

Assignment 1

IT Project Management

FIT2002

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September 10th, 2025

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Task 3.1 – Team Working Agreement

| <i>FIT2002 – Working Agreement (Team Charter)</i> | |
|--|--|
| <i>Team number</i> | OnlyFish#0607 |
| <i>Team members</i> | <ul style="list-style-type: none"> - Balqis Kinanti Haldi Heryputri (34421203) - Josefina Retondo Rojas (34307877) - Hsin-Chieh Yang (34627014) - Michael Reginald (34958126) |
| <i>Team objectives</i> | <ol style="list-style-type: none"> 1. By week 7 (final submission), produce in collaboration all required project management artefacts, ensuring that 100% are submitted on time and meet the rubric criteria for a high distinction grade. 2. Work as a cohesive team by holding at least 1 meeting per week (can be in/after class or through whatsapp), to ensure equal contribution and accountability across all artefacts. 3. Ensure that each section is reviewed by the other team members within 24 hours of completion, so that all deliverables are taking into account the opinion of all team members. |
| <i>Team characteristics</i> | <p>Strengths: collaboration, structure, innovative, communication, critical thinking Weaknesses: some of us tend to take more time to answer messages, also we can be very strong willed, or we have ideas, but not being able to fully convey them.</p> <p>We are collaborative, well-structured and innovative, with strong communication and critical-thinking skills. We work well together through our diverse perspectives, while also building up and supporting each others' ideas. Some challenges we face include delays in response time, no responses at all and leaving work to be done at a later date. Despite our weaknesses, the strengths of our team allow us to overcome our weaknesses and help us to stay organised and focused on achieving success in our project.</p> |
| <i>Core values</i> | Our team values communication, transparency, respect, honesty, excellence and integrity. These values guide our behaviour, help maintain trust between members, and ensure the team functions as an effective and cohesive unit. |
| <i>Group norms and code of conduct</i> | <ul style="list-style-type: none"> - All members will contribute equally to the project and will take responsibility for their assigned tasks. - Each member is expected to come to the meeting prepared, and will start on time (unless special circumstances). - Members will be expected to attend all scheduled meetings unless they have provided prior notice. - Team members must respond to project related messages within 24 hours. - Professional and respectful behaviour must be maintained at all times. - If a task cannot be completed by a member, they must notify the team to avoid delays. |
| <i>Participation and collaboration approach</i> | <ul style="list-style-type: none"> - Workspace: deliverables in Google Drive (Sheets, Docs, Slides) and ProjectLibre. - Methods: weekly Zoom/phone calls to plan and update other team members of what has been done, what will be done, and any blockers encountered. - Feedback: comments on the documents worked on or by a Whatsapp groupchat. Anyone can apply said feedback when agreed upon. |

| | |
|----------------------------|--|
| | <ul style="list-style-type: none"> - Tracking: a Google Sheets task board (owner, due date, status, task, notes) |
| Communications | <ul style="list-style-type: none"> - Channels: Whatsapp for day to day updates, and Zoom/phone calls for most decisions/blockers. Face to face in class for general updates and thoughts, and when needed for major decisions. - Frequency: replies within a maximum of 24 hours, and meetings at least once a week or whenever needed. - Transparency: full transparency. Share progress and blockers (if any) to work efficiently. - Escalation: if an issue can not be settled by someone after discussing it with the team, said team member should inform the others again of the blockers encountered, so that someone else can work with them. |
| Problem solving | <p>If a team member encounters a problem they cannot solve individually, they will inform the rest of the team. The team will then discuss the issue, clarify its impact, and agree on a practical way to move forward. Where possible, a responsible member will be assigned to help solve the issue. If the original member remains blocked, or becomes unavailable (for example, due to an illness or family issues), tasks will be reassigned promptly so that we keep progressing.</p> <p>For project related issues, like running over budget or falling behind schedule, the relevant team member that becomes aware of the issue will notify the others to propose solutions, and the team will decide collectively what changes need to be done.</p> |
| Conflict management | <ul style="list-style-type: none"> - Speak up fast if something is bothering you (work quality, deadlines, tone, etc), it can be said on WhatsApp and ask for when a quick call can be arranged. - Have a quick call so that the person that set it up can first talk about what they are thinking, and open a discussion for the other members to also be able to express their opinions on the matter. Keep this communication respectful in all senses. - Find a fix as a group by a majority voting if nothing is agreed upon in a few minutes. If the vote is 50/50, open for discussion again to explain choice and repeat steps. - Keep all communication respectful. No personal digs. If the conversation feels like it's getting out of hand, take a 10 minute break and resume. |
| Signatures | <p>By signing this section of the table, we agree to follow all of the above:</p> <div style="text-align: center;">    </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> Josefina Retondo Rojas Balqis Kinanti Haldi H. Hsin-Chieh Yang </div> <div style="text-align: center; margin-top: 20px;">  <p>Michael Reginald</p> </div> |

Task 3.2.1 – Project Charter

Project Title and Description:

The project's title is "LifeLoop Labs' App Management", and what we want to achieve is to create an app that will serve as a hub that standardises accessibility audits, user testing protocols, design system creation, and prototyping tools for all LifeLoop apps.

Project Scope and Objectives:

- In scope and what will be delivered:
 - A central platform for accessibility audits, usability testing protocols, design system creation, and prototyping tools for the LifeLoop app teams and users.
 - Pilot deployment with designated LifeLoop pilot app team, delivering the templates portal, the browser extension for automated usability/accessibility tests and feedback capture, and the analytics dashboard where aggregate metrics (for example, average time to complete task and number of crashes) can be seen.
- What the product will do:
 - Give developers consistent system design rules to cut reworks.
 - Let testers run standardised, auditable usability and accessibility checks.
 - Capture user feedback on prototype and deployed apps in one place to speed up decision making.
 - Overall, the app will produce faster handoffs, fewer usability inconsistencies, and more accessible and intuitive releases that will allow for more customer trust and loyalty.
- SMART Objectives:
 - Obtain 80% satisfaction from the developers/testers in the post-pilot surveys while upholding a schedule variance of $\leq 10\%$ against the approved baseline.
 - Within the pilot period, reduce design to developer handoff times by $\geq 20\%$ and lower costs by $\geq 15\%$ compared to baseline.
 - By the launch date in February 2027, launch the application and deliver the 4 main core modules, meeting 100% of the RTM and pass $\geq 90\%$ on our accessibility checklist and user testing.

Project start and finish dates:

Intended duration of 18 months, from August 2025 to February 2027.

High level project budget information:

\$300,000 AUD total (capped). Up to 10% for management reserve.

Project manager's name and contact information:

Balqis Kinanti Haldi Heryputri – bher0013@student.monash.edu

Main Project Success Criteria:

- Finish with maximum 10% schedule variance against the approved baseline and total spend of a maximum of \$300k.
- During the pilot, achieve at least a 20% reduction in design-to-dev handoff time and a minimum of 15% reduction in delivery cost versus the current workflow baseline.
- Meet 100% of the RTM acceptance criteria, deploy the deliverable with no critical defects, achieve at least a 90% pass on the accessibility checklist, and obtain at least 80% positive developer and tester ratings on the usability and intuitiveness of the deliverable.

Project development approach:

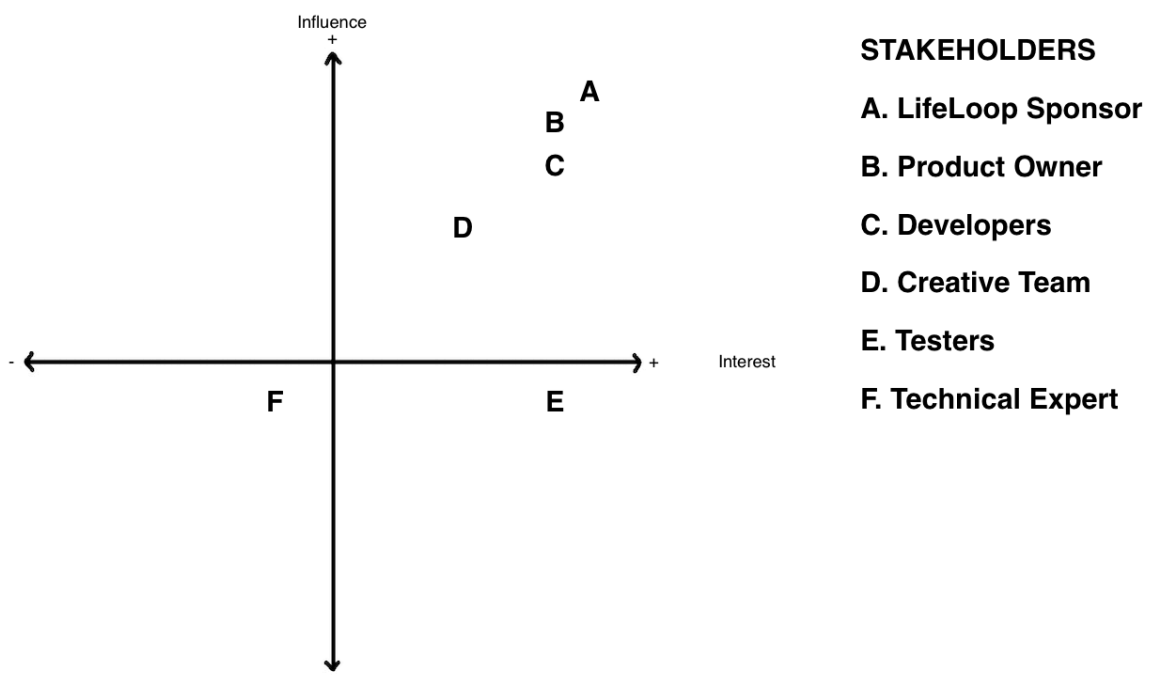
- **Approach:** Agile
- **Reasoning:** our usability and accessibility requirements will evolve as developers and testers trial the deliverables. Agile lets us prototype early, gather feedback frequently, and adjust with minimal rework.
- **Alignment with PMBOK 7 & Monash:**
 - Principles: tailoring and value delivery through short iterations and stakeholder engagement.
 - Performance domains: stakeholders (regular demonstrations), planning (per sprint), delivery (incremental, Definition of Done via RTM), measurement (track schedule variance and satisfaction), uncertainty (active risk review).
 - **Monash:** emphasis on adaptive learning, iterative cycles, demonstrations, and traceability (DoD through RTM).

