

# Assignment 1

## FIT2002

IT Project Management

### Loopcare: Your Digital Wellness Companion

**Student Name:** Edward -  
**Student ID:** 3403 4765

**Student Name:** Daniel McGuirk  
**Student ID:** 31494854

**Student Name:** Penglun He  
**Student ID:** 34528970

**Student Name:** Darren Christoff  
**Student ID:** 34253041

**Team Number:** 0615

# Table of Contents

<b>Table of Contents</b>	<b>2</b>
<b>3.1 FIT2002 – Working Agreement (Team Charter)</b>	<b>3</b>
<b>3.2 Project Charter</b>	<b>7</b>
Project Title and Description	7
Project Objectives	7
Project Start and Finish Dates	7
High-level Project Budget Information	8
Project Manager	8
Main Project Success Criteria	8
Project Development Approach	8
Key Stakeholders and Roles	9
<b>Task 3.2.2 – The Pitch (2-Minute Talk)</b>	<b>9</b>
Colin	9
Darren	9
Dan	10
Edward	10
<b>Task 3.3.1 - Requirements Traceability Matrix</b>	<b>10</b>
<b>Task 3.3.2 - Scope Statement</b>	<b>12</b>
<b>Deliverables</b>	<b>13</b>
Out of scope and conclusions	15
Constraints and Assumptions	15
<b>3.4 - Work Breakdown Schedule</b>	<b>15</b>
<b>Gantt Chart</b>	<b>19</b>
<b>Task 3.5 - Cost Model</b>	<b>21</b>
Cost Model	21
Cost Baseline	22
WBS	23
WBS graph	25
Cost Detailed Breakdown per phase	25
Project Initiation	25
Requirements Gathering & Planning	25
UI/UX Design & Prototyping	26
App Development	26
Testing & Quality Assurance	27
Deployment & Launch	28
Maintenance & Closure	28
<b>Task 3.6 Risk Management Plan</b>	<b>29</b>
Risk Register	29
<b>Task 4.1 Group Reflection</b>	<b>32</b>
<b>Task 4.1 Individual Reflections</b>	<b>33</b>
Daniel McGuirk's (31494854) Individual Reflection:	33
Penguin He's (34528970) Individual Reflections:	33
Darren Christoff (34253041) Individual Reflection:	34
Edward (34034765) Individual Reflection:	34
<b>References</b>	<b>36</b>

### 3.1 FIT2002 – Working Agreement (Team Charter)

<b>Team number</b>	0615
<b>Team members</b>	Daniel McGuirk, Darren Christoff, Colin (Penguin He), Edward
<b>Team objectives</b>	<ul style="list-style-type: none"> <li>- Achieve HD.</li> <li>- Consistent and high-quality communication.</li> <li>- Good teamwork.</li> <li>- Regular meetings (weekly/twice weekly, closer to deadlines).</li> <li>- Create a checklist of objectives.</li> <li>- Members should adhere to a high level of transparency.</li> <li>- All members meet their individual deadlines.</li> <li>- Avoid procrastination.</li> </ul>
<b>Team characteristics</b>	<p><b>Strengths</b></p> <p>Our team is well-organised and focused. Some members are good at planning and building a structure for the project. One member acts like a “lubricant” in the team-friendly, calm environment, and helps everyone work together smoothly. We care about time and always try to meet deadlines.</p> <p>We also have strong research skills and are good at collecting, analysing and processing information, and we adjust our project direction when needed.</p> <p><b>Weaknesses</b></p> <p>Some members may have a tendency to procrastinate. We will aim to be transparent with our progress, asking for help where needed to avoid this weakness. Additionally, individual deadlines will be established to assist.</p> <p>Some of our members have difficulty in standing in front of an audience whilst presenting. To combat this, we will allocate our confident members more responsibility during presentations, whilst the nervous members are allocated more tasks surrounding visuals and speech writing.</p> <p><b>Our team as a whole</b></p>

	<p>Ultimately, we have a well-rounded team, with all members showcasing differing strengths and qualities. This allows us to be role-dependent, where individuals can be motivated by working on specific tasks that they enjoy and are good at. This provides us with the best chance at producing the highest quality of work possible.</p>
<b><i>Core values</i></b>	<p><b>Transparency</b> Open communication means that we are honest in our progress. If we have any issues or concerns with achieving objectives, we should voice them, as it assists in overall team connectedness and ultimately success in achieving goals.</p> <p><b>Meeting the deadlines</b> Each member will be allocated roles, and specific work with goals. Dates will be assigned for individual due dates, creating clear expectations for deadlines.</p> <p><b>High Quality Output</b> We are aiming to achieve the highest score for the project as possible, and by holding ourselves accountable to create a high quality of work, this assists us in achieving the goal.</p> <p><b>Equality</b> All members strive to maintain equality by completing their allocated tasks to the best of their abilities. If a member is unable to produce a satisfactory amount or quality of work, they will strive to assist in other ways.</p>
<b><i>Group norms and code of conduct</i></b>	<p>Each group member is expected to complete equal amount/difficulty of work.</p> <p>Consistent communication is also vital, meaning group members should take no longer than 24 hours to respond, aiming to be active in group chats and attending in-person meetings.</p> <p>We will work together by having assigned roles, where members are allocated due to their strengths.</p> <p>Despite having individual roles, we will work as a team, meaning that our contributions should align together and with a common goal.</p> <p>Failure to adhere to our group code of conduct and norms should be voiced to the group so that everyone is made aware, and we can work together to overcome any challenges.</p>

<p><b><i>Participation and collaboration approach</i></b></p>	<p>We prefer using a shared platform like Google Drive for the work we have done. This means having one document for planning and brainstorming, then using a final document for submission.</p> <p>We will have a zoom meeting 1-2 times per week in order to rectify problems and create plans for future tasks. We have established that Wednesdays is our best day for in person meetings, which works well as it is the day before our applied class. We will use class time efficiently, and ensure that we have one other time to discuss progress throughout the week.</p> <p>We will aim to complete all work at least 1-2 days before deadlines, so that we can review our progress, and make necessary adjustments formulated in a final meeting. This allows us to come together and be aligned in achieving the common goal of each task.</p> <p>Feedback can also be given to each other in a respectful manner during meetings. We prefer transparency, so the team can progress accordingly, and formulate the highest standard of work.</p> <p>We would like everyone to be active during the meeting and fulfill their part as a team so that everyone can have an evenly distributed workload and help the others who are struggling in the team.</p> <p>In meetings, we will not only review our quality of work, but also how we worked as a team in achieving this.</p>
<p><b><i>Communications</i></b></p>	<p>We will create a group chat where we can share our progress, establish plans, and voice any concerns or struggles that we are facing. We will be transparent and honest with this, as failure to be truthful with our progress will be a hindrance to the overall group's success in achieving objectives.</p> <p>Additionally, we will utilise a face to face meeting either via zoom or in person weekly, and leading closer to due dates this will become more than once per week. This type of communication will enhance our team's success, as it allows us all to be in one conversation, where we can share more of our progress and concerns in a shorter time period.</p> <p>In the event we have issues and problems with each other or our progress of the assignment, we will use the in person/zoom meeting time to voice our issues, as opposed to over text messages, as it allows for open communication.</p>

