

SmartRx Packs

My Pill Talks: Project Plan

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Project Plan 4.1 Changelog

This section concerns changes and new inclusions that were made to the project plan since the previous revisions (3.1).

- Sub-section 1.2 has been updated to include the retrieval of PDF files and reworded accordingly. This change was done based on recent Client feedback and suggestions.
- Section 2 has been updated; risk R22 and control C24 were added to the Risk and Control Registers, and the Risk Matrix was also updated with the new risk. This risk was previously unforeseen but made apparent due to a recent meeting involving discussion about the CMI implementation with Simple Retail.
- Sub-section 4.1 has been updated to reflect the change of contact at GuildLink; Nimesh Prasad has now left the company.
- Section 5 has been updated to reflect Yoshiya Tanaka's substitute role as Project Manager during Robert Scriven's absence.
- Sub-section 6.1 has been updated to reflect the involvement of the Client's contacts in Change Management.
- Sub-section 6.2.1 has been updated to reflect the need for additional meetings (workshops) throughout the progress of the project.
- Sub-section 6.2.2 has been updated to include two new points: demonstration of the prototype, and suggestion and ideas for the prototype.

1. Introduction

1.1 Statement of Purpose

The purpose of this Project Plan is to provide all stakeholders with a clear mutual expectation of the project outcomes.

This document will include:

- A delivery schedule
- Details of the roles and responsibilities of all stakeholders
- Description of how the project will be structured and managed
- Risk Management
- Resource Management
- Tracking and Change Management
- Quality Control and Management
- Other identified project documents

This document is intended for all stakeholders of the system, and will be proposed to the client, Steve Cohen for its approval. This Project Plan will only cover the android mobile application that will be delivered by our development team.

1.2 Scope

The My Pill Talks android mobile application (MPTA app) will be used in conjunction with updated Pharmacy software to provide a new service for the visually impaired and other intended users.

It will provide users with three basic functions; the ability to scan QR codes, perform text-to-speech functionality and retrieve CMI audio and PDF files. The application will process two different types of QR tags:

- QR tags with prescription instructions and details, which will be converted into an audible format (text-to-speech)
- QR tags with a link to the GuildLink website containing the CMI audio and PDF files, which will be downloaded by the MPTA application

1.3 Definitions, acronyms and abbreviations

Term	Definition
Application controls	Are fully automated and designed to ensure the complete and accurate input, processing and output of data for a single application.
Corrective controls	Rectify any errors or anomalies after they have occurred.
Compiler	Translates the source code to machine code, allowing programs to be processed internally by the processor.

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Detective controls	Used to alert users if an error or anomaly occurs.
General controls	Overall controls that establish a framework for controlling the design, security, and use of computer programs throughout an organisation.
Intended User	Refers to general users that includes but is not limited to the following: the visually impaired, elderly, dyslexic, ADHD patients, Aboriginal and Torres Strait Islanders, Asperger's Syndrome and Autistic patients, illiterate, and those with English as a Second Language (ESL).
Market risk	Category of risk where the risk consequences impact on the organisation's market.
People risk	Risks resulting from politics, personality clashes or illnesses.
Preventive controls	Mitigate errors or irregularities from occurring.
Structure risk	Risks which arise from other related systems or parties within the organisation conflicting with the project.
Risk acceptance	Accepting the consequences of a risk should it become an issue.
Risk avoidance	Reducing risks by eliminating the source of the threat so that the risk becomes a non-issue.
Risk mitigation	Lessening the impact of a risk by reducing the likelihood of the risk occurring.
Risk transference	Shifting the management and consequences of a risk to a third party.
Technology risk	Risks related to the technology being used by the project.

1.4 References

- Cohen, S. (2013) My Pill Talks: A Mobile Application to Provide Safe Medicine Usage for Vision Impaired, Smart Rx Packs. Australia
- Considine, B., Parkes, A., Olesen, K., Speer, D. (2012) Accounting Information Systems: Understanding Business Processes 4th Ed. John Wiley & Sons Australia, Ltd, Milton. Australia
- Laudon, K., Laudon, J. (2011) Management Information Systems 12E, Prentice Hall. U.S.A.
- Schwalbe, K., (2011) Information Technology Project Management 6th Ed. Thomson Course Technology Boston Mass. U.S.A
- Testing Specification 4.1 document
- Systems Requirements Specification 4.1 document

2. Development Risks and their management

There are a number of risks that threaten the successful outcome of the project. To manage these risks a risk register is used to identify and describe the risks to the project, a control register is created to list controls that are used to minimise risks and a risk matrix visually displays the level of all the risks in the risk register in order to illustrate priority risks. This section is overseen by the Risk Manager, Yoshiya Tanaka.