Key stakeholders and their roles in the organisation and in the project:

| Stakeholder | Role | Interest | Influence |
|--------------------------------------|--|---|-----------|
| LifeLoop (Sponsor and client) | Funds and authorises project; approves scope and budget. | ROI, on time and on budget delivery, improved quality across apps | High |
| Product Owner – Balqis Kinanti Haldi | Owns backlog and acceptance; clarifies | Right features in right order, clear acceptance | High |

| | | | |
|--|---|---|---------------|
| Heryputri | requirements. | criteria, fast feedback | |
| Full Stack Developers | Primary developers of the app/extension. | Fewer reworks, faster handoffs, reliable templates | Medium - High |
| Creative team (UI/UX Designers) | Defines usability standards and refines GUI of the product. | Consistent design systems, smoother prototype to build workflow | Medium |
| QA Teasters | Runs automated and manual tests, some via the extension. | Standardized auditable accessibility/usability reports | Medium |
| Technical Expert (Deejay Raina, Stephen Paull) | Advices on accessibility methods and project planning | Quality of practices, student guidance | Low |

○ Stakeholder Matrix:



Assumptions and Exclusions:

- Assumptions:
 - The Development team has access to other LifeLoop development repos, environments, and permission to install the browser extension.
 - Sponsor and PO are available to clarify doubts within 48 hours on working days.
 - Total budget carpet at \$300k, changes to that require formal approval.

- Stakeholders would like to increase their budget if we run out of money.
- All LifeLoop apps have a web version.
- The product will be available for Firefox, Microsoft Edge, Google Chrome, Safari.
- Exclusions:
 - Does not include a mobile app, but yes an extension for the browsers mentioned above and a Desktop app.
 - Does not include any other languages except for english.

Task 3.3.1 – RTM

| REQUIREMENTS TRACEABILITY MATRIX | | | | | |
|----------------------------------|---|---|----------------|---|--------|
| Project Name: | LifeLoop Labs' App Management | | | | |
| Project Manager Name: | Balqis Kinanti Haldi Heryputri | | | | |
| Project Description: | This LifeLoop Labs project intends to deliver 3 main modules in an app and extension that standardize how LifeLoop teams design, test, and learn from users. A Developer Templates Portal lets tech leads publish approved boilerplates so developers start from a consistent place that needs less rework. A browser extension runs automated usability and accessibility checks, records task completion times, and collects feedback from users with context. An analytics dashboard aggregates metrics such as average time-to-complete, usability scores, and crash counts, across apps and versions to make better guided decisions. The platform aims to speed handoffs, reduce rework, and improve accessibility and usability of releases, with at least 20% faster designer-to-development handoffs and at least 80% positive developer and tester satisfaction by release (February 2027). | | | | |
| ID | Requirements (Functional or Non-Functional) | Assumption(s) and/or Customer Need(s) | Category | Source | Status |
| R01 | Developers can download templates; Tech leads can upload, version, and tag templates; the portal shows a version history and what has changed for the different versions. | Developers want a consistent starting point to reduce rework, Tech leads curate said standards. | Functional | Client brief | Open |
| R02 | Role based access is enforced. For the roles of Admin, Tech Lead, Tester, and Developer, the appropriate permissions to upload, edit, view, and export are enforced. | Need to prevent accidental changes and keep auditability. | Functional | Stakeholder Interview | Open |
| R03 | Runs a standard pack of usability and accessibility checks on the current page and returns a pass/fail summary, with fix hints. Said results are saved to the hub. | Testers need repeatable, auditable checks, especially for early detection and cost reduction. | Functional | Quality Requirement | Open |
| R04 | Extension records tasks start/end and key events to compute time-to-complete and crash flags, then sends it to analytics. | Sponsor wants objective metrics to compare versions. | Functional | Project objectives | Open |
| R05 | Users can submit comments and optional screenshots for feedback to be used by the LifeLoop team. Submission is sorted with a ticket number, app name and version, and timestamp. | Designers and developers need contextual feedback to act quickly. | Functional | Client brief | Open |
| R06 | The analytics dashboard shows a average time-to-complete, usability score, and crash count. These can be filtered and sorted by app, version, and date. | The people making decisions for different apps need one place to review trends and share reports. | Functional | Project objectives | Open |
| R07 | Pilot screens must pass with at least 90% of the team's Accessibility Checklist, and there must be no critical issues for deployment. | Commitment to accessible releases. | Non-functional | Quality Requirement | Open |
| R08 | For compatibility and better privacy and performance, the app/extension is supported by the 3 latest versions of Chrome, Edge, Firefox, and Safari, no data that could be used to identify a specific person is collected, and the app page and extension checks should load/run in at most 10 seconds. | Broad desktop coverage, privacy expectations, and usability performance. | Non-functional | Scope Statement and Stakeholder Interview | Open |

Ass1 RTM - FIT2002

Task 3.3.2 – Scope Statement

Purpose, Boundaries and Major Deliverables

The purpose of the LifeLoop Usability Management App is to create a centralised platform for all LifeLoop applications that standardises usability practices. We are committed to addressing the challenges that many applications in the current market face - failing to meet user expectations, increased costs, wasted time and loss of customer trust. By embedding usability into every stage of the app development lifecycle, we are confident that these challenges can be overcome.

The purpose of the application is to serve as a central hub for:

- Accessibility audits
- User testing protocols

- Creation of system designs
- Prototyping tools

Boundaries:

- The app will cover usability, accessibility workflows, design systems creation and prototyping tools.
- Features that are not directly related to the attributes mentioned above are excluded from the scope of this project (e.g. hub for cost analysis of LifeLoop Apps).

Major Deliverables:

- A centralised usability management (including analytics report) application and extension
- Integrated accessibility and user testing frameworks
- Prototyping tools/templates
- Reusable design system (UI components, templates, style guides)
- Documentation and training resources

This project aims to deliver a working solution within 18 months, with the allocated budget of \$300,000. This will be accomplished using the Agile methodology to minimise risks and adapt quickly to feedback.

Deliverables and Requirements

Deliverable 1: Accessibility Module

- Functional Requirements (FR):
 - FR1: Must provide automated WCAG 2.2 compliance checks.
 - Acceptance: At least 95% of issues detected during pilot testing.
 - FR2: Must support manual tagging of accessibility issues.
 - Acceptance: Users can annotate issues and generate reports without errors.
- Non-Functional Requirements (NFR):
 - Performance: Reports generated in under 10 seconds for datasets $\leq 10,000$ records.
 - Acceptance: Verified in $\geq 90\%$ of test runs.
 - Compliance: Must meet WCAG 2.2 accessibility standards.
 - Acceptance: Independent accessibility audit passes.

Deliverable 2: User Testing Protocols

- Functional Requirements:
 - FR1: Ability to define, schedule, and store usability test scripts.
 - Acceptance: 100% of scripts are saved and retrievable.
 - FR2: Capture and store usability test results.
 - Acceptance: $\geq 85\%$ of tests logged without data loss.
- Non-Functional Requirements:

- Reliability: 99% uptime during active testing.
 - Acceptance: Downtime \leq 1 hour per month.
- Security: must comply with the Privacy Act 1998 for handling participant data.
 - Acceptance: No critical findings in compliance audit.

Deliverable 3: Design System

- Functional Requirements:
 - FR1: Provide a repository of reusable UI components and templates.
 - Acceptance: At least 20 components available and consistent.
 - FR2: Enable version control for design assets and style guides.
 - Acceptance: Changes logged and recoverable 100% of the time.
- Non-functional Requirements:
 - Maintainability: Code must be modular for updates with minimal disruption.
 - Acceptance: New components added within 2 days.
 - Usability: Navigation to access components require \leq 3 clicks.
 - Acceptance: Verified by usability testing with \geq 80% positive feedback.

Deliverable 4: Prototyping Tools

- Functional Requirements:
 - FR1: Support for both low and high fidelity prototyping.
 - Acceptance: Prototypes created and saved successfully in \geq 95% of cases.
 - FR2: Enable collaborative prototyping
 - Acceptance: At least 5 concurrent users can edit prototypes without conflict.
- Non-functional Requirements:
 - Performance: Prototype load times \leq 3 seconds for 95% of actions.
 - Acceptance: Measured via system monitoring tools.
 - Scalability: Must support \geq 400 concurrent users without performance loss.
 - Acceptance: Load testing passes with no critical failures.

Deliverable 5: Reporting & Collaboration

- Functional Requirements:
 - FR1: Generate audit and usability reports saved in the application's database.
 - Acceptance: 100% of reports generated and accessible for future comparison.
 - FR2: Provide secure, role-based access (admin, developer, tester, designer, etc.)
 - Acceptance: Permissions applied correctly in \geq 95% of test cases.
 -
- Non-functional Requirements:
 - Reliability: Automated backup every 12 hours.
 - Acceptance: Verified via backup logs \geq 95% of cycles.
 - Security: Multi-factor authentication required for all accounts.
 - Acceptance: MFA tested successfully for 100% of users.

