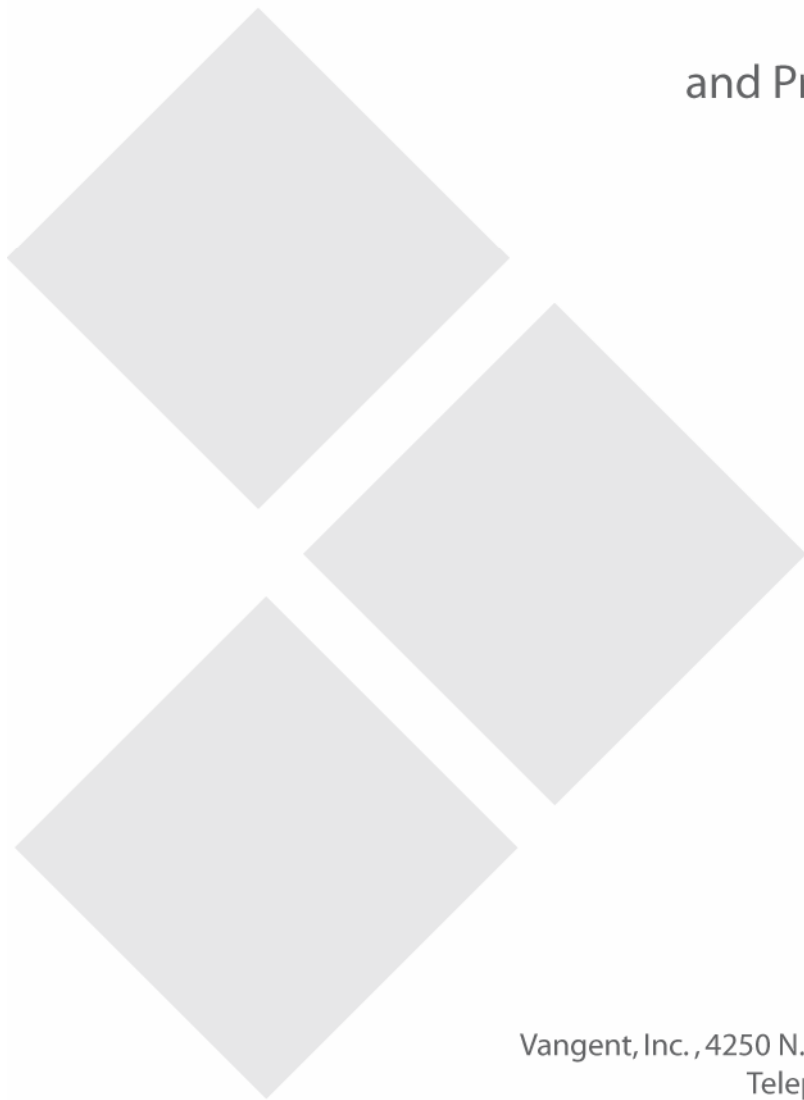




# Corporate Quality Control Plan

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## 1.0 Introduction

The Vangent Quality Control Plan (QCP) is a pro-active program designed to tailor to specific, individual program requirements. This plan consists of internal management practices and controls for monitoring and directing Vangent personnel in the process of defining, designing, developing, implementing, deploying, and evaluating contract deliverables.

## 2.0 Purpose

The purpose of this plan is to establish operational methodologies and procedures for Quality Control. All levels of Vangent contract staff apply these methodologies through every phase of design, development, and fielding. This plan defines how we conduct evaluations and follow through on their results to ensure timely, effective resolution of Quality Control problems. This QCP provides corporate support to the Seaport-e program. The role of Quality Control in Vangent development is two-fold:

- Proactive Quality Control actions that ensure the Vangent Team develops a quality product.
- Monitor adherence to Vangent quality standards and contract requirements.

This Quality Control Plan (QCP) sets requirements that ensure Vangent delivers high quality products and services. Specific Quality Control procedures are included in associated reviews and audits defined herein. This QCP is reviewed annually, updated, expanded, and refined. This QCP accomplishes the following:

- It provides the basis for an effective and efficient Quality Control program for the purpose of securing the required degree of quality in all Vangent products and services.
- It assigns Quality Control responsibilities for the Vangent organization and establishes Quality Control objectives and criteria.
- It establishes policies and procedures for internal review processes and metrics for deliverables.
- It sets forth the prescribed policies, procedures, and guidelines for providing quality products and service to all current and future Vangent programs.
- It provides a framework for development of specific program related QC plans.

