Agile Business Analysis

Project: *SAM chat-bot*

*Griffith University*

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# Introduction

## Purpose of this Document

The purpose of this document is to analyze Griffith University’s “SAM Bot” and create an agile approach that aligns with the business goals to better the service of the automated bot.

## Scope of this document

This document consists of different analysis techniques that focus on; communication, product vision, requirements, delivery and review and project management. The out-scope considerations, activities, items and areas of this project are;

* Updating of knowledge base articles in Ask Us or Cherwell.
* Developing further intents other than the General one.
* Developing further canvases (communication platforms).
* Launching the Bot on platform other than the Griffith website.
* Promoting the Bot for continuing students.
* Promoting the Bot for staff.

## Background

In July 2017 a project was initiated to facilitate 24/7 support for students and staff for the three most common IT queries as well having a place to ask all other queries through a Chat Bot developed in conjunction with Microsoft. The three queries include; password resets, printing issues and Wi-Fi connections. With the launch proving its capability the next project is to deploy the Bot and take into consideration its learnings to improves the product for its next stage to launch. The main outcome for these objectives include; increased self-help for staff and students, an additional channel for students and staff to seek help for common IT and non-IT queries, increased cognitive computing at Griffith and improved clarity and consistency of information available for the students. By focusing on these key objectives, it will benefit the IT at Griffith so that there is more efficient staff and student help available 24/7 online.

# Business Goals

The business goals that will be looked into align with the objectives that the business is trying to set forth with its IT integrated chat bot “SAM.” The main objectives that will be aimed for are; increased self-help for staff and students, an additional channel for students and staff to seek help for common IT and non-IT queries, Increased cognitive computing at Griffith and improved clarity and consistency of information available for students. That is what will be aimed for when analyzing and bettering this project.

## Agile Approach

The agile approach that will be used for this project is a combination of Kanban and Scrum to analyse. Kanban has been chosen due to how simple and efficient the approach is due to how it limits itself so that works in progress can move consistently meaning a steady work flow, on time work and completing tasks. The main thing that will be taken from Kanban is providing a steady workflow of tasks that reach 100% completion by helping the team manage day to day development with reduced blocking issues. Scrum provides the structure for organizing feedback, short term planning and an adapt mindset.

In this project, agile techniques will be used to determine many factors starting from Planning workshops to prepare and organize regular workshops for collaborative communication. When looking into the product we will be looking into the Kano Analysis graph to help analyze customer needs and product requirements. Also when looking into the product vision we will be using visioning to analyze the project.

# Stakeholders

## Stakeholder Definition

The stakeholders in this project include the development team of the software, the university teachers and the university students. The university teachers and students interest are that they were seeking more 24/7 self-help for common IT and non-IT queries. The development teams interest consists of increasing cognitive computing and not going over budget.

## Stakeholder Communication

**Backlog Refinement**

The product backlog is an ordered list of everything that might be needed in the product and is the single source of requirements for any changes to be made to the product.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | Inprogress | Complete |
| As a (role), I want to (feature), so that (benefit) |  |  |  |
| As a student, I want less broad categories |  |  |  |
| As a teacher, I want increased self help |  |  |  |
| As a |  |  |  |

# Product Vision

**Kano analysis**

Kano model is used for analyzing customer needs and product requirements. Its used to categorize and prioritize customer needs, guide product development and enhance customer satisfaction. The three types of customer needs are; basic needs, performance needs and attractive needs.

Delighted

Done poorly (or not done)

Done very well

Disgusted

1 Basic needs

In terms of Griffiths SAM bot the desired features could be:

* Increased self-help for staff and students
* An additional channel for students and staff to seek help for common IT and non-IT related queries
* Increased cognitive computing at Griffith
* Improved clarity and consistency of information available for students

As seen on the graph the start point is where we suggest where SAM bot is currently, and the end is where we would like it to be.