Out of Scope & Exclusions

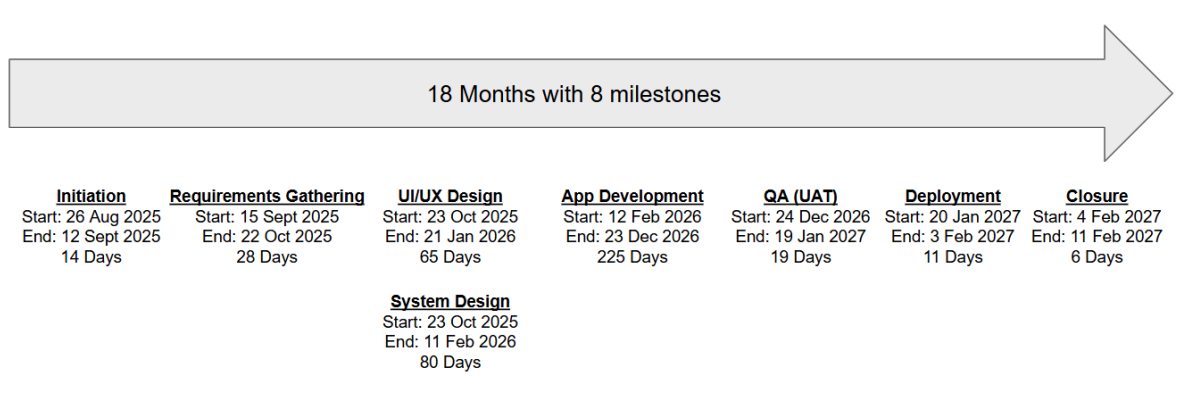
- General project management tools (task boards, time tracking, cost management etc.)
- Development of new features of Lifeloop Apps

Constraints and Assumptions

- **Constraints:**
 - The budget is \$300,000 AUD.
 - The timeline is limited to 18 months.
 - It must comply with data privacy regulations (Privacy Act 1998)
 - It must comply with accessibility standards (WCAG 2.2)
- **Assumptions:**
 - Tools necessary to complete the project, such as ProjectLibre, Zoom, Google Drive and Whatsapp will be available to the team.
 - Developers, testers and designers will engage with the pilot testing and provide feedback.
 - Stakeholders will approve deliverables at each iteration review.

Task 3.4 – WBS and Gantt Chart

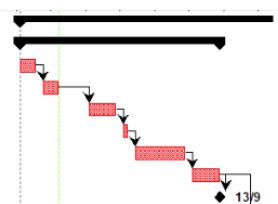
High Level Timeline



The 18-month timeline for Lifeloop Lab is reasonable and aligns with industry benchmarks for medium to large scale software projects. Each phase has been allocated timeframes supported by professional practice and research which will be elaborated below. The ProjectLibre file is available for download [here](#).

Phase 1: Project Initiation

| | | | | | |
|---|---|----------|------------------|------------------|---|
| 1 | 0. Lifeloop Labs | 384 days | 26/8/25, 8:00 am | 12/2/27, 5:00 pm | |
| 2 | 1.0 Project Initiation | 14 days | 26/8/25, 8:00 am | 12/9/25, 5:00 pm | |
| 3 | 1.1 Define project objectives of launching a central platform to improve usability across all Lifeloop Apps | 2 days | 26/8/25, 8:00 am | 27/8/25, 5:00 pm | |
| 4 | 1.2 Identify key stakeholders including the client 'Lifeloop', full-stack developers, and creative team | 2 days | 28/8/25, 8:00 am | 29/8/25, 5:00 pm | 3 |
| 5 | 1.3 Develop project charter covering scope, deliverables and constraints | 3 days | 1/9/25, 8:00 am | 3/9/25, 5:00 pm | 4 |
| 6 | 1.4 Approve \$300,000 project budget | 1 day | 4/9/25, 8:00 am | 4/9/25, 5:00 pm | 5 |
| 7 | 1.5 Assign roles to Technical and Design team | 3 days | 5/9/25, 8:00 am | 9/9/25, 5:00 pm | 6 |
| 8 | 1.6 Develop Team Charter including expectations, and core values | 3 days | 10/9/25, 8:00 am | 12/9/25, 5:00 pm | 7 |
| 9 | M1: Project and Team Charter Approved | 0 days | 12/9/25, 5:00 pm | 12/9/25, 5:00 pm | 8 |



The initiation phase lasts about two weeks, which aligns with best practices described in Planyway’s project initiation guide (*Project Initiation Phase: Quick Guide to Start Project*, n.d.-b). At this stage, the focus is on defining the project scope, objectives, and stakeholders.

By 13 September 2025, the project and team charter will be reviewed and approved, ensuring scope, objectives, budget, and roles are formally agreed upon so the team can begin with clear direction.

Phase 2: Requirements Gathering

| | | | | | | |
|----|--|---|---------|-------------------|-------------------|-------|
| 10 | | 2.0 Requirements Gathering and Planning | 28 days | 15/9/25, 8:00 am | 22/10/25, 5:00 pm | |
| 11 | | 2.1 Conduct stakeholder meeting to finalise app expectation | 3 days | 15/9/25, 8:00 am | 17/9/25, 5:00 pm | 8 |
| 12 | | 2.2 Identify client's need for LifeLoop Labs platform | 7 days | 15/9/25, 8:00 am | 23/9/25, 5:00 pm | 8 |
| 13 | | 2.3 Identify features including accessibility metrics dashboard and automated testing | 7 days | 24/9/25, 8:00 am | 2/10/25, 5:00 pm | 11;12 |
| 14 | | 2.4 Document functional and non-functional requirements (RTM) | 7 days | 3/10/25, 8:00 am | 13/10/25, 5:00 pm | |
| 15 | | 2.4.1 Document functional requirements for analytics dashboard and remote usability testing | 7 days | 3/10/25, 8:00 am | 13/10/25, 5:00 pm | 13 |
| 16 | | 2.4.2 Document non-functional requirements for performance, security and usability | 1 day | 3/10/25, 8:00 am | 3/10/25, 5:00 pm | 13 |
| 17 | | 2.5 Finalise project plan timeline and deliverables in a Gantt Chart | 7 days | 14/10/25, 8:00 am | 22/10/25, 5:00 pm | 15;16 |
| 18 | | M2: Requirements sign-off | 0 days | 22/10/25, 5:00 pm | 22/10/25, 5:00 pm | 17 |

According to KVV Technology’s software development timeline guide, requirements gathering often takes 2-4 weeks depending on project complexity. Allocating 28 days here provides enough time for stakeholder interviews, user story mapping, and documenting functional and non-functional requirements. This reduces the risk of scope creep later. (*How Long Does It Take to Build Your Software? A Comprehensive Guide 2024*, 2024b)

By 23 October 2025, all functional and non-functional requirements will be gathered, reviewed, and signed off, providing a stable baseline for design and preventing scope creep.

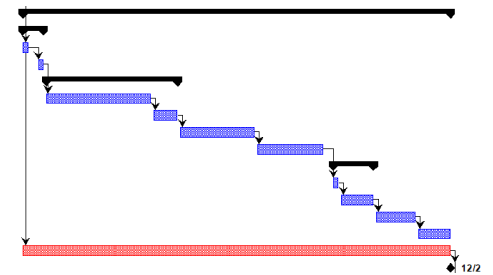
Phase 3: Planning and Design

| | | | | | | |
|----|--|---|---------|-----------------|-----------------|-------|
| 19 | | 3.0 UI/UX Design | 65 days | 23/10/25, ... | 21/1/26, 5:... | |
| 20 | | 3.1 Create wireframes for LifeLoop Labs for analytics dashboard and remote usability testing | 49 days | 23/10/25, ... | 30/12/25, ... | |
| 21 | | 3.1.1 Design layout of Home page and navigation | 3 days | 23/10/25, ... | 27/10/25, 5:... | 17 |
| 22 | | 3.1.2 Design layout of analytics dashboard including number of crashes, performance rate | 14 days | 28/10/25, ... | 14/11/25, 5:... | 21 |
| 23 | | 3.1.3 Design layout of remote usability testing tools to track users decision paths per task | 14 days | 17/11/25, ... | 4/12/25, 5:... | 22 |
| 24 | | 3.1.4 Design layout of boilerplate code download and upload page | 14 days | 5/12/25, 8:... | 24/12/25, 5:... | 23 |
| 25 | | 3.1.4 Add accessibility features for diverse customer needs | 4 days | 25/12/25, ... | 30/12/25, ... | |
| 26 | | 3.1.4.1 Implement dynamic sizing of text and image sizes based on different screen sizes | 2 days | 25/12/25, ... | 26/12/25, 5:... | 24 |
| 27 | | 3.1.4.2 Implement dark mode | 1 day | 29/12/25, ... | 29/12/25, 5:... | 26 |
| 28 | | 3.1.4.3 Implement voice and screen reader support | 1 day | 30/12/25, ... | 30/12/25, 5:... | 27 |
| 29 | | 3.2 Develop interactive prototype for user testing | 4 days | 31/12/25, ... | 5/1/26, 5:... | |
| 30 | | 3.2.1 Convert wireframes into clickable prototypes | 2 days | 31/12/25, ... | 1/1/26, 5:0:... | 28 |
| 31 | | 3.2.2 Simulate core user journey | 2 days | 2/1/26, 8:0:... | 5/1/26, 5:0:... | 30 |
| 32 | | 3.3 Conduct usability testing | 12 days | 6/1/26, 8:... | 21/1/26, 5:... | |
| 33 | | 3.3.1 Prepare for usability testing | 4 days | 6/1/26, 8:... | 9/1/26, 5:... | |
| 34 | | 3.3.1.1 Identify stakeholders from LifeLoop to test application | 1 day | 6/1/26, 8:0:... | 6/1/26, 5:0:... | 31 |
| 35 | | 3.3.1.2 Prepare test scenarios | 3 days | 7/1/26, 8:0:... | 9/1/26, 5:0:... | 34 |
| 36 | | 3.3.1.3 Set up test devices | 1 day | 7/1/26, 8:0:... | 7/1/26, 5:0:... | 34 |
| 37 | | 3.3.2 Execute user testing sessions | 2 days | 12/1/26, 8:... | 13/1/26, 5:... | |
| 38 | | 3.3.2.1 Guide participants through the tests | 1 day | 12/1/26, 8:... | 12/1/26, 5:... | 35;36 |
| 39 | | 3.3.2.2 Collect quantitative metrics and qualitative feedback | 1 day | 13/1/26, 8:... | 13/1/26, 5:... | 38 |
| 40 | | 3.3.3 Analyse and Report Findings | 3 days | 14/1/26, 8:... | 16/1/26, 5:... | |
| 41 | | 3.3.3.1 Summarise user pain points | 1 day | 14/1/26, 8:... | 14/1/26, 5:... | 39 |
| 42 | | 3.3.3.2 Gather improvements needed | 1 day | 15/1/26, 8:... | 15/1/26, 5:... | 41 |
| 43 | | 3.3.3.3 Share findings with UI/UX team | 1 day | 16/1/26, 8:... | 16/1/26, 5:... | 42 |
| 44 | | 3.3.4 Refine and finalise design based on feedback | 3 days | 19/1/26, 8:... | 21/1/26, 5:... | 43 |
| 45 | | M3: UI/UX Design Completed | 0 days | 21/1/26, 5:... | 21/1/26, 5:... | 44 |

UI/UX Design is scheduled for about 2 months, which aligns with KVV Technology’s estimate that design can take around 5 weeks depending on complexity. This phase allows for wireframing, prototyping, and usability testing, before development begins, ensuring the app is user-centered and reducing costly redesigns later.

