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# QA Manual

## SWEng – Group 2

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# Document Control

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| --- | --- | --- | --- | --- |
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| 0.1 | R.Tan | - | Created | *Skeleton.* |
| 0.2 | J.Oatley | 28/01/2014 | All | *Added in title page, document control and contents, arranged/added sections, and formatted text.* |
| 0.3 | A.Gangotra | 28/01/2014 | 2.2, 3.1 | *Filled in Project Manager role and added section on deliverables.* |
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## 1 Introduction

### Company Profile

The company was set up as a manufacturer of interactive platforms and tools. The focus of our business is mainly on the user interface design and functionality of the product. Our products’ design specifications follow the trend adopted by the best field experts in software engineering as well as complying with the current industry standard.

Our team consist of highly trained and qualified engineers that constantly review and invent new methods to design higher quality product such as exquisite user interfaces and instructive functions.

### Vision

* To be the leading and cutting edge manufacturer of interactive platforms, designing innovative features and user friendly device.
* To understand and deliver products that consumers are most sort after.
* To create a better everyday life for everyone.
* To provide a world of solutions for the ever growing needs of the many.

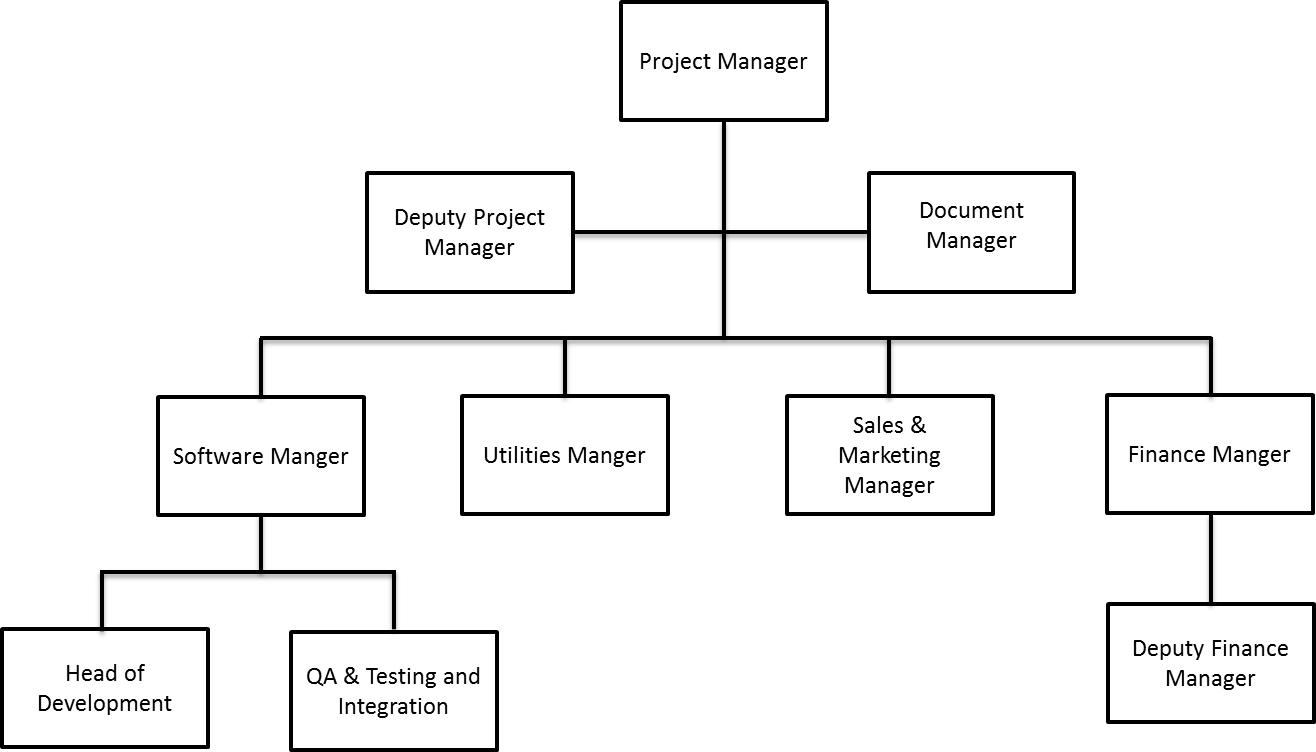
## 2 Roles and Responsibilities

### 2.1 Organisational Structure

In order for any organization to fully operate at its fullest potential and capabilities, roles and responsibilities of each personnel in the company has to be established. Figure 2.1.0 below shows the organizational structure of the company.

