

COS10025 Technology in an Indigenous Context  
Research Report

[Document subtitle]



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sWINBURNE UNIVERSITY OF TECHNOLOGY

**I. General Details**

- Project Title: Apply telecommunication in improving health condition of indigenous people of Bamaga, Cape York, Queensland.

- Project Team: Team 1

- Year: Semester 2 2022

- Project Principal/facilitator: Edward Greenaway

**II. Table of Content**

PART A

**1. Literature review**

Most indigenous people who live in Queensland is called Aboriginal and Torres Strait Islander, and like most other places, they are divided into two groups: the ones who live in the metropolitan area and the rest living in remote areas. And in this report, we will dive deep into the latter group.

**User access**: In 2016, the NATSISS published a survey about the Aboriginal and Torres Strait Islander during the 2014-2015 period, and this survey revealed that only 47.5% of Aboriginal and Torres Strait Islander who live in remote areas have access to the Internet, and this number is extremely low comparing to 88.8% of the group who is living in metropolitan areas.

A large portion of Indigenous Australians who live in Bamaga accesses the Internet through portable devices such as mobile phones and laptops, which are mainly sharing devices among family members. This leads to lots of problems, such as insecurities in daily activities like online banking, sending or giving messages, leaking of pictures, etc… and caused the reduction of using digital technologies and Internet resources.

**Affordability**: The method of sharing devices between family members, although very flexible and elastic, caused the price of data per gigabyte to be way more expensive. And since only few families can have fixed access by using a wire or cable, the Internet connection can be slow sometimes.  Although telecom companies have provided lots of Internet plans, from NBN Unlimited to small mobile broadband, the price is still a little above what a family income can afford. Only over one-third (about 36%) of Aboriginal and Torres Strait Islander households in Bamaga, Queensland reported that they have a total weekly income of 1000 Australia Dollard (AUD) or more per week in 2021, and this number is still slightly lower than 37% nationally. For Aboriginal and Torres Strait Islander households in Queensland, the median equivalized total weekly household income was 826 Australia dollars, while this number of national averages was 830 Australia dollars. According to these numbers, we can clearly see that while the Internet price is still the same as the Internet plan in metropolitan cities, families who live in remote areas have a lower income, and this causes problems for them to access a high-speed Internet connection.

**Digital Literacy**:

**PART B**

**2. Project background**

**1.0 Project Description**

The project aims to assist indigenous community health in Bamaga, Cape York, Queensland to increase patient health and reduce problems related to health. We want to create a mobile application that helps people to supervise their health condition during their daily activities like exercise, their eating habits and able to chat to experts when needed. This will allow doctors or nurses to give advices for people who live in remote areas, while people can receive help from professionals, building a better habit and reduce health related problems.

**1.1 Problem Statement**  
In 2020, more than a quarter of a million Queenslander are living alongside with diabetes. This figure among children in remote areas is considerably concerning, 37% of children from 2 to 14 years old were suffering from overweight/obese, and this number has grown significantly from 2012–2013, by nearly 30%. Only diabetes and overweight has cost the Queensland Health system nearly 1 billion Australia Dollar a year. This is a massive number, and it is even worse when we all know that the average income of indigenous people in Bamaga is lower than the national average income.

**2. Project Goals and Objectives**

The following primary objectives must be achieved for the project to be considered successful:

1. Create an application that are user-friendly, convenient, and helpful with indigenous people
2. Make it commonly used in remote areas like Bamaga

The key project goals have been broken down into a set of objectives that will provide a more detailed procedure for fulfilling the project's primary criteria:

* Create a mobile application which fulfill user’s need (tracking calories, setting exercise time, creating healthy menu, etc.)
* Linked with hospitals, doctors, nurses and ask them to support patients online when they need it.
* Provide functional interface that enables communication between professionals and Indigenous people.
* Advertise the application and make it commonly used between Aboriginal and Torres Strait Islander Indigenous in Bamaga

**3. Desired outcomes and benefits**

Understanding this long-term problem, we are highly motivated to come up with an application that can help indigenous people who live in remote areas can track their calories per day, setting exercise and creating new habits. This will not only help them to strengthen their health and improve their daily lives but will also decrease the pressure of health problem on Queensland Health System.

**4. Learning issue/problem (individual)**

The learning issue I have been tasked with is to make this application widely used between Indigenous people, especially people in Bamaga.

This is a major issue, as we need to increase the awareness of people about issues that are relating to health. Moreover, due to the lack of both internet access and digital literacy, we need to help them in creating new habits and persuade them to make questions about their health problems. If we cannot make this application become frequently used, all the effort in creating the app, connecting it with professional will become useless.