## 3.0 Scope

All Vangent personnel working on Vangent projects comply with this plan and specific program QC plans (which have precedence). This plan applies to all project deliverables. Project Vangent Corporate Quality Control Plan deliverable items include (1) documentation in accordance with contract, (2) hardware and software elements integrated into a system installed and maintained as specified in contracts.

## 4.0 Definition

Quality Control is the structure and control necessary to provide adequate confidence products and services totally conform to established customer requirements.

## 5.0 Relationship to Other Plans

The corporate Quality Control program is covered by this QCP. The QCP identifies the policies and program related procedures for ensuring the required quality of all deliverables for Vangent programs. Specific QC plans may provide more detail as required. This QCP is consistent with the following documents:

- American National Standard: Quality Systems Model for Quality Control in Design, Development, Production, Installation, and Servicing (ANSI/ISO/ASQC Q9001-1994)
- ISO 9000 Standard Series
- Vangent Final Technical Proposal

### **5.1 QC Plan Description**

The following basic format is recommended for Vangent specific QC plans in conjunction with meeting RFP and specific program related requirements.

- 1.0 Introduction
- 2.0 Purpose
- 3.0 Acronyms
- 4.0 References
- 5.0 Scope
- 6.0 Definition
- 7.0 Relationship to Other Plans
  - 7.1 Description
  - 7.2 Specifications
  - 7.3 Standards
  - 7.4 Drawings
  - 7.5 Other Publications
- 8.0 Quality Control Management
  - 8.1 Overview
  - 8.2 Quality Organization
  - 8.3 Quality Control Tasks
  - 8.4 Quality Activities
    - 8.4.1 Internal Review Processes
    - 8.4.2 Benchmark Metrics
    - 8.4.3 Communications with the Government
    - 8.4.4 Corrective Actions / Program Improvement
    - 8.4.5 Inspections and Records
    - 8.4.6 Program Management
    - 8.4.7 Points of Contact and On-Site Management
    - 8.4.8 In-Progress Reviews
    - 8.4.9 Semi-Annual Performance Evaluations

### **5.2 Specifications (may not be required)**

### **5.3 Standards (may not be required)**

This paragraph identifies all the specifications that apply to the QCP described in this document. The following specifications apply:

- ISO 9000 Standard Series.
- Other standards as may be required by Seaport-e RFI's

### **5.4 Drawings**

This paragraph identifies all the drawings that apply to the QCP described in this document. As such, this document makes no reference to any drawings. Items may be required by Seaport-e task orders.

## 5.5 Other Publications

This paragraph identifies all the other publications that apply to the QCP described in this document.

- Seaport-e task order specific

## 6.0 Quality Control Management (the following section applies as required and specified in individual Seaport-e task orders)

### 6.1 Overview

The organization and management tasks necessary to implement and maintain the Quality Control Program are the responsibility of the Vangent Quality Control Manager. The Quality Control activities include participation in program planning as part of the Vangent Quality Control Implementation Team. The following subsections define the actions to be taken by Quality Control personnel to ensure corporate activities effectively combine technical disciplines to deliver products and services that meet the standards required by the contract. The tools and techniques of the Quality Control program are for collection and dissemination of review and audit data to appropriate management personnel.

The activities that fall under the function of Quality Control include defining task plans and schedules necessary to accomplish the Quality Control tasks described in program proposals. The Vangent organizational structure establishes clear lines of authority and responsibility for administrative, technical, and supporting tasks defined and scheduled for the program. The Vangent project organization for each program ensures that personnel performing Quality Control function have the authority and responsibility to identify and evaluate problems and recommend their solutions. As other management plans are updated in later releases of the Vangent program, this document will be modified to reflect such changes.

### 6.2 Quality Organization

The Quality Control Manager leads the Company's Quality Control organization and processes. The Program specific Quality Control Manager reports directly to the Program Manager and Senior Management, and be independent of the rest of the program organization. For Seaport-e task orders, specific QA responsibilities will be outlined.

A Software Quality Assurance (SQA) Manager (if required) monitors software quality assurance. As with the Quality Control Manager, the SQA Manager will be independent of the program organization. In keeping with Vangent practice, the SQA Manager will report to the Program Manager and Senior Management.

Our approach to quality control is focused on four major activities:

- Monitoring performance metrics daily for emerging trends and areas for improvement-this includes participant surveys, supervisor survey data, and key benchmark metrics
- Conducting regularly scheduled participant satisfaction surveys to obtain an accurate and current understanding of customer satisfaction with programs and services. This is critical to ensure we hear the voice of the customer as we continue to improve and expand the Vangent offerings.
- Performing ongoing annual assessments of education programs against quality benchmark metrics and best practices.
- Providing access to performance data on-line, including QCP reporting and decision support tools to Vangent management and customer/government program management to communicate the results of continuous program monitoring.

