Unlock:

Quality Assurance Manual

Version 2.1

15th March 2018

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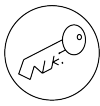Jack Mckeown

Document Control

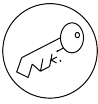| Version	Date	Sections changed	What was changed
1.0	3/2/18	-	-
2.0	25/2/18	1.1 company profile	Adjusted to be less product specific
		3. Deliverables	Adjusted to reflect general company approach to all projects
		4. project management mythology	Changed to an agile development process diagram, added paragraph to describe the new diagram
		4.1 Client Communication	Section added
		4.2 Requirements & Specifications	Section adjusted to generalise company approach not just product specific
		4.5 Review Phase	Removed
		4.6 Evaluate & Deliver	Section added
		5. QA methodology	Section added
		6. Appendix A	Updated to latest version of time sheet template, added cover page template, added document control table template
2.1	15/3/18	2.3.3 QA metrics	updated
		2.4.3 QA metrics	updated
		2.5.3 QA metrics	updated

Contents

1. Introduction

1.1 Company Profile

Founded in York, 2018, we are a group of masters students from the University of York. The inspiration for the company's focus was an amalgamation of our pooled technical knowledge and our shared interest in the city in which we study; this created the basis for our first product.

Unlock is a provider of interactive tour guides of popular tourist destinations throughout the UK. As a company our focus is the production of informative, user-friendly and reliable products that prioritise points of interest for our users; we are customer driven and as a result we work to the highest technical standards. Our first product Unlock: York is a comprehensive tour of the city and highlights various different tourist attractions across the city of York.

1.2 Vision

- "Expand our product to tourist destinations around the globe"
- "To become the go-to tour guide operator consumers will seek when visiting a new city."
- "For the company to be recognised on social media due to its widespread usage"
- "Widespread demand from cities all around the world for Unlock to create a relevant product"
- "To engage with our customers and to share our love of travel"