2.1 Risk Register

The Risk Register below is used as the central repository of all the risks that have been identified by the project development team. The register consists of the fields below:

- *Risk ID*: The unique reference number for the risk.
- *Rank*: The assessed rank for the risk in descending order from the most severe to the least. The rank is based on the likelihood of occurring and the consequence of the risk.
- *Risk Name*: The name or a brief description of the risk.
- *Category*: A risk can be categorised as financial, market, people, structure or technology
- *Impact*: The magnitude of the impact on the project in the event that the risk occurs, from insignificant (1) to severe (5)
- *Likelihood*: The probability that the risk will occur, from very unlikely (1) to very likely (5)
- *Description of Impact*: A brief description of the effects on the project when the risk materialises
- *Control ID*: The ID of controls associated with minimising the risk
- *Generic Risk Strategy*: The generalised approaches to manage the risk are risk acceptance, risk avoidance, risk mitigation, risk transfer

Risk ID	Rank	Risk Name	Category	Impact	Likelihood	Description of Impact	Control ID	Generic Risk Strategy	Total rank
R7	1	Data corruption/Loss of work	Technology	Severe (5)	Very likely (5)	Deadlines may not be achieved and progress hampered	C1, C18, C21	Avoid	10
R2	2	Pharmacists do not adopt the system	Market	Severe (5)	Moderate (3)	The project becomes worthless for the client and the development team (Time, money, effort)	C2, C13, C14	Accept	8
R17	3	Low productivity	People	Major (4)	Moderate (3)	Slow progress on the project leads to deliverable deadlines not being met.	C15, C22	Avoid	7
R6	4	Release of similar apps by competitors	Market	Moderate (3)	Likely (4)	Distribution of the application will become difficult due to competitors opposing the application in the market.	C14, C15	Mitigate	7
R11	5	Users are unable to learn how to use the app	People	Moderate (3)	Likely (4)	Users may not know how to use a smartphone/application	C6, C10, C13, C17, C24	Mitigate	7
R9	6	Legal conflict	People	Severe (5)	Unlikely (2)	There may be legal costs and intellectual property conflicts regarding the application.	C16, C19, C24	Avoid	7
R5	7	Staff absence (sickness, injury, death, other commitments)	People	Moderate (3)	Moderate (3)	Deadlines may not be achieved.	C5, C9	Mitigate	6
R19	8	Equipment (software and hardware) failure (used for development)	Technology	Moderate (3)	Moderate (3)	The system that development and testing occurs on fails	C5, C21	Mitigate	6
R16	9	Unrealistic expectations for the project's outcome	People	Major (4)	Unlikely (2)	Unrealistic project expectations leads to scope creep and will impact the overall quality of the project.	C3, C5, C18, C22, C24	Avoid	6
R15	10	Human resource management failure	People	Major (4)	Unlikely (2)	Conflicts may arise between staff, tasks may be incomplete.	C15	Mitigate	6
R20	11	Cloud server host shutdown or errors	Technology	Major (4)	Unlikely (2)	Unable to access documents or source code that is stored on the cloud	C1, C21	Mitigate	6
R21	12	Interparty conflicts	Structure	Major (4)	Unlikely (2)	Other parties may maintain other ideas or agendas regarding the project, which can obfuscate the project scope.	C18, C19	Mitigate	6

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R8	13	App becomes incompatible with current operating system	Technology	Major (4)	Unlikely (2)	The application becomes unusable for some users and requires maintenance after implementation at the expense of the client.	C5, C6, C20	Mitigate	6
R12	14	Corporate espionage	Market	Severe (5)	Very unlikely (1)	Insider information is leaked or stolen which would have a significant impact on our brand name and market presence	C4, C7, C8, C12, C15, C16	Avoid	6
R10	15	Low quality application	Market	Moderate (3)	Unlikely (2)	The app is not made to a standard which the client/target users find to be acceptable	C2, C10, C11, C12, C13, C18, C19, C20, C23, C24	Mitigate	5
R22	16	Third Party fails to provide adequate products/services required for the app's core functionality	Technology	Moderate (3)	Unlikely (2)	The app may not deliver full functionality as intended by the client/app development team	C4, C11, C13, C23, C24	Avoid	5
R1	17	Application is not accepted by or known by intended users	Financial	Major (4)	Very unlikely (1)	The project becomes worthless for the client and the development team (Time, money, effort)	C2, C13, C14, C17	Accept	5
R13	18	Staff termination	People	Major (4)	Very unlikely (1)	A member of the staff discontinues work on the app, taking their skills and resources with them	C3	Mitigate	5
R3	19	QR code format changes	Technology	Major (4)	Very unlikely (1)	The project becomes worthless for the client and the development team (Time, money, effort)	C20	Mitigate	5
R14	20	Theft	Financial	Moderate (3)	Unlikely (2)	Source code and documentation are stolen	C3, C4, C7, C8, C12, C15, C16	Avoid	5
R18	21	Conflict of interest	People	Moderate (3)	Unlikely (2)	Parties have conflicting views regarding the goals of the project and the implementation, leading to scope creep, cost and time overflows.	C3, C16, C24	Mitigate	5
R4	22	Website (www.medicines.org.au) goes offline	Technology	Minor (2)	Unlikely (2)	Inability to complete CMI functionality.	C20	Accept	4

Figure 1 - The above Risk Register identifies and describes possible risks in relation to the development project.