<b><i>Problem solving</i></b>	<p>If a team member has an emergency, another team member will try to cover for them for the time being and allocate the task back to them when they return or feel better.</p> <p>If we run into functional issues such as running over budget, we will review our system, work together in finding any aspects that can be eliminated or reduced. This form of problem solving should be done in person or over Zoom to ensure we can rectify the issue as quickly as possible, without compromising performance too much.</p> <p>Ultimately, problem solving is best attacked as a group, rather than trying to individually tackle complex issues. Communication is vital in these situations, and we will prioritise this method of problem solving in such circumstances.</p>
<b><i>Conflict management</i></b>	<p>The most important aspect of a conflict is that we transparently discuss it, so our team would prefer good communication via zoom or in person to discuss ideas on how to solve or process the conflict.</p> <p>During this time, our focus is to make progress. This means not arguing about who is right or wrong, hence why it is important to discuss the issue together as a team:</p> <ol style="list-style-type: none"> <li>1. Find a time when all the members are available</li> <li>2. Discuss transparently what the core problem of the conflict is</li> <li>3. Talk as a group about how we can avoid or face similar problems in the future.</li> <li>4. Individual members involved in conflict must come to a final agreement, to maintain a good relationship.</li> </ol> <p>It is almost guaranteed that we will have some form of conflict during the semester. By using this challenge as a progressment, we can be stronger as a team, and ultimately be successful.</p>
<b><i>Signatures</i></b>	<p>[All team members listed on top of the Working Agreement should sign the document to confirm their agreement with the contents and that they are going to follow this agreement during the course of their collaboration with the team. You can type your name as your signature but should add a note to clarify that. ]</p> <p>*All members typed*:</p> <p>Daniel McGuirk</p> <p>Colin</p> <p>Darren</p> <p>Edward</p>

## 3.2 Project Charter

### Project Title and Description

#### **LoopCare: Your Personal Digital Wellness Companion**

LoopCare is a mobile application that is focused on key health metrics of its users, including sleep, hydration, screen time, and well-being. The app incorporates all these measures in one place to provide the user with a simple and accessible experience. Engagement is achieved when forming healthy habits through integrated personalised nudges, built-in games, and community challenges. The app aligns with LifeLoop's mission of personalisation, simplicity, and community connection, whilst enhancing their reputation in the digital wellness space.

### Project Objectives

- To develop a cross-platform wellness app that allows its users to keep track of health metrics on one integrated platform.
- Include personalised nudges and gamified challenges to keep users motivated, engaged, and encourage habits.
- Achieve usability and accessibility by designing features that ensure all users can engage in.
- Implement functionality of a community aspect, where shared challenges create connection and support between users.
- Provide a secure platform with proper encryption for data protection purposes
- To deploy the application within the 18-month time frame, and ensure we do not exceed the \$300,000 budget.

### Project Start and Finish Dates

- **Start Date:** August 14, 2025.
- **Finish Date:** February 14, 2027.

## High-level Project Budget Information

Budget: \$300,000

Covering:

- Project initiation and stakeholder engagement.
- Requirement gathering and planning activities.
- Labour costs for developers, designers, testers, and project managers.
- Software tools, licenses, and development resources.
- Testing and quality assurance.
- Marketing and promotional purposes.
- Deployment, hosting, and launch.
- Maintenance, closure, and handover activities.
- Overheads and administrative expenses.

## Project Manager

Name: Daniel McGuirk

Contact: [dmcg0008@student.monash.edu](mailto:dmcg0008@student.monash.edu)

## Main Project Success Criteria

- The application is developed, tested, and launched on time and also within budget.
- All functionality meets the functional and non-functional requirements, including usability, accessibility, scalability, and data security.
- Achieves at least 75% active users and 50% user engagement within 3 months of launch.
- Provides scalability to back up a growing number of users.

## Project Development Approach

The project will use a hybrid approach combining both agile and waterfall methods. Agile development will be implemented for development and testing to let the team gather feedback and make better improvements. Waterfall methods will be used for scheduling, budgeting, and documentation purposes. By using this hybrid approach, it ensures flexibility during the development processes while also maintaining the structure and accountability to meet the deadline and budgets.



## Key Stakeholders and Roles

- **LifeLoop Executive Board** — Stakeholders who approve the budget, scope, and final results.
- **Project Manager** — Oversees planning, execution, monitoring, and deliverables.
- **Development Team** — Tasked to develop, integrate, and implement the system.
- **UI/UX Designers** — Design a user-friendly app for accessibility and engagement.
- **Testers** — Conduct functional and non-functional testing, including security testing.
- **End Users** — Provide feedback for improvements.

## **Task 3.2.2 – The Pitch (2-Minute Talk)**

### **Colin**

Imagine this: You wake up tired, rush to class, eat fast food, scroll your phone for hours, and forget to take care of yourself. This is normal for many students — but it doesn't have to be. That's the challenge we want to solve.

### **Darren**

“The LoopCare Digital Wellness Companion, developed in partnership with Monash, is designed to provide a simple and accessible way to support everyday wellness. It offers an easy-to-use platform that encourages healthier routines and creates space for reflection. With its focus on inclusivity and engagement, LoopCare serves as a supportive tool for individuals looking to strengthen their overall well-being.”

### **Dan**

“LoopCare benefits personal wellbeing of the users in a way that's simple and engaging. Instead of juggling multiple apps, users can track sleep, hydration, and screen time all in one place with personalised nudges, built in games, and community challenges to motivate everyone in progressing through a shared journey. For LifeLoop, this provides stronger customer loyalty, deeper engagement, and a clear alignment with their mission of personalisation, simplicity, and community connection.”

### **Edward**

“LoopCare offers strategic advantages for both users and stakeholders. For users, it becomes the first all-in-one wellness app that combines everything they need into a complete health system. For stakeholders like LifeLoop, it strengthens brand reputation by aligning directly with their mission while also boosting engagement across the LifeLoop ecosystem. This is our chance to lead in digital wellness innovation—let's make LoopCare the standard for healthier lifestyles and build a stronger, healthier community together.”

## Task 3.3.1 - Requirements Traceability Matrix

ID	Requirement Type	Requirement Description	Category	Source	Status	Assumptions
R1	Functional	The system requires a user login upon accessing the app.	Login	Product Owners	Planned	Authentication services are available.
R2	Functional	System tracks and displays the user's screen time	Screen Time Tracking	Client	Planned	OS allows access to screen time
R3	Functional	Users can log their daily water intake	Hydration Tracking	Client	Planned	Users must log their intake daily
R4	Functional	Users are prompted to log their sleep time.	Sleep Tracking	Client	Planned	Users must log daily
R5	Functional	Incorporate gamified features	Gamification	Client	Planned	Design resources in software are available.
R6	Functional	Push personalised nudges and reminders for users (e.g. Sleep, hydrate)	Notifications	Client	Planned	Users allow notifications
R7	Functional	Integrate community wellness challenges that users can join	Social	Client	Planned	Infrastructure and software can support
R8	Functional	Create a dashboard that displays the health metrics in one place.	Dashboard	Product Owners	Planned	All data is available and software can collect and

						process
<b>R9</b>	Functional	Integrate an API that generates tips/feedback based on health metrics.	API	Product Owners	Planned	OS API allows access data
<b>R10</b>	Functional	Implement a Navigation bar to access all areas.	Navigation	Product Owners	Planned	Chosen software offers the feature.
<b>R11</b>	Functional	Users can update and customise their profile (age, gender, preferences)	Profile	Product Owner	Planned	Users provide accurate information
<b>R12</b>	Functional	Integrate an export feature for users to share health data summaries.	Data	Product Owner	Planned	User devices allow and support exporting data
<b>R13</b>	Non-Functional	Users' data is stored securely using AES-256 Encryption.	Security	Industry Standards	Planned	Cloud provider supports AES-256.
<b>R14</b>	Non-Functional	Application complies with accessibility standards WCAG 2.1.	Usability	Industry standards	In Progress	Software and design support screen readers
<b>R15</b>	Non-Functional	Dashboard loads within 3 seconds of opening the app	Performance	Product Owner/Industry Benchmarks	Planned	Stable internet and servers are used.

