**Quality Management Plan**

**Introduction**

Dental clinic systems are complex organizations that treat varieties of problems for their patients. With a quality system it would drastically increase their productivity and even give convenience of access for their staff and patients. This thesis was created for Apelo dental clinic as they were the chosen client for this research. This research and creation of system would not only help the clinic but will make treatment fast and easy while also generating satisfaction for their customers.

**Quality objectives**

* Make sure the system has complete functions that also show easier navigation and great responsiveness.
* The criteria’s requested by the client to be met.
* To achieve a quality standard not only for the client but also to the patients they serve.
* Clarify the roles and responsibilities of each member.
* Establish objectives that would manage and uphold the project quality across the course of the subject.

**Quality management plan**

* **Project completion** – when the project objectives have been achieved and proper backups have been created for potential risks regarding within the system.
* **Acceptance criteria** – when the project has achieved standards regarding user-friendliness and operation of functions, buttons, and commands.
* **Continuous integration** – for future updates and expanding of system operations, the developers would recommend a compatible and capable developer of handling the system.
* **Test-driven development** – the system would be heavily tested to ensure its functions are working in their best condition and that the code would satisfy the quality of the system as its integration to live servers.

This quality management plan provides a comprehensive framework for managing, maintaining, and improving project quality. This plan ensures that the project meets its objectives with regards to the clients’ requests, stakeholders, its users, and even the patients, providing a clear set of rules, guidelines, process, tools, and roles and responsibilities for using, creating, and improving the system itself and any issues that may arise. All stakeholders should be familiarized with the changes, the plan itself, and their role contribution in the project.

**Quality Management Approach**

ADENICSY will utilize an Agile and Scrum method and various testing processes to ensure that the project system delivers a high quality product or even exceed the expectations of all stakeholders’ expectations. The project would prioritize the required functions first to ensure every command would work then proceed to the designing phase.

The following are the roles and duties for the quality management plan:

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| Role | Description |
| Project manager | Charged with establishing the acceptance standards and making sure that the final product satisfies the stakeholders, client, staff, and its users |
| Project team leader | Oversees the team's adherence to the Scrum framework and works with the product owner and Development Team to enhance the final product. |
| Project Development Team | Responsible for creating the production of the system and uphold the quality standards |
| Project Sponsor | Provides executive support for the project |

The approach will include the following steps:

1. **Define quality standards** – The developers would define and follow quality standards based on Agile and Scrum methodology and requests of the client with the focus of delivering value.
2. **Quality planning** – The team closely works with the stakeholders to identify and ensure the project requirements are met alongside prioritizing the most important features. The team will create a product backlog to view the changes made and set the quality goals to ensure that each iteration of the product has significant changes approaching the objectives of the quality standard,
3. **Quality control** – This measures sprint implementations to ensure that the product meets the defined requirements and quality goals. It would also identify and defects, issues, and potential requests to the system.
4. **Quality Assurance** – This would put the measures in place to prevent defects and issues from occurring in the first place, as the team would do various testing methods and processes to ensure the project is being executed according to the established standards and guidelines.
5. **Continuous Improvement** – The team would recommend a competent and professional developer for future updates, improvements, and fixes for the project.
6. **Communication** – The team will maintain constant communication with the stakeholders, clients, users, and patients in order for them to be aware of the changes, plans, status and feedback if needed.

The project team will incorporate Agile and Scrum practices, including user stories, sprints, and retrospectives, to ensure that quality is built-in throughout the project's lifecycle and meets the organization's quality standards and the needs of the project stakeholders. In addition, a risk management plan will be developed to proactively identify and mitigate potential quality risks throughout the project's lifecycle.

Overall, the Quality Management Approach for ADENICSY and will prioritize delivering a high-quality product that meets customer requirements through an Agile and Scrum method. The approach will be flexible and continuously refined to ensure that the project meets or exceeds all quality expectations.

**Requirements**

ADENICSY will be completely functional, user-friendly, and compatible with multiple devices that have access to internet connection and the latest operating system compatible to the clinics system as the quality management plan will contain both the product and process quality standards.

**Requirements for product quality**

* ADENICSY will be fully operational and adhere to the product backlog’s technical requirements.
* The interface shall be user-friendly to all the stakeholders and its users. This project comes with instruction manuals or tutorials that can be viewed by its users.
* The project system would work with the clients’ requests and improve its technological infrastructure.
* The system requires the latest OS compatible with the clinics devices and the system itself.

**Requirements for ensuring quality of process**

* The development team will implement an ongoing process of testing and quality assurance to ensure that the system meets all technical specifications and requirements.
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* A version control tool will be used by the development team to ensure that any modifications to the system are properly documented, reviewed, and authorized.
* Regular sprint reviews will be conducted by the development team to identify and promptly address any quality issues.
* The development team will follow a defined configuration management process to ensure consistent development, testing, and deployment of the system.

**Compliance Demonstration**

* ADENICSY will be tested and evaluated against the established quality requirements and standards before being deployed to the client.
* The development team will maintain comprehensive documentation of all testing and quality assurance activities, which will be made available to the client upon request.
* The development team will conduct a formal acceptance test with the client to ensure that the system meets their requirements and expectations.
* The development team will provide ongoing support and maintenance services to ensure that the system continues to meet the established quality standards over time.