2.2 Control Register

The Control Register below is the repository which lists all of the controls that have been suggested and adopted by the project development team. This is used to keep track of and to identify the controls used for particular risks. The control register describes controls with the following fields:

- *Control ID*: The unique reference number for the controls
- *Control Name*: The name or a brief description of the control
- *Risk ID*: The ID of the risks that the control will manage
- *Type of Control*: Controls are classified as corrective, detective or preventive
- *General or Application*: Controls are further categorised as a general or application control

Control ID	Control	Risk ID	Type of Control	General or Application
C1	Regular backups	R7	Preventive	General
C2	Release a better application	R1, R2, R10	Preventive	General
		R13, 14, R16, R18		
C3	Extrinsic and intrinsic incentives	R13, 14, R16, R18	Preventive	General
C4	Legal contracts	R12, R14	Preventive	General
		R5, R8, R16, R19		
C5	Cloud based storage (Google Drive)	R5, R8, R16, R19	Preventive	General
C6	Version control	R8, R11	Preventive	Application
C7	Segregation of duties	R12, R14	Preventive	General
C8	Access control	R12, R14	Preventive	Application
C9	Alternative communication methods	R5	Preventive	General
C10	Quality control mechanisms	R10, R11	Preventive	General
C11	Unit testing	R10	Detective	General
C12	Peer review	R10, R12, R14	Corrective	General
		R1, R2, R10, R11		
C13	User acceptance testing	R1, R2, R10, R11	Detective	General
C14	Market contacts and advisors	R1, R2, R6	Detective	General
		R12, R14, R15, R17		
C15	Code of conduct	R12, R14, R15, R17	Preventive	General
		R6, R9, R12, R14, R18		
C16	Intellectual Property Patent (Pending)	R6, R9, R12, R14, R18	Preventive	General
C17	User manual	R1, R11	Preventive	General
		R7, R10, R16, R21		
C18	Documentation	R7, R10, R16, R21	Preventive	General
		R7, R10, R21		
C19	Complying with licenses and standards	R9, R10, R21	Preventive	General
		R3, R4, R8, R10		
C20	Application maintenance	R3, R4, R8, R10	Corrective	Application
		R7, R19, R20		
C21	Backup development software/hardware equipment	R7, R19, R20	Preventive	General
C22	Agile methodology	R10, R16, R17	Corrective	General
C23	Feedback	R10, R11	Corrective	General
C24	Requirements Elicitation	R22	Preventative	General

Figure 2 - The above Control Register identifies controls and risks they are associated with

2.3 Risk Matrix

The Risk Matrix is a figure that defines the levels of risks identified in the risk register, from low to extreme. This is used to increase the visibility of risks as well as prioritise risks for decision making purposes. The matrix uses the product of the risk probability and the risk impact to determine the levels.

Risk Matrix		Consequences				
		Insignificant	Minor	Moderate	Major	Severe
Likelihood	Very Likely					R7
	Likely			R6, R11		
	Moderate			R5, R8	R17	R2
	Unlikely		R4	R10, R14, R18, R22	R8, R15, R16, R20, R21	R9
	Very Unlikely				R1, R3, R13	R12

Keys	Low	Medium	High	Extreme
Colour				

Figure 3 - the above Risk Matrix visually defines the levels of risk for all risks contained in the risk register

2.4 Contingency Plans

The three highest ranked risks associated with the development team, identified in Figure 2.1 includes data corruption and loss of work (R7), inability of users to learn how to use the application (R11) and low productivity (R17). For these particular risks, contingency plans must be implemented to minimise the probability of each of these risks occurring and their impacts.

Contingency plan - Data corruption/Loss of work (R7)

1. Physical daily and bi-weekly file backups by at least two separate staff members
2. Cloud based storage (Google Drive)
3. Version control software

Contingency plan - Inability of users to learn how to use the application (R11)

1. Feedback from experts and advisors leading to corrective action
2. User manual to be developed for intended users
3. User acceptance testing to receive user approval of application

Contingency plan - Low productivity (R17)

1. Extrinsic and intrinsic benefits to motivate staff
2. Good management policies to induce productivity in project team
3. Code of conduct to establish team standards

The Client may be required to formulate their own control mechanisms or contingency plans for other identified high ranking risks that are not associated with the Development Team, particularly the following risks:

- Pharmacists not adopting the system (R2)
- Competitors releasing similar applications (R6)
- Legal conflicts with other parties (R9)

3. Schedule

A detailed schedule of the tasks and due dates required to successfully complete the project is provided below. Each member of our development team will contribute equally to the tasks and it is assumed that the team will spend at most 8 hours a day for 5 days of the week, totalling 40 hours per week for the development team. The client will be notified in event of any changes to deliverable dates.