2. Roles & Responsibilities

2.1 Organizational Structure
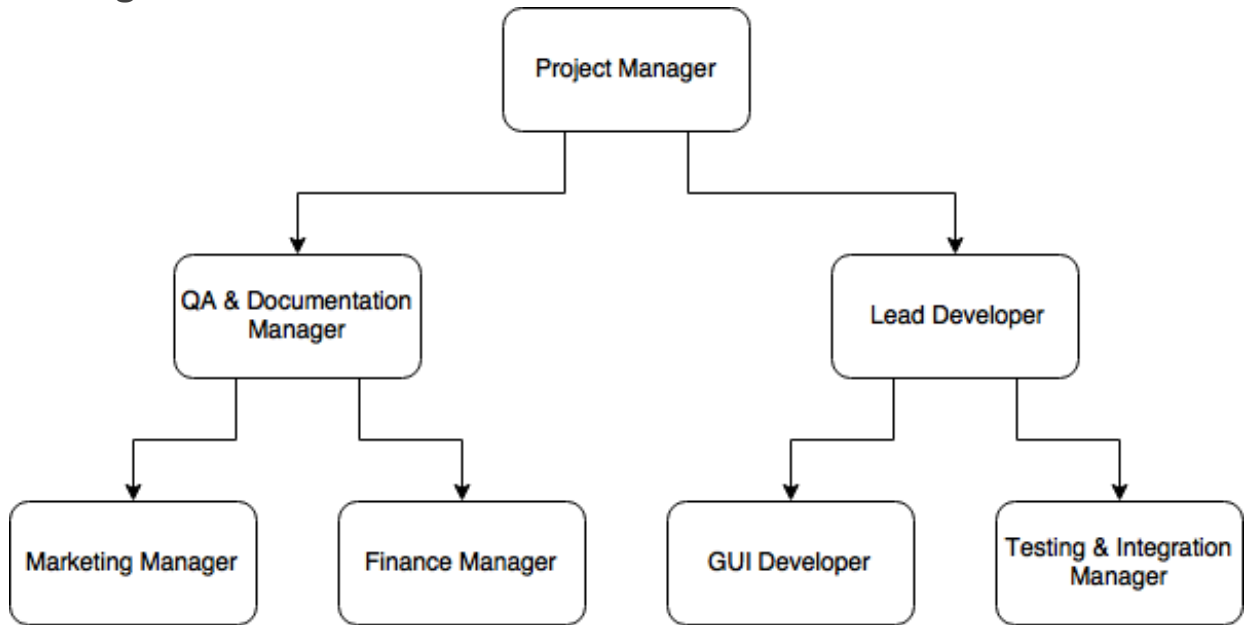
Figure 1: The organizational structure.

For the company to work efficiently and effectively there must be a defined organizational structure for the company to follow. At the top sits the project manager, they will oversee all aspects of the project and all managers will report to them. The company then is split into documentation and development teams. The QA manager oversees the document side with the finance and marketing manager reporting directly to them. For the development side the lead developer is in charge with the GUI and testing manager reporting directly to them (see Figure 1). Harmony and communication between all key members of the team is accomplished through weekly meetings and review reports.

2.2 Risk Register

Risk Value	Severity
1	Low risk
5	High risk

2.2 Project Manager

2.2.1 Role Description

Has the responsibility of ensuring the project runs smoothly from start to finish, this includes managing all members of the team and scheduling the order and duration of all aspects of the project; and ensuring the project sticks to the schedule. Will be responsible for ensuring all areas of the project development has the required resources to achieve their goals, this may include outsourcing work to other companies or arranging further resources.

- Responsible for ensuring meetings with the teams happen regularly and are productive with set agendas and objectives
- Ensuring all tasks required for the development of the product are completed by assigning job roles and responsibilities to the appropriate team members
- Creating and maintaining a professional and productive working environment by encouraging a strong and supportive work ethic
- To work with the lead developer and other key members of the team to produce the design and specifications for which the development of the product will follow
- To work with the QA manager to set a high standard that the team will follow and measure their performance against
- To work with all managers to produce a schedule and plan for the product develop to follow and to ensure that the schedule is followed, and tasks completed within deadlines
- Responsible for approving all completed deliverables produced by the team
- To work closely with the lead developer to oversee and contract negotiations with other companies

2.2.2 Risk Management

Risk	Probability (P)	Impact (I)	P x I	Solution
Project requirements not being met	2	5	10	Ensure there are sufficient and regular meetings to assess progress with all key areas, ensure all requirements are reasonable and attainable by the team, arrange a meeting with all key members of the team and assess the issues and agree upon an appropriate course of action such as extra time or a change in the requirements
Deadlines not met	2	4	8	Ensure all key members are aware of the schedule and that the time allocated for each task is realistic, coordinate with key members to assess the situation of the problem and allocate more time if required with minimal impact on the project time frame if possible
Members of the team not getting on	1	4	4	Set an example of showing good team working skills with members and arrange meetings with the team members to see if a professional atmosphere can be achieved

Absence of a key member of the team	1	3	3	Arrange a meeting to assess the reasons behind the absence and the possible duration, organise with other key members of the team to cover the work and minimise the impact on the project schedule and development

2.2.3 QA Metrics

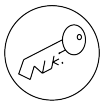| Metric	Method of calculation
Deadlines met	Project schedule against actual time deliverables have been submitted
Project requirements matching specifications	Number of project requirements that match client requirements against the number that don't

2.3 Lead Developer

2.3.1 Role Description

As different aspects of the actual development will be controlled by multiple key members of the team, the lead developer's role will be to manage the overall development and ensure all areas are working to a common goal. This will also include being in direct control of the main structure of the product and ensuring the multiple managers below them are fulfilling their responsibilities on their specific areas such as GUI development and overall testing and integration. They will be involved in the overall design of all aspects of the product and be responsible for ensuring that the design and product ideas are obtainable with the resources at their disposal. They will also be responsible for the development and completion of external contracts from other companies by delegating specific tasks to appropriate members of the team, along with being involved in outsourcing contracts to other companies to complete certain aspects of the product development.

