

Quality Management

The New River Systems (NRS) team's total quality management approach will involve processes required to ensure that the project will meet or exceed customer requirements and expectations. It will include the process activities that determine the quality policy, objectives and responsibilities as recommended by the NRS Quality Program and Project Management Plan.

The Goals of NRS' Quality Program are:

- Plan for, assign and monitor quality assurance functions
- Ensure processes and products adhere to established customer standards and methods.
- Inform project teams and customer management of the activities and results utilizing balanced scorecards and analyses.
- Inform senior management with special emphasis on those products and activities that do not meet quality standards.
- Specify and document the QA policy that guides the QA function(s).
- There will be an organized QA group with specific responsibilities as outlined in the QA policy.
- The QA group receives training to enable them to perform their job.
- There will be a QA plan for the project and for each task.
- The QA team will perform QA activities against a planned schedule.
- The QA team is involved in all aspects of a project from planning through execution.
- The QA team reports on the results of their activities and monitors corrective actions.
- The PM will report metrics based on QA activities.

Quality Planning

Quality planning involves identifying the standards, service level agreements and quality activities which will apply to the project or task, and determining how to incorporate these factors into the Project Plan, how to measure and track them and how to satisfy them. Quality planning will be performed regularly and in parallel with the other project planning processes and incorporated into the overall project plan.

The scope statement and service level agreements will be an important aspect of quality planning since they will document project objectives, project description, major deliverables and success criteria which define the minimum and important project requirements. Technical issues and risks will be incorporated and analyzed to judge their possible affect on the quality management processes. Other considerations that may have an affect on quality planning are standards, regulations, and customer policies.

Contents

The major processes are described in the following subsections and are included in NRS' approach to Quality Management. Each of the quality processes or activities may involve one or more individuals or groups of individuals based on the needs of the project.

QUALITY MANAGEMENT

QUALITY PLANNING

QUALITY ASSURANCE

QUALITY CONTROL

QUALITY IMPROVEMENT

The Quality Assurance Plan (QAP) will describe how the project management team will implement the quality policy processes and activities and depending on the task may be incorporated into the Project Plan and communicated to all stakeholders and project teams. The QAP will describe the organizational structure, responsibilities, procedures, processes and resources needed to implement quality management. The QAP provides input to the overall Management Plan and will address quality assurance, quality control and quality improvement for the project.

Quality Assurance

NRS Quality Assurance processes will assure the implementation of the planned and methodical activities contained in the Quality Assurance Plan that will satisfy customer requirements and provide confidence that the project will meet or exceed quality standards. Some of the activities the NRS Team will include to meet quality assurance goals are; structured walk-throughs (internal peer reviews), in-stage assessments (in-process independent reviews), thorough testing of work products, strict implementation of configuration management procedures and risk monitoring and assessment at all levels of management and development.

The Quality Assurance plan will include an overarching plan that is customized for each task. The possible tasks under the contract are so varied that a single, specific plan is impossible. Therefore NRS will establish a quality plan for the overall contract and create specific plans for each major task. These specific plans will document the particular standards required for the task.

The Quality Plan will establish general guidelines, review points, reporting methods and channels. Using the Quality Plan, the Quality Assurance function will audit and report to the PM on the various tasks. As applicable, each task team will establish a quality assurance function for the task. Each task QA will report to the Program Manager/customer Point of Contact for the task and to the contract QA designate.

NRS recognizes that the Government will review, test, and approve all developed application changes, systems and software prior to implementation. However, NRS' system and software engineering and development Quality Assurance and Quality Control objectives are developed to ensure that all of the Government's QA factors have been met before releasing the system for Government acceptance. This will ensure that the Government's time and effort performing QA/QC functions to arrive at a point where the applications and systems are approved is held to an absolute minimum.

Quality Control

NRS' Quality control practices involve measuring and monitoring specific project results to determine if they comply with project specifications and quality standards, and identify ways to eliminate causes of defects. The majority of these measurements will be inputs to the NRS Balanced Scorecard.

The results of project quality measurements will be reviewed regularly per the established checkpoints and milestones to gauge the quality of the work products and the overall project efficiency. Balanced Scorecards metrics and measurements will be identified, defined and described in the Quality Assur-

ance Plan and Service Level Agreements. Our Balanced Scorecard Methodology takes into account that meeting a planned schedule date in itself is not a measure of management quality. Checklists in addition to the standard QA checklists may be developed to verify that a set of required steps have been performed for each task, deliverable and/or project.

Results of the Balanced Scorecard address Customer Satisfaction, Infrastructure, Process and Cost Savings. The project management team will have a working knowledge of the NRS quality control process to facilitate the evaluation of quality control outputs. Additional comparisons of management and product results will be made with the planned and expected results identified in the Quality Assurance Plan.

NRS' Quality Assessment techniques may range from peer reviews to independent audits as a means to determine if the results conform to requirements. All variances will be analyzed for determination of causes and unidentified risks to the project. When variances exist, action will be taken to bring the project into compliance to requirements. In addition, trend analysis will be conducted to monitor technical performance (mean to defect ratio), and cost and schedule performance (determine activities completed with significant variances). These analyses will act as predictors to provide insight to potential outcomes of the project.