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Project Management

Assignment 17

4/3/2024

**Quality Management Plan**

**New Solutions Enterprise New Product Launch**

**New Solutions Enterprise**

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**4/3/2024**

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# Introduction

The Quality Management Plan for the New Solutions Enterprise New Product Launch project will establish the activities, processes, and procedures for ensuring a quality product upon the conclusion of the project. The purpose of this plan is to:

* Ensure quality is planned
* Define how quality will be managed
* Define quality assurance activities
* Define quality control activities
* Define acceptable quality standards

# Quality Management Approach

For the NSE project, the quality management approach will ensure that both product and process quality are prioritized throughout the project's life cycle. Quality planning will be necessary to prevent rework, waste, and delays, aligning with organizational standards and criteria for software products.

Product quality will adhere to the company's existing standards and criteria for its software product family, striving to meet established quality standards and ensure customer satisfaction. Process quality will focus on establishing standards for project deliverable manufacturing processes, ensuring adherence to organizational standards for successful product delivery.

The project team will collaborate with a quality group to define and document organizational and project-specific quality standards, which will be integrated into the NSE Project Plan and transitioned to operations upon project completion. Metrics will be established to measure quality throughout the project life cycle, covering aspects such as schedule, resources, cost, process performance, product performance, and customer satisfaction.

Regarding integration and user acceptance testing, these phases will play a crucial role in validating both product and process quality. Integration testing ensures that different components of the system work together seamlessly, while user acceptance testing evaluates whether the product meets user requirements and expectations. Both testing phases contribute to overall quality assurance by identifying and resolving any defects or discrepancies before product deployment. Therefore, quality management activities during integration and user acceptance testing will follow rigorous testing protocols and adherence to quality standards to ensure the final product meets quality expectations.

# Quality Requirements / Standards

***Product Quality:***

The NSE project team, in collaboration with the quality group, will establish product quality standards and requirements. These standards will primarily align with the documented standards provided by the company for its software products. Additionally, any product-specific quality standards identified during the project will undergo review by the quality group for potential incorporation into organizational documentation. To accommodate the use of newly released software tools, any newly identified quality standards will be documented in the NSE project plan and communicated to all stakeholders.

***Process Quality:***

The NSE project team and quality group will jointly define process quality standards and requirements. While many of these standards will draw from existing company process standards and software testing methods, it is expected that there may be unique requirements specific to the NSE project. The project team will collaborate with the quality group to establish these additional standards, ensuring they are documented and integrated into both organizational process documents and the NSE project plan. Clear communication of these standards will be delivered to all project stakeholders.

# Quality Assurance

This section outlines the quality assurance approach for the NSE project, focusing on ensuring the quality of both product development processes and deliverables. An iterative quality process will be employed throughout the project lifecycle to measure process metrics, analyze data, and drive continuous improvement.

The NSE Project Manager, in collaboration with the project team, will conduct assessments at planned intervals to verify the correct implementation and execution of project processes. Key performance metrics relevant to software development, such as code review coverage, defect density, and user story completion rate, will be monitored regularly. The acceptable process standards for these metrics are aligned with industry best practices and organizational standards.

|  |  |  |  |
| --- | --- | --- | --- |
| **Process Action** | **Acceptable Process Standards** | **Process Phase** | **Assessment Interval** |
| Code Review Coverage | 90% | Development | Weekly |
| Defect Density | ≤ 0.5 defects/KLOC | Testing | Bi-weekly |
| User Story Completion | ≥ 80% | Sprint Planning | Monthly |

These values are typical quality assurance metrics used for related software development projects. Code review coverage will be used to assure code quality by ensuring that a certain percentage of the codebase is reviewed regularly. To assure the effectiveness of testing efforts, defect density will be used to measure the number of defects per thousand lines of code (KLOC) found during testing. To provide insight into the development team’s progress and productivity, user story completion will be used, which is a rate that tracks the percentage of user stories completed during each sprint planning phase within the development process.

The quality manager will oversee day-to-day quality management activities, including weekly process audits, monitoring of process performance metrics, and ensuring compliance with project and organizational standards. Any identified discrepancies will be reviewed with the Project Manager for resolution.

Regularly occurring project, management, and document reviews will be scheduled by the Project Manager. These reviews will include an agenda item dedicated to assessing project processes, addressing any discrepancies or audit findings, and discussing process improvement initiatives.

Process improvement is integral to quality assurance. Reviews, findings, and assessments will inform ongoing process improvement efforts aimed at enhancing product quality. All process improvements will be documented, implemented, and communicated to stakeholders as changes occur.

# Quality Control

The quality control of the NSE project focuses primarily on the NSE software product and the acceptable standards and performance. The quality performance standards for the NSE Project are in accordance with the organizational standards of performance for its software products. The table below illustrates all performance and physical quality standards for the NSE Product:

|  |  |  |  |
| --- | --- | --- | --- |
| **Product** | **Physical/Performance Standards** | **Quality Assessment Activities** | **Assessment Intervals** |
| Data Analytics Platform | 99% uptime | Automated and manual testing | Daily |
| Data Analytics Platform | Response time < 500ms | Performance monitoring | Hourly |
| Data Analytics Platform | Maximum 0.1% defect rate | Code reviews and testing | Weekly |

The project team will conduct regular testing and evaluation activities to ensure the NSE product meets defined quality standards. The Quality Group will oversee these activities and ensure compliance with established standards.

The Project Manager will schedule regularly occurring project, management, and document reviews. In these reviews, an agenda item will include a review of the product, any discrepancies and/or audit findings from the quality manager, and a discussion on product improvement initiatives.

Ensuring that all performance standards are met is crucial to the project's success. By meeting these standards, the NSE Project Team will guarantee customer satisfaction and alignment with budget and resource allocations.

# Quality Control Measurements

AThe NSE project product and its processes must be measured and fall within the established standards and tolerances. The below logs will be used by the project and quality teams in conducting these measurements and will be maintained for use as supporting documentation for the project’s acceptance.

***Quality Assurance Log***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Trial # | Date | Process Measured | Required Value | Actual Measured | Acceptable? (Y/N) | Recommendation | Date Resolved |
| 1 | 2024-09-01 | Code Review Coverage | 90% | 92% | Y | None |  |
| 2 | 2024-09-17 | Defect Density | ≤ 0.5 defects/KLOC | 0.4 defects/KLOC | Y | None |  |
| 3 | 2024-09-24 | User Story Completion | ≥ 80% | 85% | Y | None |  |

***Quality Control Log***

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Cable # | Date | Item Measured | Required Value | Actual Measured | Acceptable? (Y/N) | Recommendation | Date Resolved |
| 1 | 2024-09-01 | Uptime | 99% uptime | 98% uptime | N | Investigate server issues | 2024-09-30 |
| 2 | 2024-09-17 | Response Time | < 500ms | 450ms | Y | None |  |
| 3 | 2024-09-24 | Defect Rate | ≤ 0.1 defects/KLOC | 0.08 defects/KLOC | Y | None |  |

**Sponsor Acceptance**

Approved by the Project Sponsor:

Date:

John Doe

Vice President

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