- To oversee the development of the product from start to finish and ensure the product is developed accordingly to the design and specifications.
- In regular meetings with their team they will check that development is on schedule and to make sure all areas of the development is coherent with each other by ensuring everyone is working towards the design and specifications initially laid out.
- Responsible for the code being readable and appropriately documented by laying out a set standard for comments and a set naming convention for functions and variables for the team to follow to ensure consistency.
- Responsible for managing the development of the core elements and structure of the program by delegating tasks appropriately

2.3.2 Risk Management

Risk	Probability (P)	Impact (I)	P x I	Solution
Program failing during development	2	5	10	Correspond with testing and integration manager to perform a more complete set of tests to minimise the number of unknown failures and to help isolate the cause of the failure, arrange a meeting with key members of the team, including project manager and estimate the length of time to fix the problem and consider moving more staff on to the problem to minimise its effect of project schedule, make sure the project manager is fully aware of the situation, so they can plan accordingly, outsource the failing area to another company to develop allowing the in-house development to move on to make up for lost time
Code from different	3	3	9	Set specific standards for code and ensure all members of the team know the

members not consistent				standards to maintain consistency, work with the members of the team to make the code more consistent and make sure all are aware of the required standard
Design specifications and requirements not being met	2	4	8	Ensure all members of the team are aware of the latest specifications and requirements and are informed of any changes promptly, arrange a meeting with key members of the team to assess if the design specifications and requirements need changing or adapting, arrange with the project manager to reschedule the project to allow more time to achieve the design specifications

2.3.4 QA Metrics

Metric	Method of calculation
Appropriateness of the design for the project goals	Correct assessment of functional specification and how many have been fulfilled by the design
Develop time	Planned time against actual time taken
Code consistency	Specified code standard compared to the actual code being produced
Compiling errors submitted during development	Number of compiling errors and warnings
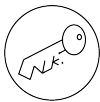
2.4 GUI Developer

2.4.1 Role Description

The design of the GUI elements of a software product is vital to ensuring a high-quality, easy to use product; the GUI forms the face of the product and is the customer's first impression of the product. Therefore, the main responsibility of the GUI Developer lies in deciding on the overall layout of the product and deciding how the user's actions will interact with the program. The GUI developer will need to work closely with the Lead Developer and the Testing and Integration Manager.
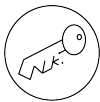
- Develop an overall design for the GUI based on the specification and user stories.
- Decide on the GUI elements and methods to be used.
- Produce an overall layout plan and design documents.
- Assign team members to programming the GUI.
- Monitor the progress on the implementation and programming of the GUI

2.4.2 Risk Management

Risk	Probability (P)	Impact (I)	P x I	Solution
Failure of code.	2	3	6	Debug the code, and contact the Testing and Integration manager to perform tests if needed.
GUI doesn't work on all desired devices.	1	5	5	Risk can be mitigated by doing research prior to implementation to verify that libraries and packages used are compatible with all devices required.
GUI incompatible with the other software modules developed.	1	4	4	Work closely with the Lead Developer to ensure all other code will be compatible with the GUI.
Code inconsistency.	2	2	4	Meet prior to implementation stage and get all team members to agree upon a convention for formatting, commenting and variable names.
Design plan delayed.	1	2	2	Notify PM asap and relay information to team. Push back subsequent stages relying on the design completion, and bring in extra members to assist with plan if necessary.

2.4.3 QA Metrics

Metric	Method of calculation
Design appropriateness	Verify that the design is appropriate for and meets the specification.

Deviations from original design during implementation	Documented deviations against undocumented deviations
Comments in code	Do comments match the project wide standard for coding.
Errors	Make a note of any errors that occur during compilation.
Planned coding time vs Actual coding time	Record number of hours spent on GUI coding and compare with planned time.

2.5 Testing & Integration Manager

2.5.1 Role Description
The Testing and Integration Manager is responsible for two main areas in the product's life cycle; ensuring that the product undergoes rigorous testing phases to find and fix any bugs and errors, verifying that the product will operate to maximum potential under all feasible operating conditions; and ensuring that the integration stage goes as smoothly as possible, with all individual elements of the product working when integrated together and verifying that the product functions well on all devices required. The Testing and Integration Manager needs to work closely with the PM, GUI Developer and Lead Developer.