**Continual Improvement**

The development team would recommend a competent developer to ensure that the system can be improved, updated, and fixed whenever a problem arises while still upholding the quality standards.

**Quality Assurance**

The QA process for ADENICSY will be integrated into the Agile and Scrum method to ensure that the quality is achieved through collaborative effort and continuous improvement as the following steps will be undertaken:

* Defining quality standards – The developers will collaborate with stakeholders, client, users, and its patients to define and document the quality standards for the project in the quality management plan as the quality standards will constantly be communicated to everyone.
* Quality metrics – The project team will use quality metrics to track and report on the project's performance against the quality standards.

- Test coverage presents the percentage of the system that has been tested

- Case pass rate presents the test cases that have been passed

* Continuous improvement – The developers would use the feedback to modify changes requested by the stakeholder and the client to ensure a quality product.
* Compliance with industry standards – The developers would ensure that ADENICSY would adhere to relevant industry standards such as accessibility standards, security standards, and data privacy regulations. Regular audits will be conducted to verify compliance with these standards.
* Reviewing feedback – The developers would constantly review feedback in order to improve and modify changes for the betterment of the system.

The quality assurance metrics will be closely monitored, tracked, and reported on a regular basis to ensure that the project produces a high-quality outcome. Any violations of these standards will be swiftly reviewed and corrected. The project team will receive regular reports from the software application that will be utilized to gather data on these parameters. The quality assurance procedure will also be reviewed frequently to find and

88implement improvements. The goal is to ensure that the Dispatch Directory System meets the highest quality standards, and that all quality assurance metrics are closely monitored to ensure the project's success.

**Quality Control**

In Agile and Scrum methodology, quality control is embedded into the development process, and the focus is on continuous testing and quality feedback. The Quality Control process for the Dispatch Directory System project will involve the following steps:

• Continuous testing and feedback: The project team will perform continuous testing to identify defects and ensure that the product is meeting customer requirements. The testing will be automated wherever possible.

•User Acceptance Testing (UAT): A representative group of end users will test the system to ensure it satisfies their needs and expectations. The UAT will be performed at the end of each sprint, and any necessary modifications will be made based on feedback from the users. •Compatibility Testing: The Dispatch Directory System will be tested on multiple platforms, including mobile devices and browsers, to ensure compatibility and address any difficulties that may arise when the system is used in various settings.

•Continuous Monitoring: After deployment, the project team will monitor the effectiveness of the Dispatch Directory system. This will involve keeping an eye on important performance measures including user happiness, response time, and system uptime. This will provide essential information to aid with any system upgrades and identify any problems or bottlenecks. The following quality metrics will be used to monitor and assess the system's performance:

* Test Coverage: The percentage of the system that has been tested.
* Test Case Pass Rate: The percentage of test cases that have been passed.
* User Happiness: Measured through surveys and feedback from users.
* Response Time: The time taken for the system to respond to user requests.
* System Uptime: The percentage of time the system is available and functioning as expected.
* Tracking and Documenting Quality Evaluations: The project team will track and document the outcomes of the Quality Control process, which will be used to monitor the project's progress and the effectiveness of any remedial actions that are taken.

In conclusion, the quality control process for ADENICSY will be an integral part of the development process, with a focus on continuous testing, user feedback, and performance monitoring. The project team will continuously monitor and assess the quality of the product as part of the Quality Control process, ensuring that it meets the required quality standards and customer requirements.

**Quality Control Measurements**

The Agile and Scrum techniques will be employed to promote continuous inspection and modification throughout the project lifecycle for the Dispatch Directory System project, which will adopt a transparent and collaborative approach to quality control.

To guarantee that the product fulfills the standards and criteria, quality control measures will be made at each stage of the development process and documented on a shared, viewable platform, such as a project management tool, as opposed to a static spreadsheet or table.

The following details will be on the platform:

•Measurement date

•Measurement type (e.g., automated testing, code review, peer review, user story acceptance)

•The measurement's findings (such as passed/failed, the number of flaws discovered, and the percentage of code coverage)

•Requirements and standards for comparison

•Member of the team in charge of measuring

•Team member responsible for assessing the measurement results

•Taking any required corrective actions

•The date that the remedial measures were finished

•Team member in charge of carrying out corrective measures Dashboards and other visual tools will be used to track the quality control measurements in real-time so that all team members can readily access and comprehend the data. The

90dashboards will draw attention to patterns and problem areas so that the team can act fast and make the necessary adjustments. The quality control metrics will be reviewed, and the method will be adjusted as necessary during routine team reviews such as sprint reviews and retrospectives. Together, the group will pinpoint potential improvement areas and put any found problems into practice. In conclusion, the Dispatch Directory System project will use Agile and Scrum approaches to implement a collaborative and dynamic quality control strategy. To make sure the product satisfies the standards and needs, the team will regularly assess the product's quality and make the required improvements. On a common platform, all quality control measurements will be collected and tracked in real-time. The team will collaborate to address any problems and implement any necessary improvements.