



QUALITY CONTROL/ASSURANCE PLAN

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1.0 Introduction

Our Quality Program is based on industry standard quality management processes including those found within the International Organization for Standardization (ISO) 9000 series of standards. Our quality management approach, graphically depicted in Figure 1-1, is based on continuous communication with our customer. It is used consistently and with great success across all of our Government contracts. Our approach demands full contractor participation with all regular and ad hoc performance reporting and regular coordination with involved stakeholders to quickly adjust performance, when adjustment is required. As required, we will attend and actively participate in performance evaluation meetings to collect positive and negative feedback and to rapidly identify methods of improving our performance.

This plan outlines the key deliverables and processes, quality standards, QC and QA activities, quality management roles and responsibilities, management tools, and reporting methods we will use to support this program. This plan is one part of our integrated PMA and is specifically focused on Project Quality Management. Figure 1-2 depicts our PMA.



Figure 1-1: Quality Program. *QC-QA based process designed to cooperatively deliver quality products and services.*

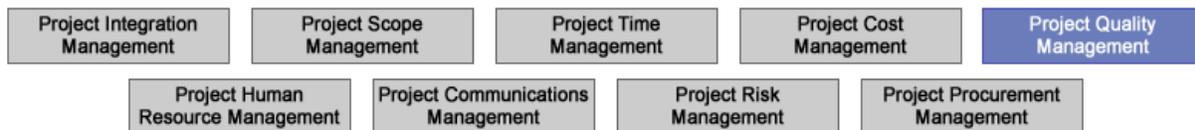


Figure 1-2: The Orion Solutions Team Program Management Architecture. *Our PMA is designed around three distinct activities: Quality Planning, Quality Assurance, and Quality Control.*

2.0 Purpose

The purpose of this plan is to establish operational methodologies and procedures for QC. All levels of contract staff apply these methodologies throughout every phase of design, development, and delivery of products and services. This plan defines how we conduct evaluations and follow through on the results to ensure timely, effective resolution of QC problems. The role of QC in design and delivery is three-fold: provide proactive QC actions that ensure we develop and deliver a quality product; monitor adherence to corporate quality standards and contract requirements; and create a process for continuous improvement.

3.0 Key Deliverables and Processes

We will apply this Quality Management Plan (QMP) to the entire project and will report the successful delivery of program requirements by objectively measuring performance and quality of delivered services. Our plan includes identification, monitoring, and measuring of key

deliverables to establish success metrics. Once identified, we implement our QA process to ensure the consistent delivery of services according to predefined performance and quality standards.

3.1 Deliverables/Schedule

We identify the key deliverables associated with the subject program. Each of these deliverables will be monitored according to the tailored plan, and our performance will be documented during routine program reporting. The objective review of performance and quality metrics will ensure customer satisfaction and consistent delivery of quality products and services to the end-user.

3.2 Quality Assurance Process

Figure 3.2-1 highlights our QA process, which ensures all data and deliverables are accurate, operationally and instructionally effective, suitable for their intended use, and consistent with established directives.