By 22 January 2026, the UI/UX design will be finalised, providing prototypes and design system guidelines so developers can build with a consistent, accessible user experience in mind.

| | | | | | |
|----|---|---------|-------------------|-------------------|----|
| 45 | 4.0 Systems Design | 80 days | 23/10/25, 8:00 am | 11/2/26, 5:00 pm | |
| 47 | E4.1 Define high level architecture | 4 days | 23/10/25, 8:00 am | 28/10/25, 5:00 pm | |
| 48 | 4.1.1 Define overall system architecture | 2 days | 23/10/25, 8:00 am | 24/10/25, 5:00 pm | 17 |
| 49 | 4.1.2 Define technology stack (Angular, NodeJS, MongoDB) | 2 days | 27/10/25, 8:00 am | 28/10/25, 5:00 pm | 48 |
| 50 | E4.2 Define data & storage design | 25 days | 29/10/25, 8:00 am | 2/12/25, 5:00 pm | |
| 51 | 4.2.1 Design database schema | 20 days | 29/10/25, 8:00 am | 25/11/25, 5:00 pm | 49 |
| 52 | 4.2.2 Define data flow (extension -> backend -> analytics) | 5 days | 26/11/25, 8:00 am | 2/12/25, 5:00 pm | 51 |
| 53 | 4.3 Define API endpoints design (request/response payload) | 14 days | 3/12/25, 8:00 am | 22/12/25, 5:00 pm | 52 |
| 54 | 4.4 Define low level design (main classes, interfaces in UML diagram) | 14 days | 23/12/25, 8:00 am | 9/1/26, 5:00 pm | 53 |
| 55 | E4.5 Review security and compliance | 9 days | 12/1/26, 8:00 am | 22/1/26, 5:00 pm | |
| 56 | 4.5.1 Define authentication & SSO (Okta) | 2 days | 12/1/26, 8:00 am | 13/1/26, 5:00 pm | 54 |
| 57 | 4.5.2 Review compliance with organisational security standards | 7 days | 14/1/26, 8:00 am | 22/1/26, 5:00 pm | 56 |
| 58 | 4.6 Conduct internal review with developers and QA leads in LifeLoop | 7 days | 23/1/26, 8:00 am | 2/2/26, 5:00 pm | 57 |
| 59 | 4.7 Implement any feedback from stakeholders | 7 days | 3/2/26, 8:00 am | 11/2/26, 5:00 pm | 58 |
| 60 | 4.8 Create technical documentation | 80 days | 23/10/25, 8:00 am | 11/2/26, 5:00 pm | 17 |
| 61 | M4: System Design Completed | 0 days | 11/2/26, 5:00 pm | 11/2/26, 5:00 pm | 60 |

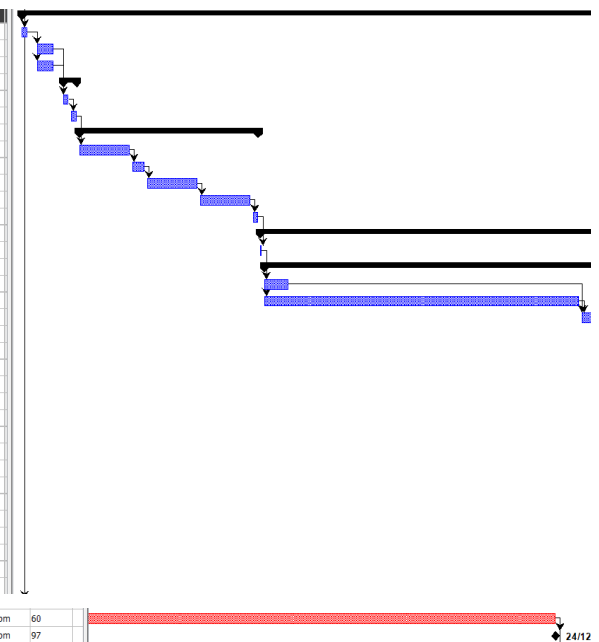


Running in parallel with UI/UX design, system design requires around 2.5 months. Based on a Reddit thread on system design timeline (Reddit, 2023), the architectural design stage typically takes 3-6 months for medium to large systems. This period is essential for database schema design, API architecture, security frameworks, and integration planning. Overlapping with UI/UX ensures both technical and design specifications align.

By 12 February 2026, the technical stack, system architecture, database schemas, classes and module specifications will be completed, giving developers a clear blueprint to follow and mitigating technical risks.

Phase 4: Development

| | | | | | |
|----|---|----------|-------------------|-------------------|-------|
| 62 | 5.0 App Development | 225 days | 12/2/26, 8:00 am | 23/12/26, 5:00 pm | |
| 63 | 5.1 Set-up frontend framework | 2 days | 12/2/26, 8:00 am | 13/2/26, 5:00 pm | 60 |
| 64 | 5.2 Develop secure SSO authentication for role based access (tech lead, developers, QA, testers/users) | 5 days | 16/2/26, 8:00 am | 20/2/26, 5:00 pm | 63 |
| 65 | 5.3 Set-up database based on technical documentation | 5 days | 16/2/26, 8:00 am | 20/2/26, 5:00 pm | 63 |
| 66 | E5.4 Develop basic navigation | 4 days | 23/2/26, 8:00 am | 26/2/26, 5:00 pm | |
| 67 | 5.4.1 Develop frontend interface for navigation | 2 days | 23/2/26, 8:00 am | 24/2/26, 5:00 pm | 64;65 |
| 68 | 5.4.2 Develop frontend interface for home page | 2 days | 25/2/26, 8:00 am | 26/2/26, 5:00 pm | 67 |
| 69 | E5.5 Develop boilerplate & design rules page | 34 days | 27/2/26, 8:00 am | 15/4/26, 5:00 pm | |
| 70 | 5.5.1 Create boilerplate repository page such as frontend, backend, microservice files | 10 days | 27/2/26, 8:00 am | 12/3/26, 5:00 pm | 68 |
| 71 | 5.5.2 Create download files functionality with respective access rights | 2 days | 13/3/26, 8:00 am | 16/3/26, 5:00 pm | 70 |
| 72 | 5.5.3 Develop page to show design system guidelines such as REST API standards, schema patterns | 10 days | 17/3/26, 8:00 am | 30/3/26, 5:00 pm | 71 |
| 73 | 5.5.4 Create page for tech leads to upload new boilerplate/ template documents | 10 days | 31/3/26, 8:00 am | 13/4/26, 5:00 pm | 72 |
| 74 | 5.5.5 Integrate file upload to cloud database storage | 2 days | 14/4/26, 8:00 am | 15/4/26, 5:00 pm | 73 |
| 75 | E5.6 Develop browser extension | 105 days | 16/4/26, 8:00 am | 9/9/26, 5:00 pm | |
| 76 | 5.6.1 Initialise browser extension environment | 1 day | 16/4/26, 8:00 am | 16/4/26, 5:00 pm | 74 |
| 77 | E5.6.2 Create Lifeloop automated test case management system | 74 days | 17/4/26, 8:00 am | 29/7/26, 5:00 pm | |
| 78 | 5.6.2.1 Integrate with backend to fetch assigned test cases for the app | 5 days | 17/4/26, 8:00 am | 23/4/26, 5:00 pm | 76 |
| 79 | 5.6.2.2 Create page for task automated testing | 60 days | 17/4/26, 8:00 am | 9/7/26, 5:00 pm | 76 |
| 80 | 5.6.2.3 Store automated test results to backend (fail & success rate) | 14 days | 10/7/26, 8:00 am | 29/7/26, 5:00 pm | 78;79 |
| 81 | E5.6.3 Develop behaviour tracking system | 8 days | 30/7/26, 8:00 am | 10/8/26, 5:00 pm | |
| 82 | 5.6.3.1 Develop capture click paths feature | 3 days | 30/7/26, 8:00 am | 3/8/26, 5:00 pm | 80 |
| 83 | 5.6.3.2 Develop measurement of time spent per task | 3 days | 4/8/26, 8:00 am | 6/8/26, 5:00 pm | 82 |
| 84 | 5.6.3.3 Store collected data in database | 2 days | 7/8/26, 8:00 am | 10/8/26, 5:00 pm | 83 |
| 85 | E5.6.4 Capture user feedback | 15 days | 11/8/26, 8:00 am | 31/8/26, 5:00 pm | |
| 86 | 5.6.4.1 Create a page to input user written feedback | 5 days | 11/8/26, 8:00 am | 17/8/26, 5:00 pm | 84 |
| 87 | 5.6.4.2 Create a rating system for user to input difficulty level per task | 5 days | 18/8/26, 8:00 am | 24/8/26, 5:00 pm | 86 |
| 88 | 5.6.4.3 Store user feedback in database | 5 days | 25/8/26, 8:00 am | 31/8/26, 5:00 pm | 87 |
| 89 | E5.6.5 Develop upload page for QA to upload the test cases | 7 days | 1/9/26, 8:00 am | 9/9/26, 5:00 pm | |
| 90 | 5.6.5.1 Create page to upload test file (automated & documented in table form) | 5 days | 1/9/26, 8:00 am | 7/9/26, 5:00 pm | 88 |
| 91 | 5.6.5.2 Store files in cloud backend | 2 days | 8/9/26, 8:00 am | 9/9/26, 5:00 pm | 90 |
| 92 | E5.7 Develop analytics dashboard | 75 days | 10/9/26, 8:00 am | 23/12/26, 5:00 pm | |
| 93 | 5.7.2 Integrate with backend to get the data | 5 days | 10/9/26, 8:00 am | 16/9/26, 5:00 pm | 91 |
| 94 | 5.7.3 Develop charts for analytics and user feedback (time-to-complete task, task completion rate, usability) | 60 days | 17/9/26, 8:00 am | 9/12/26, 5:00 pm | 93 |
| 95 | 5.7.4 Implement filtering option (by app, version, data, tester groups) | 5 days | 10/12/26, 8:00 am | 16/12/26, 5:00 pm | 94 |
| 96 | 5.7.5 Implement export functions to csv | 5 days | 17/12/26, 8:00 am | 23/12/26, 5:00 pm | 95 |
| 97 | 5.8 Conduct unit testing | 225 days | 12/2/26, 8:00 am | 23/12/26, 5:00 pm | 60 |
| 98 | M5: App Development Completed | 0 days | 23/12/26, 5:00 pm | 23/12/26, 5:00 pm | 97 |