Reference	Task Name	Duration	Start Date	Finish Date	Pred.
1.0	<i>Feasibility Study (Draft)</i>	<i>8 days</i>	<i>Thu 1/08/13</i>	<i>Thu 8/08/13</i>	
1.1	<i>Feasibility Study</i>	<i>2 days</i>	<i>Fri 9/08/13</i>	<i>Sat 10/08/13</i>	
2.0	<i>Project Plan and SRS (Draft)</i>	<i>11 days</i>	<i>Sun 11/08/13</i>	<i>Wed 21/08/13</i>	1.1
2.1	<i>Project Plan and SRS</i>	<i>5 days</i>	<i>Thu 22/08/13</i>	<i>Mon 26/08/13</i>	
3.0	Increment 1 (Draft)	16 days	Thu 5/09/13	Fri 20/09/13	2.1
3.0.1	Discuss Feedback from Updated Project Plan/SRS	4 days	Thu 5/09/13	Sun 8/09/13	

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3.0.2	Update Requirements	4 days	Sun 15/09/13	Wed 18/09/13	
3.0.3	Update Project Plan	4 days	Sun 15/09/13	Wed 18/09/13	
3.0.4	Produce Draft Prototype	10 days	Thu 5/09/13	Sat 14/09/13	
3.0.5	Review Draft Increment 1	1 day	Thu 19/09/13	Thu 19/09/13	3.0.2, 3.0.3, 3.0.4
3.0.6	Send draft increment 1 to Client for feedback	Milestone	Fri 20/09/13	Fri 20/09/13	3.0.5
3.1	Increment 1	13 days	Sun 15/09/13	Fri 27/09/13	
3.1.1	Update Original SRS	10 days	Sun 15/09/13	Tue 24/09/13	
3.1.2	Produce Requirements Analysis & Design Documentation	7 days	Wed 18/09/13	Tue 24/09/13	
3.1.3	Discuss Feedback from Draft Increment 1	1 day	Sat 21/09/13	Sat 21/09/13	
3.1.4	Produce Test Specifications	5 days	Sat 21/09/13	Wed 25/09/13	
3.1.5	Update Prototype	5 days	Sat 21/09/13	Wed 25/09/13	
3.1.6	Review Updated	1 day	Thu	Thu	3.1.1,

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	Increment 1		26/09/13	26/09/13	3.1.2, 3.1.4, 3.1.5
3.1.7	Format documentation for submission	1 day	Thu 26/09/13	Thu 26/09/13	3.1.1, 3.1.2, 3.1.4, 3.1.5
3.1.8	Send Updated increment 1 to Client & Directors for feedback	Milestone	Fri 27/09/13	Fri 27/09/13	3.1.6, 3.1.7
4.0	Increment 2 (Draft)	16 days	Thu 3/10/13	Fri 18/10/13	3.1
4.0.1	Discuss Feedback from Updated Increment 1	1 day	Thu 3/10/13	Thu 3/10/13	
4.0.2	Update Requirements	2 days	Mon 7/10/13	Tue 8/10/13	
4.0.3	Update Project Plan	4 days	Fri 11/10/13	Mon 14/10/13	
4.0.4	Update Prototype	10 days	Mon 7/10/13	Wed 16/10/13	
4.0.5	Review Draft Increment 2	1 day	Thu 17/10/13	Thu 17/10/13	4.0.2, 4.0.3, 4.0.4, 4.0.5
4.0.6	Send Draft increment 2 to Client for feedback	Milestone	Fri 18/10/13	Fri 18/10/13	4.0.6

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4.1	Increment 2	15 days	Fri 11/10/13	Fri 25/10/13	
4.1.1	Discuss Feedback from Draft Increment 2	1 day	Sat 19/10/13	Sat 19/10/13	
4.1.2	Update Extended SRS	13 days	Fri 11/10/13	Wed 23/10/13	
4.1.3	Update Prototype	13 days	Fri 11/10/13	Wed 23/10/13	
4.1.4	Update Test Specifications	4 days	Fri 11/10/13	Mon 14/10/13	
4.1.5	Review Increment 2	1 day	Thu 24/10/13	Thu 24/10/13	4.0.2, 4.0.3, 4.0.4, 4.0.5, 4.1.2, 4.1.3, 4.1.4
4.1.6	Format documentation for submission	1 day	Thu 24/10/13	Thu 24/10/13	4.0.2, 4.0.3, 4.0.4, 4.0.5, 4.1.2, 4.1.3, 4.1.4
4.1.7	Send Updated Increment 2 to Client & Directors for feedback	Milestone	Fri 25/10/13	Fri 25/10/13	4.1.5, 4.1.6
5.0	Project Presentation/Demo nstration, RTM, User Manual & Final	12 days	Sat 26/10/13	Wed 6/11/13	4.1

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	Report				
5.1	Final Report	10 days	Sat 26/10/13	Mon 4/11/13	
5.2	User Manual/Documentation	10 days	Sat 26/10/13	Mon 4/11/13	
5.3	Review Final Report	1 day	Tue 5/11/13	Tue 5/11/13	5.1
5.4	Review User Manual/Documentation	1 day	Tue 5/11/13	Tue 5/11/13	5.2
5.5	Presentation Rehearsals	7 days	Wed 30/10/13	Tue 5/11/13	
5.6	Project Presentation/Software Demonstration	Milestone	Wed 6/11/13	Wed 6/11/13	
6.0	Lessons learned	1 day	Sat 16/11/13	Sat 16/11/13	5.0

