

# **Validation of Technical Competencies**

For the Federal  
Acquisition Workforce



**Federal Acquisition Institute**

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## **Executive Summary**

In 2002, the Federal Acquisition Institute (FAI) initiated a study to evaluate the importance of 14 Technical Competencies for successful Contract Specialist performance. The evaluation of these competencies completes the validation of a set of Contract Specialist competencies which includes 24 General Competencies and 14 Technical Competencies.

Contract Specialists from at least 16 Executive Departments and Independent Agencies were surveyed to assess the importance of the Technical Competencies for the work of Contract Specialists. Participants provided examples of recent contracting in the form of critical incidents and rated the importance of each Technical Competency for successful contracting in those situations. Participant ratings of competency importance were then aggregated to arrive at an average rating of the importance of each competency for Contract Specialist work. Competencies are considered valid if participants indicated they were at least somewhat important for Contract Specialist work.

### ***Key Findings and Conclusions***

Each of the following 14 Competencies was validated for the Contract Specialist function. Five competencies are important for successful Acquisition Planning, four for successful Contract Formation, and two for successful Contract Administration, as shown below.

#### **Acquisition Planning**

1. Strategic Planning
2. Understanding the Marketplace
3. Understanding Sourcing
4. Defining Government Requirements in Commercial and Noncommercial Terms
5. Effective Communication

#### **Contract Formation**

1. Defining Business Relationships
2. Detailed Evaluation Skills
3. Effective Negotiation and Analytical Skills
4. Effective Award Resolution

#### **Contract Administration**

1. Effective Communication of Contract Requirements
2. Effective Performance Management

The remaining three competencies are important for more specific Contract Specialist functions. The competencies describing financial management and allowability of contract costs skills were found to be important for Payment and Accounting. Not

surprisingly, skill in effectively resolving contract termination or closeout was found to be important for successful Contract Closeout and Termination.

In addition to participant feedback about the importance of each competency for Contract Specialist work, the usefulness of the competencies for discriminating between effective and ineffective Contract Specialist performance was assessed to provide further evidence of the validity of the competencies. Using participant ratings of how well each competency was demonstrated in each incident of Contract Specialist work, the competencies successfully predicted whether an incident of Contract Specialist performance was effective or ineffective about 80% of the time.

Importance ratings and classification rates indicate that the Technical Competencies are valid predictors of successful contracting and indicate that the Technical Competencies can be successfully used as the basis for evaluating, managing, and improving the quality of Contract Specialist work.

## **Introduction**

The Federal Acquisition Institute (FAI) oversees Federal acquisition workforce management including planning, managing, and coordinating the development and implementation of acquisition career and acquisition workforce programs and practices. One of FAI's roles is to analyze the acquisition career field including identifying critical competencies, duties, tasks, and related skills and knowledge. Forty-nine percent of Federal Contract Specialists will be eligible to retire by 2010 (as indicated by the FAI Report on the Federal Acquisition Workforce – 1100 Series, Fiscal Year 2000) and those that are replaced will need to function as both business managers and consultants. Subsequently, FAI has need of a validated set of competencies for the work of Federal Contract Specialists which can be used as the basis for effective personnel recruitment, selection, staffing, training, development, and performance appraisal.

FAI has developed a set of 14 Technical Competencies and 24 General Competencies. FAI validated the 24 General Competencies by linking these competencies to the work of Federal Contract Specialists using critical incidents. This report describes the validation of the 14 Technical Competencies using a methodology consistent with the validation of the 24 General Competencies, providing a valid and comprehensive set of competencies for the work of Federal Contract Specialists. These competencies can be used as a basis to select effective employees, develop existing and new employees, and manage the performance of Federal Contract Specialists.

### ***Overview of Methodology***

The validity of the 14 Technical Competencies was established by gathering evidence that the competencies are important for Contract Specialists to successfully perform their jobs. See Appendix A for a listing of the competencies and their definitions. Contract Specialists were asked to describe the work that they do using a process called the critical incident methodology. A critical incident refers to a description by a knowledgeable observer of employee behaviors that make a critical difference between performing a job effectively or ineffectively. After generating critical incidents, the Contract Specialists participating in the validation effort assessed the importance of each of the competencies for the work described in the critical incidents. The importance rating of each competency was cumulated across participants to arrive at an overall importance rating. The cumulated importance ratings were used to assess the validity of the competency model. The critical incident methodology is described in more detail in a following section of this report.

Validation of the 14 technical competencies was accomplished in three phases:

- Identification of performance dimensions.
- Collection of critical incidents.
- Examination of the link between the competencies and the work that Contract Specialists perform (as described in the critical incidents).

**Report Organization**

The following report describes the validation of the 14 Technical Competencies. The report is organized as follows:

**Table 1. Report Organization**

<b>Identification of Performance Dimensions</b>	Includes a description of the job requirements of Federal Contract Specialists. These job requirements are then used as input in the data analysis process.
<b>Critical Incident Collection</b>	Describes the workshops conducted to gather validation data, the sampling strategy used, the workshop participants, and the types of critical incidents provided by participants.
<b>Data Analysis and Results</b>	Describes the criteria used for determining the validity of the Technical Competencies, identifies the competencies valid for each Contract Specialist performance dimension, and provides information about the ability of the competencies to differentiate between effective and ineffective Contract Specialist behavior.
<b>Participant Feedback</b>	Summarizes feedback provided by workshop participants on the competencies and performance dimensions. Additionally, comments and interpretation of the feedback are provided.
<b>Conclusion</b>	Provides a summary of the report findings and discusses implications for use of the competencies in human resource functions.

## Identification of Performance Dimensions

The first step in validating the competencies was to identify the different functions that Contract Specialists perform as part of their job. Many of the Technical Competencies describe specific knowledge, skills, and abilities and because of the degree of specificity, each competency may be important for successful performance of some aspects of Contract Specialist work but not others. For example, the Technical Competency ‘Understanding Sourcing’ may be a critical competency for Acquisition Planning, but not as important for Contract Administration. Therefore, in order to test the validity of the competencies it was important to identify the different functions that Contract Specialists perform so the importance of the competencies for each aspect of Contract Specialist job performance could be assessed.

Three broad performance dimensions were already in use by FAI to describe the work of Contract Specialists. Each of these dimensions consists of sub-dimensions which describe more specific facets of Contract Specialist performance. These dimensions were also used in the validation of the 24 General Competencies. Because of their history as accurate descriptors of Contract Specialist work and to provide consistency with the previous validation effort, these performance dimensions were used in the validation of the 14 Technical Competencies. The performance dimensions, facets of the performance dimensions, and descriptions are listed in Table 2.

**Table 2. Contract Specialist Performance Dimensions**

<b>Acquisition Planning</b>	<p><b>Determination of Need:</b> Forecasting requirements, acquisition planning, purchase requests, funding, and market research.</p> <p><b>Analysis of Requirement:</b> Requirements documents, use of Government property and supply sources, services.</p> <p><b>Extent of Competition:</b> Sources, competition requirements and unsolicited proposals, set-asides, 8(a) procurements.</p> <p><b>Source Selection Planning:</b> Lease vs. purchase.</p> <p><b>Solicitation of Terms and Conditions:</b> Contract types-pricing arrangements, recurring requirements, un-priced contracts, contract financing, need for bonds, method of payment, procurement planning.</p>
<b>Contract Formation</b>	<p><b>Solicitation of Offers:</b> Publicizing proposed procurements, oral solicitation, solicitation preparation, pre-award inquiries, pre-bid/pre-quote/pre-proposal conferences, amending/canceling solicitations.</p> <p><b>Bid Evaluation:</b> Processing bids, bid acceptance periods, late offers, bid prices, responsiveness.</p> <p><b>Proposal Evaluation and Negotiation:</b> Processing proposals, applying non-price factors, price analysis, pricing information from offerors, audits, cost analysis, evaluating other offered terms and conditions, award without discussions, communications/fact-finding, competitive range, negotiation strategy, conducting negotiations.</p> <p><b>Contract Award:</b> Mistakes in offers, responsibility, subcontracting requirements, prepare awards, issue awards and notices, debriefing, protests.</p>



***Contract Administration***

**Initiation of Work and Modification:** Contract administration planning, post-award orientation, consent to subcontracts, subcontracting requirements, contract modifications, options, task and delivery order contracting.