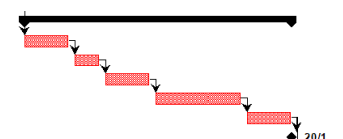


Development is the longest phase (~10 months), which aligns with KVY Technology's estimate that building a full-featured application usually takes 2–12 months, depending on complexity and team size. This time frame accommodates iterative development using agile sprints, ensuring working product increments are delivered incrementally and tested continuously.

By 24 December 2026, the application will be fully built and consistently tested, giving stakeholders a tangible product to do a final user acceptance testing and confirm against requirements.

Phase 5: Quality Assurance (UAT)

| | | | | | |
|-----|---|---------|-------------------|-------------------|-----|
| 99 | 6.0 Testing and Quality Assurance | 19 days | 24/12/26, 8:00 am | 19/1/27, 5:00 pm | |
| 100 | 6.1 Perform functional testing for browser extension, dashboard and boilerplate | 3 days | 24/12/26, 8:00 am | 28/12/26, 5:00 pm | 97 |
| 101 | 6.2 Validate authentication and data protection through security testing (encryption, vulnerability scan) | 3 days | 29/12/26, 8:00 am | 31/12/26, 5:00 pm | 100 |
| 102 | 6.3 Verify usability compliance through automated checks and manual review | 3 days | 1/1/27, 8:00 am | 5/1/27, 5:00 pm | 101 |
| 103 | 6.4 Fix bugs and refine user acceptance testing (UAT) | 7 days | 6/1/27, 8:00 am | 14/1/27, 5:00 pm | 102 |
| 104 | 6.5 Conduct final UAT | 3 days | 15/1/27, 8:00 am | 19/1/27, 5:00 pm | 103 |
| 105 | M6: UAT Completed | 0 days | 19/1/27, 5:00 pm | 19/1/27, 5:00 pm | 104 |

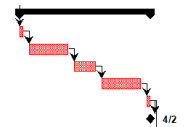


Nearly 3 weeks are allocated for QA and User Acceptance Testing. KVV Technology emphasizes that proper testing can take 3–6 weeks, depending on scope. Given the extended development phase, this shorter but focused UAT period makes sense if testing was integrated throughout development (agile testing cycles), leaving this stage mainly for end-to-end validation and stakeholder sign-off.

By 20 January 2027, the system will be validated against user and business needs, ensuring usability, accessibility, and performance standards are met and obtaining stakeholder sign-off for release.

Phase 6: Deployment and Launch

| 106 | 7.0 Deployment & Launch | 11 days | 20/1/27, 8:00 am | 3/2/27, 5:00 pm | |
|-----|---|---------|------------------|------------------|-----|
| 107 | 7.1 Set up servers and hosting configuration | 1 day | 20/1/27, 8:00 am | 20/1/27, 5:00 pm | 104 |
| 108 | 7.2 Deploy Lifeloop Lab in internal web server | 3 days | 21/1/27, 8:00 am | 25/1/27, 5:00 pm | 107 |
| 109 | 7.3 Conduct soft launch with Lifeloops leaders and key stakeholders | 3 days | 26/1/27, 8:00 am | 28/1/27, 5:00 pm | 108 |
| 110 | 7.4 Collect user feedback and resolve issues | 3 days | 29/1/27, 8:00 am | 2/2/27, 5:00 pm | 109 |
| 111 | 7.5 Launch Lifeloop Lab | 1 day | 3/2/27, 8:00 am | 3/2/27, 5:00 pm | 110 |
| 112 | M7: App Launch Completed | 0 days | 3/2/27, 5:00 pm | 3/2/27, 5:00 pm | 111 |

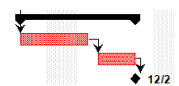


The 11 day deployment window is justified because KVV Technology notes that deployment often takes hours to days. This includes environment setup, migration, security verification, and go-live checks. This timeframe also provides a buffer for rollback and minor fixes.

By 4 February 2027, the application will be launched, formally delivering the solution to end users and achieving the project's primary objective of standardising accessibility and usability processes across all Lifeloop Apps.

Phase 7: Project Closure

| 113 | 8.0 Project Closure | 6 days | 4/2/27, 8:00 am | 11/2/27, 5:00 pm | |
|-----|--|--------|------------------|------------------|-----|
| 114 | 8.1 Handover documentations (technical, UX design, system designs) to relevant members of Lifeloop | 3 days | 4/2/27, 8:00 am | 8/2/27, 5:00 pm | 111 |
| 115 | 8.2 Administrative wrap up and conduct meeting with team about the next steps | 3 days | 9/2/27, 8:00 am | 11/2/27, 5:00 pm | 114 |
| 116 | M8: Final Handover Sign Off | 0 days | 11/2/27, 5:00 pm | 11/2/27, 5:00 pm | 115 |



Project closure emphasizes documenting lessons learned, final reporting, and administrative wrap-up. This short but crucial phase ensures the project is formally handed over and evaluated for future improvements. The red paths determines the critical path of the project which takes the longest duration.

By 12 February 2027, the project will be formally closed with stakeholder approval, documentation handover, and transfer ownership to the corresponding operations team. This ensures all deliverables are fulfilled, and the system can move into a business-as-usual support.

Task 3.5.1 – Develop Cost Model

Labour Costs

- Assumptions:
 - All effort hours were halved to reflect process efficiency gains from Agile practices, automation, and reuse of open-source frameworks. Data Analyst and DevOps Engineer roles are assumed to be contracted externally on a short-term basis.
- Project Manager: (\$150/hr) * (183.4h) = \$27510
- Business Analyst: (\$130/hr) * (184h) = \$23920
- UI/UX Designer: (\$125/hr) * (195h) = \$24375
- Frontend Developer: (\$120/hr) * (455.8h) = \$54696
- Backend Developer: (\$110/hr) * (431.6h) = \$47476

- QA Tester: $(\$90/\text{hr}) * (198.3\text{h}) = \17847
- Tech Lead: $(\$160/\text{hr}) * (377.1\text{h}) = \60336

All data above are according to HAYS SALARY GUIDE FY24/25 (Hays, 2024)

- Assumptions:
Our Data Analysts and DevOps Engineers were engaged only during limited project phases and required comparatively fewer hours.
 - Data Analysts: $(\$550/\text{day}) * (6 \text{ days}) = \3300
 - Devops Engineer: $(\$850/\text{day}) * (2 \text{ days}) = \1700

All data above are according to HAYS IT CONTRACTOR RATES GUIDE FY24/25 (*IT Contractor Rates Guide Australia* | Hays, n.d.)

Total Labour Cost: \$261160

Material Costs

- Hardware:
 - Cloud Servers $(\$314/\text{pm}) * (18\text{months}) = \5652 (*Servers Australia, 2024*)
 - Routers : \$350 (*Mwave.com.au, n.d.*)
- Software:
 - Cloud Tools
 - AWS / Azure / GCP : ~\$100-300/month (database, small instance testing and configuration) (*Australia, 2024*)
 - Atlassian Jira + Confluence : \$15-25/user/month (project management) (*Unlock the Best Jira Pricing Plans for Your Team Today, n.d.*)
 - Design Licenses
 - Figma Professional : \$20-30/user/month (UI/UX tools) (*Plans & Pricing | Figma, n.d.*)
 - Adobe Creative Cloud : \$70-80/user/month (UI/UX tools) (*Creative Business Solution, n.d.*)
 - Cybersecurity Platforms
 - OWASP ZAP / Burp Suite Pro : \$550/year (*Packages and Prices | OWASP Foundation, n.d.*)
 - Okta Identity Cloud (SSO & IAM) : \$2-4/user/month (*Plans and Pricing | Okta, n.d.*)
- Consumables:
 - Cables: \$6.5/unit (*HDMI Cable 2M, 4K HDMI 2.0 Cable eARC-Snowkids 18Gbps High Speed HDMI Cord (4K 60Hz 3D Support, Ethernet Function, Video 4K UHD 2160p, HD 1080p for Fire-TV, Net-filx, PS-5/4, Ect) : Amazon.com.au: Electronics, n.d.*)
 - External / Backup Drives: \$500/unit (*Satechi USB-C Mini NVME SSD Enclosure (Space Grey), n.d.*)

Total Material Cost: \$13594

Services and Vendor Costs

- Assumption:
Installation will be done by the internal team and setup and configuration will be done by using template and cloud automation.
- Third-Party Services:
 - Cloud Hosting: \$150-500/months → \$2700-9000
- Vendor Contracts:
 - Installation: \$250
 - Setup & Configuration: \$1000

Total Services and Vendor Cost: \$6200

Contingency Costs

A 7% buffer is applied to account for uncertainties such as schedule overruns, scope changes, or unforeseen technical challenges. While industry practice often applies 5-10% (Doug, 2024), the project adopts 7% because risks are mitigated through the use of established frameworks, vendor outsourcing for specialised roles (e.g., DevOps, Data Analyst), and leveraging cloud-based services. This lower buffer keeps the budget controlled while still providing reasonable protection against risk exposure.