Figure 4 - The above table contains all the project deliverables

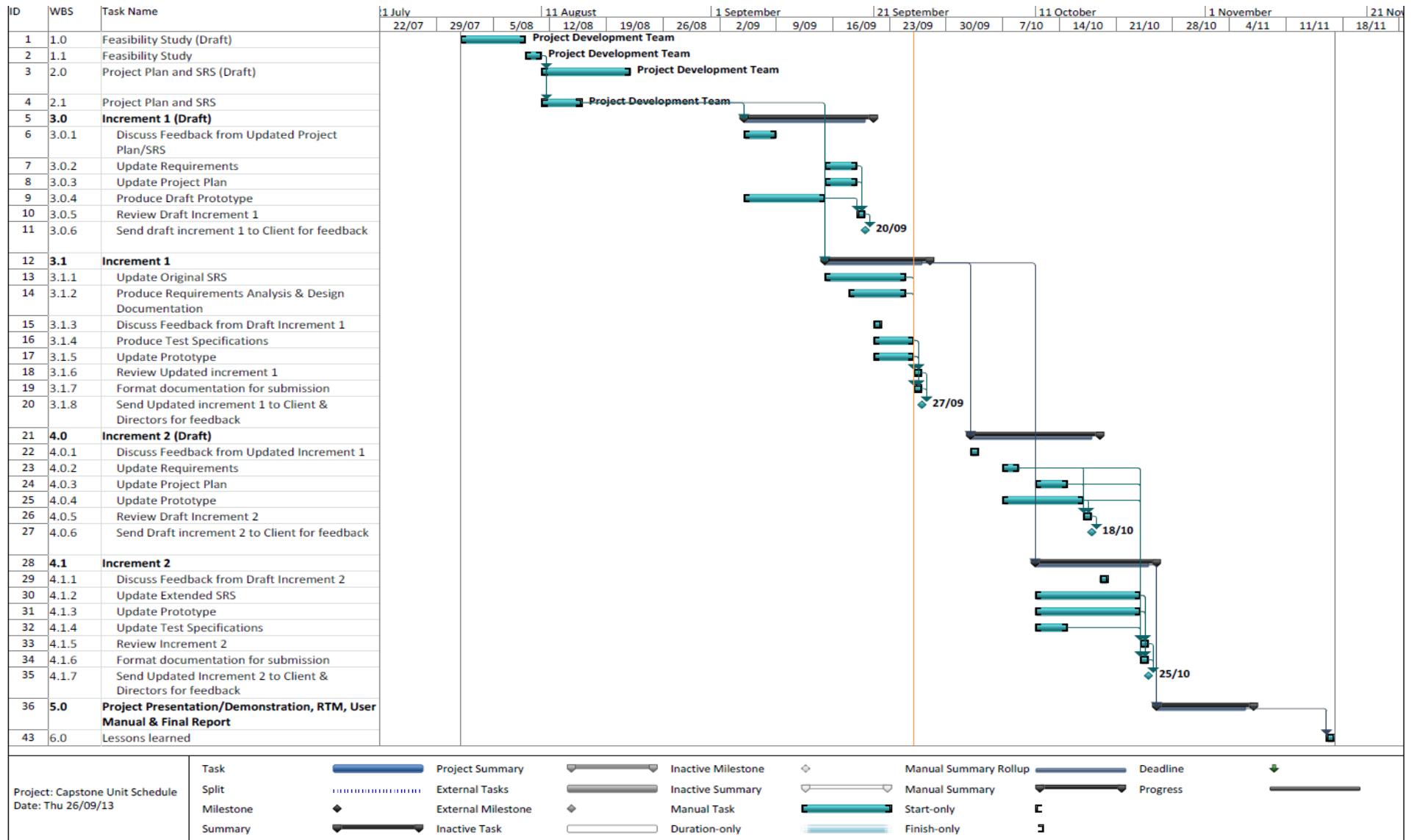


Figure 5 - A Gantt chart that provides an overview of project tasks

4. Project Resources

A variety of resources are used by the Development Team in order to complete and document tasks, communication and to develop and test the prototype. All resources used in the development can be classified into people, hardware and software.

4.1 People

Our development team comprises of a variety of skillsets. Each team member contributes differently to the team as highlighted in Figure 7.

Our client, Steve Cohen has also provided a number of contacts from multiple organisations to assist with the development process. Our development team intends to liaise with the following contacts;

Name	Organisation	Role/Contribution
Geoff Pollard	Glaucoma Australia	User Interface Advice
Cam	GuildLink	CMI Interaction
Gavin Watson	Microsoft	Development Consultant
Andrew Coates	Microsoft	Development Consultant
Jerry Perkins	Simple Retail/Aquarius Pharm. Software	Updated Pharmacy Software
Robbie	Simple Retail/Aquarius Pharm. Software	Updated Pharmacy Software
Frank Dorrian	Staywell Health	Development Consultant

Figure 6 - The table above contains all stakeholders and their roles and responsibilities in this project

The development team will liaise with the above contacts on an ‘as needed’ basis. For example; during the later stages of development Glaucoma Australia will be contacted to assist with the User Interface design and possibly be used to complete further testing of the App.

4.2 Hardware

Desktop PC and Laptops these devices will be used by Developers to produce the source code for the application as required. The Business Analysts will use these devices produce the documentation for the application.