- Produce plans for the testing stage – timings and tests carried out.
- Produce plans for further testing during the integration stage–timings and integration procedure.
- Produce test sheets for team members to fill in when carrying out tests.
- Ensure that any errors or bugs that are found are fixed, working alongside the development managers if required.
- Assign team members to test different elements of the program.
- Collect and process results from team members and produce testing and integration reports.

2.5.2 Risk Management

Risk	Probability (P)	Impact (I)	P x I	Solution
Major product-breaking bug or error found.	2	5	10	Notify Lead Developer and/or GUI Developer and give details of the problem and work together to find a solution.
Implementation stage takes longer than expected.	2	3	6	Reschedule testing and integration plans for a later date.
Testing and integration stage takes longer than expected.	2	3	6	Report to PM and team and reschedule/rearrange testing and integration plans.
Minor bugs found.	5	1	5	Fix when found, contact development team if required.
Incompatibilities between separate elements cause integration failure.	1	5	5	Can be mitigated by ensuring that up-to-date packages and software is used, and by doing research in the design stages. If risk does occur, meet with Lead Developer and work on fixing problem.

2.5.3 QA Metrics

Metric	Method of calculation
Errors and bugs fixed.	Documented on team member test report.
Unit tests complete and plan followed.	Collect individual test reports from team members and monitor overall unit testing progress alongside plans.
Integration testing phase complete and plan followed.	Collect integration test reports from team members and monitor overall integration progress alongside plans.
System testing phase complete and plans followed.	Collect system test reports from team members and monitor overall system testing process alongside plans.
Product works on all devices required.	Documented on final testing report.
Which individual parts tested and how?	Documented on all testing reports and plans.
Test outlines defined on Final Testing and Integration Plan vs Actual tests carried out.	Compare tests on plan with tests documented on reports.
Test coverage	Percentage of methods covered by automated testing

2.6 QA & Documentation Manager

2.6.1 Role Description

The QA manager is responsible for making sure that all work done by the company is done to a certain standard. This is accomplished by setting guidelines for the company's procedures and processes to allow the development process to run smoothly and problem free as possible while setting a high standard for the company to work to. Maintaining this standard will ensure the product is well received by not only investors but also prospective customers. As regular communication is key, frequent meetings with key members of the team is crucial, along with reports on the development progress being exchanged between all key areas of the company. Through this constant scrutiny of the product's development progress, and strong communication with the management team, the QA manager can maintain the high-quality standards that have been laid out. As development processes have the potential to change throughout the life cycle of the product, the QA procedures and processes must be able to adapt and change with it. Any changes will be discussed and agreed with the project manager and key members of the team when appropriate.

- To set the quality standards for the company upon agreement with the project manager and other key members of the team.
- To lay out the processes and procedures that the company will follow to achieve the necessary quality standards in a QA manual which will be distributed to all members of the team.
- To set a specification for the QA metrics which the quality of deliverables and milestones will be compared against.
- Monitoring of the projects progress to ensure standards are being adhered to by having regular review meetings with key members of the team and checking QA metrics are being met
- Inform the project manager of project progress in regards of development meeting QA standards through meetings and reports at the end of key stages.
- Lay out a template structure for company documents to follow to maintain consistency and readability of all important documents being exchanged throughout the company.
- Ensure key members are aware of deadlines of reports on the progress of the development to ensure key aspects of the QA are being followed correctly and on time to maintain a consistent review of the product development.
- Maintain a document update and version management system to ensure all documents that are accessed by members of the team are the latest version.

2.6.2 Risk Management

Risk	Probability (P)	Impact (I)	P x I	Solution
QA metrics not being met	3	4	12	Make sure regular reports and assessments of the QA metrics are up to date and accurate, set up deadlines for metrics and ensure continued adherence to QA procedures are being followed, assess the appropriateness of the current QA metrics for the areas that are not being met and

				check if they need to be adapted to a change of the situation
QA processes and procedures not being followed	3	3	9	Ensure sufficient number of regular meetings are being held and reports are being exchanged between the key areas, ensure all key members are always up to date with QA processes and are correctly following procedures, assess the reasons behind them not being followed and check for better alternatives and processes to enable the project to meet the QA standards and adapt QA manual and procedures if required
Lost documents	2	4	8	Backups of all documents to be kept, at least two backup methods to be maintained, ascertain which documents have been lost and look for pervious backed up versions that can be updated and can replace the lost information, check with key members of staff to assess the impact of the lost material and create workarounds to minimise their effects on product development
Key areas of development not being compatible with each other	2	4	8	Ensure all documents are up to date and all members of the team have access to the latest versions and are informed of all changes as a new version is released, ensure the correct processes and procedures are being followed by all areas of the product development team and ensure regular meetings are held to ensure all areas are aware of what each other are doing

