COMPSYS/ELECTENG/ SOFTENG 770: Capstone

Lecture 6.2: Next Steps

What's Next?

Weekly Overview

Week	Lecture Topics	Assessment
1: 26 Feb - 1 Mar	Welcome to the Project Risk Analysis (*)	None
2: 4-8 Mar	Te Tiriti o Waitangi Plunket (*)	Risk Analysis Team Charter
3: 11-15 Mar	No lecture Sustainability and Design (*)	None
4: 18-22 Mar	Industry Presentation 1 Working with Clients (*)	None
5: 25-29 Mar	Peer Reviewing Working as a Team (*)	Project Proposal
1-14 Apr	Mid-semester break	
6: 15-19 Apr	Producing a Client Proposal Industry Presentation 2	Project Proposal Feedback
7: 22-26 Apr	Next Steps	None
8: 29 Apr-3 May	No lectures	None
9: 6-10 May	No lectures	None
10: 13-17 May	No lectures	None
11: 20-24 May	No lectures	Final Report Presentation
12: 27-31 May	No lecture on Monday Course Wrap-up	Test Course Reflection

Use this time for your projects! *(bracketing weeks 8–10)*

Presentations *(bracketing week 11)*

Test preparation *(bracketing week 12)*

(*) - denotes a guest lecture

UNIVERSITY OF AUCKLAND Waipapa Taumata Rau NEW ZEALAND

ENGINEERING DEPARTMENT OF ELECTRICAL, COMPUTER, AND SOFTWARE ENGINEERING

Today:

1. Generic feedback from proposals
2. Information about presentations
3. Information about the final report

Project Proposals

Three types of feedback

- Your peers (due this week)

- Teaching staff
  - Focused on the report

- Mentors
  - Focused on the project

Project Proposals

What was good?

- Better than last year's proposals
- Technical details are generally well done
- You are thinking about how your systems will meet the requirements
- Most of you are thinking about how to make your products sustainable

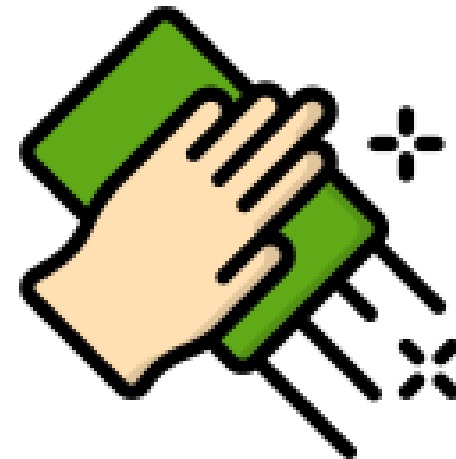# Project Proposals

What needs improvement?

- Need to think of both the reader and the end user
  - Tendency for too much technical detail
- Need to think about business issues as they relate to the project
  - For example, how to apply the privacy act
- Needs more relevant figures
  - And figures in the right places

Project Proposals

Where to next?

- Look for the feedback that will help you prepare your final reports

- Work **TOGETHER** as a team

- Remember, you are responding to an RfP
  - It is not a checkbox exercise to optimize marks
  - There is no right or wrong

Project Proposals

Team Peer Reviews

- How well did each member contribute to the proposal?
- We will send at the end of the week
  - After proposal feedback
- Confidential

Some Examples

Deliverables

As shown in Figure 1, our system will contain four components that we deliver to Plunket.

The Smart Scales and Mobile Application are targeted at the staff who work directly with children. These components work together to allow staff to weigh the babies in a safe, low-stress manner. To facilitate this connection, the Smart Scales and Mobile Application will use wi-fi to connect to each other directly.

The system will store all the data in a cloud-based database. This component allows easy access to the data access all Plunket nurses and the back-end support staff. We will follow industry best practices for securing the database.

The Browser Application is intended for back-end and centre-based support staff. It will contain the functionality for administrators to manage the system, as well as allowing for organisation-wide data analysis.
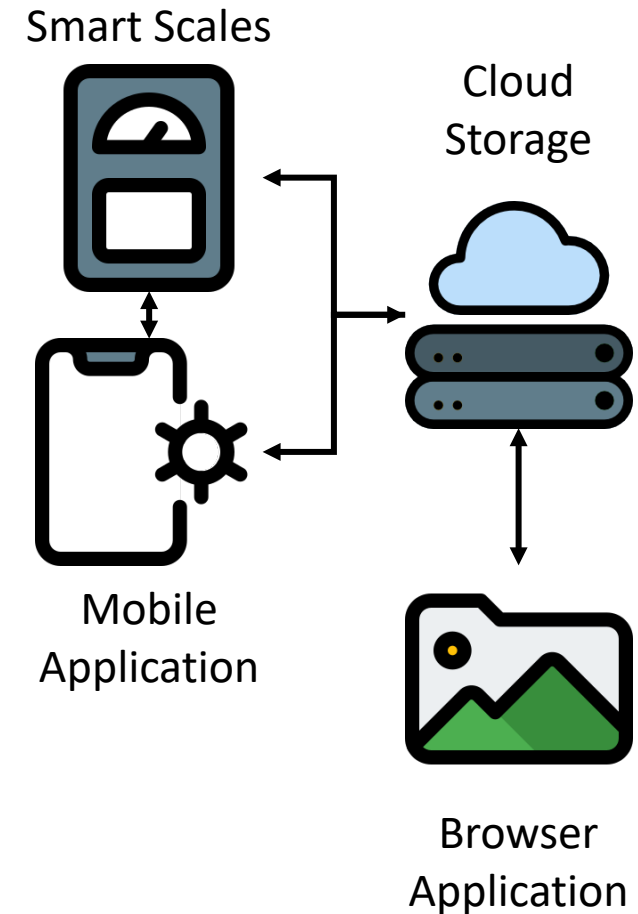