Product Quality Assurance Process

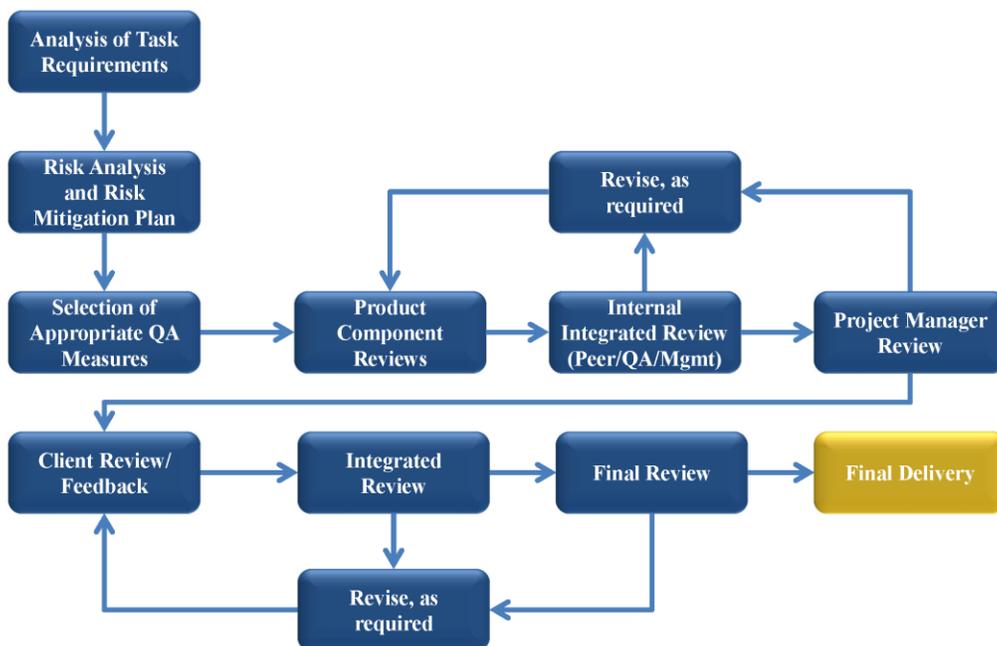


Figure 3.2-1: QA Process. Our QA Process supports deliberate use of quality procedures during development and delivery of products and services, maximizing internal and external reviews to ensure delivery of quality products.

4.0 Quality Standards

We use formal and informal methods to assess performance against identified deliverables. Each deliverable or program objective is defined within our QMP to include success factors, success criteria, and the metrics we will use to measure performance. Objective measurements provide hard evidence of delivery success, indicating acceptable or more than acceptable performance. Subjective measurements may also be used and will typically be used to measure the quality of

products or services provided to the end-user community. As an example, student surveys and course evaluations will serve as the subjective input while providing instruction.

We will incorporate our standard approach toward performance and quality management to most appropriately measure project/support success, without increasing management burdens to unacceptable levels. Our minimalist approach ensures customer satisfaction by measuring key indicators of success. We also use simplified surveillance methods to evaluate contract performance, where appropriate. Our surveillance methods include:

- Random Inspection – Non-routine, ad hoc review of defined project variables to assess compliance using a representative set of delivery objectives
- Periodic Monitoring – Routine sampling of specified project variables to ensure delivery consistency and product quality
- 100% Inspection – Monthly review of specified project variables to compare actual performance to predefined performance criteria

We analyze and interpret performance variances to assess root causes for corrective actions and related improvement strategies with emphasis on identifying emerging trends that permit early intervention. Our analysis methods include the use of charting, histograms, and other statistical process control tools to identify variances. This approach eliminates special cause issues and minimizes common cause issues through risk mitigation in order to improve overall quality.

The data is correlated as it is derived from benchmark metrics to determine patterns or trends affecting program and project outcomes. We perform correlations to identify trends and opportunities for continuous improvement and report results of measurable factors in monthly status reporting, unless an immediate reporting need is identified, in which case it is reported immediately. The contract management team routinely reviews results of ongoing evaluations and analyses. The program is then adjusted based on stakeholder buy-in and approval.

4.1 Quality Factors

We will identify relevant deliverable quality factors, which will be outlined in table format. The output of identified deliverables will be reviewed using our quality standards approach and measured consistently to assess ongoing contract performance. The results of all assessments will be included in the MSR's.

4.2 Quality Criteria

We will identify and document relevant deliverable quality criteria which will be outlined in table format. Measurement of deliverable performance and/or quality criteria and subsequent assessments against defined metrics will determine the overall effectiveness of the program. The output of identified deliverables will be reviewed using our quality standards approach and measured consistently to assess ongoing contract performance. The results of all assessments will be included in the MSR's.

4.3 Quality Metrics

We will identify relevant deliverable quality metrics, which will be outlined in table format. Collection and analysis against the defined metrics will establish our team's performance level with reference to agreed performance and quality criteria. The output of identified deliverables

will be reviewed using our quality standards approach and measured consistently to assess ongoing contract performance. The results of all assessments will be included in the MSR's.