## Task 3.3.2 - Scope Statement

### Project Title: Loopcare: Digital Wellness Companion

Loopcare is a wellness-focused mobile application that aims to improve the user's lifestyle and behaviour through habit tracking and community engagement. Loopcare achieves this by providing gentle reminders, such as a simple notification pop-up at a specific time. The overall purpose of Loopcare is to give users an accessible and user-friendly platform that allows individuals to monitor emotional well-being, sleep, hydration, and screen time, while also encouraging mindfulness and social connection. Loopcare aims to achieve a positive change for the users.

The boundaries of LoopCare include a strong background in UX/UI design and usability testing, with the app being released on IOS and Android, as well as some usability testing. The major deliverables include a wellness tracking module, mindfulness exercises, community challenges, and gamification features, all of which collectively define the scope of the product.

## Deliverables

1. Habit tracking statistic
  - Functional
    - Users can log hydration, calories, and sleep data.
      - Acceptance criteria: Entry saves daily without errors.
    - Extract mobile screen time data.
      - Acceptance criteria: Users must allow for this functionality to happen, and data must be accurate and up to date.
  - Non-functional
    - Response time under 3 seconds
      - Acceptance criteria: Dashboard must load fast enough so that it doesn't bring up frustration.
    - Data stored securely with proper encryption
      - Acceptance criteria: All data can be encrypted in AES-256 encryption standard.
2. Mindfulness checklist
  - Functional
    - Provide users with mindfulness checklist that they can practice daily to reach their goal

- Acceptance criteria: Users can check and do each checklist
- Record and option for post checklist progress on their profiles
  - Acceptance criteria: Completed checklist will be saved and published if users wanted to.
- Non-functional
  - Checklist should be refreshed everyday and customized to users need
    - Acceptance criteria: Learned the users habit and suggests useful habits
  - Data should be stored securely and can be accessed anytime
    - Acceptance criteria: The app stability and encryption should be tested properly and run properly most of the time

### 3. Challenges

- Functional
  - Provide weekly Tournaments that users can join
    - Acceptance criteria: Completing tournaments add points to the users and should be tracked properly
  - Reward tracking points
    - Acceptance criteria: Completing challenges or daily task will add points to the users which they can show in their profile
- Non-functional
  - Challenge system uptime > 99%
    - Acceptance criteria: The tournament ranking should be updated per minute so users can track it.
  - Clear and simple interface with proper instructions
    - Acceptance criteria: instruction should be clear for users to be able to understand and follow the tournament rules

### 4. Community points

- Functional
  - Provide groups with similar goals for users to join
    - Acceptance criteria: Joined groups appear in the user dashboard
  - Provide group challenges to complete together as a team
    - Acceptance criteria: Users can form a team to complete challenges and boost points
- Non-functional
  - Privacy control for team members

- Acceptance criteria: team members may/not be visible to other users depending on the challenges
  - System scalability
    - Acceptance criteria: System should be able to handle at least 10,000 users at the same time and should be improved as the community grows bigger
5. Customized dashboard
- Functional
    - Let users to customise their dashboard
      - Acceptance criteria: provide relevant information but still customizable color and layouts
    - Provide reminders
      - Acceptance criteria: provide relevant reminders that help the users to improve
  - Non-functional
    - Accessible through all mobile devices
    - Acceptance criteria: iOS and Android can both have similar features that can be used
    - Designed for usability and accessibility
      - Users can use and access the app feasibly and report problems where exists

## Out of scope and conclusions

Loopcare will exclude advanced third-party integrations beyond core LifeLoop tools, such as wearable devices. Custom enterprise versions, desktop-only editions, and non-English localisations are also excluded from scope. Features such as AI-driven predictive analytics for long-term behavioural change and complex gamification systems are not part of the current release. Extensive customer support operations are also out of scope to prevent scope creep.

## Constraints and Assumptions

Key constraints include a fixed budget of \$300,000 and an 18-month development timeline. The project is limited to iOS and Android mobile platforms, with technology restricted to in-house development and standard APIs. Assumptions include consistent stakeholder engagement for feedback, user willingness to share routine and habit data, and reliable access to cloud services for

syncing. These assumptions will be validated through pilot testing, periodic reviews, and controlled usability trials.



## 3.4 - Work Breakdown Schedule

### 1. Project Initiation

- 1.1 Define app objectives \*
- 1.2 Identify key stakeholders including shareholders, developers, and users
- 1.3 Develop project charter covering scope, deliverables, and constraints
- 1.4 Confirm the \$300,000 budget
- 1.5
- 1.6 Assign roles and responsibilities such as project manager, developer team, design team, and testing team.

Milestone: M1 - Project Charter Approved

### 2. Requirements Gathering & Planning

- 2.1 Conduct stakeholder meeting to finalise expectations
- 2.2 Identify customer needs for community points, mindfulness checklist, and personalised nudges
- 2.3 Define app features including gamification, wellness activities, etc
- 2.4 Document functional and non-functional requirements
  - 2.4.1 Document functional requirements for activities, tracking, and engagement.
  - 2.4.2 Document non-functional requirements for performance, privacy, and security
- 2.5 Finalise project plan, timelines, and deliverables

Milestone: M2 - Requirements Sign-off

### 3. UI/UX Design

- 3.1 Create wireframes for core app pages
  - 3.1.1 Define the dashboard/home page structure
    - 3.1.2 Design the Mood tracking page screen
    - 3.1.3 Design the Hydration and Sleep page screen
    - 3.1.4 Draft the Screen time and mindfulness page screen
    - 3.1.5 Draft the report and insights page screen
    - 3.1.6 Draft the challenges page screen
- 3.2 Develop interactive prototype testing for user testing
  - 3.2.1 Convert wireframes into clickable prototypes
  - 3.2.2 Simulate core user journey
- 3.3 Conduct usability testing with testing team

- 3.3.1 Prepare for usability testing
  - 3.3.1.1 Identify test participants
  - 3.3.1.2 Prepare task scenarios
  - 3.3.1.3 Set up test devices
- 3.3.2 Execute user testing session
  - 3.3.2.1 Guide participants through test tasks
  - 3.3.2.2 Collect quantitative metrics
  - 3.3.2.3 Collect qualitative feedback
- 3.3.3 Analyse and Report findings
  - 3.3.3.1 Summarise User pain points
  - 3.3.3.2 Recommend Improvements
  - 3.3.3.3 Share findings with UI/UX team

Milestone: M4 - User testing completed

3.4 Refine and Finalise UI/UX designs to align with Loopcare branding

#### 4. App Development

##### 4.1 Develop front-end interface for core pages

- 4.1.1 Build dashboard screen UI for users to log in
- 4.1.2 Build report screen UI for daily results
- 4.1.3 Build hydration screen UI for users to log their hydration status
- 4.1.4 Build a sleep screen UI to allow users to log their sleep data
- 4.1.5 Build screen time screen UI to track user screen time
- 4.1.6 Build mindfulness screen UI for exercises and checklists
- 4.1.7 Build challenges screen UI for community engagement

