6.8. Quality Management Plan

6.8.1. Introduction

For agile projects like scrum, a quality management strategy is required to preserve quality throughout the project. The quality standards that will be used to assess the Rams E-Caf project are defined in this plan. Along with articulating quality concepts and processes, the plan also offers a framework for addressing quality issues and defining the roles and responsibilities of team members.

**Quality objectives**

* Make sure the project satisfies or exceeds the expectations of the key stakeholders of the project.
* List the criteria for quality that the team will use to assess the project.
* To achieve quality standards, clarify roles and responsibilities of team members.
* Determine and fix any potential quality problems.
* Establish a structure to manage and uphold project quality across the course of the project.

**Quality management plan**

* **Definition of Done:** When key objectives and goals of the project have been achieved and are approved by the key stakeholders.
* **Acceptance Criteria:** Requirements that the Rams E-Caf must satisfy to be approved by the product sponsor.
* **Continuous Integration:** A technique for regularly integrating code updates into a common repository to make sure the final product is always in a state that can be released.
* **Test-Driven Development:** The system would undergo extensive testing to make sure all its components were in perfect working order and that the code met the standards for the system's integration with live servers in Asia Pacific College.

This Quality Management Plan will, in general, offer a thorough structure for sustaining managing and sustaining project quality. It will guarantee ensure the project meets or exceeds all stakeholders' expectations, while simultaneously establishing a precise framework of procedures, instruments, and roles and responsibilities for locating and addressing any potential problems with quality. Everyone involved should be aware of this plan and their role in making it successful.

6.8.2. Quality Management Approach

The Rams E-Caf project's quality management plan will make use of an to ensure that the project meets or exceeds all stakeholders' expectations, agile and scrum quality standards. Providing high-quality products and services will be given priority in the strategy. satisfying consumer needs comes before adhering to strict procedures.

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, 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 project team Coderist will define and follow quality standards based on Agile and Scrum methodology and by the requests of the project sponsor given that it is aligned with the project goals.
2. **Quality planning** – To determine project needs and rank the most crucial features, the team will collaborate extensively with key stakeholders. To make sure that each iteration of the product offers value and complies with quality standards, the team will establish quality goals and a Product Backlog.
3. **Quality control** – This measures sprint progress reports to ensure that the product meets the defined requirements and quality goals. It would also identify defects, issues, and potential requests to the system.
4. **Quality Assurance** – A quality assurance program will be implemented to stop errors and problems before they start. The group will follow best practices and procedures to make sure the project is carried out in accordance with established principles and standards.
5. **Continuous Improvement** – The team will include recommendations for the next iteration of the project to improve on the Rams E-Caf project.
6. **Communication** – The team will maintain constant communication with the stakeholders, food concessionaires, customers, and project sponsor for them to be aware of the status of the project and provide feedback if needed.

The project team will apply Agile and Scrum techniques, such as user stories, sprints, and retrospectives, to make sure that quality is integrated throughout the project's lifecycle and meets the requirements of the project stakeholders as well as the organization's quality standards. As part of the project's lifetime, a risk management strategy will also be created to proactively identify and reduce any quality concerns.

The Rams E-Caf Quality Management Approach will place a strong priority on using an Agile and Scrum methodology to provide a high-quality product that satisfies client needs. To ensure that the project meets or beyond all quality objectives, the methodology will be adaptable and continually improved.

6.8.3. Quality Requirements/ Standards

Given that the quality management plan will include both the product and process quality requirements, Rams E-Caf will be fully operational, user-friendly, and compatible with a variety of devices that have internet connectivity and the most recent operating system.

**Requirements for product quality**

* Rams E-Caf 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 and training for the users/stakeholders.
* The project system would work with the clients’ requests and Asia Pacific College’s current technological infrastructure.
* The system working on different devices if the devices are connected to the internet.