The project manager carries the responsibility of ensuring that the group members work in concordance and harmony. Having to oversee that all the members of the company comply with the company’s policies and procedure is also part of the project manger’s responsibility.

As the roles mentioned down in the figure, each of them gets more into specialised operation whereby the products are being designed, tested, and strategize into the market. In order to ensure that a product is being delivered on schedule, communications between each team members is essential. This is done by having weekly meeting to review the progress of the production in each team and also consistently reviewing the deliverables and eventually every crucial milestone.



*Figure 2.1.0 – Organisational structure of the company*

### 2.2 Project Manager

### 2.2.1 Role Description

The Project Manager is responsible for taking an overviewing role within the company and organising the working of the team toward the desired goals. She along with the Deputy Project Manager is accountable for insuring that the design, development and implementation process runs smoothly during the project life cycle (section 4) until the final product is presented to the customer. Accomplishing this involves several tasks that include:

* Arranging for regular meetings with the team and chairing meetings.
* Along with the Deputy Project Manager having the ability to make the final decisions in case of a dispute, disagreement or otherwise.
* Provide meeting agendas (see Appendix A for templates).
* Signing monthly Timesheets and working closely with the Business Manager to ensure the Business Plan is being conformed to.
* Assigning the different roles required in the project in a way that ensures the optimal use of every member’s qualifications is reached.
* Maintaining an encouraging and cooperative environment where every individual contribution is appreciated and respected.
* With the help of the Software Manager, provide the plans for the project development and monitor the progress.
* With the help of the appropriate managers, provide the timetable plan and ensure it is adhered to, or make appropriate modifications as required.
* Make sure that the requirements and standards are met at every stage whether during the development process itself or when the final product is near completion.
* Providing solutions and backup strategies where required.
* Grant final approval of all the deliverables provided by the team.
* Deliver reports to customers and act as the connection between them and the project team.
* Produce the overall project plan (with Gantt Chart) and time schedule.

### 2.2.2 Risk Management

|  |  |
| --- | --- |
| Risk | Possible Solution |
| Some group members don’t get along with each other. | Try to resolve any issues that group members might have. If this does not work, consider assigning and delegating tasks to minimise disruption within the group as a whole. |
| The prolonged absence of a member in the group. | Have more than one team member trained to do any task. Be ready to adjust schedules as appropriate. |
| Deadline overdue. | Have regular project plan review meetings where possible overruns can be identified and rescheduling can be considered. |
| Failure to meet one of the requirements. | Have regular review meetings where requirement conformity is checked. Make sure that the design and the development of the product is organized in a way that simplifies rollback and re-implements the missing requirements with as little modification to other parts as possible. |
| Finding out late during the project that one member has a lot more work than the others. | Review the workload for each member regularly to make sure there is a parity in the amount of work done by each person. |
| Certain team members producing work that is not up to the mark or not doing any work altogether. | Have a system to review work done by each member (as mentioned above) and hold separate meetings with the members in question. If even after repeated counselling there is no change, talk to the board members (in this case Dr. Stuart Porter and the supervisor) to take further action. |

### 2.2.3 Quality Assurance Metrics

|  |  |
| --- | --- |
| Metric | How measured |
| Client requirements clarity. | Holding regular meetings ensuring that the client understands his/her own requirement statements and that these have been interpreted correctly by the company and finally signed off by both sides. |
| Project wide standards and contracts drawn up and adhered to. | Working with other teams to finalise PWS and liaising with the client and other teams for final contracts. |
| Complete specification. | Checking the specifications against the requirements statement to make sure all requirements are covered by the specifications team, during appropriate review meeting(s). |
| Software and Business Plan clarity. | Holding review meetings to make sure software plans and business plans are at par with each other. |
| Deadlines met. | Deliverables submitted as timetabled and recorded. |