4.2 Develop back-end API's and a database for mood tracking, sleep, screen time, and to generate tips.

- 4.2.1 Setup database and backend api
- 4.2.2 Implement secure user authentication for login
- 4.2.3 Implement API to generate tips based on feedback
- 4.2.4 Enable data storage for user logs and activities

##### 4.3 Develop gamification and engagement features

- 4.3.1 Introduce points and rewards for completing activities
- 4.3.2 Develop progress tracking with levels or badges
- 4.3.3 Create community challenges for user participation
- 4.3.4 Provide leaderboards or group progress summaries

##### 4.4 Implement reminders and personalised nudges

- 4.4.1 Set up daily reminders for hydration, sleep, mindfulness, and screen time

4.4.2 Personalise nudges based on user behaviour and feedback

4.5 Optimise performance for the testing team

Milestone M5 - Development Completion

5. Testing and Quality Assurance

5.1 Perform functional testing

5.1.1 Test each front-end page (dashboard, reports, hydration, sleep, screen time, mindfulness, challenges)

5.1.2 Test back-end APIs for mood, sleep, hydration, and tips generation

5.1.3 Validate the authentication and login process

5.2 Conduct compatibility testing for IOS and Android

5.3 fix bugs and refine app features

5.4 Security and compliance checks

5.4.1 Verify secure login and data handling

5.4.2 Ensure compliance with privacy regulations

5.4.3 Review permissions and access controls

5.5 Conduct final user acceptance testing

Milestone M6- UAT sign off

6. Deployment and Launch

6.1 Set up servers and hosting configuration

6.2 Deploy the LoopCare digital wellness companion app to the App Store and Google Play

6.3 Conduct soft launch with testing team

6.4 Collect user feedback and resolve issues

6.5 Launch digital wellness companion

Milestone M7 - App Launch

7. Maintenance, Project closure, and handover

7.1 Post-release support

7.1.1 Provide technical assistance for early users

7.1.2 Monitor error logs, crashes, and performance issues

7.1.3 Release urgent fixes and updates when necessary

7.2 Continuous improvements and updates

7.2.1 Collect user feedback from reviews, surveys, and analytics

7.2.2 Release updates to improve the app based on user feedback

7.3 Prepare project closure documents

7.3.1 Compile final project reports covering objectives, deliverables and outcomes.

7.3.2 Document lessons learned and best practices for future projects

7.3.3 Prepare a financial closure report, including budget utilisation

7.3.4 Release final project report to stakeholders

7.4 Handover to operations team

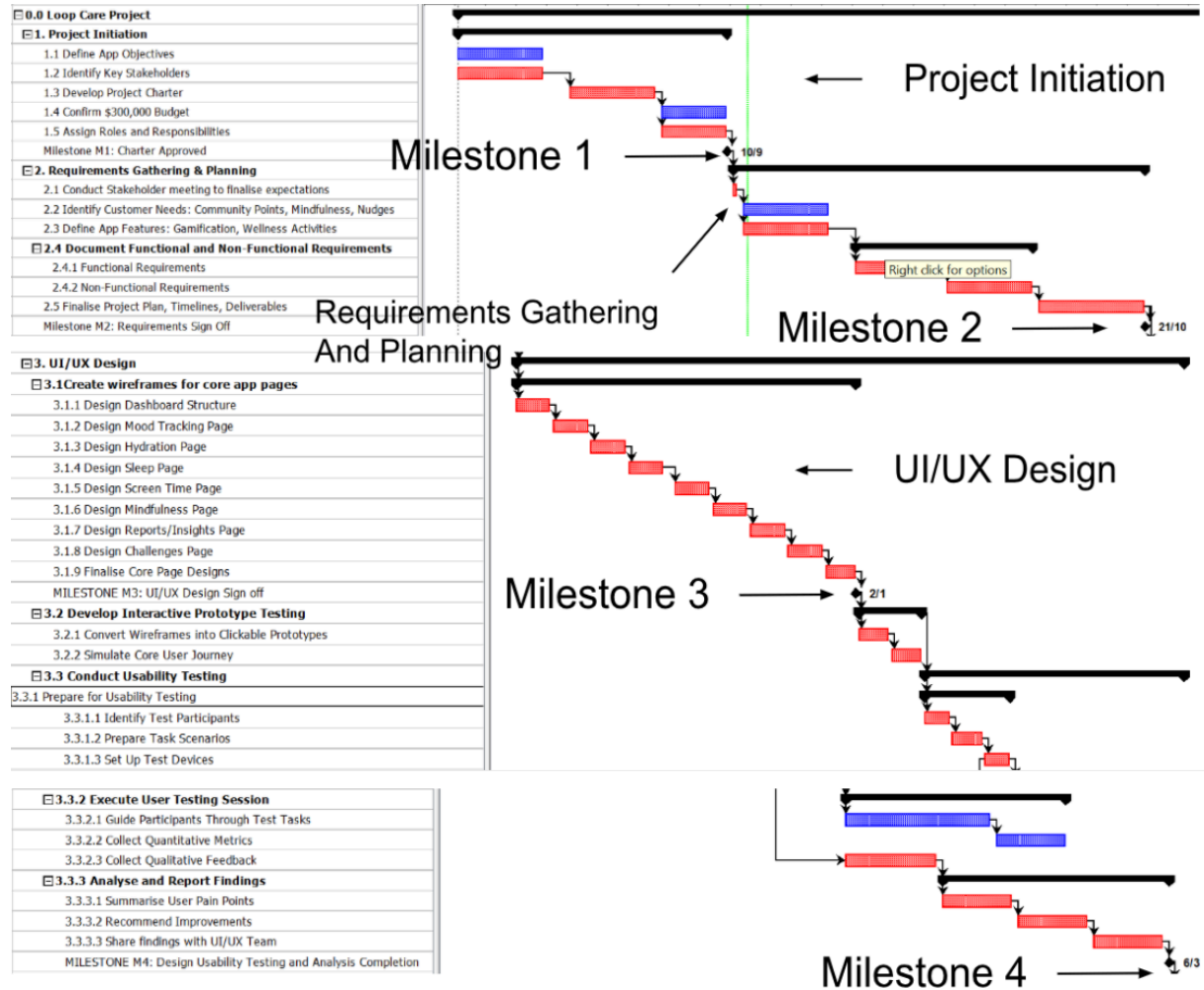
7.4.1 Transfer app ownership and management responsibilities

