training center more and improve their interests to study here.

* **Online Advertisements**

Choosing good websites, platforms or apps which have many target customers always view them to put advertisements. And tracking customer internet surfing habits online, find protentional customers who need oral-English training more probably to send advertisements.

**7.2.4 Reaching Target Customer Timing**

Then final step is to decide when will we do the promotion, which are:

* **January to December**

Doing promotion in different months in a year will have different results. For example, every year in beginning of September and February are the months when students are back to schools, January and July are the months when students are starting to have breaks. Normally doing promotion when students are just back to school or the last month when students are going to have school breaks will get more target students, but when it’s the school breaks, it will be hard to get students.

* **Spring & Summer & Autumn & Winter**

Different seasons get different target customers too, such as spring and summer may get much students than autumn and winter.

* **Morning & Afternoon & Evening**

Different time of the day to do promotion is different as well. Doing promotion in the afternoon and evening is much better than morning.

# 8 Evaluation

The project manager needs to evaluate work by reviewing cost, schedule reports, how many students who pay for the training fee to be the Oral-English training center’s students for each schema and how much money the training center has got back in different period.

Evaluation analysis compares the actual work implemented at any time with the original schedule, budget and plans. It makes forecasts about the final result gives people the significant early warning signal that things are going wrong.

The model which data analysists have built shows the number of students which training center will get by using each schema. Each schema contains a series of numbers which are assigned for each attribute. To be more specific, the best schema should tell which place will be the best place to do promotion, which method will receive the best result to do marketing and when is the best time to do promotion, What’s more, the data analysis will get accuracy to tell how good the model and schema is, and use this schema, how many students the training center will get.

So, the data for evaluating the model are as below:

* Number of final students who paid for the training fee from different sex, age, occupations, salary level, majors and grades.
* Number of final students who paid for the training fee from different regions in Wuhan, schools, locations in schools, foreign companies and outside of English testing centers.
* Number of final students who paid for the training fee from different online platforms, apps, websites and people who see the advertisements individually.
* Number of final students who paid for the training fee from different distributors, speeches, promotion events, other English communication events, posters, fliers, newspapers, magazines, radio, phone calls or texting and trail classes.
* Number of final students who paid for the training fee from different months, seasons of a year and time of a day.

Analysis the results and compare with the old model data to see if the company reach the goal by using the model or not.

There is an acceptable variance between the results. If the differences are between the acceptable tolerance interval, then no need to make big changed on the marketing plans. But if it’s out of the tolerance interval, then have to adjust the model and make big change for the plans for the next run of marketing promotion.

# Project Budget

This project will last for one year, each item of project budget is the total price of the whole year. The table below shows the suggested budget components are:

Table 6: Project Budget

|  |  |
| --- | --- |
| **Project Budget** | |
| **Project Budget Component** | **$AUD** |
| Hardware and network infrastructure purchase | 14,000 |
| Data warehouse system and software purchase | 10000 |
| Data analysis system and software purchase | 10000 |
| Project team members Recruitment fee | 5000 |
| Project staff salary (project members only) | 1,000,000 |
| Project staff allowance | 200,000 |
| Project staff telephone expenses | 12,000 |
| Project staff insurance | 12,000 |
| Project staff other fees | 100,000 |
| Training project staffs fee | 10,000 |
| Transportation fee | 30,000 |
| Business entertainment fee | 10,000 |
| Contingency | 20,000 |
| Total | 1,433,000 |

# Personnel

**10.1 Project Stakeholders**

Stakeholders are those with any interest in your project's outcome, they are the group of people who invested in the project and will be affected by project at any point, and their input can directly impact the outcome. They are typically the members of a project team, project managers, executives, project sponsors, customers, and users. Stakeholders are people who are [1].

The table below shows the information of the project stakeholders:

Table 7: Project Stakeholders Information

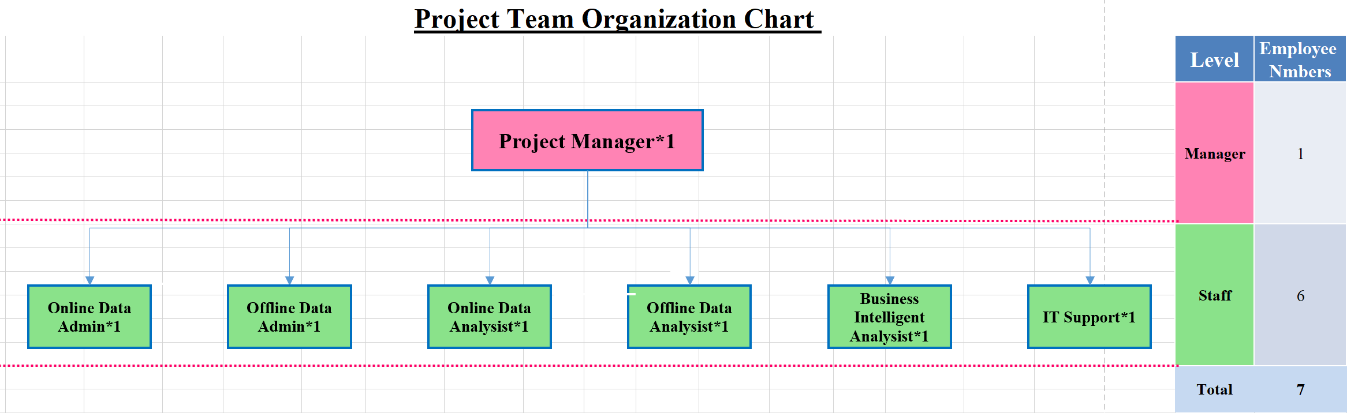
|  |  |  |  |
| --- | --- | --- | --- |
| **Project Stakeholders Information** | | | |
| **Information**  **No.** | **Name** | **Position** | **Working Email** |
| 1 | Don Cox | CEO | don.cox@twoa.com |
| 2 | Jun Li | Project Manager | jun.li@twoa.com |
| 3 | Prina Kotti | Online Data Admin | prina.kotti@twoa.com |
| 4 | Vaibhav Sharma | Offline Data Admin, | vaibhav.sharma@twoa.com |
| 5 | Yuting Cao | Online Data Analysist | yuting.cao@twoa.com |
| 6 | Huiyun Niu | Offline Data Analysist | Huimin.niu@twoa.com |
| 7 | Ziming Yang | Business Intelligent Analysist | ziming.yangi@twoa.com |
| 8 | Kate Davidson | IT support. | kate.davidson@twoa.com |
| 9 | None | Target Customers | None |