2 Performance needs

* Improving code base while dealing with technical dept which exist from the first project
* Improving the database containing all queries which include non IT related queries

3 Delightful features

* Better UI and more smaller and apparent permanently like Facebook
* Having a more Griffith university styled chatbot

**Minimal Viable Product**

Minimal Viable product is a product development strategy developed that ensures the minimal requirements the certain product is given so that there is an indication on what is needed and how it can get better. In relation to the SAM bot the minimal viable product includes the three following;

* It must be able to change passwords
* Fix internet issues
* Fix printer issues

# Requirements

**Story Decomposition**

**Story mapping**

# Delivery and Review

Backlog was the main thing that was implemented for this project and it helps identify users and recording stories that connects to it to prioritize development, this is in section 3.2 above. The backlog needs to be maintained, reviewed and updated by using the backlog management technique which should be implemented to ensure that the priority is in place properly.

Another process that was done is the MVP which is the minimal viable product which is a strategy developed to ensure the minimal requirements of the product is given so that there can be a good indication on what is needed to be done and what is needed to be improved on. The way to maintain this is to implement Retrospectives which discusses the potential opportunities for continuous improvement.

# Project Management

Project management is having all the processes and techniques in place to manage a project from start to finish. The difference between a Project Manager (PM) and a Business Analyst (BA) is that a BA is more specialized for analyzing specific processes and the way key processes run. The PM manages the whole project and does not go massively in depth with analyzing, but rather having all those processes and techniques properly aligned so that the project is manageable from start to finish.

Project management has three main constrains that effect the outcome of the project; Cost, Scope and Time. All these are in place to find a balance in achieving all three to create a positive project outcome, but most of the time achieving all three is difficult. What you can do in your project will be contained by how much money you have; how big the project is and who well you can control the scope and the period given to deliver the project.

The process of scope management is to first plan out how you are going to do the process, collect its requirements, using the requirements you can then define the scope and create the work break down structure to validate it and then finally control the scope.

The process of time management is to plan the time schedule and to define the activities to a small level of detail, followed by putting the activities in sequence and estimating your resources. Then the resources get converted into a duration estimation and developed into a schedule such as a gantt chard so that it can easily be controlled.

The cost management process starts with planning the budget and cost management which bases off the scope and time. Usually this is done last and the last two processes would be looked over according to things like budget. With the plan you then estimate based on the current resources and time to determine the budget.

## APM Framework

The Agile Project Management Framework (APM) is a set of five different knowledge areas and each of them have their own practices and processes. The five knowledge areas are; Envision, Speculate, Explore, Adapt and close. All these knowledge areas contain different categories with specific practices to go along with it, there has been chosen practices in relation to this current project in each knowledge area.

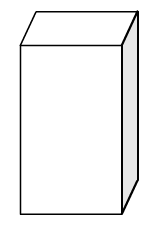
### Envision

#### Product Vision

**Vision Product Box**

The vision product box is a technique from BABOK that involves the entire team including customers to break into teams and design a box which includes; product name, graphics, bullet point selling points, detailed feature description on the back of the box and a list of operating requirements. At the end the team comes together and discusses their product vision box. This will be done below briefly to the SAM bot project.

**Front**



**SAM Bot**

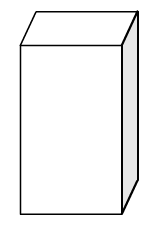
Selling Points

* Helps students
* Let’s IT solve processes with the use of automation 24/7
* Helps teachers and staff

Operating requirements

* Internet
* Computer with minimal specs to run windows and browser

**Elevator Test Statement**

**Back**

**Product Description**

SAM bot is an online automated helper that’s purpose is to help students and staff with IT related queries such as changing passwords, fixing internet issues and fixing computer issues