**Quality Assurance:** Monitoring, inspection, and acceptance, delays, stop work, commercial/simplified acquisition remedies, noncommercial remedies, documenting past performance.

**Payment and Accounting:** Invoices, assignment of claims, administering securities, administering financing terms, unallowable costs, payment of indirect costs, limitation of costs, price and fee adjustments, collecting contractor debts, accounting and estimating systems, cost accounting standards, defective pricing.

**Special Terms:** Property administration, intellectual property, socio-economic, etc.

**Contract Closeout or Terminations:** Claims, terminations, closeout, fraud and exclusions.

## **Critical Incident Collection**

### *Description of Workshops*

Critical incidents were collected in a series of workshops. For participants outside the Washington metropolitan region, data collection assistance was provided individually over the phone. For regional participants, workshops were held at the offices of Federal Management Partners in Alexandria, Virginia; at the General Services Administration Federal Supply Service training facility in Arlington, Virginia; and on-site at participants' office buildings. A variety of locations was offered in an attempt to make participation as easy as possible. Workshops lasted three hours, beginning with a 30-minute training session in the critical incident process. Participants spent the remaining time completing the validation process.

During the training, workshop participants were trained to write critical incidents. Training included:

- A review of the goals of the workshop,
- A description of critical incident methodology,
- Instructions about the structure of critical incidents,
- Examples of well and poorly written critical incidents, and
- Tips for writing critical incidents.

Participants were trained to write critical incidents of Contract Specialist performance. The critical incidents consisted of three parts:

- Situation: A description of the situation that lead to the incident.
- Action: The behaviors of the focal person during the incident.
- Result: The outcome of the focal person's actions.

Participants completed the validation process using a customized web site (See Appendix B). When they accessed the website, participants were asked to record critical incidents of Contract Specialist performance that they had been part of or witnessed in the last two years. Each participant then used drop down menus on the website to classify each incident in terms of:

- Effectiveness: Was the action described in the critical incident effective or ineffective?
- Grade level: What is the grade level of the focal person?
- Performance dimension: Which of the 14 facets of Contract Specialist performance is the critical incident an example of?

Next, participants rated each of the 14 competencies against the critical incident. Using dropdown menus, participants rated:

1. The **importance** of each competency for handling the situation described in the critical incident.
2. The extent to which each competency was **exhibited** by the focal person in the critical incident.

Importance was rated on a five-point Likert scale ranging from ‘not important’ to ‘very important’. Extent exhibited was also rated on five-point Likert scale ranging from ‘not exhibited’ to ‘exhibited to a great extent’. Each participant was asked to generate and rate between six and ten critical incidents and to provide equal numbers of effective and ineffective critical incidents.

### ***Sampling and Participation***

The sampling strategy used was intended to obtain a representative sample of critical incidents. Consequently, participation was solicited from a variety of agencies so examples of Contract Specialist work as the job is performed at different agencies would be collected. In addition, information about the career level of the focal individual in the critical incident and the performance dimension of the critical incident was also collected to ensure that the critical incidents provided a robust picture of the work of Contract Specialists.

Two phases of critical incident data collection were conducted. The first occurred in August and September of 2002. A memo was sent from Gloria Sochon, FAI Director, to members of the Procurement Executives Council (PEC) soliciting involvement of Contract Specialists (occupational series 1102) from their agency or department in the data collection (See Appendix C). Data collection sessions were held from August 13<sup>th</sup> until September 5<sup>th</sup>. The first data collection resulted in fewer than 100 critical incidents. Participants indicated that the time of year made participation for most Contract Specialists difficult.

To increase the number of critical incidents in the database, a second data collection phase was scheduled and took place between October 21<sup>st</sup> and November 13<sup>th</sup> of 2002. A second memo was sent from Gloria Sochon to members of the Procurement Executives Council (See Appendix C) soliciting their participation in the second data collection. Each of the recipients of the email received either a follow-up phone call or email to answer any questions about the data collection and encourage participation.

Seventy-nine Contract Specialists from at least 16 Executive Departments and Independent Agencies participated in the data collection. The following Departments and Agencies provided participants:

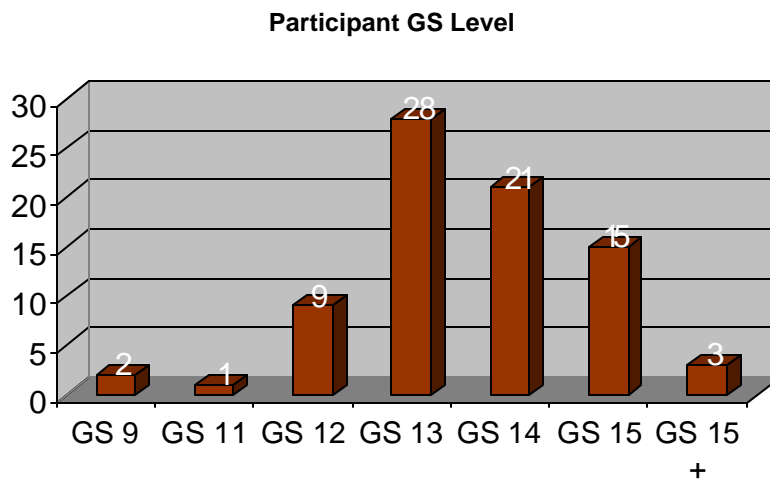
- Department of Commerce
  - National Oceanic and Atmospheric Administration
  - Patent and Trademark Office
- Department of Energy
- Department of Health and Human Services

- Department of Defense
- Department of Justice
  - Bureau of Prisons
- Department of the Interior
- Department of State
- Department of Treasury
  - Bureau of Alcohol, Tobacco, and Firearms
- Department of Transportation
- Environmental Protection Agency
- General Services Administration
  - Federal Supply Services
- Department Housing and Urban Development
- National Aeronautics and Space Administration
  - Goddard Space Flight Center
- Social Security Administration
- Department of Veterans Affairs
  - National Acquisition Center
- Small Business Administration

Department/agency was not specified for some participants.

Participants had on average over 18 years experience as Contract Specialists and represented a range of GS levels from 9 to above GS 15 (see graph below).

**Graph 1**



A total of 407 critical incidents were collected. The quality of the critical incidents collected was very high; participants closely followed the situation, action, result format that had been described in the training sessions. Only one critical incident was eliminated because of a lack of descriptive detail. In total, data analysis was performed on 406 critical incidents.

The critical incidents provided were relatively evenly divided among the three performance dimensions:

- Acquisition Planning: 132 critical incidents, 33%
- Contract Formation: 160 critical incidents, 39%
- Contract Administration: 114 critical incidents, 28%

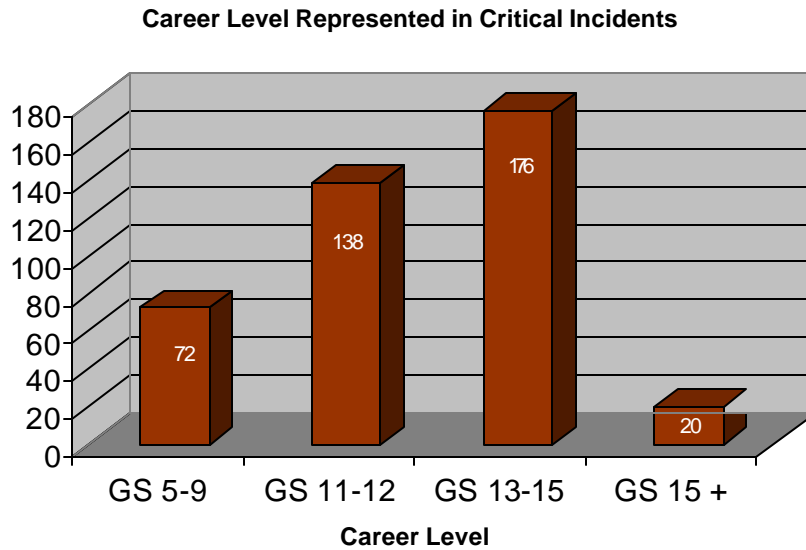
The following table presents a further breakdown of the critical incidents by the 14 facets of Contract Specialist performance.