### 2.3 Deputy Project Manager

### 2.3.1 Role Description

The role of the deputy project manager differs from the role of project manager in that the deputy is only concerned with internal company matters, whereas the project manager is directly responsible for the company as a whole, and any interaction between the company and ‘the outside world’. Reporting directly to the project manager, the deputy is the first port of call for all sub-division managers, with the exception of the documents manager. The role is mainly supervisory, in that all sub-division activities must be overseen by the deputy, and task progression must be tracked throughout the project. The deputy project manager should know exactly what is happening in all departments of the company at all times (although this may be a top-level understanding of which tasks are in progress). In order to fulfil this role, the deputy project manager should perform the following tasks:

* Define company quality standards in conjunction with the project manager
* Monitor QA metrics to ensure that processes are being carried out to the required standards
* Provide regular updates to the project manager regarding task progression and QA issues
* Ensure that all members of the company are performing in line with the defined quality standards, and that workload distribution is fair and reasonable
* Resolve sub-team disputes or disagreements, by involving the project manager if absolutely necessary
* Be available to assist any sub-team at any time should help be required to complete tasks on schedule and to the required standard
* Work with project manager to approve all deliverables before submission
* Conduct regular review meetings with sub-teams to track progress and respond to any issues raised by the sub-team manager(s)

### 2.3.2 Risk Management

|  |  |
| --- | --- |
| Metric | How measured |
| QA metric not met | Set up continued monitoring of team member’s adherence to QA procedures and regular, monitored deadlines for metrics. |
| Dispute in sub-team | Attempt to resolve through discussion in a logical way, raising the issue to the project manager if necessary. |
| Procedures not being carried out to required standards | Closely monitor situation and attempt to identify cause of problem. Implement solution to problem and ensure that situation improves through appropriate measurement. |
| QA metric collection | Number of QA metrics collected / expected |
| Deadlines met | Internal completion date / customer- prescribed submission date |

### 2.3.3 Quality Assurance Metrics

### 2.4 Document Manager

### 2.4.1 Role Description

The Documentation Managers role is to look after the entire projects documentation ensuring hand in dates are met and documents written comply with the correct standards. The Documentation manager can also be expected to write reports, compile resources into reports and to review documents handed over to them.

The Documentation Manager must work alongside the Project Managers to ensure documentation content, provided by the Documentation Manager and other team members, is of sufficient quality that both internal and external project deadlines are being met.

* Take minutes at meetings and upload to group repository for reference
* Create documentation templates and ensure they are adhered to
* Working with primarily the Deputy Project Manager, sometimes the Project Manager, to review documents
* Ensuring hand in deadlines are met
* Organisation of the group repository
* Keeping backups of important project documents
* Write up important global project documents (documents that do not fall into a particular category)
* Accepting documentation from other team members and compiling into a main document

### 2.4.2 Risk Management

|  |  |
| --- | --- |
| Risk | Possible Solution |
| Other group members have not met internal deadlines | Work with Project Manager/Deputy Project Manager to ensure that the required content is obtained ASAP |
| Cannot meet hand-in date | Assign task to another group member |
| Too much work | Assign parts of the work primarily to Deputy Project Manager however, depending on circumstances, could also be assigned to other group members. |
| All documentation is lost | Retrieve backup files and use a temporary repository, collaborate with Utilities Manager to ensure smooth changes to new repository |
| Content handed over to be documented is not up to standard | Discuss with Deputy Project Manager |

### 2.4.3 Quality Assurance Metrics

### 2.5 Software Manager

### 2.5.1 Role Description

### 2.5.2 Risk Management

### 2.5.3 Quality Assurance Metrics

### 2.6 Head of Development

### 2.6.1 Role Description

### 2.6.2 Risk Management

### 2.6.3 Quality Assurance Metrics

### 2.7 Testing and Integration Manager

### 2.7.1 Role Description

### 2.7.2 Risk Management

### 2.7.3 Quality Assurance Metrics

### 2.8 Utilities Manager

### 2.8.1 Role Description

### 2.8.2 Risk Management

### 2.8.3 Quality Assurance Metrics

### 2.9 Sales & Marketing Manager

### 2.9.1 Role Description

The role of a marketing manager is to steer the project into public awareness and demand through research, understanding and reporting on the climate of potential consumers of the product(s) to be made. They would be serving as an intermediary between the company and the public, gathering information and then using said information to target product to the public.