5.0 QC and QA Activities

Our methodology facilitates high quality standards and continuous improvement that begins with review and assessment of performance, as defined within the approved set of quality standards. Our PM will monitor performance and adapt our approach if/when modifications are required. Specifically, we will closely monitor the following areas:

- Technical performance and participant satisfaction
- Program and project schedule performance
- Program and project cost performance

At the project level, we utilize quality checklists to continuously monitor the health and quality of each program and project. These checklists focus on the key deliverables that are completed during a particular stage of work. At the process level, we use specific checklists to verify employees are thinking about and executing preferred tactics.

Where and when appropriate, we may also use a Client Quality Management Assessment (CQMA) to proactively predict and manage potential risks and problems and monitor the fulfillment of Government requirements as assessed by client satisfaction and feedback. The primary goal of the CQMA is to verify the project progresses in accordance with Government specifications and expectations, and is consistently on-time and within budget.

To ensure and validate quality in both technical and contractual performance, we establish Project Change Control practices at the beginning of the requirements-gathering phase, following project approval, and then revisit the results and recommendations throughout the project life cycle. Our approach uses the following four elements of QA:

Identification, Review, Audit, and Inspection: The PM uses two methods to identify deficiencies. The first method uses specific, repeated review techniques to ensure contract requirements are being met. The second method is more in-depth and involves conducting random audits of work performed, ensuring that products and processes are consistent with the requirements of the contract. All deficiency responses include identification of the cause of the deficiency.

Analysis of Reviews, Audits, and Inspections: Review, audit, and inspection of data provides important information for identifying trends and determining areas for process improvement and tracking of action item resolution. The PM analyzes the inspection data and metrics requirements, as required, and provides results to organizational leadership and the Government PM in order to assess appropriate follow-on actions.

Problem Resolution and Corrective Actions: Even with continuous improvement and an effective QC/QA inspection system, unpredictable challenges may occur. When a problem occurs, the project member who discovers the problem will: (a) define the problem; (b) find the cause by going back as many steps in the process as needed; (c) identify a solution by determining what materials, procedures, or steps will solve the problem and prevent it from happening again, or escalate the problem to the next appropriate level if the individual cannot solve the problem; (d) make the necessary changes before the problem affects the customer; (e)

verify the corrective action to prevent the problem from reoccurring; and (f) document the problem for future analysis. This dynamic process empowers employees and teammates to promptly take appropriate corrective action to protect and optimize resources.

Tracking, Monitoring, Documenting, and Reporting: We collect, store and retrieve project information to enable continuous process improvement (CPI). We use metrics to (a) monitor daily processes for trends and causes; (b) plan for and implement QC; (c) identify potential performance deficiencies; (d) improve scheduling and project support; and (e) mitigate risk and reduce costs.

6.0 Roles and Responsibilities

6.1 Contractor

6.1.1 Performance Management

The QC program covered by this plan identifies the policies and program-related procedures for ensuring the quality of all program deliverables. The QC program is led by our PM and includes participation of key and non-key personnel.

6.1.2 Quality Management

The organization and management tasks necessary to implement and maintain the QMP are the responsibility of our QC Manager, which is an additional responsibility of our PM. QC Manager activities include participation in program planning as part of QC Planning and Delivery activities. The QC Manager uses proactive reporting, communication, and other quality management tools to ensure contractor efforts effectively combine technical disciplines to deliver products and services that meet the standards required by the contract. The tools and techniques of the QCP are for collection and dissemination of review and audit data to appropriate management personnel.

6.1.3 Quality Control Tasks

A key part of our overall quality methodology is to use a review process. This proven methodology enhances quality by improving predictability and establishing well-defined phases for reviewing and determining that the products and services offered meet the Government's needs.

We ensure integrated management processes are used across the organization to ensure problems are anticipated and either prevented or mitigated. Additionally, data is collected and used in all defined processes and systematically shared across projects. Our processes offer the Government the following benefits:

- **Predictability:** Aggressive pursuit of superior results while driving continuous improvement
- **Control:** Reduces the variability of risks and results
- **Effectiveness:** Ensures cost controls, performance and quality as confirmed by empirical data

6.2 Government

Government leadership and involved stakeholders participate in QA activities, which are designed to complement associated contractor QC mechanisms. The Government's QASP defines methods of monitoring performance and the performance criteria associated with

contractor activities. In coordination with the contractor QC Manager, Government representatives must participate in routine and ad hoc performance management activities, including routine analysis and/or audit of contract reporting, regular task area and/or event evaluations, and all other program-related project, human resources, and financial reporting products. Additionally, and as required, the Government will participate in IPR meetings and other performance-focused meetings to share results of analysis, audits, and other evaluations with the contractor.