**Table 3: Number of Critical Incidents Collected**

<b>Performance Dimension</b>	<b>Number of Critical Incidents</b>
<b>Acquisition Planning</b>	
Determination of Need	32
Analysis of Requirement	42
Extent of Competition	34
Source Selection Planning	13
Solicitation Terms and Conditions	11
<b>Contract Formation</b>	
Solicitation of Offers	27
Bid Evaluation	19
Proposal Evaluation and Negotiation	76
Contract Award	38
<b>Contract Administration</b>	
Initiation of Work and Modification	34
Quality Assurance	24
Payment and Accounting	28
Special Terms	11
Contract Closeout or Termination	17

In addition to performance dimension, participants also indicated the career level of the focal person in each critical incident. The database of critical incidents provides examples of performance that span career levels. The following graph shows the number of critical incidents provided at different career levels.

**Graph 2.**



The critical incidents provided capture examples of performance in all performance dimensions and across career levels. The breadth of the critical incidents in terms of both performance dimensions and career levels suggests that the critical incidents provide a robust picture of the work of Contract Specialists and an adequate foundation for assessing the importance of each of the Technical Competencies for that work.

## Data Analysis and Results

### *Presentation of Data*

Participants were asked to provide information about the importance of the competencies for Contract Specialist work and the extent to which these competencies were exhibited in examples of Contract Specialist behavior. Participant responses were measured on five-point Likert scales. Means, standard deviations, and confidence intervals are provided in this report.

- **Mean:** Average score or the sum of scores divided by the number of scores.
- **Standard Deviation:** The typical distance of scores from the mean.
- **Confidence Interval:** A range of values around a sample statistic in which the true parameter in question is likely to fall. Ninety-five percent confidence intervals are used in this report and indicate that we are 95% confident that the true mean falls within the range of values. Confidence intervals are computed using the standard error: Mean  $\pm$  (1.96 \* Standard Error).

### *Criteria for Validity*

As described above, each participant rated the importance of each competency for successfully handling the situation described in his or her critical incidents on a five-point scale. The rating scale is as follows:

**Table 4: Importance Rating Format**

1	Not Important
2	Of Little Importance
3	Of Some Importance
4	Moderately Important
5	Very Important

The mid-point scale anchor indicates that a competency is ‘of some importance’ for performance and corresponds to a rating of three. A competency is considered a valid predictor of performance if it was given an average importance rating of three (‘somewhat important’) or higher taking into account sampling error. Sampling error is the discrepancy between the importance mean generated by the sample of critical incidents collected and the true mean if every example of Contract Specialist performance had been collected. Collecting every example of Contract Specialist performance is neither desirable nor necessary. A sample of critical incidents was gathered and used to estimate the range of values in which the true means fall. This range is called a confidence interval. The confidence intervals calculated in this report indicate that there is a 95% chance that the true population mean falls within the confidence interval. **Therefore, a competency is considered valid for the work of Contract Specialists if the minimum value in the confidence interval for mean importance ratings is above three, indicating that the competency is of some importance for Contract Specialist work.**

### **Validity Analyses**

The following sections describe the analyses used to validate the Technical Competencies and identify those competencies important for Contract Specialist performance.

Importance ratings were calculated for each competency for the job of Contract Specialist as a whole, by each of the three performance dimensions, and by each of the 14 facets of performance.

- Job as a Whole: All performance dimensions combined
- Performance Dimensions: Acquisition Planning, Contract Formation, Contract Administration
- Performance Facets: Sub-dimensions of Acquisition Planning, Contract Formation, and Contract Administration

### **All Performance Dimensions**

For the job as a whole, mean importance ratings and confidence intervals were generated using all 406 critical incidents. Two competencies had importance means with minimum value confidence intervals exceeding three (see Table 5). The remaining 12 had confidence intervals with minimum values falling below three. See Appendix D for the importance means, standard deviations, and standard errors of each of the 14 competencies using all the critical incidents.

**Table 5: Results for Combined Performance Dimensions**

<b>Competency</b>	<b>Mean</b>	<b>Confidence Interval</b>
Detailed Evaluation Skills	3.64	3.47 – 3.81
Effective Communication of Contract Requirements	3.21	3.04 – 3.38

Note. Calculations based on 406 critical incidents. Confidence intervals are set at 95%.

Means and confidence interval values for the competencies ‘Detailed Evaluation Skills’ and ‘Effective Communication of Contract Requirements’ are between three and four. These ratings indicate that on average participants consider these competencies to be of ‘some importance’ or ‘moderately important’ for the work of Contract Specialists as a whole.

The definitions of ‘Detailed Evaluation Skills’ and ‘Effective Communication of Contract Requirements’ focus on fairly specific aspects of the Contract Specialist job. ‘Detailed Evaluation Skills’ includes competencies relating to pre-award actions such as receiving and evaluating bids. ‘Effective Communication of Contract Requirements’ includes skills associated with post-award actions such as conducting post-award orientations and modifying contracts. Because participants indicated these competencies are important for



the job of Contract Specialist as a whole, it suggests that participants may be interpreting the competencies more broadly than was intended by their definitions.

Minimum confidence interval levels for the remaining 12 competencies are below three. This result is not unexpected because the degree of specificity in the Technical Competencies suggests that these competencies may be important for success at specific aspects of Contract Specialist work rather than the job as a whole. Means and confidence intervals for the 14 competencies were calculated for each of the three Contract Specialist performance dimensions: Acquisition Planning, Contract Formation, and Contract Administration. Critical incidents that participants indicated were representative of Acquisition Planning, Contract Formation, and Contract Administration were grouped together. Then mean importance ratings and confidence intervals were calculated for each competency three times, using only critical incidents from a single performance dimension each time. Results by each of the three dimensions are reported below.

### **Acquisition Planning**

Participants provided 132 Acquisition Planning critical incidents. Using these 132 critical incidents, importance means and surrounding confidence intervals for each of the 14 competencies were calculated. Five of the 14 competencies had minimum confidence intervals above three:

- Strategic Planning
- Understanding the Marketplace
- Understanding Sourcing
- Defining Government Requirements in Commercial and Noncommercial Terms
- Effective Communication

Importance means and confidence intervals for these five competencies are in Table 6. Means, standard deviations, and standard errors for all 14 competencies using the Acquisition Planning critical incidents are in Appendix E.

**Table 6: Acquisition Planning Results**

<b>Competency</b>	<b>Mean</b>	<b>Confidence Interval</b>
Understanding the Marketplace	4.23	3.99 – 4.47
Strategic Planning	4.06	3.81 - 4.31
Understanding Sourcing	4.05	3.80 – 4.30
Defining Government Requirements in Commercial and Noncommercial Terms	3.68	3.41 – 3.95
Effective Communication	3.31	3.02 – 3.60

Note. Calculations based on 132 critical incidents. Confidence intervals are set at 95%.

Respondents indicated that five competencies are important for Acquisition Planning. Their importance ratings show that these five competencies are considered on average by respondents to be either ‘of some importance’ or ‘moderately important’ when conducting Acquisition Planning and are valid predictors of successful Acquisition Planning.

***Contract Formation***

Participants reported 160 critical incidents of Contract Formation. Using these 160 critical incidents, four of the 14 competencies had importance means and minimum confidence interval values above three:

- Defining Business Relationships
- Detailed Evaluation Skills
- Effective Negotiation and Analytical Skills
- Effective Award Resolution

Means and confidence intervals for these four competencies are in Table 7. Means, standard deviations, and standard errors for all 14 competencies using the Contract Formation critical incidents are in Appendix E.

