Final Report

for

Sydney Wildlife Rescue and Care App

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1. Introduction

Overview:
This document is to discuss and reflect the product that we developed for our sponsor, Maryanne of Sydney Wildlife. In this document we will go through the various different stages of our project, the different deliverables that we prepared throughout it, and the various different decisions and choices we made throughout the project, and why we made these choices. We will format this document in a way that follows the structure given by the project definition, in that we will follow the structure of the system development life cycle.

The Problem:
Sydney Wildlife and our sponsor Maryanne posed to us the issue that they needed both a tool to triage animals when they are found, in order to make a quick decision based on their current health and prospective health. The tool would take the form of a decision tree, and the ability to create new decision tree's based on new or specific types of animals was highly valued as well. They also needed a recording tool in order to store animal information in profiles, using a centralised database. This animal data should be entered through an app, and able to be viewed either through a database or another medium such as a website.

This problem stemmed from the previous recording method in which was all paper based. New animals that came in would have a form filled out on the spot which was paper based and non-automated/cumbersome. These forms would then be relayed in to the office which would then be recorded and manually put in to a file system. Our client came to use because this system was very slow and cumbersome, and desired a more modernised and up to date system in order to solve these issues.

In this way, Sydney Wildlife came to us in order to create a system that solved this issue that they had with recording/assessment in order to assist them with record keeping as well as animal triage.

The Solution:
We decided on our particular solution after weighing up the various different options that could meet our client's needs, such as the development of an application. Through discussion with our sponsor we eventually decided to create a web application in order to both host a decision tree as well as creation of a database entry form and database in order to store animal information.

We also decided to implement various additional features that would help our client, such as animal profiles, carer profiles, health data tracking, login system and gallery system towards the end of the project, or at least provide the infrastructure for these features to be implemented at a later date.

2. Project Planning

During the initial planning stage of the project, we aimed to get a good understanding of the objectives and requirements of our sponsor. We started this process by meeting our sponsor, understanding the organisation and what they do, and then started to discuss the problem they were trying to solve. This was a major first milestone in the project as it set the stage of what we aimed to achieve over the next few months.

Once we had gathered all the requirements and had a good understanding of the problem, we began to formulate possible solutions. We took into consideration the main parts of the

problem, and divided them up by size and importance. Pulling apart the problem was an important step as we could further understand, and absorb all aspects and awarded a weight to each part. This was a crucial step to developing a project plan as we now had a good idea of what resources would be required for each part.

Before we could put this information into developing a plan, we had to come up with a solution that would solve all parts of the problem, which required only the available resources. Coming up with possible solutions was a process in itself, brainstorming and matching each broken-down problem with a solution. Once we had decided on a solution, we then began to develop a plan of attack for achieving the solution.

We then began to prepare a plan for how we were going to tackle the problem. Parts of this plan included resource management (mainly time and people in this situation) and a timeline of required tasks. We also had secondary tasks that were dependencies of the required tasks, so this was another consideration in the planning process.

Once the plan was formulated and agreed upon, we began to follow the set plan to stay on task and on time.

The main difficulties we had with the ongoing plan were the constantly changing requirements and resources. Throughout the project new requirements would be added, deleted or otherwise changed. The resources of people and time also varied from the original plan throughout the project. These factors required the review and constant change of the plan throughout the project to better match the updated constraints and manage them appropriately.

The constant changing of requirements and resources was a challenge for us as we were not too good at re-assessing the plan as time went on. We ended up with a plan that no longer fit the original schedule and allocation of tasks and resources, which was a disadvantage to the group.

An improvement for next time would include being aware that if a significant amount of requirements and/or resources changes, we need to reassess the project plan to ensure it is still appropriate, and make adjustments as necessary.

3. Requirements and Analysis

Throughout the semester we have had several meetings. This includes meetings with the sponsor and meetings with just our group members. At the beginning of the semester the sponsor described to us the two main features that she wanted us to create, to develop a decision tree and an electronic form. In the subsequent meetings, we would discuss the specific details of the features, as well as additional features that the sponsor would like to have.

We also had the opportunity to meet with two other Sydney Wildlife members, a carer and a hotline responder. They told us their experiences while working with Sydney Wildlife, the advantages and disadvantages they encounter when using the current system, and provided suggestions for our prototype based on their experience.

In the group member meetings, we would analyse all the suggestions that our sponsor had proposed to us and discuss what we can actually develop. Due to constraints such as time, the technical skills of our four group members, and other resources, we could not develop

everything that they want. We had to prioritise features that are more important. Based on our discussions, requirements for the application were created and documented as part of the software requirements specification document. Our sponsor reviewed the SRS document and was pleased with it.