| WBS Items | Units/Hours | Cost/Unit or Hr | Subtotal | WBS Level 2 total | % of Total |
|-------------------------|----------------------|------------------|----------|-------------------|------------|
| 1. Labour | | | | 259888 | 86.63% |
| 1.1 Project Manager | 183.72 hr | \$150 | \$27558 | | |
| 1.2 Business Analyst | 176 hr | \$130 | \$22880 | | |
| 1.3 UI/UX Designer | 195 hr | \$125 | \$24375 | | |
| 1.4 Fronted Developer | 455.8 hr | \$120 | \$54696 | | |
| 1.5 Backend Developer | 431.6 hr | \$110 | \$47476 | | |
| 1.6 QA Tester | 202.3 hr | \$90 | \$18207 | | |
| 1.7 Tech Lead | 373.1 hr | \$160 | \$59696 | | |
| 1.8 Data Analyst | 6 days | \$550/day | \$3300 | | |
| 1.9 Devops Engineer | 2 days | \$850/day | \$1700 | | |
| 2. Hardware | | | | \$6002 | 2% |
| | 1 unit for 18 months | | | | |
| 2.1 Cloud Server | | \$314/unit/month | \$5652 | | |
| 2.2 Router | 1 unit | \$350 | \$350 | | |
| 3. Software | | | | \$7053 | 2.1% |
| 3.1 Cloud Tools | | | | | |
| 3.1.1 AWS / Azure / GCP | 18 months | \$100/month | \$1800 | | |

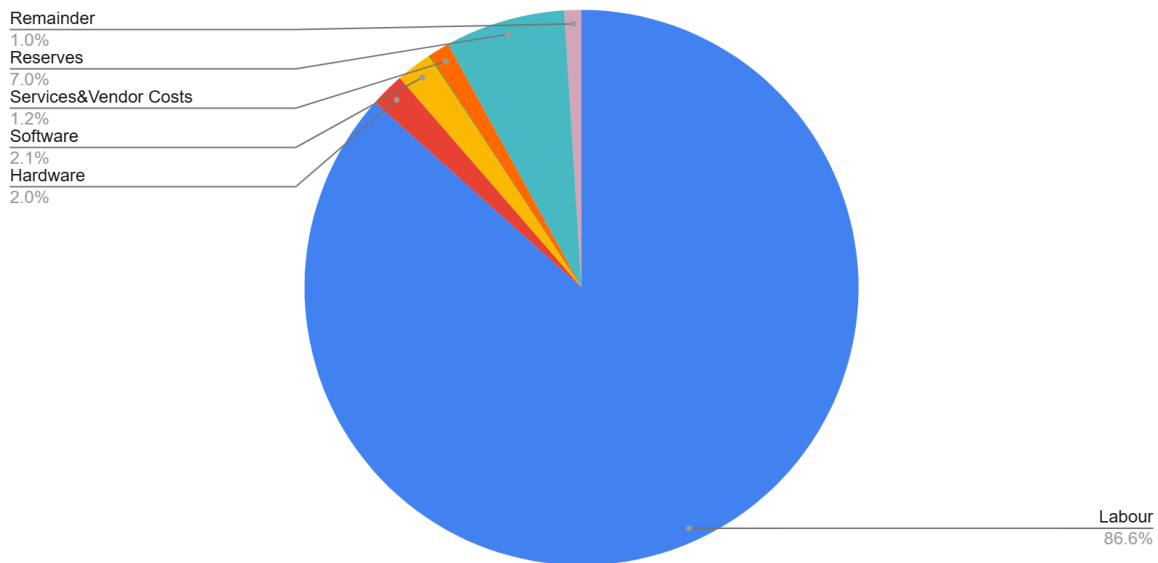
| | | | | | |
|---------------------------------------|-------------------------------|-----------------|---------|---------|--------|
| 3.1.2 Atlassian Jira + Confluence | 7 users 18 months | \$20/user/month | \$2520 | | |
| 3.2 Design Licenses | | | | | |
| 3.2.1 Figma Professional | 18 months | \$25/month | \$450 | | |
| 3.2.2 Adobe Creative Cloud | 18 months | \$75/month | \$1350 | | |
| 3.3 Cybersecurity Platforms | | | | | |
| 3.3.1 OWASP ZAP / Burp Suite Pro | 1.5 year | \$550/year | \$825 | | |
| 3.3.2 Okta Identity Cloud (SSO & IAM) | 2 admin accounts 18 months | \$3/user/month | \$108 | | |
| 4. Consumables | | | | \$144 | 0.048% |
| 4.1 Cables | 6 units | \$6.5/unit | \$39 | | |
| 4.2 External / Backup drives | 1 unit | \$105/unit | \$105 | | |
| 5. Services & Vendor Costs | | | | \$3950 | 1.25% |
| 5.1 Third-Party Services | | | | | |
| 5.1.1 Cloud Hosting | 18 months | \$150/months | \$2700 | | |
| 5.2 Vendor Contracts | | | | | |
| 5.2.1 Installation | | | \$250 | | |
| 5.2.2 Setup & Configuration | | | \$1000 | | |
| 6. Reserves (7%) | | | \$21000 | \$21000 | 7% |
| TOTAL | | | | 298037 | 99.35% |

Task 3.5.2 – Cost Estimation Methodology And Justification

Cost Estimation Methodology

Personnel costs were estimated using a bottom-up approach based on WBS tasks, hours, and hourly rates. Hardware costs were estimated using analogous estimation by referencing vendor price lists for comparable servers and routers. Software licenses and cloud hosting followed a parametric approach, multiplying vendor unit rates by the required number of users and months. Vendor services were estimated using analogous market benchmarks. A 7% contingency was applied to the baseline costs to account for risks.

Chart 1. Budget division across different areas



Justify All Key Assumptions

Hourly rates for each role were derived from the HAYS Salary Guide and IT Contractor Benchmarks. These rates reflect typical market values for IT professionals in Melbourne and ensure alignment with industry standards. Where external source was chosen, contractor rates were benchmarks against managed service providers, recognising that highly specialised skills are often more cost-efficient when sourced externally on a short-term basis.

Labours hours were estimated using a bottom-up approach, linking directly to WBS tasks and durations. Each role was treated as a single resource for estimation purposes, with effort calculated as (task duration)*(8 hours/day). In practice, multiple personnel may be assigned to balance workload and shorten duration. However, the aggregate effort*The rate remains unchanged.

For example, Project Manager hours were adjusted to reflect overlapping tasks in WBS 3.0 and 4.0 to avoid duplication. Also, 4.8 and 5.8 run in parallel with the rest of 4.0 and 5.0 features respectively, so the working hours were halved rather than duplicating full development time. Agile and automation practices were assumed to reduce overall labour effort by up to 30%-50%, consistent with industry studies. After evaluating hourly costs of data analysts and devops engineers and recognising the efficiency gains achievable through outsourcing to specialised contractors, we opted to externalise these roles. Contracting these resources allows us to reduce overall labour hours while maintaining high-quality outputs in their respective domains.

Software followed a parametric approach: subscription-based licenses, calculated as (unit cost)*(users)*(18months). These tools were selected for widely adopted in industry and they are compatible with project scope.

Cloud hosting costs were reduced by leveraging AWS/Azure/GCP free tier credits and small instance configurations, allocating only \$4000 for the full project.

Services & vendor costs were streamlined and installation and setup largely handled internally by the devops contractor and tech lead. Licensing was excluded here to avoid duplication, since all software subscriptions are already captured in the software category.

The application will be deployed on cloud to support approximately 400 users, requiring scalable hosting services to ensure availability, usability, and performance under expected demand.