#### Project Objectives and Constrains

**Project Data Sheet**

|  |  |
| --- | --- |
| **Project Data Sheet** | |
| Project Name: SAM Bot | Project Leader: |
| Project Start Date: 03/03/18 | Product Manager: |
| Clients: | Executive Sponsor: |
| IT Department |  |
|  | Quality Objectives: |
|  | Must be able to assist with change of password |
|  | Assist in fixing internet issues |
|  | Assist in fixing computer issues |
| Project Objective Statement: |  |
| The objective is to completely build an automated chatbot that has the minimal requirements to assist in IT related queries such as changing of passwords and fixing internet and computer issues. | Performance Guidelines: |
| Business Objectives: | Student Feedback |
| Help Staff with IT related queries |  |
| Help Students with IT related queries | Architecture Guidelines: |
| Maximize the use of a 24/7 automated bot to minimize the work in the IT department | Integrate the characteristics of a Griffith member so that the bot is relatable to users |
|  | Maximize the use of an online automated helper to complete simple IT related queries |
| Trade-Off Matrix: |  |
|  |  |
| Capability: | Major Project Milestones: |
| Solve IT Queries | Finishing the project |
|  | Issues and Risks: |
|  | Query development is not easy and can only be made for the most common of questions |
|  | Requires internet to access, could be downfall due to the reason people would be using it is to fix their own internet |

#### Project Community

**Participant Identification**

It is important to have the right participants for all the tasks required with the skills and attitude to fit the project. Below are a select few participants being identified in the three main participant categories; customers, development team members and stakeholders.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Critical | Essential | Nonessential |
| **Customers** |  |  |  |
| Students | **X** |  |  |
| Teachers | **X** |  |  |
| **Development team members** |  |  |  |
| Tester |  | **X** |  |
| Programmer | **X** |  |  |
| Sales |  |  | **X** |
| **Stakeholders** |  |  |  |
| Griffith University |  | **X** |  |
|  |  |  |  |

**Customers**

The two main participates that must be identified are the students and teachers. This relates to the SAM bot project due to these customers being the people who use the chat bot the most, the people who the chat bot was originally intended to be for. Both customers are critical participants to the project due to them being the end user and it was made to assist them.

**Development team members**

These are the possible participants regarding the development team members; a tester, programmer and sales team members. The tester is essential to the product due to needing feedback and testing prior to launch so that the automated bot is working and up to minimal standard before launching to the public. The programmer is a critical member due to it being the person who makes the automated bot in the first place and without the programmer there will be no program. Sales team is not essential in this case but is a possible participant in this project and can possibly change the project outcome slightly.

**Stakeholders**

One of the stakeholders that have been identified is the university itself, this meaning all the funding and management in Griffith university are essential in completing the project and all play an important part in this SAM project and must be considered.

#### Approach

**Self-Organization Strategy**

This strategy focuses on the efficient process of interactions between individuals and helps create a shared understanding in an Agile project. There are a set of questions that relate and support this process to focus on collaboration which goes beyond communication.

How will we collaborate with customers?

The team will collaborate with the customers using feedback forms from students and staff using the SAM bot itself.

How will members from a different feature team collaborate with each other?

Members from different teams can collaborate through the internet using emails and other communication methods.

How will the different teams collaborate with other teams?

This will be done by having standups so that every team is on track with each other and offer their own insights on the SAM project.

What does empowerment mean to our team?

Empowerment means the level of authority, everyone should respect and listen to the team leader so that everything will be completed and on track.

Who is accountable for what?

The programmers are accountable for creating the code, testers are for testing and Griffith University is accountable for the funds and deadline.

What practices are they going to use to facilitate the above?

One of the practices that will be used is called the standup practice which is where people from different teams come together at the same time every day to know what is completed, what is in progress and what will be done next.

### Speculate

This phase consists of gathering the initial broad requirements for this product and defining the workload as a backlog of product features.

#### Product Backlog

**Story Cards**

This section captures user stories and story details on cards that allows groups to physically manipulate them by writing on them, shuffling them or laying them out on a table. This allows you to prioritize and manage user stories.