### 6.3 Quality Control Tasks

A key part of our overall quality methodology is use of the Phase Review System (PRS). This proven methodology enhances quality by improving predictability and establishing well-defined phases for reviewing and determining that the services offered meet the customer's needs.

Vangent ensures integrated management and engineering processes are used across the organization, and problems are anticipated and prevented, or, at a minimum, their impacts are minimized. New technologies are evaluated on a qualitative basis. Additionally, data is collected and used in all defined processes and systematically shared across projects. Our processes offer customers three primary quality benefits:

- **Predictability**—limiting the difference between targeted results and actual results ensures that we deliver the agreed-upon system with the agreed-upon functionality at the agreed-upon price.
- **Control**—significantly reduces the variability of results.
- **Effectiveness**—decreases costs and development time while increasing productivity and quality.

### 6.4 Quality Activities

The Implementation Team, led by the Quality Control Manager, develops and refines metrics to monitor our performance in these five service areas:

- Vangent Performance
- Program/project schedule
- Program/project cost
- Program Management
- Customer Satisfaction

This section describes the internal review processes and metrics that form the core of the Quality Control approach.

#### 6.4.1 Internal Review Processes for Specific Programs

The Implementation Team holds two types of internal reviews. The first type of internal review includes technical reviews such as technical peer reviews, walk-throughs, and tests, conducted by the Program Manager.

The second is an overall performance review, chaired by the Program Manager, with the management team and subcontract partners, to review each service area. The Quality Control Manager also reports on performance. Changes in policies and procedures will be documented by the Quality Control Manager, inserted into the QCP, and provided to the respective customer/government program manager. The Vangent Program Manager will prepare and distribute a performance review agenda. The agenda will include the following standard items:

- Overall status of services and capabilities and review of previous internal performance review action items.
- Specific program related services (emerging trends, program expansion).
- Program management (metrics, corrective action status, progress in meeting key milestones, including program status and expansion initiatives).

We schedule the performance review meeting monthly (or as specified by the government if more frequent), and we publish the minutes. These minutes identify all action items, the associated completion dates, and assigned responsibilities.

#### 6.4.2 Benchmark Metrics

To develop benchmark metrics, the Vangent Team draws upon the collaborative expertise and capabilities of all member companies of our Team. These metrics and metrics from specific programs form a set of benchmark measures for the technical aspects of the program. Specific relevant metrics/measures will be provided via the Seaport-e task order.

Vangent establishes a sampling strategy by selecting a percentage of related reports. Based on the results of this activity, we adjust the sampling plan accordingly. If the quality is of an acceptable level, we reduce the sample size. If, however, the quality drops below an acceptable level, we increase the sample size. We consult with the customer/government Program Manager regarding any decrease or increase in sample size.

Specific Seaport-e task orders will address relevant metrics. Shown below are sample metrics for a sample training delivery program. We will track and monitor sample metrics as shown below in Figure 1. Key to our analysis will be reporting on in every aspect of measurement of our performance against our plan.

Task Element	Performance Indicators	Performance Monitoring and How it is Accomplished
Student wait time	Student wait time to attend course is less than 45 days.	Our Trainer/Admin support measure each student's time between initial notification and course start and track the average time from when a person registers to training start date. The PM will review these timeframes (with the QC Manager) against the performance indicators and report the averages to the COR in the monthly status report.
Quality instruction	Student satisfaction with instructional quality greater than 75%	The PM will collect student feed back (good/bad/indifferent) from in-class session or from the website. All feedback will be reviewed with the training team and QC manager. Any feedback below Satisfactory will be immediately addressed and reported. All Satisfactory and above (and reports of addressing all other feedback) will be reported to COR monthly.
Student performance	Student ability to accomplish major training objectives should be greater than 75%	Our trainers will review both student and supervisor survey feedback from website (or in-class if applicable) as well as the students ability to accomplish course objectives and report in monthly status report to COR IAW Appendix A. Any issues impacting a specific participants ability to successfully complete the course will be immediately brought to the