When required, the Government will identify and define criteria for reporting and tracking resolution of any contractor responsibilities that are trending outside of expected performance thresholds for any task area. The contractor will assist Government QA personnel with monitoring and reporting associated QA activities in its regular reporting products.

6.3 Quality Organization

The QC Manager leads the QC organization, maintains its processes, and directly reports the status of QC efforts to Government stakeholders and senior corporate management personnel. This approach ensures all quality initiatives are tracked closely and if negative trends emerge, they immediately gain high levels of customer and contractor visibility.

Our approach to QC is focused on three major activities: (1) monitoring performance metrics for emerging trends and areas for improvement, which includes student surveys, course learning assessment, and benchmark metrics; (2) routine and ongoing assessments of performance against benchmark metrics; and (3) reporting and decision support tools designed to connect corporate management and Government program management to communicate the results.

6.3.1 Quality Control Manager

The QC Manager is responsible for general/technical administration of the project and ensures proper surveillance of contract performance. The QC Manager will have the responsibility for: (1) completing QA monitoring forms used to document the evaluation of work performance; (2) developing and analyzing statistical data and product specifications to determine present standards and establish proposed quality and learning efficacy of finished courseware and services; and (3) formulating and maintaining QC objectives and coordinating objectives with processes and procedures in cooperation with project managers to maximize achievement of performance objectives and assure service levels are exceeded. This role can be a member of the project team, independent of the project team, or a member of the program's leadership. For the ADLP/LDP Program, our PM will perform the duties of QC Manager.

6.3.2 Program Manager

The PM will achieve or exceed performance objectives, expected outcomes, and service levels in conformance with the contract while executing contract administration and cost control and resolving any differences between the observations documented by contract employees and/or Government representatives.

Our PM has primary responsibility for the overall coordination and management of all work required under the contract. The PM is the primary contractor POC and manages all work performed under this contract.

7.0 Tools

We use a variety of tools to manage our Quality Program, most of which are designed to increase the occurrence and productivity of Government/contractor communication. Our experience shows most issues or potential issues can be avoided through program transparency and routine collaboration with our customer.

7.1 Internal Review

We hold two types of internal reviews. The first type of internal review includes technical reviews such as peer reviews and walkthroughs conducted by the PM.

The second is an overall performance review. Our PM reviews each service or product and reports on performance within the MSR. Changes in policies and procedures will be documented by the PM, inserted into the QMP, and provided to the respective Government PM. As required, we will support performance review meetings, including development of a meeting agenda and distribution of meeting minutes. Meeting minutes identify all action items, completion dates, and assigned responsibilities.

7.2 Communication

We achieve high levels of user satisfaction by maintaining regular and productive communication with our customers, team partners, and program stakeholders. IPRs and reports are the most widely used communication method, but other methods are sometimes utilized (e.g., ad hoc meetings, telephone calls, or emails) to coordinate activities in near real-time.

Our approach is to maintain an open and transparent two-way interaction with the Government to discuss contract performance, issues, schedules, and customer support requirements. Regular communication with the Government, formal and informal, ensures the Government has access to our most current quality data.

7.3 Performance Evaluations

We provide the Government with the quality data and information necessary to monitor a program of this scope and importance. All relevant contract information is provided to the Government through the MSR, and our PM is readily available to participate in program reviews.

7.4 Inspections and Records

We store QC records so they may be used in reviews or as historical data for the program. Records may be used to develop trends and to continuously improve performance and effectiveness of contractor processes and measures.

7.5 Contract Checklist

We utilize Phase-In and Phase-Out checklists of activities and deliverables required of the contract. The checklists are also used during end-of-contract management reviews. The end-of-contract management review ensures all required program deliverables were completed and positions the contractor to phase-out without unnecessarily increasing program risk.