|  |  |  |  |
| --- | --- | --- | --- |
| Story ID | 1 | Importance | 3 |
| Story Title | Change Password | Estimate | 1 day |
|  | | Type | Customer |
| User Story | | | |
| As a Student  I want to change my password  So that I can access my account | | | |
| Acceptance Criteria | | | |
| And I know I am done when: The student has successfully changed password | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| Story ID | 2 | Importance | 3 |
| Story Title | Fix Internet Issues | Estimate | 1 day |
|  | | Type | Customer |
| User Story | | | |
| As a Student  I want to connect to the internet  So that I can use the internet | | | |
| Acceptance Criteria | | | |
| And I know I am done when: I am connected to the internet | | | |

|  |  |  |  |
| --- | --- | --- | --- |
| Story ID | 3 | Importance | 3 |
| Story Title | Fix Printer Issues | Estimate | 1 day |
|  | | Type | Customer |
| User Story | | | |
| As a Staff Member  I want to fix printer issues  So that I can print | | | |
| Acceptance Criteria | | | |
| And I know I am done when: The printer works, and something has been printed | | | |

#### Released Planning

**First Feasible Deployment**

**Minimal Viable Product**

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### Explore

#### Iterating Planning and Monitoring

**Monitoring Iteration Progress**

Monitoring iteration progress occurs using specific practices. The one that will be investigated is called Story/tasks check off charts. This is done by creating a simple list of stories and tasks that indicate what state the process is at (In-progress, Completed, Defined) along with information about the process.

User Story: UI too simple

|  |  |  |
| --- | --- | --- |
| **Name** | **Owner** | **State** |
| Changing colours | Programmer | Completed |
| Message box creation | Programmer | In-progress |
| Implement notification sound | Programmer | In-progress |
| Implement voice replay | Programmer | In-progress |
| Test to see if UI works | Tester | In-progress |

User Story: Feedback

|  |  |  |
| --- | --- | --- |
| **Name** | **Owner** | **State** |
| Create a google form for feedback | Tester | Complete |
| Disburse feedback to customers | Tester | Complete |
| Look back at results | Tester/Programmer | In-progress |
| Implement improvements | Programmer | In-progress |

User Story: File support ticket

|  |  |  |
| --- | --- | --- |
| **Name** | **Owner** | **State** |
| Create support ticket entry | Programmer | Complete |
| Test support ticket | Tester | Complete |
| Change colour and UI to make it presentable | Programmer | In-progress |
| Revise support ticket database | Programmer | In-progress |

#### Technical Practices

**Continuous Integration**

Continuous integration is an essential technique in agile development and it focuses on the continual development of the minimal viable product. One of the practices that can relate to the SAM bot project is using a version control tools called SVN. This is done when coding and adding on to any current piece of code, saving it and then coding another addition on to it. This is helpful because it allows a safe way to backtrack when implementing continuous integration when it comes to code. This can benefit the SAM bot project so that continuous integration can be achieved.

#### Project Community

**Collaboration and Coordination**

The tool that should be used in this project for collaboration and coordination is using the practice called daily standups. Daily standups are a quick daily team meeting so that activities can be properly coordinated. Team leaders are expected to set up a meeting held at the same time and place every day that lasts less than 15min which requires all core team members to be present. Each person at the meeting is asked a series of three questions in relation to the project that they are working on, this helps the team stay on track and make sure that everything is being done properly and fluently without any problems. Problems arising earlier is better than later and will help projects like the SAM bot project to find problems early and fix them so that everyone is on the same page and is working according to time and not going over budget. The questions include;

* What did I do yesterday?
* What am I planning to do today?
* What impediments are in the way?

The end results will be that everyone will get things done efficiently and so that everyone knows what everyone is up to in the project.

### Adapt

#### Product, Project, and Team Review and Adaptive Action

**Customer focus groups**

This practice is apart of the review process and it is a technique used to get feedback from customers along with possible desired changes for the project. In this case a group get together will be made limited between eight and ten customers and product team members so that they can receive feedback on the SAM bot service. By using this it helps gather information from the customers perspective about SAM bot so that we can make possible changes to the project.

### Close

To close of this project, we will use three specific activities to successfully close. First being is to celebrate the completion of the SAM bot project and include a customer to demonstrate that the project is done and successfully working. We then move onto finalizing all the project documentation and support material along with reports required by Griffith University who is the organization making this project happen. Finally, we will then pass on our key learnings of the projects such as our most important backlogs, vision statement and other parts of the report to in the future hope benefit the organization and future teams.