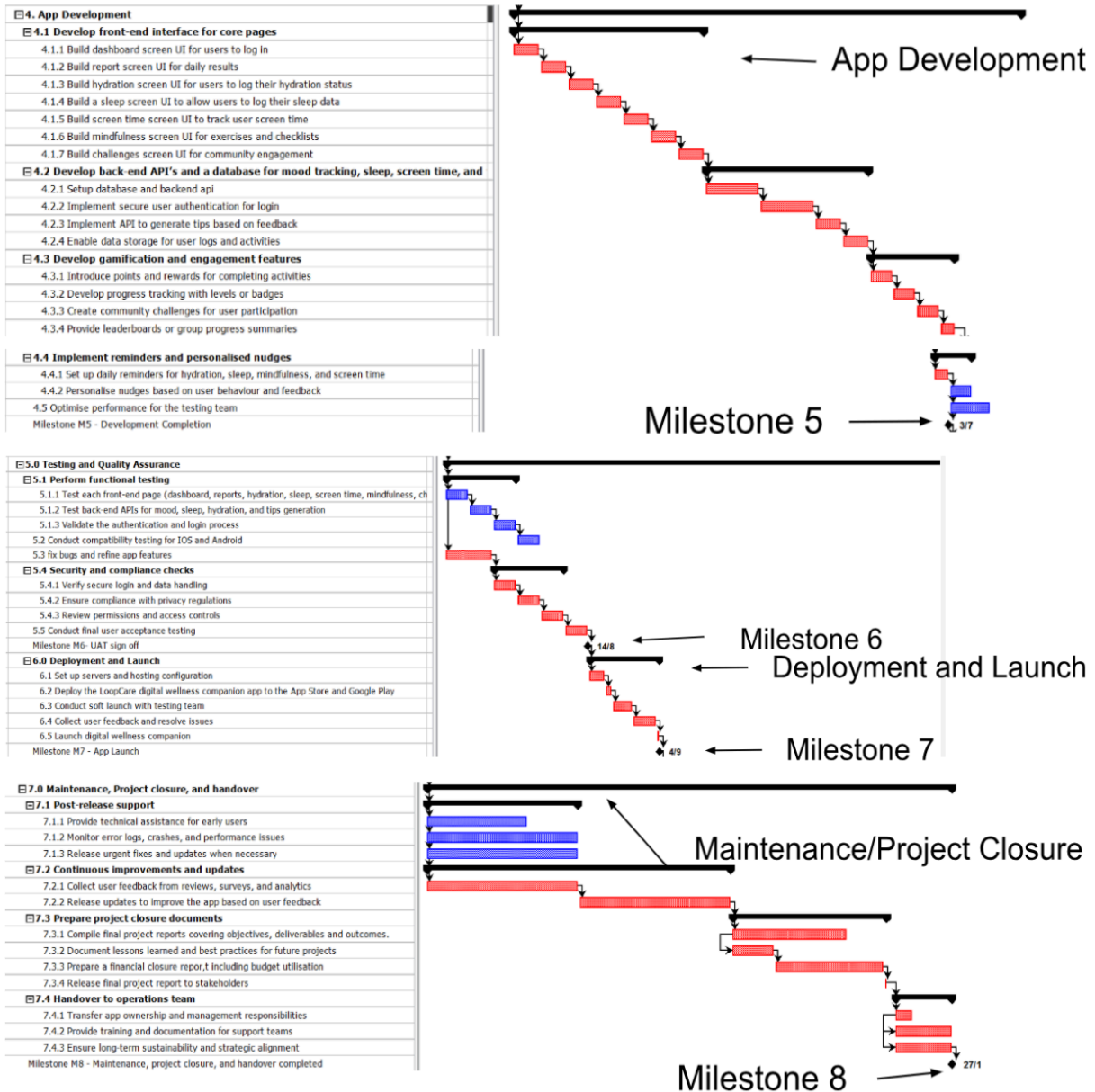
7.4.2 Provide training and documentation for support teams

7.4.3 Ensure long-term sustainability and strategic alignment

Milestone M8 - Maintenance, project closure, and handover completed

# Gantt Chart





## Task 3.5 - Cost Model

Contractor Daily Rates based on Hays IT Contractor Rates Guide FY24/25 (VIC) (*IT Contractor Rates Guide Australia* | Hays, n.d.):

Project Manager: \$800 - \$1400 per day

Business Analyst: \$750 - \$1050 per day

Front-End / Mobile Apps Developer: \$700 - \$1100 per day

UX/UI Designer: \$750 - \$1000 per day

Test Analyst (QA/Tester): \$500 - \$800 per day

### Cost Model

Control Account	Units/ Days	Cost/Unit or Days	Subtotal	Sum of control account	% of Total	Assumptions	WBS Reference
<b>1. Labour</b>							
1.1 Project Manager	35 days	\$1,100/day	38500			Rates per PDF/Hays	1.0, 2.0, 9.0, 10.0
1.2 Business Analyst	25 days	Mixed (\$900–\$950/day)	22500			Rates per PDF/Hays	1.0, 2.0, 3.0
1.3 UX/UI Designer	30 days	\$875/day	26250			Rates per PDF/Hays	3.0
1.4 Developers	175 days	Mixed (\$800–\$900/day)	141000			Rates per PDF/Hays	4.0,5.0,6.0,8.0,9.0,10.0
1.5 Testers	30 days	\$650/day	19500			Rates per PDF/Hays	7.0
TOTAL Labour				247750	83.4%		
<b>2. Materials</b>							
2.1 Materials (all phases)			2800			We don't provide hardware or basic software that we have expected our professional labourers to have had except for some functionalities that are needed for communication, collaboration and teamwork, which require extra material, which is where this category is counted at. This is done to minimize the cost as the cost for the labour itself is already high so we do this to meet the budget constraint	1.0,2.0,3.0,4.0,5.0,7.0,9.0, 10.0
TOTAL Materials				2800	0.9%		
<b>3. Services</b>							
3.1 Services (all phases)			4050			This is where the vendors and extra services such as API, cloud sharing and other stuff is spend on.	3.0,4.0,5.0,6.0,7.0,9.0,10.0
TOTAL Services				4050	1.4%		
<b>4. Overheads</b>							

4.1 Overheads (all phases)			4250			Indirect costs required for the project to run	1.0–10.0
TOTAL Overheads				4250	1.4%		
<b>5. Contingency</b>							
5.1 Contingency (15% across phases)			38191			15% allowance	1.0–10.0
TOTAL Contingency				38191	12.9%		
GRAND TOTAL				297041	100%		

## Cost Baseline

Project Phase / Category	Estimated Cost (\$)	Cumulative Cost (\$)	% of Total
Labour	244,750	244,750	82.40%
Materials	2,800	247,550	0.90%
Services	4,050	251,600	1.40%
Overheads	4,250	255,850	1.40%
Contingency	38,191	294,041	12.90%
Grand Total	297,041	297,041	100%