2.6.3 QA Metrics

Metric	Method of calculation
Documents delivered on time	Number of documents expected and their deadline against the actual number and the time of hand in
QA metrics being met	Number expected to be met against the current number being met
Deadlines for product development	Expected completion times against actual completion times

2.7 Marketing Manager

2.7.1 Role Description

A marketing manager performs many duties aimed at developing and implementing the long- and short-term marketing strategies of his employer. Takes steps to measure, enhance, and enrich the position and image of a company through various goals and objectives. Being a small company in early days of its inception; the role of the marketing manager will be to create branding and to reach out to companies we will liaise with to build our product.
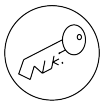
- Help management make marketing decisions
- Manage launch campaigns for new products
- Supervise other members of their team in their marketing efforts
- Create a cohesive marketing strategy in line with the company's objectives
- Coordinating marketing campaigns with sales activities.
- Overall responsibility for brand management and corporate identity
- Analysing potential strategic partner relationships for company marketing.
- Study market trends to allow for expansion and further business development

2.7.2 Risk Assessment

Risk	Probability (P)	Impact (I)	P x I	Solution
Competition	3	3	9	Ensure quality of products. Produce appropriate advertising campaign. Provide excellent after-sales service.
Pricing issues related to core products.	2	4	8	Endeavour to find source companies that can maintain and better our price points.
Market Access	1	5	5	Check whether end users are those with purchasing authority, model selling strategy accordingly. Ensure all legislation is met and authorisation is granted.

2.7.3 QA Metrics

Metric	Method of calculation
Brand Awareness	Feedback and the use of surveys
Customer Satisfaction	Customer Feedback
Market Share	Research in to competitors and the market as a whole

2.8 Finance Manager

2.8.1 Role Description

The financial manager is responsible for the financial health of an organization they will produce reports, forecasts and will direct investment activities so as to help maximise profitability of the company. The financial manager is fundamental to the success of the company; their roles within the company will include:

- Help management make financial decisions
- Supervise other members of their team in their reporting and budgeting
- Review company financial reports and seek ways to reduce costs
- Monitor cash flows to create more realistic projections
- Monitor financial details so that legal requirements are met and that all new legislations are adhered to
- Use financial forecasts as a tool to reduce costs
- Analyse market trends to allow for expansion

2.8.2 Risk Assessment

Risk	Probability (P)	Impact (I)	P x I	Solution
Credit risk	2	3	6	Make detailed contracts with customers.
Liquidity risk	2	3	6	Make an accurate budget and monitor during project lifecycle.
Poor budgeting	1	4	4	Monitor at regular intervals and adjust as necessary. Create long term forecasts for a more detailed outlook.
Time sheets not being filled out	3	2	6	Ensure all time sheets are signed off by the project manager and the employee at the appropriate time.

2.8.3 QA Metrics

Metric	Method of calculation
Assets turnover	Sales/Average total assets. Measure the efficiency of the company's use of its money.
Economic value added	Find the net operating profit after taxes. This will help to determine created value.
Debt to equity ratio	Debit/Equity ratios < 1 will show profit generation