Figure 1. Main components of the system.

Smart Scales

Cloud Storage

Mobile Application

Browser Application

Some Examples

Technical Overview

Figure 2. shows the overall technical design for our proposal. The system can be divided into four main technical components: physical hardware, a mobile application, a cloud storage application, and a web-based browser application.

The Smart Scales will contain the main electronic components for weighing babies. In addition, it will contain an embedded microprocessor for recording the data and interacting with other system components. The smart scales and microprocessor will interact via direct electrical connections.

The mobile application is designed for the nursing staff. It will provide an easy interface for weighing babies, messaging, and retrieving previous data. It will contain a local database to store data if the web connection is down. It will handle synchronisation to ensure that no data is lost.
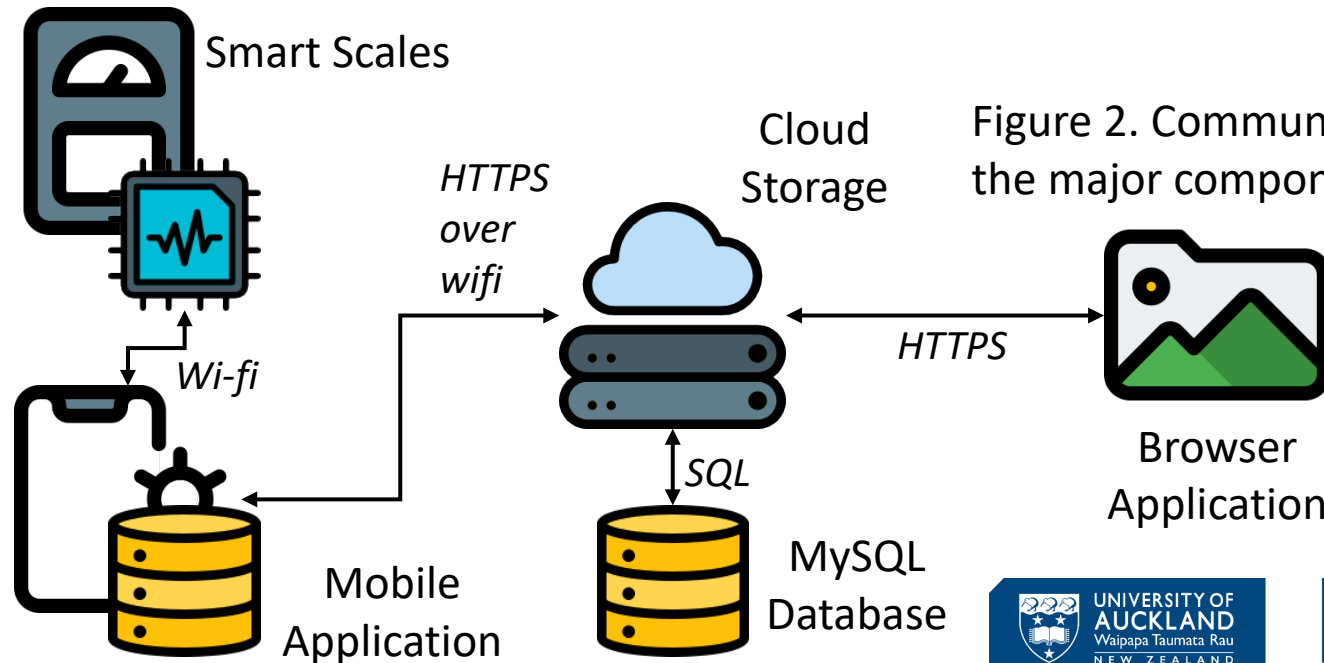
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Figure 2. Communication flows between the major components of the system.

Some Examples

Holistic Report

Te Tiriti o Waitangi

As part of our Te Tiriti obligations, we will develop the application to handle multiple languages. Te Reo Māori will be included in the list of available languages: however, since no one on our team speaks Te Reo Māori, it will not be included in the initial delivery. Instead, we will add the infrastructure for multiple languages. To We will implement Chinese as an alternate language to test the effectiveness of this approach.

Front End Software

We intend to allow users to change languages as part of our design. This will help meet our Te Tiriti obligations, as well as make the system more friendly for volunteers who are not confident in speaking English.