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Laptop/Desktop PC Model	Operating System	Tasks	Operator
MacBook Air Mid 2011 Model	Mac OS X 10.8.4/Windows 8 Professional	Documentation and diagram modelling.	Business Analysts
ASUS ZenBook UX 32VD 2012	Windows 8 Professional	Documentation and diagram modelling.	Business Analysts
HP Pavilion DV7 3007-TX	Windows 7 Home Premium	Documentation, diagram modelling, and software development and testing.	Software Developers
ASUS VivoBook S400C	Windows 8 Professional	Documentation, diagram modelling, and software development and testing.	Software Developers
ASUS G73JH	Windows 7 Professional	Documentation and diagram modelling.	Business Analysts
E6A Lab Computers	Windows 8 Enterprise	Documentation and diagram modelling	Business Analysts

Figure 7 - The table above contains the devices and their respective operating systems that will be used for documentation, development and testing

Android based Mobile Devices will be utilised during the development process to ensure that the application is compatible on a variety of android based devices and operating systems. These are listed below:

Android Device Model	Operating System (Firmware)	Tasks
Google Galaxy Nexus 3	4.3	This device is used for testing the prototypes at each increment.
HTC One	4.2.2	This device is used for development and testing the prototypes at each increment.
Samsung Galaxy Tab 3	4.1.2	This device is used for development and testing the prototypes at each increment.
Samsung Galaxy S3	4.1.2	This device is used for testing the prototypes at each increment.

Figure 8 - The table above contains the devices and their respective operating systems that will be used for testing and development

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Other Android based devices and emulators may be needed to comprehensively test the application before release.

4.3 Software

Software	Type	Description
Windows 7 Home Premium & Windows 8 Professional	Documentation	Operating systems used by the development team for the development process.
Microsoft Word 2010	Documentation	Word processing software used for writing and formatting documentation.
GoogleDocs	Documentation	Word processing software used collaboratively to write and edit documentation.
Microsoft Project 2010	Documentation	Used to create the project schedule, timeline and Gantt chart.
Microsoft Excel 2010	Documentation	Used to schedule specific tasks for all deliverables.
Enterprise Architect ver 7.5	Documentation	Used to model the various diagrams that are required for the development process. This includes the use case, class, state and sequence diagrams.
Android Operating System 4.x.x	Testing and Development	Used to test and demonstrate the developed prototypes.
Eclipse IDE for Java Developers	Development	An Integrated Developer Environment (IDE) which is specialised for the Java Programming Language. This IDE incorporates features such as syntax highlighting, error checking, auto-correction and others.
Java Developer Kit (JDK) SE7u25	Development	The latest Java Development Kit used by the Eclipse IDE. This is the compiler required to convert the program source code into machine code read by the devices.
Android Standard Development Kit	Development	Allows the programmer to program for the Android operating system.
TortoiseHg 2.9 (with Mercurial 2.7)	Development	Provides use of the repository and version control services of Bitbucket. This allows both backups and the ability to restore the files to any previous version of development code.
ZXing Ver 2.0	Development	An open source barcode image processing library implemented in Java. This library is used to scan QR Codes and translates them into text.

Figure 9 - The table above contains the software and a description of what it is used for

4.4 Other resources

Resource	Description	Operator
Google Drive	A cloud based service that enables team members to collaborate in real-time. This software will be used for sharing relevant documents and will also be used for backup purposes.	Used by all development team members.
Skype	Communication software that uses Voice Over Internet Protocol (VOIP) to allow group members to hold video and audio conferences over the Internet without meeting in person.	Used by all development team members.

Figure 10 - The table above contains miscellaneous software and how they are used by the development team.

5. Organisation

All stakeholders of the MPTA app are listed in the table below

Member	Responsibilities
Dr. Stephen Smith <i>Director</i>	<ul style="list-style-type: none"> Arrange initial contact with client Provide feedback on deliverables
Prof. Deborah Richards <i>Associate Director</i>	<ul style="list-style-type: none"> Provide feedback on deliverables
Robert Scriven <i>Project Manager</i>	<ul style="list-style-type: none"> Define project goals Allocate resources Oversee progress of project Develop project plan Contribute to deliverables Review deliverables Communicate with client and other relevant parties on behalf of team Coordinate project team and assign roles Gather user requirements Interpret clients' needs Determine constraints Test project solution

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Yoshiya Tanaka <i>Assistant Project Manager / Business Analyst</i>	<ul style="list-style-type: none"> • Act as a substitute Project Manager when the Project Manager is absent • Coordinate project team and assign roles • Develop project plan • Contribute to deliverables • Gather user requirements • Interpret clients' needs • Determine constraints • Review deliverables • Test project solution
Adhytia Lowas <i>Business Analyst</i>	<ul style="list-style-type: none"> • Contribute to deliverables • Develop project plan • Gather user requirements • Interpret clients' needs • Determine constraints • Review deliverables • Test project solution
Phillip Tsiamoulis <i>Software Developer</i>	<ul style="list-style-type: none"> • Develops prototypes • Track development • Develop test cases • Adept Java developer • Programming documentation • Develop user manual • Test project solution
Joshua Budymen <i>Software Developer</i>	<ul style="list-style-type: none"> • Develops prototypes • Track development • Develop user interface • Adept Java developer • Programming documentation • Test project solution
Steve Cohen <i>Project Sponsor (Client)</i>	<ul style="list-style-type: none"> • Provide project scope • Provide background on project • Provide project requirements • Provide feedback on deliverables