3. Deliverables

Deliverable	Producer	Recipient	Due
QA manual – adaptations if required	QA manager *	All company personal	Ongoing through project
Functional Specification report	Project manager, lead developer, GUI developer and marketing manager	Client	Requirements and specifications phases
Financial Business Plan	Finance manager*	Project manager	After initially starting each project
Design Documentation	Development Team	Project Manager, client	Design phases
Tender presentation	All members of the team	Potential investors	After Design phases
Financial Report	Finance manager*	Project manager	Regular update reports throughout the project
Third party contracts	Project manager, lead developer, finance manager	External companies	After ITT process
Final Test and Integration Plans and reports	Testing and integration manager*	Project manager, Lead developer	Testing and integration phases
Source Code	Lead Developer*	Project manager and client	After testing and integration has completed
QA audit reports	QA manger	Project Manager	Evaluation stage of each iteration
Iteration Evaluation reports and relevant documents	Project Manager*, QA manager	client	End of evaluation and delivery phases
HTML-tour of the product		Client	After product completion
User manual		Client	After product completion
Financial Summary Report	Finance manager*	Project manager	After the final product has been delivered
Demonstration and Sales presentation	All members of the team	Potential investors, Client	After product Completion, or

			after set iterations
All other project documentation e.g. Meeting minutes	All members of the team		Evaluation and deliver phases
Gantt & pert	Project manager		Start of project
Media content	Marketing manager*	Client	First Demonstration of working product

*indicates a sub-team will be working with the relevant manager on this task.

4. Development Methodology
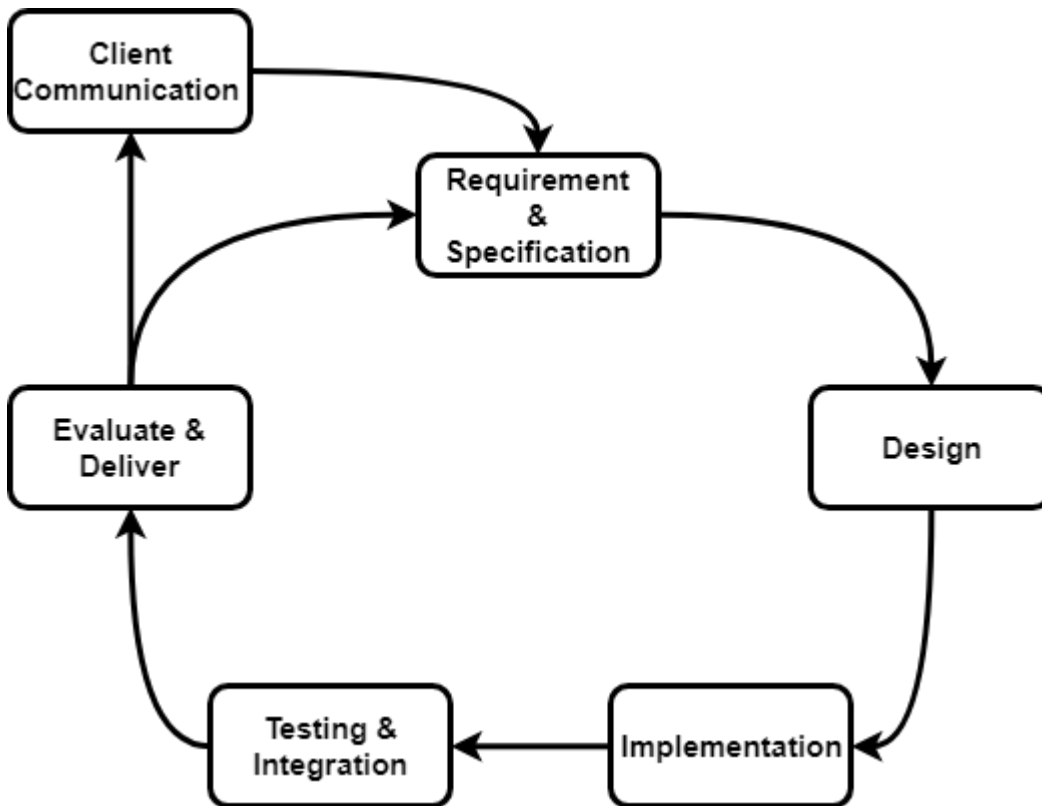
Figure 2: Agile Development Process

The development team follows an agile development philosophy which is based on an alliterative process. Each alliteration follows a set path described in figure 2 (above) and begins with ascertaining what the clients wants to enable appropriate product requirements and specifications to be determined. Using the set specifications, a design for the implementation stage to follow can be made, the different implemented sections can then be integrated into the final product with the functionality being tested before the alliteration is evaluated and

delivered back to the client for them to assess, this begins the next alliteration allowing for changes to be made or further features to be added.