Task 3.5.3 – Cost Baseline

| | A | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S | T | U | V | W |
|----|---------------------------------------|---------------|----------|--------|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|-------|
| 1 | | Rate/Unit | Subtotal | M1 | M2 | M3 | M4 | M5 | M6 | M7 | M8 | M9 | M10 | M11 | M12 | M13 | M14 | M15 | M16 | M17 | M18 | Total |
| 2 | 1.1 Project Manager | 150 | \$27558 | 10740 | 3150 | 3006 | 1326 | 3846 | 2670 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 600 | 2220 | 27558 |
| 3 | 1.2 Business Analyst | 130 | \$22880 | 8060 | 5096 | 2808 | 2808 | 1040 | 260 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 624 | 2184 | 22880 |
| 4 | 1.3 UI/UX Designer | 125 | \$24375 | 1050 | 1225 | 8575 | 8575 | 3350 | 400 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 450 | 750 | 24375 |
| 5 | 1.4 Frontend Developer | 120 | \$54696 | 0 | 0 | 0 | 0 | 2697.5 | 4361.5 | 7697.5 | 3617.5 | 4097.5 | 4097.5 | 4097.5 | 4097.5 | 4123.5 | 4149.5 | 4149.5 | 4149.5 | 2784 | 576 | 54696 |
| 6 | 1.5 Backend Developer | 110 | \$47476 | 0 | 0 | 2733.5 | 0 | 1501.5 | 4875.5 | 4985.5 | 2741.5 | 3005.5 | 3005.5 | 3005.5 | 3005.5 | 3412.5 | 3819.5 | 3819.5 | 3819.5 | 2953.5 | 792 | 47476 |
| 7 | 1.6 QA Tester | 90 | \$18207 | 0 | 0 | 90 | 90 | 3024 | 2738 | 884.5 | 884.5 | 884.5 | 884.5 | 884.5 | 884.5 | 884.5 | 884.5 | 884.5 | 884.5 | 3204 | 216 | 18207 |
| 8 | 1.7 Tech Lead | 160 | \$59696 | 3724 | 2444 | 6700 | 599 | 7436 | 6209 | 4449 | 2273 | 3345 | 3345 | 3345 | 3345 | 2943 | 2557 | 2557 | 2557 | 780 | 1088 | 59696 |
| 9 | 1.8 Data Analyst | 550/day | \$3300 | 0 | 0 | 2640 | 660 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3300 |
| 10 | 1.9 Devops Engineer | 850/day | \$1700 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1700 |
| 11 | 2.1 Cloud Server | 314/month | \$5652 | 314 | 314 | 314 | 314 | 314 | 314 | 314 | 314 | 314 | 314 | 314 | 314 | 314 | 314 | 314 | 314 | 314 | 314 | 5652 |
| 12 | 2.2 Router | 350 | \$350 | 350 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 350 |
| 13 | 3.1.1 AWS / Azure / GCP | 100/month | \$1800 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 1800 |
| 14 | 3.1.2 Atlassian Jira + Confluence | 20/user/month | \$2520 | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 140 | 2520 |
| 15 | 3.2.1 Figma Professional | 25/month | \$450 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 25 | 450 |
| 16 | 3.2.2 Adobe Creative Cloud | 75/month | \$1350 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 75 | 1350 |
| 17 | 3.3.1 OWASP ZAP / Burp Suite Pro | 550/year | \$825 | 550 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 550 | 0 | 0 | 0 | 0 | 1100 |
| 18 | 3.3.2 Okta Identity Cloud (SSO & IAM) | 3/user/month | \$108 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 108 |
| 19 | 4.1 Cable | 6.5/unit | \$39 | 39 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 |
| 20 | 4.2 External / Backup Drives | 105/unit | \$105 | 105 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 105 |
| 21 | 5.1.1 Cloud Hosting | 150/months | \$2700 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 150 | 2700 |
| 22 | 5.2.1 Installation | \$250 | | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 250 | 0 | 250 |
| 23 | 5.2.2 Setup & Configuration | \$1000 | | 0 | 0 | 0 | 0 | 0 | 1000 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1000 |
| 24 | 6 Reserves(7%) | \$21000 | | 1166.6 | 1166.6 | 1166.666 | 1166.666 | 1166.666 | 1166.666 | 1166.666 | 1166.666 | 1166.666 | 1166.666 | 1166.666 | 1166.666 | 1166.666 | 1166.666 | 1166.666 | 1166.666 | 1166.666 | 1166.666 | 21000 |
| 25 | Cumulative Costs | | | 26594 | 40486 | 69015.5 | 85050.1 | 109921.8 | 134412.5 | 154405 | 165898.8 | 179208 | 192517.1 | 205826 | 219135.5 | 233025 | 246412.8 | 259800 | 273187.1 | 286809 | 298312 | |
| 26 | Percentage of Costs | | | 8.86% | 13.50% | 23.01% | 28.35% | 36.64% | 44.80% | 51.47% | 55.30% | 59.74% | 64.17% | 68.61% | 73.05% | 77.68% | 82.14% | 86.60% | 91.06% | 95.60% | 99.44% | |

The cost baseline is presented as a monthly distribution over the 18 months project timeline, with expenditures aligned to WBS tasks, which is easy to visualise the spent. Labour costs dominate in every phase because of the labour-intensive project. Hardware appeared as one-off while software licensing has recurring costs distributed evenly across the project lifecycle. Vendor and setup, IT contractors occur when needed.

The monitor and control costs, a monthly cost review approach will be adopted. At the end of each month, actual costs will be compared to baseline allocations for that period. Variances will be tracked and analysed, enabling corrective actions such as reallocation of labour hours, deferral of discretionary vendor expenses, or utilisation of contingency reserves. This method ensures timely detection of overruns while maintaining alignment with project cash flow and schedule milestones.

Task 3.6 – Risk Management Plan

Risk Management Process

To ensure the LifeLoop Usability Management App runs smoothly, our team developed a Risk Management Plan. We collaborated together to identify, analyse, prioritise and place for risks that could affect the project.

Risk Identification

The team used brainstorming sessions, scenario planning and root cause analysis to help identify any potential risks. Both internal risks, such as technical challenges and team workload and sudden unavailability, and external risks, such as stakeholder availability or changes in usability requirements were considered. Using our considerations, we created a risk register with a few key risks.

Risk Analysis

Each risk was analysed to determine how likely it was to happen and what impact it would have on the overall project. Each risk was discussed by the team to make sure everyone agreed on the assessment of each one.

Risk Prioritisation

We prioritised each risk based on their potential to disrupt the project, which was displayed using a probability-impact matrix.

Risk Register

| RISK ID | RANK | RISK DESCRIPTION | IMPACT DESCRIPTION | IMPACT LEVEL | PROBABILITY LEVEL | PRIORITY LEVEL | RISK RESPONSE | OWNER |
|---------|------|--|--|--------------|-------------------|----------------|--|-------------------------------------|
| R01 | 3 | Vendor invoice delays. Vendor (e.g. AWS) admin errors may delay invoice approval/settlement, which can stall licensing approval, and feature implementations. | Delays in vendor payments can stall delivery of components, disrupt timelines, and increase overall project costs. | 3 (Medium) | 3 (Medium) | 9 | Mitigation: Set clear payment schedules, maintain buffer funds, follow up regularly with vendors. Contingency budget: \$2000 used to expedite fees/courier for time sensitive items. | Project Manager |
| R02 | 6 | Stakeholders resist application. Stakeholders may not be happy and satisfied with the product increment delivered during the sprints. Deadlines may be pushed back to account for this. | Stakeholders pushback could reduce adoption and project success. Timelines may be disrupted and overall metrics of success may not be achieved on time. | 4 (High) | 2 (Low) | 8 | Mitigation: Run early demos, training and regular stakeholder engagement. Train the team to develop an Agile mindset to stay flexible, and motivated even when things don't go as planned. Contingency budget: \$1000 to cover extra engagement bursts, such as training, guides, or tutorials. | Stakeholder Manager/Project Manager |
| R03 | 2 | Data privacy or security breach Exposure of design assets, test data, or user information due to | Breach could cause reputational and legal damage, as well as incident response costs, and schedule | 5 (High) | 2 (Low) | 10 | Mitigation: Encrypt all data, enforce access controls, and comply with Privacy Act 1998. | Security Lead/Tech Lead |

| | | | | | | | | |
|-----|---|---|--|------------|------------|----|---|---------------------------|
| | | misconfiguration, weak APIs, or third-party provider breaches. | disruption for remediation. | | | | Contingency budget: \$5000 to consult with security experts, urgent updates, or legal/privacy advice. | |
| R04 | 5 | Key Team Member unavailable Team member may unexpectedly leave the team for long or short term due to personal situations such as sickness. | Delays and knowledge gaps may occur if a critical person leaves or is unavailable for an extended period | 4 (High) | 2 (Low) | 8 | Mitigation: Cross-train members, maintain strong documentation, and rotate responsibilities Contingency budget: \$2000 for short term contractor backfill or overtime coverage. | Project Manager/Team Lead |
| R05 | 7 | End User Resistance to Change. Lifeloop current employees may still use their old ways of testing instead of using our system because they are comfortable and are not willing to learn new things. | Users may not adopt the system, reducing overall impact. As we have spent the full \$300,000 budget and 18 months for this, it would not fully utilise the full resource. | 3 (Medium) | 2 (Low) | 6 | Mitigation: Provide training, run pilot testing, and incorporate feedback loops. Contingency budget: \$1000 for guides/tutorial videos as well as on site training. | Product Owner |
| R06 | 1 | Staff fatigue and burnout may occur because our team is small and it could lead to project delays. This could occur because even though the project has an 18-month deadline, the budget is very limited, so it results in only hiring a small development team that work on all parts of the app. This could potentially result in the project timeline being delayed since employees would not work in their optimal capacity. | A missed deadline would postpone the launch of the app, and potentially increase the overall cost as more time is needed than expected to develop the app. | 5 (High) | 3 (Medium) | 15 | Mitigation: To minimise the likelihood of staff burnout, the team will work with the Agile methodology, setting realistic timelines and deliverables, as well as Stand up and retrospective meetings. Contingency budget: \$3000 allocated to engage with temporary contractors. | Project Manager |
| R07 | 4 | Widespread popularity of Lifeloop App such as adoption outside of LifeLoop The LifeLoop app could lead to increased | With other companies' recognition, Lifeloop could be known as a pioneer in elevating brand's reputation. | 3 (Medium) | 3 (Medium) | 9 | Exploit: Lifeloop can build infrastructure like APIs and partner programs that allows other companies to integrate to its | Product Owner |

| | | | | | | | | |
|--|--|--|---|--|--|--|---|--|
| | | adoption of its features beyond its original target audience, potentially inspiring partnerships or setting trends that other companies might follow or integrate into their own platforms | We could set industry standards and other companies may want to collaborate and seek licensing of features or integrate with Lifeloop creating new revenue streams. | | | | platform. Contingency budget: \$2000 for capacity bumps and a partner outreach plan/packs. | |
|--|--|--|---|--|--|--|---|--|

| | | | | | | |
|-------------|---|--------|---|------------|------------|-----|
| PROBABILITY | 5 | | | | | |
| | 4 | | | | | |
| | 3 | | | R01 R07 | | R06 |
| | 2 | | | R05 | R02 R04 | R03 |
| | 1 | | | | | |
| | | 1 | 2 | 3 | 4 | 5 |
| | | IMPACT | | | | |