Figure 11 - This table provides a listing of the roles and responsibilities of all stakeholders of the MPTA app

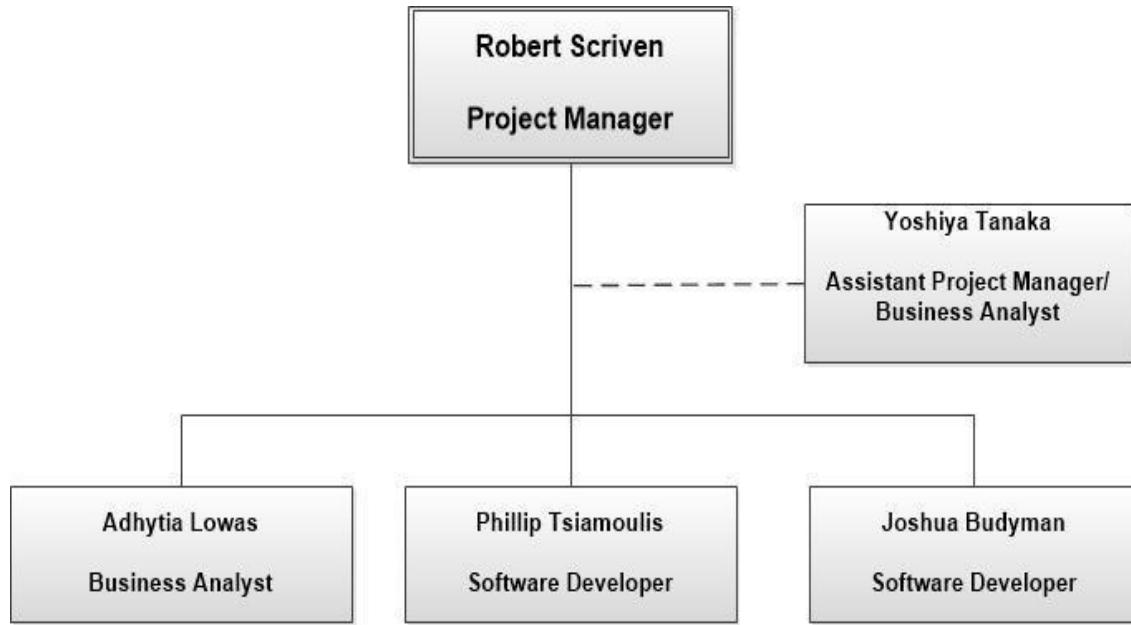


Figure 12 - This diagram provides a summary of our development team's group structure

6. Tracking, communication and quality control mechanisms

6.1 Version Control and Change Management

The Project Manager of the Development Team will act as the Change Manager for the project. This role comprises of two core responsibilities;

- To identify, approve and monitor changes that need to be made in regards to the documentation or application design, and;
- Act as a liaison for a change request in regards to the documentation and/or application towards the Client or our Directors.

Changes to the project can affect the project scope, requirements, cost, time, processes, deliverables and the MTPA application. Every change can be categorised under three different priorities outlined in the table below.

Priority	Description
High	Changes that are classified as high priority will impede the progress of the project significantly. These particular types of changes are required to be executed as soon as possible and consultation with the client is almost always mandatory.
Medium	Changes of medium priority are likely to obstruct the progress of the entire project, but are not as significant as that of high priority changes. Client consultation may be necessary.
Low	Changes of this priority are unlikely to incur a halt on the project. These changes are minor and will usually only require the Development Team.

Figure 13 - The table above contains details of the types of priorities

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The change request process involves an internal process where the Development Team discusses any need for change and determines the priority of the change and what the change would involve. This is then evaluated by the Change Manager, who will then determine if the change is required. Following this, the change is either implemented if the changes are within scope or will follow an external process where a formal request for change is lodged to the Client, who will then review the request and decides upon the requested change. The Client may request any Third Parties to be involved in the Change Management process and to provide technical expertise. Any changes that are completed will be reviewed by the Directors and the Client at each increment.

6.1.1 Documentation

Deliverables will be incrementally numbered from 1 to 5 with a version number after the point. Please see Figure 4 for more details.

6.1.2 Google Docs

Google Docs is a service that will be used as it provides distributed document development. Some benefits include an automated recovery tool, real-time multi-user access, built-in chat function and comment/review mechanisms.

6.1.3 BitBucket

BitBucket is a system that will be used for distributed code development. It works by having central repository where collaborators download the latest version of the project, make their modifications, and push the changes back to the repository. Each push to the system makes a unique version which can be retrieved (pull down) at any time. BitBucket also allows multiple streams of code to be developed at the same time, this is known as ‘forking’ from a version. Later, these ‘forked’ versions can be merged back to the main code.

6.2 Communication Methods

6.2.1 Internal meeting

Group meetings will be arranged by the Project Manager involving the entire Development Team on a weekly basis to discuss the following:

- Project progression
- Task allocation
- Client feedback
- If any support is required on specific tasks
- The agenda of the following meeting
- Ideas

Smaller meetings involving a select number of the Development Team may be organised upon request by any member of the Development Team during the Project.