4. Design

Once most of the requirements are identified, the design stage can begin. This process involved some of the group members drawing the different screens in the application, either electronically or hand-drawn, showing the layout and functionalities of each screen. The programmers would then use these conceptual designs to develop the application. In terms of colour, we have decided to follow Sydney Wildlife's colour scheme as our product is intended to be used by Sydney Wildlife members.

One of the sponsor's requirements was to develop an application that can be accessed on smart phones. This gave us a few options: to develop an application specifically for iOS, to develop an application specifically for Android, to develop both iOS and android applications, or to develop a web-based application. It was possible for us to develop an application for only one mobile platform but it was not a flexible solution as the other half of smart phone users would not be able to use it. Also, developing applications for both iOS and Android would not be possible due to time constraints, we only have one computing student in our team. In the end we decided to develop a web based application, which is an application that is accessed through the internet. This allowed flexibility as it could be accessed on both computers and mobile phones. The web application interface would resize depending on the device it is displayed on. This feature is beneficial for Sydney Wildlife as some members would primarily use this application on computers. For example, Sydney Wildlife rescue hotline responders would use this application on computers while answering calls to fill in animal record forms. We are happy with the decisions we have made in terms of the design of the SWRCA

5. Implementation

The future implementation of this project will require the close collaboration of the technology head at Sydney wildlife and the students within this project. The head of tech at Sydney wildlife will need to liaise with us to discuss the best way of moving the project form the testing to the production environment.

Since the project is currently hosted on local development machines, the files and connections will be exported for testing on the production server. Once they are on the production server, testing will need to be carried out to ensure the system works the in the same way as it did on the local server.

Since this is now connected to a live web server, security and load testing will then need to be carried out. Any alpha and beta testing stages would then take place after this period.

The final phase is making the project go live. Once live, the team will need to monitor the system for any unexpected bugs or issues relating to server load.

Once the system is live, training and promotion of the new system will take place. It would be up to the staff at Sydney wildlife as to whether they will do a hard cut over from the old paper system to using this system immediately, or phase it in slowly.

After deployment, the system may require maintenance and ongoing support. This will be provided by the technology team at Sydney wildlife, or the Macquarie university student will be contacted if needed. This may cover bugs, questions, improvements or new feature requests.

6. Learning Outcomes

Break complex tasks into parts and steps

- During the early stages of the team forming we all learnt to importance of being able to break complex tasks into smaller more manageable tasks. All team members learnt and now understand the importance of the forming stage where individuals strengths and weaknesses are assessed in order to reach the performing stage of the work team.

Plan and manage time

- We all had a chance to experience the pressure of a real project with real project deadlines critical tasks were assessed for the development of the project plan. During the project we had the chance to experience the emotions, anxiety that the late notice of task completion creates. These experiences develop strong individual accountability in a team environment.

Refine understanding through discussion and explanation

- As a group we learnt the advantage that a team brings to solve a problems, we learnt how to refine understanding through discussion and explanation.

Give and receive feedback on performance

- We all had the opportunity to give critical feedback on each other's work, this is a skill which can only be developed through experience. During the project critical evaluation of individuals work was a requirement of our quality performance control. We learnt to respond professionally without unnecessary emotional attachment.

Challenge assumptions

- We learnt to criticise others ideas and assumptions bringing alternatives into the decision making process.

Develop stronger communication skills.

- Through the development of the project many communication and collaboration techniques were applied we all gained skill and experience in communicating via software packages like Atlassian for documentation. We all learnt ability to communicate in an open forum.

Tackle more complex problems

- We were able to understand the power of teamwork and the ability of a team to solve large complex problems in an efficient manner if broken down into small work packages

Delegate roles and responsibilities.

- Delegation and acceptance of tasks responsibility was an important process for each member of the group to attain. We learnt being responsible for your work and responsible for the team's performance is tied to the overall value of each deliverable and then entire project

Share diverse perspectives.

- We got to experience and understand the importance of diverse perspectives and the value diversity brings to group decision making. We all learnt diversity of knowledge and experience gives more options and a better chance of choosing the optimal rational choice.

7. Conclusion

The prime goal of this report is to identify the actions and initiatives that made up the new web application for the Sydney wildlife project. The changes made to the business process of Sydney wildlife in order to effectively improve the resource allocation through a centralised information system, extended to all users through the web.

For the project scope we were able to define user stories create requirements and develop an online information system to improve the effectiveness and efficiency of staff and coordinators within the Sydney Wildlife organisation. We utilised database, modern programming methods through an agile development environment.

We have successfully created a new environment which delivers real business value into the Sydney Wildlife organisation. We as a team are confident we have resolved many of the bottlenecks in the old business process.

In the future Sydney wildlife will be able to build upon the application in a iterative way to deliver more value and more features integrating other work streams into their online business process platform.