4.1 Client Communication

Being the first stage of the process, the effectiveness of ascertaining what the client is after is crucial to the success of the project and limiting the amount of alliterations required for attendances, therefore increasing the efficiency of the development cycle. The bulk of the client communication will be done in direct meetings, objectives for the discussed topics will be agreed upon beforehand to increase the effectiveness of the time spent with client.

4.2 Requirements & Specification

The information gained from the client during the communication stage is assessed and broken-down into simple client requirements that the product must have to satisfy what the client is wanting. The product specifications are formed from these requirements and will act as the user stories for all other stages follow. The specifications might not match the requirements entirely, but they must match or improve on the client requirements to be considered fully successful, deviation from this must be justified and approved by the project manager before the design stage begins.

- The Functional Specification Team, made up of our Project Manager, Lead Developer, GUI Developer and Marketing Manager, analyse the requirements to ensure that there are no inconsistencies between the product we are designing and what the client wants.
- After a Product Specification has been drawn up, our Project Manager will send this to our client and, if needs be, discuss any amendments to the requirements
- From this they will create a series of user stories from which the design process can begin.
- The design process can be incorporated into the final functional specification before implementation
- When this is complete, and contract is agreed, the Project Manager will create a time schedule for the project to be complete.
- The functional specification team will distribute their functional specification to all managers.

4.3 Design

When the user stories are finalised, the design phase can begin; this phase is led by the Project Manager, Lead Developer, GUI Developer and the Marketing Manager. The GUI Developer and the Marketing manager work on a GUI design and overall layout. The Project Manager & Lead Developer will begin to consider code implementation while completing the functional specification. Despite these further sub-teams, the GUI Developer and the Lead Developer will continue to be in constant contact and will look to eradicate any incompatibilities between the software elements. From this, the pooled contributions from the two sub-teams will create a final functional specification that can be sent to the client for their consideration.

4.4 Implementation

After the design and specifications have been agreed upon, the lead developer will brief their team on the designs and begin a breakdown down of the tasks required to implement the designs according to the user stories. Once a full breakdown has been completed, the lead developer will provide the project manager with the work break down, along with time estimates for each major phase of the implementation. It will be the lead developer to allocate tasks to the appropriate team members and the project manager will add the implementation phase into the project schedule. Regular review meetings will be held throughout the implementation phase to help keep track of progress and to arrange solutions to any problems encountered. Using the specified programming language and set libraries, along with working towards the set standards for code comments and naming conventions, allow for code consistency across all teams.

- The different aspects of the software development, GUI and core functionality for example will be implemented by different groups
- Specifications may be updated during implantation phase along with design changes to meet new client requirements
- Once all aspects of the programming have been done it will be sent to the test and integration phase to be joined together
- The finance manager will be responsible for ensuring the budget is adhered during implementation

4.5 Testing & Integration

Once the product has been designed and subsequently implemented, the different components of the product should be tested individually, for these unit tests we recommend using White Box testing. We will then also look to undergo an integrated test of the product with the objective of removing any interface defects between modules and functions. Finally, we will undertake a system test, the objective of this being to ensure our product meets all of our quality standards, the functional specification and the original client requirements. Our Testing and Integration Manager will lead this stage of the process. Errors found in this process will most likely involve iterating back through the code to an earlier stage and then revising any problematic code; this type of process would involve a form of regression testing to remove any fundamental errors. Throughout the test and integration phase all members must follow the testing schedule as set out by the Testing & Integration Manager and record test outcomes.

4.6 Evaluate & Deliver

After the iteration has gone through testing and all parts have been integrated, all team members will meet to evaluate the output of this iteration. It will be compared against the original client requirements and the user stories to determine if this iteration has been successful or not. The project manager is responsible for approving each iteration and will closing oversee the evaluation phase. If the project manager isn't happy with how this iteration has turned out then the whole process will start again, otherwise a meeting with the client will be arranged and the output of the iteration will be delivered to them for feedback for future iterations or if approved to discuss further features to be added starting the whole process again.