**Requirements for ensuring quality of process.**

* To make sure the system complies with all technical requirements and standards, the development team will undertake an ongoing process of testing and quality assurance.
* The development team will use version control to make sure that any system alterations are properly documented, examined, and approved.
* The development team will regularly conduct sprint reviews to find and rapidly fix any quality problems.
* To ensure consistent system development, testing, and deployment, the development team will adhere to a standardized configuration management procedure.

**Compliance Demonstration**

* Before being made available to the client, Rams E-Caf will undergo testing and evaluation in accordance with the set quality standards and requirements.
* The development team will keep thorough records of all testing and quality assurance procedures, which will be provided to the client upon request.
* To make sure the system satisfies the client's requirements and expectations, the development team will run a formal acceptance test with them.
* To guarantee that the system maintains its compliance with the defined quality standards throughout time, the development team will offer continuous support and maintenance services.

**Continual Improvement**

The project team Coderist will be recommending features or functions that could be added to the Rams E-Caf for the next iteration to improve on it. The project team will also train a representative of the ITRO to be able to handle, update, and fix issues in the Rams E-Caf moving forward.

6.8.4. Quality Assurance

To guarantee that quality is attained through teamwork and ongoing improvement, the Rams E-Caf QA process will be merged with the Agile and Scrum methodology. The following actions will be taken:

* Defining quality standards – In order to create and record the project's quality criteria in the Quality Management Plan, the project team will work with stakeholders. All stakeholders will be made aware of the quality standards.
* Quality metrics – The project team will use quality metrics to track and report on the project's performance against 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.
  + Root Cause Analysis shows the percentage of issues that have been resolved at the root cause level.
* 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 Rams E-Caf 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 to improve and modify changes for improvement of the system.

To guarantee that the project delivers a high-quality result, the quality assurance metrics will be actively watched, tracked, and reported on a regular basis. Any infractions of these standards will be reviewed right away and fixed. The software application that will be used to gather data on these criteria will send regular reports to the project team. The process for ensuring quality will also be regularly examined to identify and implement changes. The Rams E-Caf must meet the highest standards possible, and all quality assurance indicators must be continuously monitored to guarantee the project's success.

6.8.5. 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 Rams E-Caf project will involve the following steps:

* Continuous testing and feedback: The project team will carry out continuous testing to find flaws and make sure the product satisfies consumer expectations. Wherever it is practical, the testing will be automated.
* User Acceptance Testing (UAT): A sample of the system's users will test it to see if it meets their needs and expectations. At the conclusion of each sprint, the UAT will be conducted, and any adjustments needed will be made in response to user feedback.
* Compatibility Testing: To ensure compatibility and address any issues that may come up when the system is utilized in diverse contexts, the Rams E-Caf will be tested on a variety of platforms, including mobile devices and browsers.
* Continuous Monitoring: Following deployment, the project team will assess the Rams E-Caf’s performance. This will entail monitoring crucial performance indicators including customer satisfaction, response speed, and system uptime. This will give crucial data to support any system improvements and help find any issues 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 monitor and record the results of the quality control process, which will be used to assess the success of any corrective measures that are implemented as well as the project's progress.

In conclusion, the quality control process for Rams E-Caf 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.

6.8.6. Quality Control Measurements

The Agile and Scrum techniques will be employed to promote continuous inspection and modification throughout the project lifecycle for the Rams E-Caf 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.

Real-time quality control measurements will be tracked using dashboards and other visual tools so that all team members can easily access and understand the data. The team will be able to quickly react and make the necessary adjustments thanks to the dashboards, which will highlight patterns and issue areas. During routine team reviews, such as sprint reviews and retrospectives, the quality control metrics will be examined, and the approach will be modified as necessary. The project team will identify possible areas for improvement together and address any issues they uncover.

In conclusion, the Rams E-Caf project will employ Scrum and Agile methodologies to put into practice a cooperative and flexible quality control strategy. The team will routinely evaluate the product's quality and make the necessary modifications to ensure that it meets the requirements and needs. All quality control metrics will be gathered and tracked in real-time on a single platform. The group will work together to solve any issues and put any needed adjustments into place.