Task 4.1 – Group Reflection

| Added by | Task | Description / Notes | Start Date | Status | Last updated |
|------------------------|--|---------------------|-------------|-------------|--------------|
| Balqis Heryputri | Started Team Working Agreement | Worked in class | 7 Aug 2025 | Approved | 7 Aug 2025 |
| Balqis Heryputri | Started WBS and think of the milestones, gantt chart | Worked at home | 25 Aug 2025 | Approved | 3 Sept 2025 |
| Balqis Heryputri | Make justification of milestones | Worked at home | 1 Sept 2025 | Approved | 3 Sept 2025 |
| Balqis Heryputri | Finish gantt chart estimation of time and predecessors | Worked at home | 31 Aug 2025 | Approved | 3 Sept 2025 |
| Balqis Heryputri | List down the requirements for gantt chart | Worked in class | 30 Aug 2025 | Approved | 3 Sept 2025 |
| Hsin-Chieh Yang | Started Team Working Agreement | Worked in class | 7 Aug 2025 | Approved | 28 Aug 2025 |
| Hsin-Chieh Yang | Finish the project criteria in project charter | Worked at home | 27 Aug 2025 | Approved | 28 Aug 2025 |
| Hsin-Chieh Yang | Researching key stakeholders for project charter | Worked in class | 27 Aug 2025 | Approved | 30 Aug 2025 |
| Hsin-Chieh Yang | Cost breakdown and cost baseline | Worked at home | 28 Aug 2025 | In progress | 3 Sept 2025 |
| Hsin-Chieh Yang | Doing assumption and exclusion | Worked in class | 28 Aug 2025 | Approved | 31 Aug 2025 |
| Josefina Retondo Rojas | Started Team Working Agreement | Worked in class | 7 Aug 2025 | Approved | 7 Aug 2025 |
| Josefina Retondo Rojas | Refined and finished Team Working Agreement | Worked at home | 27 Aug 2025 | Approved | 27 Aug 2025 |
| Josefina Retondo Rojas | Started Project Charter | Worked in class | 14 Aug 2025 | Approved | 14 Aug 2025 |
| Josefina Retondo Rojas | Refined Project charter | Worked at home | 27 Aug 2025 | Approved | 27 Aug 2025 |
| Josefina Retondo Rojas | Finished Project Charter | Worked at home | 28 Aug 2025 | Approved | 31 Aug 2025 |
| Josefina Retondo Rojas | Started and finished working on RTM | Worked at home | 31 Aug 2025 | Approved | 31 Aug 2025 |
| Michael Reginald | Refined Team Working Agreement | Worked at home | 26 Aug 2025 | Approved | 31 Aug 2025 |
| Michael Reginald | Started working on Scope Statement | Worked at home | 28 Aug 2025 | Approved | 29 Aug 2025 |
| Michael Reginald | Started Working on Project Scheduling Presentation | Worked at home | 27 Aug 2025 | Approved | 1 Sept 2025 |
| Michael Reginald | Refined Scope Statement | Worked at home | 28 Aug 2025 | Approved | 28 Aug 2025 |
| Michael Reginald | Started Risk Management Plan | Worked at home | 29 Aug 2025 | In progress | 29 Aug 2025 |
| Michael Reginald | Scope Statement Finished | Worked at home | 29 Aug 2025 | Approved | 29 Aug 2025 |

Our team has demonstrated good collaboration, structure, and innovation throughout the project. By leveraging our diverse strengths in communication and critical thinking, we have effectively coordinated tasks, resolved challenges, and ensured high-quality deliverables. Each member contributed according to their strengths: Balqis led the Gantt chart, Josefina led the Project Charter, Team Working Agreement, and RTM, Hsin Chieh led the Cost Breakdown and Cost Baseline, and Michael led the Risk Management and the Scope Statement. This division of responsibilities allowed us to work efficiently and maintain accountability.

Weekly meetings which are done in person every Thursday 10am and daily updates on WhatsApp ensured transparency and alignment. Tasks were tracked using a [working task tracker](#) above, which clearly shows who is responsible for each task and their progress. All team members reviewed sections as soon as possible, enabling timely feedback, iterative improvement, and consistent progress. Google Drive was used to share and collaborate on documents, ensuring a centralized and accessible workspace.

Our team values are communication, transparency, respect, honesty, excellence, and integrity. These guided our interactions and helped us navigate challenges. For instance, delays in response time or unclear ideas were addressed through quick calls, respectful discussion, and, if needed, majority voting. Issues such as potential blockers were promptly shared, discussed, and resolved collaboratively.

Despite occasional delays in responses and differences in communication styles, our team's strengths enabled us to overcome obstacles. By supporting each other's ideas, clarifying misunderstandings, and applying constructive feedback, we maintained cohesion and focus on project goals. Members took responsibility for their tasks, communicated blockers transparently, and assisted others when needed, ensuring that no task was left incomplete.

Overall, our collaboration fostered an environment where each member could contribute fully and learn from one another. Leadership was shared organically, support was consistently available, and feedback was applied constructively. Conflict resolution strategies, including open discussion, voting, and temporary breaks, helped us navigate disagreements respectfully and maintain team harmony. Our structured, communicative, and transparent approach, reinforced by the task tracker, directly influenced positive project outcomes and demonstrates the mutual understanding developed throughout the project.

Task 4.2 – Individual Reflections

Balqis Kinanti Haldi Heryputri

At the beginning of the project, I think that our team felt disorganised and I am unsure of where to start. The project seemed overwhelming with new terms and unfamiliar concepts, and I initially found it difficult to understand the group dynamics. Scheduling meetings was also a challenge, which slowed progress. I realised that dividing tasks fairly among team members was essential so we could move forward without waiting for everyone's availability, while still having collective discussions to ensure a shared understanding. Personally, I was also responsible for delivering the pitch, which pushed me outside of my comfort zone as public speaking has never been my strength.

During the project, I felt frustrated when tasks seemed unevenly distributed and demotivated when a tutor commented that he "expected more" from our team. This lowered my morale and made me worry about letting others down. However, over time I learnt to be more flexible and to trust my teammates. By dividing responsibilities, the group began to make steady progress. The pitch, although challenging, gave me confidence and resilience, while the tutor's criticism became an opportunity to reflect on how we could improve both as a group and individually.

Reflecting on the experience, I recognised the value of embracing challenges such as presentations and external criticism as learning opportunities. Next time, I would establish clearer workload distribution earlier, initiate regular checkins to maintain alignment, and practise public speaking in smaller contexts to build confidence. Lastly, I would give myself and the team a HD on this project as we have put in our best effort and I personally contributed on the Gantt chart, presentations, and pitch.

Josefina Retondo Rojas

We prepared project management deliverables to propose an app/extension that manages other LifeLoop Lab Apps. Across seven weeks, I worked alongside my 3 people team, meeting online and on-campus. Early coordination was messy due to different schedules, but organization improved as we got to know each other better. My main responsibility was the project charter and RTM, which I approached carefully, knowing that these are the base for the entire project. Although I had prior knowledge (FIT1055, FIT2001, FIT2101, this was my first practical exposure to cost analysis and such detailed planning.

I felt secure and motivated because the workload was more fairly shared than previous teams I work with. The uniqueness of our pitch idea reinforced this motivation, as no one in the class chose the same idea. Still, I experienced moments of uncertainty about the scope, but discussing with teammates clarified our direction.

The experience revealed both strengths and weaknesses. I successfully applied my knowledge of Agile framework/principles, stakeholder mapping, and requirement management were needed. However, I would've liked to establish a clearer work distribution early on and check on teammates' progress, rather than remaining focused on my tasks.

From this, I learned the importance of balancing accountability with proactive team support. In future projects, I plan to ask more questions early, monitor task dependencies, and share progress consistently to improve outcomes and team cohesion.

I would give myself and the team a HD, as we all accomplished our parts to the best of our ability and really put in the effort to deliver something we're proud of.

Hsin-Chieh Yang

Throughout this unit, I was exposed to the complete cycle of project management deliverables, beginning with the Project Charter, RTM, and Project Scope Statement, followed by the Gantt Chart and, later, cost-focused activities such as cost analysis, estimation, the cost model, and the cost baseline. My main contribution was centred on the cost components, which allowed me to understand how detailed assumptions, estimation methods, and baseline allocation are essential in balancing project scope and budget.

At the beginning, our group faced some uncertainty. Roles were not clearly defined, and it was sometimes unclear how to categorise work or what exactly we were expected to deliver. Over time, however, our team adjusted, clarified responsibilities, and gradually returned to a more structured workflow. While this process was challenging, it reflected the reality of project environments, where ambiguity must be resolved through communication and adaptation.

Weekly meetings with group members provided opportunities to align progress, although at times they were inefficient, with some members working on tasks during the meeting itself. In retrospect, our efficiency could be improved if tasks had been allocated more clearly at the start, leaving meetings to focus on resolving problems rather than performing work.

Overall, I believe I gained valuable experience, both in applying project management tools and in learning how teamwork evolves. The unit highlighted the importance of clear planning, structured communication, and adaptability, which I expect will benefit me in future projects.

Michael Reginald

At the start of the project, I felt uncertain about how to approach the tasks, as the project management deliverables such as risk registers and scope statements were new to me. Initially, the workload was overwhelming, and I struggled to balance attention to detail while keeping on task and on schedule. Scheduling meetings with the team also posed a challenge, as I was not consistently available due to other commitments.

My main contributions were developing the project scope statements and risk management plan. These tasks required me to define boundaries, deliverables and constraints while also identifying potential risks and mitigation strategies. I found this rewarding, as I enjoy structured planning, but at times I became too focused on details, which at times made me take longer to complete my work. Despite this, I learned to trust the team process and rely on others to carry different responsibilities, which helped us move forward more effectively.

Through this experience, I developed stronger skills in identifying risks and understanding how scope definition shapes a project's success. I also realised the importance of concise communications when explaining technical information to teammates. In future projects, I want to practice delivering my ideas more clearly and work on balancing thoroughness with efficiency.

Overall, I am proud of my contribution and collective effort of the group. I would give myself a B+, as there is room for significant improvement. I would give the team a HD, as we overcame many internal and external challenges to deliver high quality outcomes.

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Generative AI Acknowledgement

We confirmed that we have used our original ideas for this work. Generative AI such as [ChatGPT](#) was used in this assignment in the following ways

1. Rephrasing of paragraphs.
Prompt: Rephrase _____ in a clear and professional manner.
Number of iterations: 1 per paragraph needed.
Example output: “Running in parallel with UI/UX design, system design requires around 2.5 months. Based on a Reddit thread on system design timeline, the architectural design stage typically takes 3-6 months for medium to large systems.”
2. Research and getting background knowledge on project timeline
Prompt: do we need project closure and a milestone for it?
Number of iterations: 1
Example output: “Yes. you need closure and a milestone in that phase. Here’s why..”
3. Research about examples of opportunity risk
Prompt: what is an opportunity risk and an example?
Number of iterations: 1
Example output: “Opportunity Risk is the cost of not choosing the next best alternative”

We also have used a Citation generator (<https://www.scribbr.com/>) to help manage citations and references of this document.