**Table 7: Contract Formation Results**

<b>Competency</b>	<b>Mean</b>	<b>Confidence Interval</b>
Detailed Evaluation Skills	3.78	3.53 – 4.03
Effective Negotiation and Analytical Skills	3.72	3.45 – 3.99
Defining Business Relationships	3.65	3.40 – 3.90
Effective Award Resolution	3.48	3.21 – 3.75

Note. Calculations based on 160 critical incidents. Confidence intervals are set at 95%.

Respondents indicated that four competencies are important for Contract Formation. Importance ratings show that these four competencies are considered on average to be either ‘of some importance’ or ‘moderately important’ when forming contracts and are valid predictors of successful Contract Formation.

***Contract Administration***

Participants provided 114 critical incidents describing examples of Contract Administration by Contract Specialists. Two of the 14 competencies received mean importance and minimum confidence interval values above three:

- Effective Communication of Contract Requirements
- Effective Performance Management

Means and confidence intervals for both competencies are shown in Table 8. Means, standard deviations, and standard errors for all 14 competencies using the Contract Administration critical incidents are in Appendix E.

**Table 8: Contract Administration Results**

<b>Competency</b>	<b>Mean</b>	<b>Confidence Interval</b>
Effective Communication of Contract Requirements	3.45	3.12 – 3.78
Effective Performance Management	3.39	3.08 – 3.70

Note. Calculations based on 114 critical incidents. Confidence intervals are set at 95%.

‘Effective Communication of Contract Requirements’ and ‘Effective Performance Management’ received mean importance ratings and confidence interval ratings between three and four, indicating that on average participants believe these competencies to be either ‘of some importance’ or ‘moderately important’ when performing Contract Administration and that they are valid predictors of successful Contract Administration.

***Summary of Analysis by Performance Dimension***

Of the 14 Technical Competencies, 11 were validated as important for one of the three performance dimensions: Acquisition Planning, Contract Formation, or Contract Administration. The following table summarizes these findings.

**Table 9: Valid Competencies by Performance Dimension**

<b>Acquisition Planning</b>	<ol style="list-style-type: none"><li>1. Understanding the Marketplace</li><li>2. Strategic Planning</li><li>3. Understanding Sourcing</li><li>4. Defining Government Requirements in Commercial and Noncommercial Terms</li><li>5. Effective Communication</li></ol>
<b>Contract Formation</b>	<ol style="list-style-type: none"><li>1. Detailed Evaluation Skills</li><li>2. Effective Negotiation and Analytical Skills</li><li>3. Defining Business Relationships</li><li>4. Effective Award Resolution</li></ol>
<b>Contract Administration</b>	<ol style="list-style-type: none"><li>1. Effective Communication of Contract Requirements</li><li>2. Effective Performance Management</li></ol>

The linkage of competencies to performance dimensions logically follows the competency and performance dimension definitions. Participants indicated that competencies describing skills generally associated with Acquisition Planning, Contract Formation, or Contract Administration were important for their relevant performance dimensions, with one exception. ‘Defining Business Relationships’ describes pre-solicitation skills such as preparing the contract and determining the method of payment. However, ‘Defining Business Relationships’ was validated for Contract Formation, suggesting that participants’ interpretation of ‘Defining Business Relationships’ may be broader than its definition.

### ***Analysis of Remaining Competencies***

Three competencies were not found to be valid predictors of Acquisition Planning, Contract Formation, or Contract Administration:

- Effective Financial Management
- Make Decisions Related to Allowability of Contract Costs
- Effective Resolution of Contract Termination and/or Closeout

These competencies had importance means and minimum confidence intervals below three for Acquisition Planning, Contract Formation, and Contract Administration. In addition, with one exception<sup>1</sup>, the maximum confidence interval values of these three competencies for each of the three performance dimensions are below three. This suggests that further data collection would not result in means or minimum confidence interval values that exceed the threshold importance value of three.

Examination of the description of these competencies revealed that they describe skills needed for very specific aspects of Contract Specialist work. For example ‘Effective Financial Management’ includes requiring contractors to provide bonds and approving requests for assignment of claims. ‘Make Decisions Related to the Allowability of Contract Costs’ includes authorizing payment of invoices and dealing with indications of fraud. ‘Effective Resolution of Contract Termination and/or Closeout’ involves terminating contracts and performing closeouts. Each of these skills is likely necessary for only a small portion of Contract Specialist work. Therefore, means and confidence intervals for each of these three competencies were calculated for each of the 14 sub-dimensions of Contract Specialist work. See Appendix F for means, standard deviations, and standard errors for each competency by each of the 14 facets of performance.

Because only a small number of critical incidents fall into each of the 14 facets of Contract Specialist performance, the accuracy of the mean importance ratings as a reflection of the true mean is less assured. Therefore, the confidence intervals around the mean importance ratings for each performance facet are wide. Despite the wide confidence intervals, two of the competencies, ‘Make Decisions Related to the Allowability of Contract Costs’ and ‘Effective Resolution of Contract Termination and/or Closeout’, had minimum confidence intervals above three for one of the 14 facets. See Table 10.

In addition, ‘Effective Financial Management’ had a mean well above three and a minimum confidence interval just under three for one of the performance sub-dimensions. Because the minimum confidence interval for ‘Effective Financial Management’ was close to the validity criteria, the likelihood of the population importance mean falling above three was calculated. The confidence interval for ‘Effective Financial Management’ with a minimum value above three is 87%. In other words, we can be 87% confident that true importance mean of ‘Effective Financial Management’ for Payment and Accounting is above three. While this confidence interval is wider than the other confidence intervals used in this report, it is still quite high and allows us to conclude with a fair amount of confidence that ‘Effective Financial Management’ is an important skill for effective Payment and Accounting.

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<sup>1</sup> The competency ‘Make Decisions Related to the Allowability of Contract Costs’ has a 95% confidence interval of 2.44 – 3.10 for importance ratings using critical incident examples of Contract Administration. Because the confidence interval includes three, if a large number of critical incidents of Contract Administration were gathered it is somewhat possible, although unlikely, that a confidence interval could be obtained with a minimum value above three.

**Table 10: Results for Effective Financial Management, Decisions Related to the Allowability of Contract Costs, and Effective Resolution of Contract Termination**

<b>Competency</b>	<b>Performance Dimension</b>	<b>Number of Critical Incidents</b>	<b>Mean</b>	<b>Confidence Interval</b>
Effective Financial Management	Payment and Accounting	28	3.50	2.85 – 4.15
Make Decisions Related to the Allowability of Contract Costs	Payment and Accounting	28	3.71	3.12 – 4.30
Effective Resolution of Contract Termination and/or Closeout	Contract Closeout or Termination	17	4.95	4.82 – 5.00

Note. Confidence intervals are set at 95%.

The following conclusions can be drawn from the above analysis. Participants indicated:

- ‘Effective Financial Management’ is likely either of ‘some importance’ or ‘moderately important’ for Payment and Accounting.
- ‘Make Decisions Related to the Allowability of Contract Costs’ is either of ‘some importance’ or ‘moderately important’ for Payment and Accounting.
- ‘Effective Resolution of Contract Termination and/or Closeout’ is either ‘moderately important’ or ‘very important’ for Effective Resolution of Contract Closeout or Termination.

In summary, each of the 14 Technical Competencies was found to be important for at least one Contract Specialist job requirement. Eleven of the 14 competencies are important for Acquisition Planning, Contract Formation, or Contract Administration. The three remaining three competencies are important for more narrow aspects of Contract Specialist work.<sup>2</sup>

### ***Analysis by Facets of Performance***

In addition to the competencies ‘Effective Financial Management’, ‘Make Decisions Related to Allowability of Contract Costs’, and ‘Effective Resolution of Contract Termination and/or Closeout’, the importance of the remaining competencies was also

<sup>2</sup> All 14 competencies are valid for some aspect of contract specialist work. It is important to note that further data collection may reveal competencies are important (have minimum confidence intervals above three) for additional dimensions of performance. Following are the number of additional competencies that, based on their confidence intervals, have the *possibility* of validation with additional data collection: Acquisition Planning, 3; Contract Formation, 6; Contract Administration, 1.

examined for each of the 14 performance facets. Extending the analysis to the facet level of performance was not a goal of the project. However, the additional analyses were run to identify any additional information that may be useful for validating and effectively utilizing the competencies in human resource applications. Importance means, standard deviations, and standard errors for each competency for each of the 14 facets of performance can be found in Appendix F.