The sales & marketing manager works in the business branch and is involved with the financial and contractual decisions made by the branch. The exclusive roles of a marketing manager are:

* Research into product demand and customer needs and insights.
* Detail how product will be marketed to customers.
* Manage distribution channels for products.
* Defining target audience.
* Determine viable price for product.

### 2.9.2 Risk Management

|  |  |
| --- | --- |
| Risk | Possible Solution |
| Product undesirable by public | Revisit project plan. |
| Competition | Beat it (the competition) |
| Market failure | Beta test window and user feedback. |
| Product lacking in important features | Revisit project plan.  Survey. |
| Pricing Issues | Survey prior to main release. Re-evaluate spending power of target demographic. |

### 2.9.3 Quality Assurance Metrics

### 2.10 Business Manager

### 2.10.1 Role Description

The Business Manager is responsible for taking an overviewing role within the finance and marketing division of the company and organising the working of members in this division toward the desired goals. She along with the Sales and Marketing Manager and Finance Manager are accountable for constructing the business plan, Time-sheets, budgeting, marketing strategies, and financial reports at each stage of the project until the final product is presented to the customer. Accomplishing this involves several tasks that include:

* Managing the financial part of the company, supervising marketing and finance managers
* Creating a schedule for the business to run on.
* Sign off time-sheets for employees
* Providing Budget Plans and working closely with the Project Manager for approval
* Assigning the different tasks within the finance and marketing division, making sure the contribution is equal.
* Constructing financial reports with the help of the financial manager and the Sales and Marketing Manager.
* With the help of the appropriate managers, provide the timetable plan and ensure it is adhered to, or make appropriate modifications as required.
* Making sure that the financial requirements of the other divisions of the company is met by budgeting.

### 2.10.2 Risk Management

|  |  |
| --- | --- |
| Risk | Possible Solution |
| Some group members don’t get along with each other. | Try to resolve any issues that group members might have. If this does not work, consider assigning and delegating tasks to minimise disruption within the group as a whole. |
| The prolonged absence of a member in the Business Division. | Have more than one team member trained to do any task. Report to Project Manager |
| Deadline overdue. | Have regular business plan review meetings where possible overruns can be identified and rescheduling can be considered. |
| Failure to meet one of the Business requirements. | Have regular review meetings where requirement conformity is checked. Make sure that the financing and marketing of the product is organized in a way that simplifies rollback and re-implements the missing requirements with as little modification to other parts as possible. |
| Over or Underestimated Budgeting | Review provisional budgeting with the team and then with the project manager frequently. |
| Certain team members producing work that is not up to the mark or not doing any work altogether. | Report to Project Manager. |
| Irregular Handing in of time-sheets | Designate a fixed date on which the timesheets need to be submitted. If still not consistent then report to Project Manager. |

### 2.10.3 Quality Assurance Metrics

### 2.11 Finance Manager

### 2.11.1 Role Description

The finance manager will be responsible for the oversight and management of all financial applications. Honesty and efficiency is vitally important to ensure all financial parameters are properly implemented and cost reduction opportunities are quickly apprehended, this also warrants a long-term successful business that achieves the highest quality of performance. The final outcome of an indispensable finance team should maximise profitability by working in an accounting environment. To follow are some equally important qualities that a manager, within the finance section, must hold:

* In-depth working knowledge of the whole financial industry.
* Proficiency at developing, implementing and evaluating sales policies.
* Monitor performance of a team of employees, supported by facilitating continuous professional development and motivation.
* Confident and persuasive communication skills with an ability to deal with senior colleagues throughout the organisation.
* Aptitude in meeting with clients internally and externally to maintain strong working relationships.
* Competent evaluation of budgets, prediction of quarterly forecasts/market trends.
* Ingenious investigation into competitors to capitalise projects.
* Provide financial information such as cost/benefit analysis, profit/loss accounts and balance sheets.
* Consistent and punctual attendance.
* The ability to work nights, weekends and overtime if necessary.
* Persistence and assertiveness.