**5. Project Scope and Exclusions**

To achieve the above-mentioned goals and objectives, we need to finish these two task parallelly: Create an UI and generate a good media campaign about the application.

**About the application:**

* User can log in and store basic information (name, D.O.B, mobile number, etc.)
* The system will include a considerable number of features like tracking calories, setting timer to exercise, tracking sleep, etc.
* Users can choose to talk to professionals like doctors, nurses, nutrition experts, etc about the health-related issues that they are facing.
* Users can access to the community where everyone can share their knowledge and experience in maintaining excellent in both mental and physique life.

Some features may fall inside the scope yet be unachievable owing to limitations on resources like time and team knowledge. Once the key features listed above have been developed, and if the team believes there is enough time, we will attempt to prioritize them as secondary tasks. These premium features (which users will have to pay a small amount of money to unlock) consist of:

* User information stores in a database, where professionals can give advice based on the user’s medical history.
* Videos of sample exercises for everyone who wants to workout at home.

**About the Media Campaign:**

* Promote the app widely so Torres and Strait Islander can know about it, especially who live in remote area, focusing on its feature, flexibility, and convenience.
* Use different social media platforms (Facebook, Instagram, TikTok, etc..) as people in both remote and metropolitan areas tend to use mobile devices more than laptop.
* Co-operate with hospitals, doctors, professionals to advertise for the application.

**6. Project Deliverables**

* The project source code
* Presentation about the prototype in person
* Media campaign strategy

**7. Project Management**

# Project Management Plan

## Timeline

The overall timeline of the project is as follows:

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **QueenslandCare Project** | **Week 2** | **Week 3** | **Week 4** | **Week 5** | **Week 6** | **Week 7** | **Week 8** | **Week 9** | **Week 10** | **Week 11** | **Week 12** |
| List all features needed |  |  |  |  |  |  |  |  |  |  |  |
| Develop functional interface |  |  |  |  |  |  |  |  |  |  |  |
| Planning for the media campaign |  |  |  |  |  |  |  |  |  |  |  |
| Invite professionals to co-operate in the project |  |  |  |  |  |  |  |  |  |  |  |
| Build an user-friendly front-end |  |  |  |  |  |  |  |  |  |  |  |
| Running media campaign |  |  |  |  |  |  |  |  |  |  |  |
| Testing User Interface |  |  |  |  |  |  |  |  |  |  |  |
| Maintaining, debugging User Interface |  |  |  |  |  |  |  |  |  |  |  |

## Goals and Milestones

Table 1: Project Development Milestones

Stage 1: Priority Tasks

### Goal: Invite professionals to co-operate with (Queensland Health, Royal Brisbane Hospital, etc)

1. Milestone: Acceptance of invitation to support the project from doctors, nurses, etc.
2. Milestone: Promote the project through reliable individual and incorporation.

### Goal: Build QueenslandCare front-end

1. Milestone: Develop simple, user-friendly UI.
2. Milestone: Develop features.
3. Milestone: Set up interface for professionals to interact with.

### Goal: Build QueenslandCare back-end

1. Milestone: Setup database for storing user’s information.
2. Milestone: Develop service interface.

### Goal: Set up media campaign

1. Milestone: Promote through social media platforms.
2. Milestone: Promote through volunteer operations (at hospitals, health clinic, etc)

*Stage 2: Would like to do, if we have time*

### Goal: Premium Features

1. Milestone: Create Premium Features.
2. Milestone: Promote the Premium Features to encourage Indigenous people to use it (especially Torres and Strait Islander who live in remote area).

### Goal: Management Interface

1. Milestone: Setup management interface.
2. Milestone: Setup system state for MySQL to store user’s medical history.

## Team breakdown and duties

|  |  |
| --- | --- |
| **Scrum Team Member** | **Role** |
| Minh Duc Pham | Project Manager, Developer, Media Team Supervisor |
|  | Media Team |
|  | Media Team |
|  | Front-end Developer |
|  | Back-end Developer |
|  | Back-end Developer |

Table 2: Team Roles

According to the table above, we will have two main group to follow: developer team and media team. I will be the Project Manager, who responsible for supervising, giving advice and checking quality of the final product. The project source code will be uploaded on GitHub repository. The developer team will in charge of implementing features, debugging, and maintaining system.

Word count:

# References

1. Diabetes Queensland - “FOCUS ON DIABETES QUEENSLAND ELECTION 2020”
2. Australian Bureau of Statistics- “National Aboriginal and Torres Strait Islander Health Survey 2018-2019”
3. Australian Bureau of Statistics - “Queensland: Aboriginal and Torres Strait Islander population summary 2022”
4. Australian Bureau of Statistics – “National Aboriginal and Torres Strait Islander Social Survey, 2014-15**”**