The following table lists each performance facet with the Technical Competencies that have means and minimum level confidence intervals above three. Competencies with the largest means are listed first and the others follow in descending order of magnitude. The small number of critical incidents representative of each facet results in very wide confidence intervals for the importance ratings. Therefore, if more data were collected, it is possible that additional competencies would be found to be important for each performance facet.

**Table 11: Results by Facets of Performance**

<b>Determination of Need</b>	Strategic Planning, Understanding the Marketplace, Understanding Sourcing, Detailed Evaluation Skills
<b>Analysis of Requirement</b>	Detailed Evaluation Skills, Understanding the Marketplace, Strategic Planning, Effective Communication of Contract Requirements, Effective Communication, Defining Government Requirements in Commercial & Noncommercial Terms, Understanding Sourcing
<b>Extent of Competition</b>	Understanding Sourcing, Understanding the Marketplace, Strategic Planning, Detailed Evaluation Skills, Defining Government Requirements in Commercial & Noncommercial Terms
<b>Source Selection Planning</b>	Strategic Planning, Defining Government Requirements in Commercial & Noncommercial Terms, Detailed Evaluation Skills
<b>Solicitation Terms and Conditions</b>	Detailed Evaluation Skills
<b>Solicitation of Offers</b>	Detailed Evaluation Skills, Understanding Sourcing
<b>Bid Evaluation</b>	Defining Business Relationships
<b>Proposal Evaluation and Negotiation</b>	Effective Negotiation and Analytical Skills, Detailed Evaluation Skills, Defining Business Relationships

<b>Contract Award</b>	Effective Award Resolution, Effective Negotiation & Analytical Skills, Defining Business Relationships, Effective Communication of Contract Requirements
<b>Quality Assurance</b>	Effective Performance Management, Effective Communication of Contract Requirements
<b>Payment and Accounting</b>	Make Decisions Related to the Allowability of Contract Costs, Effective Financial Management
<b>Special Terms</b>	Detailed Evaluation Skills, Effective Communication
<b>Contract Closeout or Termination</b>	Effective Resolution of Contract Termination and/or Closeout

Note. Competencies are listed in descending order of mean importance value.

As found in the analysis by performance dimension, participants indicated that ‘Defining Business Relationships’ is an important competency during Contract Formation. Specifically, participants indicated it is an important skill for successful Bid Evaluation, Proposal Evaluation and Negotiation, and Contract Award. However, the definition of ‘Defining Business Relationships’ focuses on pre-solicitation actions. These results suggest that participants are inferring a broader meaning for ‘Defining Business Relationships’ and that skills associated with that meaning are important for Contract Formation.

Similarly, participants indicated that ‘Detailed Evaluation Skills’ were important for eight different performance facets and for at least one facet of Acquisition Planning, Contract Formation, and Contract Administration. However, the definition focuses on bid evaluation skills. These findings suggest that the need for evaluation skills extends beyond bid evaluation.

‘Effective Communication’ and ‘Effective Communication of Contract Requirements’ are two additional competencies for which participant importance ratings are somewhat inconsistent with their definitions. ‘Effective Communication’ focuses on pre-award skills such as preparing oral and written solicitations. ‘Effective Communication of Contract Requirements’ focuses on post-award skills such as monitoring and adjusting contracts. However, participants indicated that ‘Effective Communication’ was important for Special Terms, a Contract Administration performance dimension, and that ‘Effective Communication of Contract Requirements’ is important for Analysis of Requirement, an Acquisition Planning performance dimension. These findings suggest that having multiple communication competencies is confusing to users and more clarity in labeling and definitions may be beneficial.

One performance facet, Initiation of Work and Modification, did not have any competencies with minimum level confidence intervals above three. However, at least



two competencies had minimum confidence interval values approaching three, suggesting that further data collection would result in their validation.

The apparent inconsistencies between competency definitions and their interpretation by participants suggest that improvements can be made in the clarity of competency definitions and labels. The inconsistencies are manifested at the facet performance level (with the exception of ‘Defining Business Relationships’) and not at the performance dimension, indicating participant importance of the competencies for Acquisition Planning, Contract Formation, and Contract Administration are valid.

***Classification of Critical Incidents***

The validation of the Technical Competency model provides evidence that the competencies are important for successful Contract Specialist work. Further support can be provided by demonstrating that the competencies are able to discriminate between effective and ineffective contracting behavior. If the competencies can be used to discriminate between effective and ineffective contracting behavior, it suggests that the competencies can be used to successfully select competent Contract Specialists.

A series of analyses were performed to determine if the extent to which the Technical Competencies were exhibited in the critical incidents could be used to predict whether the critical incidents are examples of effective or ineffective contracting behavior. During the data collection process participants provided examples of ineffective and effective contracting behavior and rated the extent to which each Technical Competency was exhibited in the critical incident. Discriminant function analyses were performed to determine if the set of competencies validated for each performance dimension could be used to classify critical incidents as effective or ineffective.

**Table 12: Results of Critical Incident Classification**

Performance Dimension	Competencies	Classification Rate		
		Overall	Effective Critical Incidents	Ineffective Critical Incidents
Acquisition Planning	Strategic Planning	83.3%	81.1%	86.2%
	Understanding the Marketplace			
	Understanding Sourcing			
	Defining Government Requirements in Commercial and Noncommercial Terms			
	Effective Communication			
Contract Formation	Defining Business Relationships	86.3%	82.1%	90.8%
	Detailed Evaluation Skills			
	Effective Negotiation and Analytical Skills			
	Effective Award Resolution			

Performance Dimension	Competencies	Classification Rate		
		Overall	Effective Critical Incidents	Ineffective Critical Incidents
Contract Administration	Effective Communication of Contract Requirements Effective Performance Management	77.2%	80.6%	71.4%

Note. Percentages are the proportion of critical incidents correctly classified as effective or ineffective.

In over 80% of the Acquisition Planning and Contract Formation critical incidents, the extent exhibited scores predicted whether an incident would be effective or ineffective. The high classification rate indicates that the Technical Competencies discriminate between effective and ineffective Acquisition Planning and Contract Formation. The percentage of correctly classified critical incidents is slightly lower for Contract Administration (77.2%). Therefore, an additional discriminant function analysis was conducted to determine if a greater percentage of Contract Administration critical incidents could be correctly classified if ‘Effective Financial Management’, ‘Make Decisions Related to the Allowability of Contract Costs’, and ‘Effective Resolution of Contract Termination and/or Closeout’ were included in the analysis. With these additional competencies included the overall classification rate rose to 80.7% with 81.9% of effective incidents correctly classified and 78.6% of ineffective incidents correctly classified.

The magnitude of the classification rates indicate that the Technical Competencies are useful for predicting the effectiveness of Contract Specialist job performance. In addition, including the ‘Effective Financial Management’, ‘Make Decisions Related to the Allowability of Contract Costs’, and ‘Effective Resolution of Contract Termination and/or Closeout’ competencies in the Contract Administration analysis raised the classification rate and provides further evidence that these competencies are important for effective Contract Administration.

***Summary of Findings***

Importance ratings indicate the each of the Technical Competencies is important for at least one aspect of Contract Specialist work. Eleven of the competencies are important for Acquisition Planning, Contract Formation, or Contract Administration. The three remaining competencies are important for specific aspects of Contract Administration. Analysis for more specific facets of Contract Specialist performance provided direction for enhancing the clarity of the competencies in the future. In addition, analyses show that demonstrating the competencies is associated with effective Contract Specialist performance. These findings support the validity of the Technical Competencies for Contract Specialists the use of the Technical Competencies in human resource functions.

## **Participant Feedback**

During the data collection sessions, participants often offered feedback about the competencies and performance dimensions. The feedback that seems especially relevant is summarized here. In addition, comments regarding the feedback received are provided.

**Feedback:** Competencies do not always reflect common terminology. For example, ‘Understanding the Marketplace’ is generally called ‘Market Research’.