**10.2 Project Team Members**

There are 7 people in total in this project team. One project manager who is managing all the staffs, one online data admin, one offline data admin, one online data analysist, one offline data analysist, one business intelligent analysist and one IT support.

Please see the project team originization chart as below in figure 1:

Figure 1 Project Team Organization Chart



Different people in the project team are responsible for different things, everyone works together to push the project and make sure that the project will be completed on time with high standard. Please see the project team members job descriptions as below in table 8:

Table 8: Project Team Members Job Responsivities

|  |  |
| --- | --- |
| **Project Team Members Job Responsivities** | |
| **Position** | **Job Responsibilities** |
| Project Manager | * Project Scope Management Planning. Creates the scope management plan. The Scope management plan includes how to define, validate and control project scope. * Requirements Collection. The requirements collection is intending to meet the project objectives to approach documenting stakeholders’ needs. * Create Work Breakdown Structure and assign tasks to project staff * Make project budget plan and make cost control * Make sure the project is on track with high quality. * Conduct project meetings * Help make marketing promotion decisions and strategies * Deal with project emergency issues |
| Online Data Admin | * Collect online marketing data from competitors and our side * Design database structure * Set different levels of assesses to the database * Program databases in computer languages such as Structured Query Language * Input data for the database * Maintain existing databases and integrate new database to the system * Test database * integrate new database to the system |
| Offline Data Admin | * Collect offline marketing data from competitors and our side * Design database structure * Set different levels of assesses to the database * Program databases in computer languages such as Structured Query Language * Input data for the database * Maintain existing databases and integrate new database to the system * Test database |
| Online Data Analysist | * Work with online data admin. Make sure that online data admin provide data on time with good quality * After get the data from online data admin, first step is to do raw Data Pre-processing. check if there is any missing value or error, to make sure all the data has no problem before processing forward, it is necessary to check and clean data. * Data Table Creating. Put all the attributes as columns and insert all the other information to the corresponding area. Sometimes, the join in tables or new calculation columns maybe needed as well. Or if some data need to be converted, this need to be done before processing. * Visual Structure Building. Data analysist can use software, python or other languages to do data analysis. Depends on what stockholders need, data analysist build model and use different algorithms to test model accuracy. * Data Viewing. Every user is able to view the information but not only the data scientists. All the data is transformed, they are all readable with different graph forms such as maps, plain text, images and videos. |
| Offline Data Analysist | * Work with offline data admin. Make sure that offline data admin provide data on time with good quality * After get the data from offline data admin, first step is to do raw Data Pre-processing. check if there is any missing value or error, to make sure all the data has no problem before processing forward, it is necessary to check and clean data. * Data Table Creating. Put all the attributes as columns and insert all the other information to the corresponding area. Sometimes, the join in tables or new calculation columns maybe needed as well. Or if some data need to be converted, this need to be done before processing. * Visual Structure Building. Data analysist can use software, python or other languages to do data analysis. Depends on what stockholders need, data analysist build model and use different algorithms to test model accuracy. * Data Viewing. Every user is able to view the information but not only the data scientists. All the data is transformed, they are all readable with different graph forms such as maps, plain text, images and videos. |
| Business Intelligent Analysist | * Communicate between data analysists and project managers to make sure that all the requirements are reached and data analysists give their data result on time with good quality. * Work with online and offline data analysists, after they give the final result to business intelligent analysist. The business intelligent analysist writes reports and make presentation to show to the project managers and other stakeholders as request * Explain in detail about what those data mean to project manager and stakeholders when they get questions |
| IT Support | * Plan for the most effective infrastructure * Test the new network infrastructure * Implement the new network infrastructure system * Address the hardware issues and problems * Setup, maintain and upgrade system and software * Address the network issues and problem * Implement the code and integrate to the system |

# 11 References

[1] Wrike (2013), What is a Stakeholder in Project Management?, Wrike, Inc, United States, viewed 8 October 2019, <https://www.wrike.com/project-management-guide/faq/what-is-a-stakeholder-in-project-management/>