We will include changing languages on the login screen for our application. Once the language is selected, we will store it in the local database, so it only needs to be changed once.

Conclusion

As part of our Ti Tiriti obligations, we have included the ability to include Te Reo Māori as a language. While we do not speak Te Reo Māori, we have designed the ability to change languages in the system. This choice means adding Te Reo Māori in future will be as simple as adding the translations to the system rather than forcing a redesign of the interfaces.

Presentations

Presentations

Purpose

1. Demonstrate the viability of your proposal
2. Sell your proposal to Southland Engineering

Must contain:

- Demonstration of the minimum requirements
- Example of
  - Recording a weight
  - Transmission
  - Viewing weight
- Does **NOT** need to show everything

Presentations

Structure

1. 30 min. setup/preparation time

2. 15 min. demonstration
   - You can structure this section however you like

3. 10 min. Q&A

4. 5 min. pack up

Remember:

An important component is how well you can **SELL** your proposal!

Presentations

Administration

- Sign-ups during week 9

- Presentations during week 11
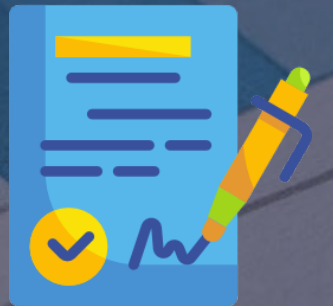
- Marks released during week 12

Presentations

Marking Criteria

Criteria	Marks	
Presentation [15 marks]	3 marks	Project proposal is described clearly in an understandable manner.
	3 marks	Proposal demonstrates value for Plunket and is pitched at a level that non-technical viewers can understand.
	3 marks	Presentation is clearly structured, with clear links between each part of the presentation.
	3 marks	Presentation is professional.
	3 marks	Materials for the presentation are applicable, clear, and easy to understand.
Technical [10 marks]	5 marks	Demonstrates the required hardware specifications (see Hardware in the Project Brief).
	5 marks	Demonstrates the required software specifications (see Embedded Software and Software in the Project Brief).
Questions [5 marks]	5 marks	Questions are answered knowledgeably. Answers are related to the project and content presented.

Final Reports

Final Reports

Purpose

- Proposal for Plunket
  - Not a technical audience
- Sell your proposal to an external, non-technical group
- Show the value it will provide to the client

Must contain:

- Business value to the client
  - Why should Plunket choose your project?
- Technical details
  - For a non-technical audience
  - Explains "how" your solution will work

Final Reports

What are we looking for?

1. An integrated report: the sections should work together to "tell the story"

2. Business case: what value is your solution going to provide to Plunket
   - Assume the Plunket know about themselves and their request for proposals

3. Rationale for technical decisions: why did you choose the approach you did?

4. How do the pieces work together
   - Should not be a piecemeal approach

Final Reports

Structure

Must contain:

- Executive summary (1 page)

- Introduction

- Summary

Other components:

- Business value

- Technical details $\quad$ Can be interwoven

  - Course book provides some suggestions
  - Do not need to include all of them

Final Reports

Suggested Structure

- Introduce your project and its significance

- Explain how your project will meet the business requirements
  - Can include *some* technical details

- Explain the technical solution you are providing
  - Include an overview

- Conclude and emphasize the **VALUE** your solution will provide

*Can use appendices for extra details that are **NOT** necessary to understand the main report*

Does not have to follow this order

Final Reports

Criteria	Marks	
Executive Summary **[5 marks]**	2 marks	Summarises the essential information.
	2 marks	Clear recommendations.
	1 mark	Section is stand-alone and provides the reader with sufficient information to make a decision.
Introduction **[5 marks]**	2 marks	Context for the project is clear, provides essential background for the reader.
	2 marks	Clearly describes the aim of the report.
	1 mark	Briefly summaries the methodology of the report with the main sections.
Problem Definition **[10 marks]**	4 marks	Clear specific problem statement, provides an idea of how the problem evolved from a broad conception to the specific statement.
	2 marks	Clear identification of specific users, existing product-s/services targeting the problem and problems they have.
	4 marks	Identifies appropriate requirements and their importance; provides evidence of how the requirements were selected.
Business Value **[10 marks]**	4 marks	Explains how the project will provide value to Plunket.
	4 marks	Explains how the project will meet Plunket's legal and moral obligations.
	4 marks	Explains how the project will engage with Māori.
Technical **[20 marks]**	4 marks	The technical sections have an overview that explains how all the parts work together and explains the overall technical implementation.
	16 marks	Explains how the project will meet the technical requirements from Plunket (see the Project Brief).
Summary **[5 marks]**	2 marks	Main points from the report are clearly summarised.
	3 marks	Outlines what is unique/interesting about this project proposal and why Plunket should choose it.
Reporting **[5 marks]**	2 marks	No spelling or grammar mistakes, within page limit.
	2 marks	Organized into logical sections and paragraphs that flow well and are easy to read.
	1 mark	Clear formatting and use of figures and tables, including captions.