Project Proposal - *finappster Sigma* (Version 3)

Version History

Version	Details	Author	Date
One	Initial Draft	finappster *Sigma*	08/08/2021
Two	Draft	finappster *Sigma*	12/08/2021
Three	Draft	finappster *Sigma*	15/08/2021

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Contents

Executive Summary

N/A

Introduction

Need a statement and a list of questions that we do not currently have answers to. Giving Alan a better perspective of the scope we are going to tackle

The following questions are questions that the development team is not clear on now that may have a significant impact on aspects of the scope of this project. They are listed here for context when reading the rest of this draft proposal.

A) Investment provider user related
   1. Investment provider authentication – what sort of authorization will be needed, if any, to make an account as an investment provider; surely a user with the ability to submit funds to the finappster database would need something like this?
   2. Investment provider investment clarification – clarification on what range of funds will be advertised by investment providers. KiwiSaver Schemes seems likely based on past conversations. What of investment funds? Other types?
   3. Quiz for investment providers – if this is being implemented (assumption is yes for now based on the last moments of our last client meeting) will it be from the angle that the investment provider is undertaking it to pick the appropriate 5P values for the fund they have in mind (as opposed to their own personal belief like the investor user)?
   4. 5P ratio popularity data – Where should the data representing the most popular ratio of 5P data (that represents personal values of investor users) be displayed? And in what form should it be displayed?

B) Investor user related
   1. Quiz design - How will the concept of the quiz for investors accurately depict the 17 UN Sustainable Goals but still be user friendly?
   2. Investment visual design – How will any given fund/scheme be viewed visually, along with all the 5P/17 UN Sustainable Goals data if selected by investor user? (Concept has been visited but needs to be discussed more).

C) Administration user related
   1. Scope fit - (More of a needed discussion than a question) This is a user that was discussed with Leeanna briefly, and the user journey was planned out…but not with the client. This will likely fit into the scope somewhere, but for now isn't mentioned much, barring further discussion with Leeanna.

D) Data related
   1. Data availability – We are acting under the assumption that finappster *tau* has coded access to the UN's 17 Sustainable Development Goals (THE 17 GOALS | Sustainable Development (un.org), reference properly later in proposal parts that will be in final draft). This is a key component in many features within our scope. As finappster *Sigma* does not have access to *Tau's* database or the code that *Tau* is working on currently, scope may shift dependent on *Sigma*'s discussion with them.

Context

finappster is an informational tool to help users decide how to align their financial investments with their personal values.

Client

finappster was established in December 2016 by Leeanna Kohn-Hardy. Her experience working for various banks over the previous four years widened her knowledge and understanding of share market investment and enabled her to identify a business opportunity. Leeanna's inspiration to create finappster arose from a gap she saw in the market, with people wishing to make ethical investments but struggling to locate the information to do so.

Project Purpose

This purpose of this project is to build a plan that will ultimately implement one of finappster's main missing parts, the ability to align your financial investments with your personal values. Prototyping of some of the first feature priorities to accomplish this will also be a focus.

Opportunity, Problem or Need

Leeanna has been working with AUT's Research and Development program since 2019, and finappster *Sigma* is her fifth team. Through her time at AUT, she has worked with her previous R&D teams to create the basic framework of the application. There is now an opportunity to build upon this foundation and begin planning and prototyping one of the main overarching features that finappster needs – the ability for users to align their financial investments with their personal values.

Project Justification

N/A

Current Situation

finappster *Sigma* is the fifth R&D team to work with Leeanna and continue development on the finappster application. The initial team, finappster *Alpha & Omega* completed their development on semester 1, cleaning up the initial code that was done by a team outside of AUT. Next finappster *Rho* took over to complete development of Spreadsheet 2.0, providing a more meaningful place for Leeanna's data to be stored. When finappster *Delta* team took over in Semester 2 2020, their team was primarily tasked with merging both teams previous work, establishing a unified development pipeline and taking it live. Upon the completion of finappster *Delta's* work in Semester 1 2021, finappster *Tau* began implementing API data fetching for obtaining the UN sustainable goals data and share data (to our knowledge, unsure of the specifics of the data they are fetching at this point).

The website is currently live and accessible at https://app.finappster.co.nz where we can view features like share and cryptocurrency tracking, ability to view a user's portfolio and its performance, a secure two-factor authentication, etc. However, several core features are yet to be developed.