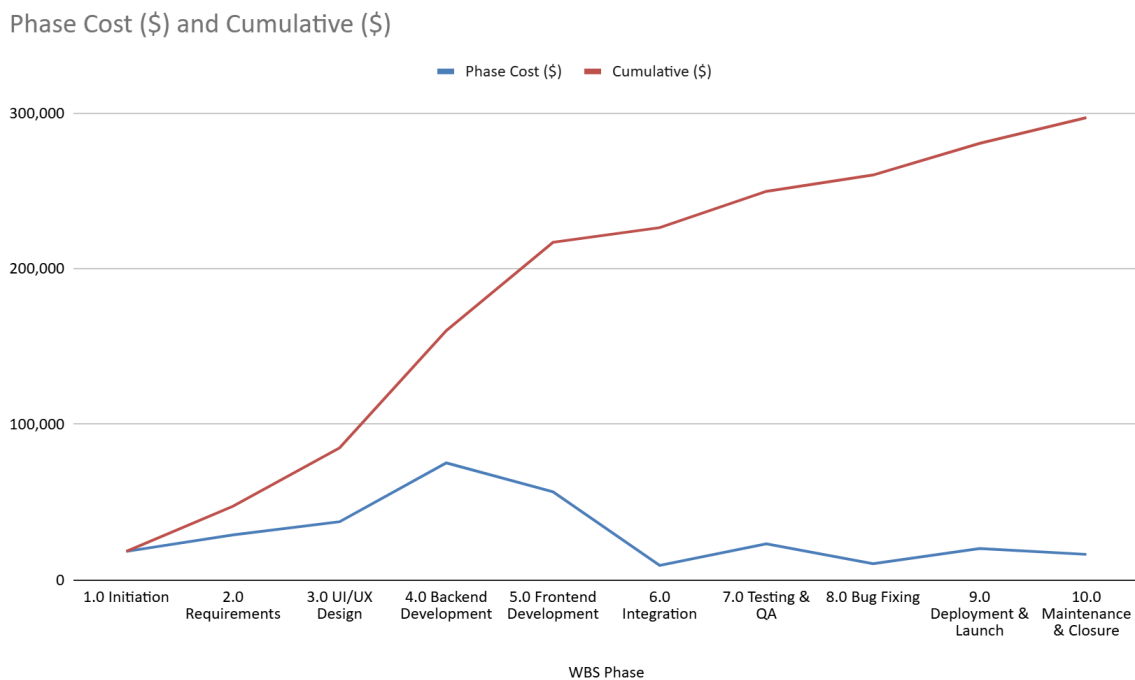


## WBS

WBS ID	Phase	Role/Category	Daily Rate (days)	Number of workers x Effort (days)	Cost	% of Grand Total
1.0	Initiation	Project Manager (Labour)	\$1,100	1 x 10	\$11,000	
		Business Analyst (Labour)	\$900	1 x 5	\$4,500	
		Materials & Equipment			\$100	
		Services & Vendors			\$0	
		Contingency (15%)			\$2,340	
		Overheads			\$500	
		Subtotal Initiation			\$18,440	6.2%
2.0	Requirements	Project Manager (Labour)	\$800	1 x 10	\$11,000	
		Business Analyst (Labour)	\$750	1 x 15	\$13,500	
		Materials & Equipment			\$300	
		Services & Vendors			\$0	
		Contingency (15%)			\$3,720	
		Overheads			\$500	
		Subtotal Requirements			\$29,020	9.8%
3.0	UI/UX Design & Prototyping	UX/UI Designer (Labour)	\$875	1 x 30	\$26,250	
		Business Analyst (Labour)	\$900	1 x 5	\$4,500	
		Materials & Equipment			\$500	
		Services & Vendors			\$500	
		Contingency (15%)			\$4,763	
		Overheads			\$1,000	
		Subtotal UI/UX			\$37,513	12.6%
4.0	Backend Development	Developers (Labour)	\$800	2 x 40	\$64,000	
		Materials & Equipment			\$100	
		Services & Vendors			\$750	
		Contingency (15%)			\$9,728	
		Overheads			\$700	
		Subtotal Backend			\$75,278	25.3%
5.0	Frontend Development	Developers (Labour)	\$800	2 x 30	\$48,000	
		Materials & Equipment			\$200	
		Services & Vendors			\$500	
		Contingency (15%)			\$7,305	

		Overheads			\$700	
		Subtotal Frontend			\$56,705	19.1%
6.0	Integration	Developers (Labour)	\$800	1 x 10	\$8,000	
		Materials & Equipment			\$0	
		Services & Vendors			\$100	
		Contingency (15%)			\$1,215	
		Overheads			\$100	
		Subtotal Integration			\$9,415	3.2%
7.0	Testing & Quality Assurance	Testers (Labour)	\$650	1 x 30	\$19,500	
		Materials & Equipment			\$100	
		Services & Vendors			\$500	
		Contingency (15%)			\$3,015	
		Overheads			\$200	
		Subtotal Testing			\$23,315	7.8%
8.0	Bug Fixing	Developers (Labour)	\$900	1 x 10	\$9,000	
		Materials & Equipment			\$0	
		Services & Vendors			\$0	
		Contingency (15%)			\$1,350	
		Overheads			\$150	
		Subtotal Bug Fixing			\$10,500	3.5%
9.0	Deployment & Launch	Developer (Labour)	\$800	1 x 5	\$4,000	
		Project Manager (Labour)	\$1,100	1 x 10	\$11,000	
		Materials & Equipment			\$1,000	
		Services & Vendors			\$1,500	
		Contingency (15%)			\$2,625	
		Overheads			\$200	
		Subtotal Deployment			\$20,325	6.8%
10.0	Maintenance & Closure	Developer (Labour)	\$800	1 x 10	\$8,000	
		Project Manager (Labour)	\$1,100	1 x 5	\$5,500	
		Materials & Equipment			\$500	
		Services & Vendors			\$200	
		Contingency (15%)			\$2,130	
		Overheads			\$200	
		Subtotal Maintenance			\$16,530	5.6%
		GRAND TOTAL			\$297,041	100%

## WBS graph



## Cost Detailed Breakdown per phase

### Project Initiation

- Labour Costs:
  - Project Manager:  $\$1100 \times 10 \text{ days} = \$11000$
  - Business Analyst:  $\$950 \times 5 \text{ days} = \$4500$
  - Justification: Project Manager needed to lead project setup and Business Analyst documents and analyse projects.
- Materials & Equipment: \$100
  - Justification: Basic collaborative, documentation, and communication tools.
- Services & Vendors: -
- Contingency (15%): \$2340
- Overheads \$500
- Total: \$18440

### Requirements Gathering & Planning

- Labour Costs:

- Project Manager:  $\$800 \times 10 \text{ days} = \$11000$
- Business Analyst:  $\$750 \times 15 \text{ days} = \$13500$
- Justification: Business Analyst and Project Manager works together to plan for schedule and budgets.
- Materials & Equipment: \$300
- Services & Vendors: -
- Contingency (15%): \$3720
- Overheads \$500
- Total: \$29020

## UI/UX Design & Prototyping

- Labour Costs:
  - UX/UI Designer:  $\$875 \times 30 \text{ days} = \$26250$
  - Business Analyst:  $\$900 \times 5 \text{ days} = \$4500$
  - Justification: UX builds wireframes for the system, and the Business Analyst validates the wireframes with the requirements.
- Materials & Equipment: \$500
  - Wireframes, collaborative tools and etc
- Services & Vendors: \$500
  - User testing and review for the prototype
- Contingency (15%): \$4763
- Overheads \$1000
- Total: \$37513

## App Development

### Backend Development

- Labour Costs:
  - Developers:  $2 \text{ person} \times \$800 \times 40 \text{ days} = \$64000$
  - Justification: Building APIs, services and other backend development costs a lot and requires enough people to meet the time requirement.
- Materials & Equipment: \$100
  - Justification: Communication and collaborative purposes
- Services & Vendors: \$750
  - Cloud and API usage
- Contingency (15%): \$9728
- Overheads \$700
- Total: \$75278

## **Frontend Development**

- Labour Costs:
  - Developers: 2 person x \$800 x 30 days = \$48000
  - Justification: In order to have a smooth frontend for the users, we need to put in enough work for this.
- Materials & Equipment: \$200
  - Justification: Communication and collaborative purposes
- Services & Vendors: \$500
  - Testing and building process
- Contingency (15%): \$7305
- Overheads \$700
- Total: \$56705