**Comment:** Language regarding competencies may vary across agencies and departments and clarity in the naming and description of the competencies will facilitate their successful use.

**Feedback:** ‘Effective Communication’ should apply to the entire Contract Specialist domain (not just pre-award),

**Comment:** ‘Effective Communication’ is defined using skills associated with pre-award activities. However, it was validated for both Contract Administration and the Special Terms dimension within Contract Administration, suggesting that it does apply across performance dimensions. In addition, the General Competency ‘Oral Communication’ was validated across aspects of Contract Specialist work further emphasizing the importance of communication skills for Contract Specialists.

**Feedback:** Some competencies relate to pre-award and some relate to post award. Suggest putting a heading before the ‘Pre Award’ competencies and a heading before the ‘Post Award’ competencies.

**Comment:** Several of the competencies were validated for performance dimensions that were inconsistent with their definitions. Specifying the competencies as pre-award or post-award may make their meaning clearer. The competencies involving communication skills are one example.

**Feedback:** ‘Understanding the Marketplace’ and ‘Understanding Sourcing’ should be merged.

**Comment:** ‘Understanding the Marketplace’ and ‘Understanding Sourcing’ received very similar importance ratings across dimensions of performance. In addition, the definitions include similar skills. This suggests that the two can be combined and this may be a good strategy when it is desirable to minimize the number of competencies and/or when the competencies are updated.

**Feedback:** Merge ‘Detailed Evaluation Skills’ with ‘Effective Negotiation Skills and Effective Analytical Skills’.

**Comment:** Both these competencies describe skills used to assess bids. However, ‘Effective Negotiation Skills and Effective Analytical Skills’ includes additional skills relating to developing a negotiation strategy and conducting the negotiation. In addition, the importance means for the competencies are not similar, suggesting these skills are used for different Contract Specialist functions. However, there does seem to be some overlap in the competency definitions, especially in terms of evaluation skills. Therefore, the clarity and utility of the competencies might be enhanced by rewriting them so that

‘Effective Bid Evaluation’ focuses on bid evaluation skills and ‘Effective Negotiation Skills and Analytical Skills’ focuses on negotiation skills.

**Feedback:** ‘Defining Business Relationships’ should be changed to reflect ‘Selecting Contract Type’ to capture determining what type of contracts used (e.g., Fixed Price, Incentive Fees, etc.).

**Comment:** As discussed in the previous section, participants interpreted ‘Defining Business Relationships’ more broadly than its definition implies. Changing its label to more accurately reflect the specifics of its definition may facilitate understanding and effective use of this competency.

**Feedback:** Add competencies about pre-negotiation (this takes a huge amount of time and seems to be overlooked).

**Comment:** ‘Effective Negotiation and Analytical Skills’ does include pre-negotiation actions. However, the description of this competency is quite long and pre-negotiation is only one part. Creating a separate pre-negotiation competency may result in a competency model with a more accurate and balanced reflection of Contract Specialist skill.

**Feedback:** Add a competency about Contract Award. This is a major step and there does not appear to be any competencies that refer to this phase. Possibly re-write ‘Effective Award Resolution’ competency so that it addresses contract award. The phases of awarding a contract from debriefing, to determining a contractor unsuccessful, to responses to protests need to be included.

**Comment:** The definition of ‘Effective Award Resolution’ does appear to include the some of the above mentioned skills. It is possible that re-writing the definition to further highlight these skills may be beneficial.

**Feedback:** ‘Contract closeout and termination’ doesn’t happen because Contract Specialists do not have enough time.

**Comment:** Relatively few critical incidents of contract closeout or termination were reported and the competency Effective Resolution of Contract Termination and/or Closeout was validated only for the contract closeout performance dimension suggesting that this competency is may not be a major aspect of most Contract Specialists’ work.

## **Conclusion**

### ***Validity of the Technical Competency Model***

This validation study provides evidence that each of the 14 Technical Competencies is important for successful performance as a Contract Specialist. Analyses indicate that eleven of the 14 competencies are important for one of three major aspects of Contract Specialist work: Acquisition Planning, Contract Formation, and Contract Administration. The remaining three competencies are important for specific aspects of Contract Administration. Validation of the Technical Competencies was achieved by soliciting feedback from Contract Specialists about the importance of each Technical Competency for effective contracting. Contract Specialists from at least 16 Executive Departments and Independent Agencies participated in the study and provided examples of Contract Specialist work that are illustrative of performance at a variety of career levels and across job functions. Participants provided a robust and comprehensive description of Contract Specialist work to which they linked the Technical Competencies.

In addition to Contract Specialist feedback about importance of the competencies, demonstrating that use of the competencies was associated with effective contracting provided further support for the Technical Competency model. Analyses showed that the extent to which the competencies were exhibited successfully predicted whether an example of contracting was effective or ineffective approximately 80% of the time.

The analysis of importance ratings supports the validity of the Technical Competency Model. Additionally, analysis of extent exhibited ratings demonstrates that use of the competencies is associated with effective contracting.

### ***Enhancing the Technical Competency Model***

The validity study provides evidence that the Technical Competencies capture skills needed for effective contracting and suggests ways that the Technical Competency model can be improved. Three types of evidence suggest that improvements can be made. First, importance ratings suggest that participants may not have been interpreting the competencies in ways consistent with their definitions. In addition, the 80% classification rate suggests that the set of competencies does a fairly good job of capturing the skills needed to be an effective Contract Specialist. However, the 20% of incorrectly classified incidents indicates that improvements can be made. Also, participants provided feedback, which if incorporated, may improve the Technical Competency model.

Several modifications to the competency definitions including combining, splitting, and expanding various competency definitions are suggested by the validation study. Competencies for which importance ratings and/or participant feedback indicate the definitions could be improved include:

- Understanding the Marketplace
- Understanding Sourcing

- Defining Business Relationships
- Detailed Evaluation Skills
- Effective Negotiation and Analytical Skills
- Effective Award Resolution

Competencies for which importance ratings and/or participant feedback suggest changing the label would facilitate understanding:

- Defining Business Relationships
- Effective Communication
- Effective Communication of Contract Requirements

The Technical Competency model should be updated on a regular basis to ensure that the competencies accurately capture necessary Contract Specialist skills as the job evolves. In addition, updating the Technical Competency model will provide an opportunity for reviewing the interpretation and understanding of the competencies by Contract Specialists and modifying them accordingly.

### ***Putting the Technical Competency Model to Work***

Both the General and Technical Competencies have been validated for Contract Specialists. The General Competencies were found to be important across Contract Specialist functions, while the Technical Competencies are valid for more specific aspects of Contract Specialist work. Thought should be given to how most effectively integrate these two models to understand and enhance the work of Contract Specialists. For example, many of the General Competencies include what are generally considered soft skills such as flexibility, teamwork, and interpersonal skills. These skills are much harder to successfully train and develop in employees. In contrast, the Technical Competencies contain concrete skills which lend themselves to traditional training methods. A plan for effective utilization of the competencies might include using the General Competencies in assessment systems and the Technical Competencies in training and development systems.

The effective application of the Technical Competencies in human resource functions may need to vary in conjunction with how individual Contract Specialists perform their jobs. For Contract Specialists whose work involves specific contracting functions, only a portion of the set of Technical Competencies may be relevant. In contrast, all the Technical Competencies will be important for those Contract Specialists who are involved from the beginning to the end of the contracting process. Training, development, and assessment systems will need to reflect this difference.

Using the General and Technical Competencies in human resource applications such as selection, performance appraisal, training needs identification, training evaluation, and employee development require the ability to assess individuals' skill level for each competency. The database of critical incidents collected in this study provides a solid foundation for developing behaviorally-anchored rating scales to assess the Technical

Competencies. These scales are based on observable employee behaviors and provide an effective assessment tool that is well received by employees. The existing database of critical incidents can be used to facilitate the development of Contract Specialist assessment tools.

## **Appendix A: Technical Competencies**



## **Technical Competencies for the Contract Specialist Series**

**Strategic planning.** Advise customers on their acquisition-related roles as well as the development and implementation of strategies needed to assure that supplies and services are available when needed to meet mission requirements.