Additional informal group meetings (workshops) have and will be arranged on as needed basis to allow for group collaboration and discussion on both documentation and application.

6.2.2 External meetings

External meetings with the Client and/or other parties will be organised as needed. These would be arranged for the following purposes:

- Requirements gathering
- Project concerns
- Feedback
- Consultation
- Demonstration of the prototype
- Suggestions and ideas for the project

6.2.3 Email

Email is used as a formal means of communication between internal and external stakeholders. The Project Manager provides a weekly memo to the Client, Steve Cohen, and the development team. Feedback from the client is also provided through email. The Client is able to email the Project Manager, Robert Scriven, and Assistant, Yoshiya Tanaka, as necessary.

6.2.4 Phone

Phone contact will be used as a last resort for the Development Team to contact the Client and amongst the Development Team.

6.2.5 Audio and video conference (Skype)

Skype may be used for informal discussion between group members when face-to-face is not required and/or needed.

6.2.6 Conflict Resolution and Negotiation

Conflicts in the development process can involve disagreements regarding project requirements, deliverables and solutions. These disagreements will be either internal, where the conflicts will be within the Development Team and may involve the Directors or external, where there are conflicts with third parties or the Client. This project will maintain an internal and external conflict resolution plan.

In situations where conflicts arise, information sharing and collaboration between Development Team members and client are emphasised. The reason for this is that by being able to work together, creative solutions to problems may be generated. This approach has the potential to mitigate the risk that conflicts will intensify. Furthermore, in cases where the Project Manager is unable to resolve the conflict, it will be escalated to the Directors.

Internal: Development Team members will negotiate with the Project Manager. The Project Manager will then decide upon and implement solutions to the conflicts.

External: Our Development Team will primarily negotiate with the Client and his relevant contacts. The Client will have the final decision regarding the solution that will be implemented.

6.3 Quality Control and Management

A combination of reviews, auditing and testing will be used for quality assurance. These mechanisms will ensure both the application and its documentation are at a professional standard and meet our client's expectations.

Given the small sized nature of our group, the Project Manager, Robert Scriven, will also act as our Quality Control Manager. His role as Quality Control Manager will include:

- Define quality standards
- Ensuring reviews, auditing and testing are carried out to quality assurance standards
- Complete full reviews: reviews completed at project milestones as outlined in the task schedule.
- If tasks are incomplete or completed to an unsatisfactory standard, he will notify group members and ensure that necessary action is taken.
- Manage stakeholders' quality expectations.
- Provide training when necessary.
- Monitor development processes and tasks.
- Identifies faults and possible improvements for the project deliverables.

6.3.1 - Reviews

Peer Reviews:

Every component of the project must be reviewed by at least one other (preferably two) group members – e.g. if one programmer develops a section of code, this must be reviewed/tested by their counterpart, also one of the business analysts. Similarly, documentation will be peer reviewed.

Member or members of the development team cannot perform a peer review of their own tasks. However, they will still be required to review their own work.

At each deliverable stage the Directors of the development team will receive a listing of the tasks along with the members who have completed and peer reviewed each of the tasks.

Full Reviews:

Prior to each audit (internal or external) a full review will be carried out by the Quality Control Manager and at least two others (Programmer and Business Analyst). A full review consists of a detailed analysis of the documentation and an overview of the functionality and inspection of the working out of the application.

6.3.2 - Auditing

Internal Audits:

Our Directors, Stephen Smith and Deborah Richards will analyse and provide feedback after each deliverable. The feedback provided will be discussed by all team members of the project team and a solution regarding any problems will be developed.

External Audits:

Our Client, Steve Cohen, as well as any other parties on behalf of the client's request will provide regular feedback throughout the development process. This feedback will be discussed by the development team and actioned.

6.3.3 - Testing

Please refer to the Test Specifications 3.1 document for testing details.

6.4 Documentation Identified/Discussed

Documentation Type	Description
Project Plan	<p>This document contains details about how the project will be executed and controlled. It consists of the following contents:</p> <ul style="list-style-type: none">• Statement of purpose/scope/description• Risk management• Resource management• Team organisation and structure• Project schedule and tasks• Resource allocation• Process model discussed/justified• Quality control and management• Reviews, audits and testing• Tools and techniques• Tracking/change management• Communication• Conflict resolution and negotiation
Test Specifications	<p>This document contains the project test plan, the test-case specifications and other information regarding tests in the project that are relevant to the MTPA application. Tests are compulsory as they aid in the detection of software bugs that may impede functionalities. It will contain the following contents:</p> <ul style="list-style-type: none">• Test Plan• Test Case Specification

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Requirements Analysis and Design	<p>This document is comprised of two distinct sections. The first section is the requirements analysis which includes a description of the following:</p> <ul style="list-style-type: none">• Use cases• Functionalities that are needed to be implemented.• The second section is known as the design documentation, which contains an explanation of the following contents:• Application architecture• User interface layouts• The following figures will also be included in this section:• Class diagram• Sequence diagram• State diagram• Requirements Traceability Matrix
User Manual	<p>This document is meant for end users of the application. It contains necessary information to understand and be able to fully utilise the functionality of the application and will demonstrate the functionality.</p>

Figure 14 - The table above contains identified documents and what they will contain