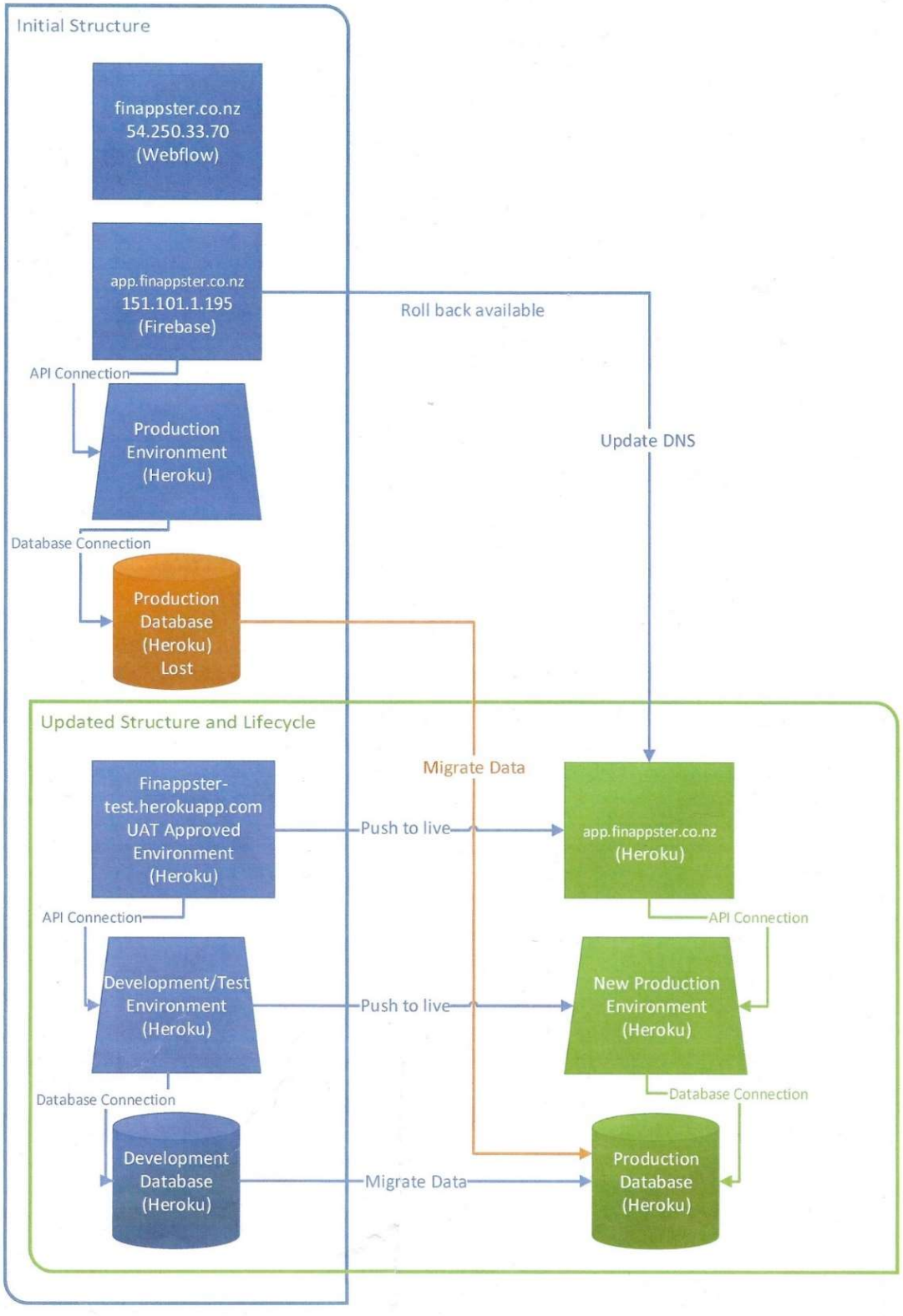

Diagram *showing the finappster development timeline.*

Scope and Objectives

Project Objective

Over the next year, the project's objective will be to design and begin prototyping a core missing piece of finappster, the ability to align your financial investments with your personal values. The design process will come first, documenting, and illustrating the user journey of investors and investment providers, which, when implemented with finappster's existing infrastructure, should in theory achieve this goal.

Following that, prototypes of much of the underlying features of this objective that were mapped out in the design phase will be implemented by finappster *Sigma*. The design and prototypes developed over this project will serve as foundation for future teams to build upon.

Scope Statement

The scope of this project consists of planning out and then prototyping the big 'missing piece' from finappster. This will build off the features already present within finappster, allowing users to track the ethical performance of their fund investments. The scope has not been fully actualized yet; further discussion with the client and collaboration with finappster *tau* to obtain access to various sources of data will need to continue before this scope will be in its final state.

To accomplish this, the following steps will be taken. Note however that the order and content of these steps are subject to change pending further discussion with the client and finappster *tau*.

