Quality Management Plan

**Introduction**

This will be the quality management plan for the IO system that will be given to Torrecamps Marketing, the plan would aid the group in ensuring that the quality of the system would be what the client needs. The plan would help in defining the quality of the output as well as maintaining it, since the proposed system contains many variables this quality management plan would aid in ensuring that each and every part of the system would be to the clients satisfaction.

**Goals of the Quality Management Plan**

* Make sure the system satisfies or exceeds the expectations of the client
* List down the criteria the group will follow for the quality of the project
* Clarify the roles and responsibilities of the group members
* Determine and fix the quality problems that the group are or may face
* Establish a structure to manage and uphold the quality of the system throughout the course of the project

**A quality management plan’s tools include:**

* **Definition of Done:** This tool will help in determining when the project is deemed “Done”, it is a clear explanation of what makes a finished product.
* **Acceptance Criteria:** This will help define what requirements a product must meet for the product owner to approve of the output.
* **Continuous Integration:** Atechnique for regularly integrating code updates into a repository so that the final product is always ready for release.
* **Test-Driven Development:** A method of development that calls for the creation of automated tests before any code is written in order to guarantee that the code satisfies required quality.

This plan will aid the group in ensuring that the quality of the project will be accepted by the client by being a comprehensive framework for managing and maintaining project quality throughout the project’s lifecycle. This will ensure that the project will at least meet the expectations of the client, while providing a clear process, tools, and roles and responsibilities for identifying and addressing the quality issues that the group may face.

**Quality Management Approach**

The Quality Management Plan for the IO system will utilize an Agile and Scrum method to ensure that the project meets or exceeds the clients quality expectations. This approach will prioritize delivering high-quality products and meeting customer requirements over following rigid processes.

These are the roles and duties for the quality management plan

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| Role | Description |
| Project Manager | The person in charge of establishing the acceptance standards and making sure the final product satisfies all stake holders |
| Project Team Leader | The one in charge of checking if the team adheres to the framework set and is also the one who works with the Product Owner and Development team to enhance the final product. |
| Project Development team | They are responsible for producing a high-caliber product and upholding the specified quality policies and standards. |
| Project Sponsor | Provides executive support for the project. |

**The approach will include the following steps:**

1. **Define quality standards** – The group will define quality standards based on the Agile and Scrum methodology, with a focus on delivering value to the customer.
2. **Quality planning** – The group will work closely with the stakeholders ensuring that the project requirements are met while prioritizing the most important features. The group will then create a product backlog so that they can monitor the changes made and so that they can ensure the quality of the system with each iteration released.
3. **Quality control –** Quality control measures will be implemented during the sprint to ensure that the product meets the defined requirements and quality goals. Testing and reviews during each sprint are included to identify any defects or issues.
4. **Quality Assurance** – Quality assurance measures to prevent defects and issues from occurring will be implemented. The group will use the best available practices and processes to ensure that the project is being executed according to the established standards and guidelines.
5. **Continuous Improvement** – The group will continuously monitor the and evaluate the system’s performance and adjust when necessary. This will include collecting and analyzing feedback from the stakeholders, identifying areas of improvement, and implementing changes to improve the project’s overall quality.
6. **Communication** – The group will maintain constant communication with the stakeholders in order to make sure that they are aware of the product’s quality status and can provide feedback as 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 IO system 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/Standards**

The IO system places a high focus on quality, and the team will cooperate to create and record quality requirements and standards. Client comments, testing, and assessments will be used to guarantee adherence to these criteria. The following requirements and standards for quality will be followed by the IO system.

**Requirements for Product Quality:**

* The IO system will be fully operational and adhere to the product’s backlog technical requirements.
* The interface will be easy to use with a simple design that will be easy to navigate.
* The solution will be implemented with a new technological infrastructure.

**Requirements for Ensuring Quality of Processes:**

* The product owner and development team will review and approve all project deliverables prior to being provided to the client
* The development team will implement an ongoing process of testing and quality assurance to ensure that the system meets all technical specifications and requirements.
* 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.

**Compliance Demonstration:**

* The IO system 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 will design a method for continual improvement by routinely gathering an analyzing client feedback, monitoring system performance, and carrying out internal audits to spot improvement areas.

**Quality Assurance**

The QA process for the IO system 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 group will collaborate with stakeholders to define and document the quality standards for the project in the quality management plan. The quality standards will constantly be communicated to all stakeholders.
* **Agile Quality Auditing:** The group will conduct regular quality audits using Agile practices such as peer reviews, test-driven development, and continuous integration. These practices will be used to verify that quality standards are being met and identify areas for improvement.
* **Quality Metrics:** The group will use quality metrics to track and report on the project's performance against the quality standards

To monitor the quality process, the following metrics will be used:

* Agile Metrics such as Velocity, Burn-Down Charts, and Sprint Reviews
* Defect Density: The number of defects found per unit of measure (e.g., per KLOC)
* Defect Severity: The classification of defects based on their impact on the system
* Test Coverage: The percentage of the system that has been tested
* Test Case Pass Rate: The percentage of test cases that have been passed
* Root Cause Analysis Effectiveness: The percentage of issues that have been resolved at the root cause level.

**Continuous Improvement:** The group will use the feedback received from quality audits and quality metrics to continuously improve the product and the quality process. The project team will work with stakeholders to identify opportunities for improvement and implement changes.

**Compliance with Industry Standards:** The group will ensure that the IO System adheres 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 Customer Feedback:** The group will regularly review customer feedback to identify any issues or areas for improvement. This feedback will be used to inform the continuous improvement process and ensure that the product meets customer needs and expectations.

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 88

implement 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 group will perform continuous testing to identify defects and ensure that the product is meeting customer requirements. The testing will be automated wherever possible, and the results will be tracked in a continuous integration/continuous delivery (CI/CD) system.

• **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 IO System will be tested on one platform, being browsers, to ensure compatibility and address any difficulties that may arise when the system is used in specific settings.

* 1. • **Continuous Monitoring:** After deployment, the group will monitor the effectiveness of the IO 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
  + Defect Density: The number of defects found per unit of measure (e.g., per KLOC)
  + Defect Severity: The classification of defects based on their impact on the system
  + 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.

The following quality metrics will be used to monitor and assess the system's performance:

In conclusion, the Quality Control process for the IO System project will be an integral part of the development process, with a focus on continuous testing, user feedback, and performance monitoring. The group 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 IO 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 dashboards 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 IO 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.