**Understanding the marketplace.** Collect and analyze relevant market information from Government and non-government sources; analyze and provide business advice on the procurement request; review and provide business advice in the preparation of requirements documents and related elements of the procurement request.

**Understanding sourcing (commercial/government practices).** Identify possible sources for the acquisition through effective market analysis and knowledge of suppliers. Limit competition when it is appropriate to the acquisition situation based on business strategies and market environments. Determine whether to limit competition to small business concerns, eligible 8(a) concerns, or a single 8(a) concern.

**Defining government requirements in commercial and noncommercial terms.** Select appropriate offer evaluation factors for incorporation into the solicitation; determine the method of acquisition.

**Defining business relationships.** Select the most appropriate pricing arrangement(s) to solicit. Determine whether and how to provide for recurring requirements. Prepare unpriced orders and contracts. Determine whether to provide for Government financing and where necessary the method of financing. Determine bonding requirements for the solicitation and contract. Determine the method of payment. Determine whether a written source selection plan is necessary or desirable.

**Effective communication.** Select and implement a method or methods of publicizing the proposed procurements. Establish appropriate subcontracting and make-or-buy requirements. Conduct oral solicitations. Prepare a written solicitation that includes the appropriate provisions and clauses tailored to the requirement and assembled in a format appropriate to the acquisition method and market for the required supply or service. Respond to an inquiry about the solicitation received prior to contract award or a request for information under the Freedom of Information Act. Conduct a pre-quote, pre-bid, pre-proposal conference when appropriate. Amend or cancel a solicitation.

**Detailed evaluation skills.** Receive bids including the safeguarding, opening, reading, recording, and abstracting of each bid. Evaluate offered bid acceptance periods and take appropriate action. Determine whether a bid is late, and if late, whether it can be considered for contract award. Identify and resolve mistakes in bids. Calculate the evaluated price for each bid and determine whether the lowest price is reasonable. Determine responsiveness for the invitation for bids (IFB).

**Effective negotiation skills and effective analytical skills.** Receive quotations/proposals including the safeguarding, opening, tracking, assessing compliance with minimum

solicitation requirements, and identifying of quotations/proposals that will not receive further consideration. Apply non-price factors in evaluating quotations, proposals, and past performance. Determine what pricing information (if any) to require from offerors. Consider the adequacy of a firm's accounting and estimating systems in making contracting decisions. Assure that a firm properly discloses its accounting practices when required by Government cost accounting standards (CAS) and that the disclosed practices comply with CAS requirements. Obtain any necessary audit support. Establish pre-negotiation positions on price including: the need to cancel and re solicit for price related reasons; the need for communications; the need for cost information; and the need to negotiate. Establish pre-negotiation positions related to cost reasonableness and cost realism by analyzing cost and technical

**Effective award resolution.** Determine and document the responsibility or non-responsibility of a prospective contractor. Prepare purchase orders/contract and document the award recommendation. Make the contract award and related notifications. Debrief offerors at their request. Act to resolve acquisition complaints and concerns.

**Effective communication of contract requirements.** Plan for contract administration. Conduct a post-award orientation. Monitor contractor subcontract management in accordance with prime contract requirements. Modify or adjust a contract when needed. Determine whether or not to exercise an available option. Utilize task order contracts, delivery order contracts, and basic ordering agreements.

**Effective performance management.** Monitor contract performance and take any necessary action related to delays in contract performance or the need to stop work under the contract. Apply remedies to protect the rights of the Government under commercial item contracts and simplified acquisitions. Apply remedies to protect the rights of the Government under noncommercial item contracts. Document past performance information.

**Effective financial management.** Approve or disapprove the request for an assignment of claims. Require the contractor to provide a bond or other securities to apply toward completing the contract in case the contract is terminated for cause or default. Assure that the contractor receives the appropriate contract financing in accordance with contract financing requirements and relate contract performance.

**Make decisions related to allowability of contract costs.** Adjust the price or fee. Determine if cost or pricing data were defective (i.e., not current, accurate, and complete) and appropriate remedies. Determine whether to authorize payment against an invoice in full, in part, or not at all. Refer indications of fraud or other civil or criminal offenses to responsible officials. Determine and recover debts from contractors. Enforce government and contractor compliance with special contract terms and conditions.

**Effective resolution of contract termination and/or closeout.** Analyze and negotiate and prepare a Contracting Officer's decisions. Terminate contracts when it is in the best interest of the Government. Perform contract closeout.


## **Appendix B: Survey Website**

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## FAI - Technical Competency Validation

Facilitated by Federal Management Partners, Inc.

### Login

Full Name

Password

Login

Are you a new user? You will need to register a user account: [New User](#) Your personal information will be kept private.

Internet

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## Welcome Beverly Cromer

### Begin Technical Competency Validation

[Tips](#)  
[Competency Definitions](#)  
[Ratings](#)  
[Performance Dimensions](#)

Part A. Describe Critical Incident (e.g. Situation, Action, Outcome)

Effectiveness

Applicable Career Level

Performance Dimensions

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Part B. Evaluate the Critical Incident for these competencies.

1. Strategic Planning	1	1
2. Understanding the Marketplace	2	3
3. Understanding sourcing (commercial/government practices)	1	5
4. Defining government requirements in commercial and noncommercial terms	3	3
5. Defining Business Relationships	3	2
6. Effective Communication	2	4
7. Detailed Evaluation Skills	4	5
8. Effective negotiation skills and effective analytical skills	2	2
9. Effective award resolution	2	2

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7. Detailed Evaluation Skills	4	5
8. Effective negotiation skills and effective analytical skills	2	2
9. Effective award resolution	2	2
10. Effective communication of contract requirements	5	5
11. Effective Performance Management	2	2
12. Effective Financial Management	2	3
13. Make decisions related to allowability of contract costs	3	2
14. Effective resolution of contract termination and /or closeout	2	3

Submit Incident

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## **Appendix C: Participation Solicitation Memos**



To Procurement Executives:

The Federal Acquisition Institute (FAI) will be validating the 14 technical competencies that have been identified for the Contract Specialist series. To do this, FAI will collect critical incident information from experienced acquisition professionals in the Contract Specialist career field. FAI will hold a series of workshops during which participants will be asked to provide incidents of both effective and ineffective contracting behaviors and rate their levels of importance against the competencies. A similar process involving the validation of general competencies took place in 2001.

Federal Management Partners, Inc., a human resources management consulting company located in Alexandria, Virginia, will be facilitating the collection of the critical incident data, analyzing the data collected, and providing a comprehensive report of the findings to FAI. When the study is complete, the validated competencies will be used to assist FAI in better developing recruitment, selection, and training tools for the federal acquisition workforce.

The accomplishment of this program requires your help in soliciting experienced acquisition professionals to represent your agency. Twenty-one workshops have been scheduled to collect data. Each session will accommodate 12 participants, last no more than three hours, and will be conveniently scheduled during both morning and afternoon sessions, Tuesday through Thursday (see times indicated on the calendar below). All sessions will be held at Federal Management Partners' facility in Alexandria, VA. Attached is information and options for getting to Federal Management Partners, Inc.

Your participation in soliciting participants is greatly appreciated and will assist in the improvement of FAI's competency-based career development program. Please contact Janet Springsteen ([janet.springsteen@gsa.gov](mailto:janet.springsteen@gsa.gov) or 202-208-0759) for further information and to schedule participants.

***Critical Incident Sessions***

Sessions will be held at Federal Management Partners, Inc.  
1500 North Beauregard Street, Suite 320, Alexandria, Virginia 22209

Tuesday			Wednesday			Thursday		
<b>8/13</b>	No am session	1pm-4pm	<b>8/14</b>	9am-12pm	1pm-4pm	<b>8/15</b>	9am-12pm	1pm-4pm
<b>8/20</b>	9am-12pm	1pm-4pm	<b>8/21</b>	9am-12pm	1pm-4pm	<b>8/22</b>	9am-12pm	1pm-4pm
<b>8/27</b>	9am-12pm	1pm-4pm	<b>8/28</b>	9am-12pm	1pm-4pm	<b>8/29</b>	9am-12pm	1pm-4pm
<b>9/3</b>	9am-12pm	1pm-4pm	<b>9/4</b>	9am-12pm	1pm-4pm			

To IPCMC:

Due to low participation rates and a busy end of fiscal year, the Federal Acquisition Institute (FAI) has decided to extend data collection efforts for the validation of the 14 technical competencies identified for the Contract Specialist career field. FAI needs participation in the next few weeks from 200 experienced acquisition professionals in the Contract Specialist career field. The accomplishment of this program requires your help in soliciting experienced acquisition professionals to represent your agency.