- Finish discussing planned scope with client (finish discussing admin user journey, discuss questions outlined in introduction).
- Examine, sanitize, model, and document the databases present within the finappster system
- Create a model to display the flow of data within finappster
- Examine data streams/database by finappster tau, determine if they have the data streams with the content and form, we assume they are in, otherwise adjust scope dependent on the state of them otherwise.
- Review existing finappster infrastructure in detail, making sure intended scope is not overlooking anything significant.
- With the scope clear, finalize the overall user journey of investment provider, investor, and administrator users. Make use of wireframes and other designs to make the intended implementation of the project objective clear for the current development team and future teams.
- Collaborate with Leeanna to develop a comprehensive list of all possible user stories that are relevant to this project.
- Take a key few of these user stories through the development pipeline, working on the ones with the highest priority first. (Product backlog → Sprint backlog → in development → UAT (dev team) → UAT (Leeanna) (← Back to a previous step if UAT (Leeanna) fails) → Done).
- Prototype lower priority user stories if time allows.

Scope Breakdown (for context, will be removed in later versions)

To accomplish this, the development of the two main users of finappster must be furthered. The first of these users is the investor user, users who would be browsing funds/schemes/investments that are in the finappster database for information on where to invest. Infrastructure for this user already exists in part in a prototype form. Further development of the existing quiz to help them accurately determine their personal values, being able to view investment opportunities that exist in the finappster database that match their personal values and being able to view detailed information on the ethics behind these investments will be one half of the process to achieve this.

The second half consists of implementing the investment provider user, users who will serve as the primary source of investments for the previous user to view in the finappster database. The infrastructure for this user partially exists through the ability for users to add shares or cryptocurrency. The next steps to fully actualize this user is the implementation of a quiz system (similar but not quite the same as the one for investors) to help the investment provider decide what values they seek to supply for a fund they are building, a system to build a fund that may use their quiz's results to choose the appropriate company shares to add to their fund to match their fund's intended values, and the ability to view information on what investor users currently seek in investments to help the investment provider build their funds in a way that meets the demand of the intended recipients.

A third user is also being considered (further discussion with Leeanna required), an administration user. This user would be there to assist users that need further help the FAQ cannot provide. This may consist of email or phone help, possibly other help too. This user's place in the scope is not clear at this current stage.

These steps will be outlined (or similar steps at least, there is still some leeway on some of the features of each user here) in a series of user journeys and wireframes to help visualize the journey, and the features will be sorted by priority (some of which will be prototyped by finappster *Sigma*). This design and the prototypes implemented will be built upon by later finappster teams.

Project Requirements

Functional Requirements

- The investment provider user shall register to advertise their scheme/fund.
- The investment provider shall be able to login to the website.
- The investment provider shall be able to add their scheme/fund.
- The investor user shall register to view scheme/fund information.
- The investor user shall be able to do the quiz.
- The user shall be able to view their values upon doing a quiz.
- The system shall record a user's data in the database upon said user logging into the website.

Non-Functional Requirements

- All key functionalities should be accessible within three clicks.
- The system shall provide the current pricing of a fund provided by an investment provider.
- The system shall display user's quiz result values within three seconds.
- The user shall be able to complete the quiz.

Summary of Project Deliverables

Key Milestones

Milestone Title	Date
First Client Meeting	17 June 2021
Project-Kick off	13 July 2021
Mid-Project Proposal Draft Complete	13 August 2021
User stories defined	October 15, 2021
Project Proposal Complete	October 15, 2021
Final Project Poster	End of Semester 1, 2022
Final Project Presentation	End of Semester 1, 2022

Project Methodology

Introduction

Agile

Within the Agile methodology, change is expected. As individual sprints are only measured in weeks, there is significantly more flexibility available if the client needs /desires change throughout the project. It also allows for more accurate representations of what a client wants in their project, as they have constant say in how it is developed, iteration by iteration (Kumar & Bhatia, 2012).

Scrum

Scrum is a methodology that implements the framework laid down by Agile. It works by dividing the work required into a series of sprints, and communication is maintained through the sprints using daily stand-up meetings. Change is expected and encouraged but is restricted to only occur generally between sprints. Completing work in sprints allows for constant feedback on the iterating product.

Kanban

Kanban is a popular framework used to implement agile and DevOps software development. It requires real-time communication of capacity and full transparency of work. Each work items are visually posted on the Kanban Board. This methodology focuses on a "just in time" approach and is much more focused around change at any time, rather than Scrum's more fixed focus on changes only occurring between sprints.

Method being employed: Scrumban (Scrum/Kanban mix)

Reasoning

We are considering *Scrumban*, a methodology that is a hybrid mix of *Scrum* and *Kanban*. We are planning this because the development team is more familiar with Scrum but is also interested in employing a few methodology characteristics from Kanban as they seem particularly suitable for this project and the development team's teamwork style.