Task Element	Performance Indicators	Performance Monitoring and How it is Accomplished
		attention of the Army PM, and results reported to the COR.
Website updates	Monthly updates	<p>Our technical support will gather information from the web site(s) to measure;</p> <ul style="list-style-type: none"> <li>▪ Number of hits/log-ins to course web based training module,</li> <li>▪ On line rate of web based training module,</li> <li>▪ Percent of students registering online,</li> <li>▪ Percent of students completing feedback on line.</li> </ul> <p>Our Vangent PM, training team and QC manager will review all data, compare against previous data to track trends and ensure RFP requirements are met. Information will be presented in monthly reports and periodic reviews to COR.</p>
Response to help desk calls	Calls should be returned in less than 9 hours	<p>Our Technical Support/Help Desk team member works with our trainers to resolve all calls within the specified time limits. Calls may be technical or content related. We measure student feedback to website and our help desk logs. This information is reviewed by our PM, Training and Support Team and QC Manager for trending and assurance that RFP requirements are met. Data and information are reported monthly in our status report to COR IAW Appendix A.</p>
Student feedback online	Feedback website online 95% of time	<p>Our Technical Support team member gathers feedback information from the web and reviews student feedback to website. This information is then reviewed by the PM, Training and Support Team and QC Manager for trends and compliance with the RFP. Data and information is presented in monthly status reports to COR IAW</p>
Student registration	Registration online with a 95% success rate	<p>Our Training and Support Team reviews all registration and measures the percent of students who register on-line successfully and confirms information in-class and by Student feedback to website. This information is then reviewed by the PM, Training and Support Team and QC Manager for trends and compliance with the RFP and reported to the COR.</p>

Task Element	Performance Indicators	Performance Monitoring and How it is Accomplished
Quarterly course updates	Course remains current and satisfies student need	Our Trainers seek student input on course relevance and review supervisor feedback to confirm the information. We review all feedback to ensure updates are current and reflect the changing needs of HQDA. This information is reviewed by our PM, Training Team, and QC manager, then reported along with recommendations, to the COR. This is done in writing and also at periodic meetings.
Course materials and handouts	99% of students receive needed handouts during course.	Our Trainers seek information from all course participants about the quality of handouts, student guides, exercises and web-based material. We review student feedback and respond to each student as necessary. This information is reviewed by our PM, Training Team, and QC manager for completeness and compliance with RFP requirements. We report this information in our monthly status report.
Class registration and attendance	99% accountability of student attendance and no shows.	Our Training and Support Team take time and attendance records and track against registration data. We attempt to locate each student, and if possible, reschedule. Our PM reviews the information with our QC manager for correctness and compliance with RFP requirements and provides attendance reports and trends to the COR monthly. No shows reported to COR within 48 hours.

**Figure 1: Task Elements, Performance Indicators, and Performance Monitoring.**

Initially, Vangent focuses the analysis on Customer and Supervisor satisfaction surveys (with permission of customer). As additional data becomes available from scheduled surveys and other evaluation initiatives, we expand the analysis to correlate outcomes with program specific quality benchmark metrics.

The Vangent Team analyzes and interprets performance variances to assess root causes for corrective actions and related improvements strategies, with emphasis on identifying emerging trends that permit early intervention. Our analysis methods include the use of Pareto charting, histograms, and other statistical process control tools to identify special and common variance causes. Our approach is to eliminate special cause issues and minimize common cause issues (by risk mitigation in some cases) to improve the service quality to our customers.

The Team correlates the data we derive from our various benchmark metrics to determine patterns or trends affecting program/project completions, and specific metrics developed to meet customer requirements. We perform correlations to identify emerging trends and opportunities for program

improvement. Our Executive Team and QC IPT review twice each year the results of these ongoing evaluations and analyses, including satisfaction survey data. They prioritize improvement strategies in terms of likely success, practicality, and buy-in by Customer stakeholders.

#### 6.4.3 Communication with the Government

Vangent achieves high-levels of user satisfaction by maintaining regular and productive communications with our customers, team partners, and stakeholders. Our communications include formal methods, such as scheduled semi-annual meetings, customer partnering sessions, In-Progress Reviews (IPRs), and reports, as well as less formal methods such as ad hoc meetings, telephone calls/conferences, and e-mail.

We maintain open, frequent two-way interaction with the customer by providing:

- Program Manager meetings with our customer counterparts to discuss contract performance, issues, schedules, etc.
- Customer partnering sessions twice each year.

The Vangent Team understands that the government's role is to provide a quality assurance function that complements the quality control efforts we implement. We work with our customer and provide all the access necessary to evaluate the quality of our work, and ensure our results are in compliance with the QCP.

Our regular communication with the government, formal and informal, facilitates this interface. In addition to regular communication, we ensure our customer has access to our most current quality data supplied by our QC manager or Program Manager.

#### 6.4.4 Corrective Actions/Program Improvement

Once the quality process or internal review has indicated the cause of a defect, the quality organization acts to correct the cause and prevent further defects. The Quality Control Manager makes recommendations relative to the re-engineering of the project's processes in order to fulfill the promise of continuous improvement.