## **Integration**

- Labour Costs:
  - Developers: \$800 x 10 days = \$8000
  - Justification: Integrating the flows needed person to handle
- Materials & Equipment: -
- Services & Vendors: \$100
  - Testing tools
- Contingency (15%): \$1215
- Overheads \$100
- Total: \$9415

## **Testing & Quality Assurance**

### **Testing processes**

- Labour Costs:
  - Testers: \$650 x 30 days = \$19500
  - Justification: Given the timeline, with 1 tester is enough to check bugs and other errors.
- Materials & Equipment: \$100
- Services & Vendors: \$500
  - Penetration testing purpose and other testing support.
- Contingency (15%): \$3015
- Overheads \$200
- Total: \$23315

### **Bug Fixing**

- Labour Costs:

- Developers:  $\$900 \times 10 \text{ days} = \$9000$
- Justification: 1 person in that timeline is enough to fix bugs if development processes are done properly.
- Materials & Equipment: -
- Services & Vendors: -
- Contingency (15%): \$1350
- Overheads \$150
- Total: \$10500

## Deployment & Launch

- Labour Costs:
  - Developer:  $\$800 \times 5 \text{ days} = \$4000$
  - Project Manager:  $\$1100 \times 10 \text{ days} = \$11000$
  - Justification: Developers are needed to ensure the smooth deployment, and project manager is responsible for managing the deployment
- Materials & Equipment: \$1000
  - Justification: Hosting and other fees.
- Services & Vendors: \$1500
  - Marketing purposes
- Contingency (15%): \$2625
- Overheads \$200
- Total: \$20325

## Maintenance & Closure

- Labour Costs:
  - Developer:  $\$800 \times 10 \text{ days} = \$8000$
  - Project Manager:  $\$1100 \times 5 \text{ days} = \$5500$
  - Justification: Project managers are needed at this stage to properly close the project and maybe do a handover, while developers are needed for the maintenance phase where in case some things go wrong, for a faster response time.
- Materials & Equipment: \$500
  - Justification: Training purposes.
- Services & Vendors: \$200
- Contingency (15%): \$2130
- Overheads \$200
- Total: \$16530

## Task 3.6 Risk Management Plan

### Risk Register

Risk ID	Rank	Risk Description	Impact Description	Impact Level	Probability Level	Priority Level	Risk response	Owner
R01	1	Unexpected testing problems – with only one tester and 1 developer in the testing phase there are high chance that there is a lot of part that is not properly tested with the amount of time and manpower given to that phase because of budget constraints. We may expect defects in security, some functionality, and the server capacity.	Critical bugs may push the set timeline by some time, which would impact the KPI, which is the target of 75% active users in 3 months, increase the cost for testing and developers, and risk releasing products that are not totally ready to be launched.	5	4	20	This problem can be less if development process are thorough and proper. We can also mitigate this by having multiple QA tests, and 1 developer to standby in case anything urgent happens. And this problem can be handled by allocating more time for the testing which means timeline needs to be stretched if there are any significant errors.	Developer
R02	3	<b>Budget overrun</b> – We are aware that the budget we set for vendors, such as for clouds and API in the development phase, is quite tight. Furthermore, backend and frontend development are resource-heavy and are needed as it's the core for our system.	If there is any increase in price from the vendors, then the cost may exceed the estimates of \$75,278 backend and \$56,705 frontend budgets. This may cause the project to exceed the \$300,000 cap. This forces us to delay or seek additional funds, risking the satisfaction of the stakeholders.	4	3	12	We can manage this by maintaining the contingency fund, monitoring vendor and cloud costs closely, and negotiating contract if prices increases so we can find a sweet spot where we don't overrun our budget. Lastly, we will monitor our spending closely at every phase, especially the development phase.	Project Manager
R03	5	<b>Data security breach</b> – The system we develop needs to hold sensitive data from the users, such as the hydration logs, sleep patterns, and screen time. If there are any weaknesses in our security that allow the system to be breached by malicious attackers then it could affect our data security.	A breach could cost penalties under the Australian Privacy Principles, legal fees, and reputational loss. Furthermore, users may not trust the app and uninstall it, preventing KPIs from being met. In the long run, LifeLoop's brand credibility would decline in the digital wellness market.	5	2	10	Ensure proper encryption, secure cloud storage and monthly security and compliance audits. A proper penetration test needs to be done in our testing process, as we have stated in our cost model. Most importantly, we need an incident response plan with proper steps and personnel.	Security Lead
R04	7	<b>Integration failure during the development phase</b> – Our backend and frontend developers may have some problems in aligning the system without proper	If the integration process failed to sync properly with the frontend, the user experience will be broken. This error will delay the completion process and further	2	2	4	We will implement a CI/CD pipeline, hold a weekly integration checkpoint, and also assign a lead to properly coordinate the integration between the	Lead Developer

		communication, such as the dashboards, reminders, and analytics.	increase the cost, which we have to avoid.				backend and frontend. This is done to avoid miscommunication and failed integration.	
R05	4	<b>Low user engagement</b> – Even with the full functionalities available, users may not fully adapt to the app if gamification, challenges, and points are not properly set. This requires another marketing analysis to analyse what the market needs. This is why it may be a challenge to build a loyal ecosystem that adopts our system into their community.	KPIs (75% active users, 50% engagement within 3 months) will not be met. ROI will shrink, and LifeLoop's reputation for innovation will suffer, reducing competitive edge in wellness apps.	3	4	12	We can focus more on usability testing, refine the flow of the users and improve the marketing campaign for better targeting and analysis for the app usage. The app will also be refined more to the target users so that the community can be built upon that and gain more engagement.	Marketing team
R06	6	<b>App compatibility problems during the testing phase</b> – OS restrictions, such as iOS or Android and API permission limits may block critical features like our screen time data accessibility.	This may risk the system being released on one platform while ongoing progress for another one, which limits the adoption of users across different platforms and allows competitors to gain a headstart as a leading wellness app. Moreover, this may cause the rating to drop across different app store or play store.	3	2	6	Conduct a compatibility test properly during the testing phase. Align properly with all platforms during the development process and prepare alternative methods for the user to provide data, such as manual sleep tracking logging if there are any restrictions on the API.	Developer and testing team
R07	2	Privacy data compliance issues – the failure to align features with the policy from the local country, such as the Australian Privacy Principles or GDPR equivalent laws, could result in compliance gaps.	If compliance is breached, LoopCare have to pay severe fines or even worse banned in the country. This problem may lead to lawsuits and loss of trust. Finally, the users may hesitate to provide data, which reduces the app's functionality.	5	3	15	We will mitigate this by reviewing all our features against the Australian Privacy Principle and prioritize user consent before accessing their data. Furthermore, data will also be encrypted, and audit logs will be monitored for compliance.	Project manager and Audit team



<b>PROBABILITY</b>	5					
	4			R05		R01
	3				R02	R07
	2		R04	R06		R03
	1					
		1	2	3	4	5
		<b>IMPACT</b>				

# Task 4.1 Group Reflection

Using Gibbs' Reflective Cycle (1988), a reflection on personal emotions, evaluation of the team, and takeaways for growth can be achieved:

## 1. Description

Our team was able to partly achieve desired objectives set out in the Working Agreement. Daniel acted as a leader, by appointing tasks and deadlines to keep the team's progress on track. Colin with his skills in software and visual presentation tended to create powerpoints and planning our 2 minute pitch, and project plan demonstration. Edward and Darren used their expertise and theory skills to produce high quality analysis throughout the report.