Once development starts, a typical scrum setup on Trello will be followed, with sprints, a product backlog, standup meetings, and other standard Scrum features. Where our particular methodology will deviate from Scrum is implementing the triage system of Kanban, allowing workloads to shift to areas that they are most needed if certain areas are falling behind (many user stories being moved to in testing, but not being completed would be such an example). Our Trello board will also have more columns than a Scrum board would typically have, encompassing the traditional Scrum columns of "Product Backlog", "Sprint Backlog", "In Development" and "Development Complete", but including "Sprint UAT", "Leeanna UAT" and "Merged and Completed". This allows for more meaningful progress to be made on individual cards, and individual cards can also move back and forward through these columns as required.

As for communication and team interaction, elements from both Scrum and Kanban will be employed. Regular status update meetings will occur, but not at the frequency and in the same format as Scrum does (i.e., daily standup meetings), as these will only when the team feels it is necessary. Because the exact scope of our project is still in discussion, it is difficult to say how exactly we will handle the change management process, but we expect that any changes that are to be made will be added to the bottom of the Product Backlog and will be assessed at the beginning of the next sprint.

Approach

- In Person Meetings
    - Best way where possible
    - Facilitates effective communication and collaboration
- Teams
    - Great way to share documents and work together on them with the team
    - Also effectively allows communication with Leeanna
- Discord
    - Allows for effective communication within the team

Project Management Resources

- Trello
- Discord
- Teams
- Notion
- Weekly Meetings

Coding Standards

- Review and test code before pulling a Git Request
- Make your code as modular as possible
- Every change and fix must have their branches on Git Hub
- Variables, functions, and components must have named correctly
- Code will be easily readable with the correct white-spacing
- Components should be placed in separate folders
- Arrow functions are preferred to normal functions
- Have folders with containers and Higher Order Components
- Keep components simple and clear
- Import libraries in the order they are used

Project Plan

N/A at this point, as we are still fleshing out the scope. We do not have a definite plan yet.

Upskilling

Skills Analysis

Group	Skill	Chris	John	Jose	Pete	Total
		Score (1-5)				
Databasing	MYSQL/OracleSQL	3	3	3	4	13
	PostGRES	1	4	3	2	10
	MongoDB	3	4	3	3	13
	Firebase FireStore	4	2	2	2	10
Web Technology	JavaScript	3	4	4	2	13
	Node,js	3	4	3	2	12
	React	3	3	4	2	12
	Azure	1	3	3	1	8
	Heroku	3	4	3	3	13
	GitHub / Git	5	5	4	5	19
	HTML/CSS	2	2	4	2	10
Programming Languages	Java	4	4	5	4	17
	C#	1	3	1	2	7
	Python	1	1	2	4	8
	C / C++	2	1	2	2	7
Project Management Tools	Microsoft Project	1	1	2	3	7
	Trello	5	3	5	5	18
	Asana	1	1	1	1	4
Design Tools	Figma	1	2	4	2	11
Personal Skills	Verbal Communication	5	3	3	5	16
	Written Communication	5	3	3	5	16
	Leadership	5	1	2	5	13
	Change Management	4	2	2	5	13
	Learning and Development	4	4	4	4	16
	Project Management	5	2	3	5	15
	Time Management	4	3	3	4	14
finappster Related	Financial Knowledge	3	2	1	3	8

We are still upskilling in the financial industry, and we expect to have one week left of this. This upskilling will finish week 6, and the design phase will begin week 7.

Before we can actualize the design and navigation journey for the end users and investment providers, Leanna helped us develop a shared understanding of how her app will work so that we can start conceptualizing and making wireframes for the upcoming designs. This included learning about our KiwiSaver schemes, the 17 sustainable goals, how investment providers operate and how this all could fit upon future development of finappster.

We also need wireframing software like Figma to help us create a prototype of the website and allow ourselves to visualize how everything can fit together.

Estimated Costs

At the current time of this project, the estimated cost is not available as we do not have the full range of our scope yet. Also, as this is a university project, costs are expected to be minimal, if not nil.

Appendix

Auckland University of Technology

Bachelor of Computer & Information Sciences

Research & Development Project

Disclaimer:

Clients should note the general basis upon which the Auckland University of Technology undertakes its student projects on behalf of external sponsors:

While all due care and diligence will be expected to be taken by the students, (acting in software development, research or other IT professional capacities), and the Auckland University of Technology, and student efforts will be supervised by experienced AUT lecturers, it must be recognised that these projects are undertaken in the course of student instruction. There is therefore no guarantee that students will succeed in their efforts.

This inherently means that the client assumes a degree of risk. This is part of an arrangement, which is intended to be of mutual benefit. On completion of the project, it is hoped that the client will receive a professionally documented and soundly constructed working software application, some part thereof, or other appropriate set of IT artefacts, while the students are exposed to live external environments and problems, in a realistic project and customer context.

In consequence of the above, the students, acting in their assigned professional capacities and the Auckland University of Technology, disclaim responsibility and offer no warranty in respect of the "technology solution" or services delivered, (e.g., a "software application" and its associated documentation), both in relation to their use and results from their use.