### 2.11.2 Risk Management

|  |  |
| --- | --- |
| Risk | Possible Solution |
| Credit Risk | Thorough knowledge of customers and associated risk to create strict compliance contracts to improve overall performance and secure competitive advantage |
| Liquidity Risk | Identify and complete balance sheets. Increase stringent regulatory requirements for greater transparency and visibility of balance sheet. |
| Missed time constraint | Develop robust systems and models in association with the relevant project to ensure accurate deliverables to each individual. |
| Poor budgeting | Ensure relevant and well-thought resource allocation and administrative budgeting that encompasses rationalism. Attend key meetings to lead discussions on the financial performance of corporate departments. |

### 2.11.3 Quality Assurance Metrics

## 3 Deliverables

### 3.1 List of Deliverables

|  |  |  |  |
| --- | --- | --- | --- |
| **Deliverable** | Producer | Recipient | Due |
| Spring Term | | | |
| **Functional Specification** | Docs Manager  + Project Team | Supervisor + Project Team Managers | 28-01-2014  [Tuesday Wk-4] |
| **QA Manual** | Deputy Project Manager + Managers | All company personnel + Supervisor | 03-02-2014  [Monday Wk-5] |
| **Financial Business Plan** | Business Team | Financial Backer (AEW) + Client (SJP) + Project Manager | 07-02-2014  [Friday Wk-5] |
| **Project Wide Standards** | Other Groups + Docs Manager | Project Team | 13-02-2014  [Thursday Wk-6] |
| **Group Tender Presentation** | Docs Manager + Project Team | Financial Backer (AEW) + Client (SJP) + Supervisor | 18-02-2014  [Tuesday Wk-7] |
| **Financial Report 1** | Business Team | Financial Backer (AEW) | 21-02-2014  [Friday Wk-7] |
| **Contracts Agreement** | Project Manager + Dep. Project Manager + Docs Manager | Supervisor + Client (SJP) | 25-02-2014  [Tuesday Wk-8] |
| **Financial Report 2** | Business Team | Financial Backer (AEW) | 07-03-2014  [Friday Wk-9] |
| **First Iteration Complete** | Software Team + Project Team | Supervisor | 14-03-2014  [Friday Wk-10] |
| **Final Test and Integration Plan** | Software Team | Client (SJP) | 14-03-2014  [Friday Wk-10] |
| Summer Term | | | |
| **Financial Report 3** | Business Team | Financial Backer (AEW) | 09-05-2014  [Friday Wk-3] |
| **Financial Summary Report** | Business Team | Financial Backer (AEW) | 30-05-2014  [Friday Wk-6] |
| **Demonstrations and Sales Presentations** | Marketing Manager + Project Team | Client (SJP) | 09-06-2014  [Monday Wk-8] |
| **Final hand-in of all deliverables** | Project Team | Client (SJP) + Financial Backer (AEW) | 12-06-2014  [Thursday Wk-8] |
| **Project Plan** | Project Manager | Team Mangers + Project Team | Wk-5 |
| **QA Auditing and Metrics** | Dep. Project Manager | Project Manager | Audits throughout project, metrics at the end of project |
| **Timesheets** | Project Team | Business Manager + Project Manager + Dep. Project Manager | Throughout project |
| **Progress reports** | Team Managers | Project Manager + Dep. Project Manager | Throughout project |
| **Meeting agenda** | Project Manager | Team Manager + Project Team | Prior to meeting |
| **Meeting minutes** | Docs Manager | Project Manager + Dep. Project Manager + Project Team | After meeting |