5. QA Methodology

As each department has their own QA metrics, all managers will be responsible for filling out their respective QA metrics during the appropriate stages of the iterations. An audit of these metrics will occur during the evaluation stage of each iteration, the QA manager will be responsible for this audit and a report will be shared with the team members during the review meetings held as part of the evaluation stage.

The audits will work by having the filled-out QA metrics from the departments as the input and a comparison will be made between the expected and the actual results with a performance rating being established by this method. This allows the company to assess the quality of work produced and the performance of each department. With this assessment, problem areas can be identified and discussed with the team to allow suggests of improvements to be made, these suggestions will be documented in a form of an evaluation report and will be implemented before the next iteration begins.

6. Appendices

Appendix A: Document Templates

All company documentation must follow a standardised format and layout to ensure consistency and quality. The standard document formatting for Unlock is as follows:

- Use the company template for all official documents.
- All documents must have a cover page containing the logo, the date, the author(s) (the relevant manager and all members of the sub-team).
- All pages in the document must have the Unlock logo in the top left corner.
- All pages must be numbered, with the page number at the bottom right.
- The type of document must be indicated in the top right corner.
- The document version must be in the lower left corner. The format for document version is "DOCUMENT_ABBREVIATION/VERSION_NUMBER", eg for the functional specification "FSPEC/2.0".
- Main section headings must be font size 18, with all sub-heading titles being font size 16, and sub-sub headings being font size 13.
- Text must be font size 11.
- All documents must have a contents page where appropriate.
- All documents must have a document history table showing the document version number, modification date, modifier name, section modified and any modifier comments. This table is to be placed between the cover page and contents page.
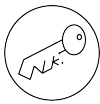
Configuration Change Management

As multiple team members will be working on the same document at any one time, it is very important for the most recent version of a document to be in use by all members, and imperative that any changes are made note of. Every document will have an overall name, eg. "FSPEC" for the Functional Specification and a version number "X.Y" where X is the overall release version of the document and Y is a minor revision with small changes having been made. Any time a small change are made to the document Y will be changed, and if major changes to formatting and content are made a new release of the document will be made, indicated by changing X. Any changes made to documents will recorded in the document history table at the start of the document, where the modifier will record the version number, date, their name and make comments on what they have changed.

(Page Layout)
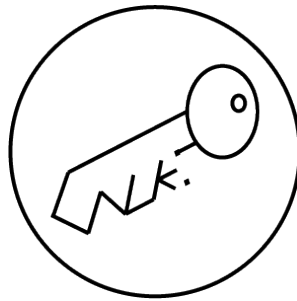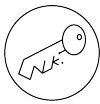
Unlock:

Title of Document

Version ...

date

Authors

Document Control

Version	Date	Sections changed	What was changed
1.0	---	-	-
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Time Sheet
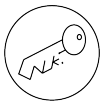
Employee Name:

Employee Role:

Date	Activity	Start Time	End Time	Total Hours
			TOTALS:	

I certify that these hours are a true and accurate record of all time worked during the pay period.

Employee Signature   Date:

Project Manager Signature: Date:

Minutes

Meeting Number:

Location   Date   Time   Duration

Attendees:

Name (Initial)   Name (Initial)   Name (Initial)

Apologies:

Name (Initial)   Name (Initial)   Name (Initial)

MEETING OBJECTIVES

- ……………………………………………………………………………………………………
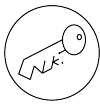- ……………………………………………………………………………………………………
- ……………………………………………………………………………………………………
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ITEMS DISCUSSED
• ……… .
• ……… .
• ……… .
• ……… .
• ………
Progress Notes: ……… ……… ……… …………….………………..
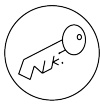
Next Meeting Time and Date:

Location   Date   Time

QA Metric List

Metric	How Measured	Produced By	Date	Results & Remarks

Comments and discussion points

Testing Report

Employee Name:_____

Element Under Test	Test Carried Out	Expected Result	Actual Result	Errors Fixed	Comments	Date of Test

Signature: _____

Date: _____

Implementation Progress Report

Component or Task	Start Date	Progress Details	% Complete	Expected Finish Date

Comments and discussion points.

Appendix B: Design Methodologies

GANTT Chart