## 2. Feelings

Initially, our group was confident in achieving success, as we assigned roles that assisted us in communication and planning for deadlines. We effectively designated tasks based on individual strengths and weaknesses, in hopes of producing a high quality of output. However, at times there was concern, with individuals failing to contribute adequately within the specified time frame. This concern was voiced in our group chat and meetings using honest communication, to formulate a solution to the issue. This supportive attitude from all members contributed to our investment in success.

## 3. Evaluation

One specific strength that was evident in the project's lifecycle was adaptability. All members were able to ultimately contribute equally, regardless of designated tasks and deadlines. Despite challenges regarding unequal contributions that had potential to create conflict, all members adhered to our code of conduct to maturely address the situation. This ability to be adaptable and problem solve highlighted the team's emotional intelligence and commitment to success.

## 4. Analysis

The effective use of the Working Agreement throughout the project assisted us in managing workloads and conflict resolution. The assigned communication tools (group chat, and in person meetings) provided us with transparency. With defined roles and responsibilities, it was easy to hold accountability, however, we failed to appropriately monitor progress consistently, leading to the mentioned challenges.

## 5. Conclusion

While we were able to adhere to the Working Agreement, and achieve part of the objectives and completion of the project, our group could have made use of the task tracking tool to monitor progress on a regular basis. The experience highlighted the importance of planning and monitoring, and how communication and a commitment to honesty can overcome challenges in group work.

## 6. Action Plan

In the future, group members will know to utilise frequent reviews of progress to ensure alignment with the plan. Therefore, feedback will be ongoing as opposed to reactive. Additionally, it will be critical to maintain efficient communication during problem-solving to resolve conflicts and overcome challenges.

## Task 4.1 Individual Reflections

### Daniel McGuirk's (31494854) Individual Reflection:

My experience throughout the lifecycle of this project was filled with mixed emotions. In the early stages, it appeared that the group's motivation was present, and we had confidence in success due to our ability to plan and distribute tasks. With deadlines approaching, we were behind schedule in terms of progress, so I attempted to take on more of a leadership role to get everyone organised.

Despite feeling at times that I was carrying an unfair workload, and was left to do all of the tasks that were not officially assigned, the group's ability to be adaptable was exceptional. I can commend them for their unselfishness in the face of adversity, as we all understood that life can interrupt progress in a group assignment of this nature. This meant team members taking on tasks they were not assigned, and other team members doing an exceptional job in redeeming themselves for failing to complete their tasks.

Ultimately, I can say that I am proud of the way I contributed to the project. I have learnt that I am a capable leader, who can enforce accountability whilst simultaneously forgiving. The role brought me stress, and I know moving forward that this is not the position I would volunteer for. Furthermore, I now understand and am grateful for my team members who were respectful and unselfish throughout the process. Their flexibility throughout our operation is a critical quality, which will be essential for all group work going forward.

Team Grade: A

Personal Grade: A

### Penglin He's (34528970) Individual Reflections:

In this project, I joined every team meeting and was active in discussions. I helped check the assignment requirements carefully and made sure we followed the rules. I also helped create and check our PowerPoint slides. When we were behind, I organised Zoom meetings and reminded my team to meet and talk. I think I helped with team communication and kept things on track. But I know I can do more. Next time, I want to take more tasks like writing the report or helping with time planning. I also want to give support to others more clearly.

Our team had some problems in making plans. At the beginning, we didn't have clear task roles. Everyone just chose what they wanted to do. This made the work a bit confusing. But our team was still flexible. When Edward had personal problems, we shared the work and finished on time. I really liked how my teammates were kind and supported each other. This made me feel safe and encouraged me to work harder. I learned that teamwork needs clear task planning, better tools like task trackers, and more communication. Next time, I will be more active and do more to help my group.

## Darren Christoff (34253041) Individual Reflection:

We had a period of five weeks to develop and deliver a research group presentation on a topic of our choice related to creating an app for a company. We had separated the tasks for individuals/duos to work on to share the tasks fairly and to finish them on time. I was pretty proud of the quick decision and allocation of tasks, as we had wasted almost no time arguing over who was responsible for what task. Everything had been progressing well with all members of the group doing their tasks. However, some circumstances arose, and one of our group members was unable to complete/assist with a task, and the other member had to complete the task by themselves. This led to an avalanche effect, causing all the group members to have to handle more workload. In the end, we gave that group member extra workload to make it fair and as a chance for redemption.

Ultimately, this was a positive experience as it taught me, even if preparations are completed and perfect, some unforeseen circumstances could occur and derail the whole process, making it important to have some sort of backup plan just in case. Moving forward, I think that we should use the task tracker to assign the tasks more clearly to make it fair for everyone in the group and to make it as efficient as possible.

## Edward (34034765) Individual Reflection:

While doing this assignment, I had a lot of things going on like work, sickness, and other personal matters going on at the same time. These made it hard for me to keep up with the task given to me, contribute to the team, and even miss the presentation day. I felt really guilty because it slowed down the team, and I also didn't want to bring the whole team down.

Despite the struggle, my team worked really well overall. We divided tasks fairly at the beginning, and when problems came up, everyone was adaptable and willing to take on extra responsibilities, such as the problem I faced. I really appreciated how supportive the group was, which motivated me to do more at the end by focusing on the report and taking up more part of the report after sorting out my personal problems to make up for what I didn't do.

From this assignment, I learned that I need to manage my time and stress better, transparent about my situation, not thinking that I can handle it all. At the same time, this process also made me realise how important teamwork, communication, and adaptability are when working in a group. In the future, I

would like to contribute more consistently to the group so that I can match the effort my teammate puts in and not feel guilty for my team.

Team Grade: A

Personal Grade: B+

# References

*Project Management Institute. (2021). The 12 project management principles. Project Management Institute.*

<https://www.pmi.org/-/media/pmi/documents/public/pdf/pmbok-standards/12-project-management-principles.pdf>

Hays. (n.d.). *Software developer salary in Australia.*

<https://www.hays.com.au/it/software-developer-jobs/salary>

Indeed. (2025). *Project Manager Salaries – Victoria, Australia.* Retrieved September 10, 2025, from

<https://au.indeed.com/career/project-manager/salaries/Victoria>

Clicks IT Recruitment. (2025). *.NET Developer Salary & Rates Guide.* Retrieved September 10,

2025, from <https://clicks.com.au/job-salary/net-developer>

Lang, J., & Robertson, P. A. (2002). You'd call anything a project just so you can manage it. In *Proceedings of the Project Management Institute Annual Seminars & Symposium.* Project Management Institute.

Project Management Institute. (2021). *A guide to the project management body of knowledge (PMBOK® Guide) (7th ed.) and The Standard for Project Management.* Project Management Institute.

Paul, S., & Vella, K. (2025). *Deep Dive - By Stephen Paul and Dr. Karen Vella.* Monash University

The University of Edinburgh. (2024, October 15). *Gibbs' reflective cycle.*

<https://reflection.ed.ac.uk/reflectors-toolkit/reflecting-on-experience/gibbs-reflective-cycle>

GeeksforGeeks. (2024, April 3). *Real world applications of SDLC (Software Development Life Cycle).* GeeksforGeeks.

<https://www.geeksforgeeks.org/software-engineering/real-world-applications-of-sdlc-software-development-life-cycle/>

*IT Contractor Rates Guide Australia* | Hays. (n.d.).

<https://www.hays.com.au/it/it-contractor-rates-australia>