For initiating process improvements, Vangent uses its Phase Review System (PRS) to ensure completeness. The PRS and the actions of the quality organization allow the Vangent Team to identify and self-correct instances of sub-standard quality. We understand, however, that in instances of poor quality, we may be required to:

- Perform rework at government direction.
- Respond to government initiated Contract Discrepancy Reports (CDRs).
- Develop discrepancy correction/prevention processes.

#### 6.4.5 Inspections and records

The Vangent Team stores QC records so they may be used in reviews by quality control staff or the Government. Stored records also may be used to develop historical and trend data to determine such things as contractor performance over time and the effectiveness of our processes and quality measures. Stored QC data includes the following:

- Contractor-initiated quality inspection records and documentation of corrective actions.
- Internal controls and procedures for proper cost management.

Quality records may be stored as hardcopy, or electronically via a variety of media. A substantial amount of quality data will be stored and available for review at any time upon request of the Program Manager.

#### 6.4.6 Program Management

The Vangent Team provides comprehensive program management support services through our Program Manager. This section of our plan includes our approach to:

- Points of Contact and On-Site Management
- In-Progress Reviews
- Semi-Annual Performance Evaluations
- Reporting Requirements
- Contract Phase-Out

#### 6.4.7 Points of Contact and On-Site Management (as required for Seaport-e task orders)

The Vangent Program Manager has primary responsibility for the overall coordination and management of all work required under the contract.

The Program Manager is the primary point of contact with the government on contract performance issues. Our PM dedicates 100 percent of his time to our customer’s program from on-site or from our Arlington, Virginia, offices, where he will integrate and manage all work performed under this contract.

Vangent	Primary Point of Contact for:
Program Manager	<ul style="list-style-type: none"> <li>▪ Team Management Position</li> <li>▪ Contracting Officer (KO)</li> <li>▪ Contracting Officer's Representative (COR)</li> </ul>

Figure 2: Management Team Interfaces

#### 6.4.8 In-Progress Reviews (as required for Seaport-e task orders)

The Vangent Team uses management tools and techniques that document, report, track, and evaluate all program management data to support the need and requirements of our customer’s Program Management Office. These include infrastructure-based management tools that allow assessment, evaluation, and analysis of all program data.

For such data to be useful, clear and open channels of communication must be established between the Vangent team the customer/government Program Office. The Vangent Team meets on a regular with the Contracting Officer's Representative to discuss any issues affecting our customer including contract performance, revisions to established program schedules, and any other issues impacting performance of the contract. When applicable, the Vangent Program Manager discusses trends established by metrics collection and measurement, and strategies for intervention if needed to improve program performance, and may recommend new techniques, tools, or approaches to improve or enhance program performance.

The Vangent Team conducts formal In-Progress Reviews (IPRs) with the Contracting Officer's Representative (COR) on a monthly basis (or as specified), scheduled at the convenience of the government. We provide an agenda, jointly prepared with and approved by the government, and an

IPR Status Report to our customer/government Program Manager and the COR 7 calendar days (or as required) prior to the meeting. These will be distributed electronically with hard copy backup available.

The IPR Status Report includes the following:

- Overall status of services and capabilities.
- Vangent performance, schedule, cost and program specific related data.
- Existing and potential problem areas and the proposed action for resolution.
- Proposed recommendations for improvements/enhancements to service, technical capabilities, and management procedures as appropriate.

Vangent will submit an After Action Report to our customer/government Program Manager (as required), the Contracting Officer (KO), the COR, and other government entities as directed, after conclusion of the IPR. This report will:

- Document the proceedings of the IPR.
- List all action items.
- Describe the resolution of quality and performance discrepancies.

We format IPR Status Reports and After Action Reports as directed by the Government.

Any recommended changes to improve service, reduce costs, correct metrics, or otherwise improve, enhance or streamline management of our customers program, will be documented and submitted separately to the Contracting Officer, and the COR for approval prior to incorporation into the PBWS. Incorporation of such changes will normally only occur by written authorization of the Contracting Officer.

#### **6.4.9 Semi-Annual Performance Evaluations**

The Vangent Team provides the Government with the quality data and information necessary to monitor a program of this scope and importance. The Team will conduct semi-annual performance reviews to measure the health and performance of the contract. Specific dates for these reviews will be set in consultation with our customer/government Program Manager, the Contracting Officer, and the COR.

All data and information resulting from semi-annual evaluations, we package in a format specified by the government and make it available to authorized users in electronic and paper media. The Vangent Team supplies all administrative support for the reviews. We record and distribute minutes of the proceedings; record, track and manage all official action items that arise; and maintain archives of all program documentation for the life of the contract. At contract end, we transfer all semi-annual review data and documentation to the custody of the government.