FAI in conjunction with Federal Management Partners, Inc. will hold a series of workshops on-site at your agency in the next few weeks. During the sessions, participants will be asked to:

- Describe incidents of on-the-job behaviors observed in the past year
- Classify each incident in terms of effectiveness, grade level, and performance dimension
- Evaluate each incident against each technical competency

Each session will accommodate as many participants as your space provides, last no more than three hours, and will be conveniently scheduled during both morning and afternoon sessions, Monday through Friday from 15 October to 1 November. Participants should have working knowledge of the Contract Specialist career field and should only attend one session.

The sessions require computer stations equipped with Internet access. If computers are not available but conference space is, Federal Management Partners, Inc. can still provide a 30-minute training session and the participants can return to their workstations to complete the session. If either option is not available or if you have any space allocation questions, please contact Sherean Miller at Federal Management Partners, Inc. ([smiller@fmpconsulting.com](mailto:smiller@fmpconsulting.com) or 703-671-6600 ext. 102).

In addition to facilitating the collection of data, Federal Management Partners, Inc. will analyze the data collected and provide a comprehensive report of the findings to FAI. When the study is complete, the validated competencies will be used to assist FAI in better developing recruitment, selection, and training tools for the federal acquisition workforce. A similar process involving the validation of general competencies took place in 2001.

Your participation in soliciting participants is greatly appreciated and will assist in the improvement of FAI's competency-based career development program. Please have your agency's point of contact reach Sherean Miller at Federal Management Partners, Inc. ([smiller@fmpconsulting.com](mailto:smiller@fmpconsulting.com) or 703-671-6600 ext. 102) or Beverly Cromer at FAI ([beverly.cromer@gsa.gov](mailto:beverly.cromer@gsa.gov) or 202-208-6750) by October 10<sup>th</sup> to schedule participants.

Sincerely,  
Gloria M. Sochon  
Director  
Federal Acquisition Institute

## **Appendix D: Importance Statistics for Combined Performance Dimensions**

**For each competency the following information is reported:**

1. Number of critical incidents used in the analysis (N).
2. Mean importance rating: Sum of importance ratings divided by the number of critical incidents.
3. Standard deviation of the importance rating (Std. Deviation): The typical distance of an importance rating from the average importance rating.
4. Standard error of the mean importance rating (Std. Error): A measure of the distance of the sample mean from the population mean which is used to calculate confidence intervals. 95% confidence intervals are computed as follows: Mean  $\pm$  (1.96 \* Standard Error).

	Strategic Planning (Importance)	Understanding the Marketplace (Importance)	Understanding Sourcing (Importance)	Defining Government Requirements in Commercial & Noncommercial Terms (Importance)	Defining Business Relationships (Importance)	Effective Communication (Importance)	Detailed Evaluation Skills (Importance)
N	406	406	406	406	406	406	406
Mean	2.9951	3.0739	3.1034	2.9483	2.9064	2.9631	3.6404
Std. Deviation	1.7427	1.7818	1.7928	1.7708	1.7613	1.6956	1.7324
Std. Error of Mean	8.649E-02	8.843E-02	8.897E-02	8.788E-02	8.741E-02	8.415E-02	8.598E-02

	Effective Negotiation & Analytical Skills (Importance)	Effective Award Resolution (Importance)	Effective Communication of Contract Requirements (Importance)	Effective Performance Management (Importance)	Effective Financial Management (Importance)	Make Decisions Related to Allowability of Contract Costs (Importance)	Effective Resolution of Contract Termination and/or Closeout (Importance)
N	406	406	406	406	406	406	406
Mean	3.1379	2.8424	3.2143	2.5394	2.2020	2.1626	1.7537
Std. Deviation	1.7835	1.8270	1.8138	1.7588	1.6113	1.6294	1.4241
Std. Error of Mean	8.851E-02	9.067E-02	9.002E-02	8.729E-02	7.997E-02	8.087E-02	7.068E-02

**Appendix E:**  
**Importance Statistics for Acquisition Planning,**  
**Contract Formation, and Contract**  
**Administration**

**For each competency the following information is reported:**

1. Number of critical incidents used in the analysis (N).
2. Mean importance rating: Sum of importance ratings divided by the number of critical incidents.
3. Standard deviation of the importance rating (Std. Deviation): The typical distance of an importance rating from the average importance rating.
4. Standard error of the mean importance rating (Std. Error): A measure of the distance of the sample mean from the population mean which is used to calculate confidence intervals. 95% confidence intervals are computed as follows: Mean  $\pm$  (1.96 \* Standard Error).

## Acquisition Planning

	Strategic Planning (Importance)	Understanding the Marketplace (Importance)	Understanding Sourcing (Importance)	Defining Government Requirements in Commercial & Noncommercial Terms (Importance)	Defining Business Relationships (Importance)	Effective Communication (Importance)	Detailed Evaluation Skills (Importance)
N	132	132	132	132	132	132	132
Mean	4.0606	4.2348	4.0530	3.6818	2.7500	3.3106	4.0152
Std. Deviation	1.4502	1.3972	1.5399	1.6360	1.7403	1.7216	1.5382
Std. Error of Mean	.1262	.1216	.1340	.1424	.1515	.1498	.1339

	Effective Negotiation & Analytical Skills (Importance)	Effective Award Resolution (Importance)	Effective Communication of Contract Requirements (Importance)	Effective Performance Management (Importance)	Effective Financial Management (Importance)	Make Decisions Related to Allowability of Contract Costs (Importance)	Effective Resolution of Contract Termination and/or Closeout (Importance)
N	132	132	132	132	132	132	132
Mean	2.9470	2.7727	3.2045	2.2803	2.1288	1.7955	1.5303
Std. Deviation	1.7662	1.8435	1.8850	1.6911	1.6271	1.3633	1.1751
Std. Error of Mean	.1537	.1605	.1641	.1472	.1416	.1187	.1023



## Contract Formation

	Strategic Planning (Importance)	Understanding the Marketplace (Importance)	Understanding Sourcing (Importance)	Defining Government Requirements in Commercial & Noncommercial Terms (Importance)	Defining Business Relationships (Importance)	Effective Communication (Importance)	Detailed Evaluation Skills (Importance)
N	160	160	160	160	160	160	160
Mean	2.8438	2.9312	3.0875	2.9563	3.6500	2.8937	3.7813
Std. Deviation	1.6542	1.7379	1.7280	1.7279	1.6831	1.6658	1.6547
Std. Error of Mean	.1308	.1374	.1366	.1366	.1331	.1317	.1308

	Effective Negotiation & Analytical Skills (Importance)	Effective Award Resolution (Importance)	Effective Communication of Contract Requirements (Importance)	Effective Performance Management (Importance)	Effective Financial Management (Importance)	Make Decisions Related to Allowability of Contract Costs (Importance)	Effective Resolution of Contract Termination and/or Closeout (Importance)
N	160	160	160	160	160	160	160
Mean	3.7187	3.4813	3.0562	2.1500	1.9875	2.0313	1.5188
Std. Deviation	1.7199	1.7482	1.7777	1.6260	1.5336	1.5957	1.1708
Std. Error of Mean	.1360	.1382	.1405	.1286	.1212	.1261	9.256E-02

## Contract Administration

	Strategic Planning (Importance)	Understanding the Marketplace (Importance)	Understanding Sourcing (Importance)	Defining Government Requirements in Commercial & Noncommercial Terms (Importance)	Defining Business Relationships (Importance)	Effective Communication (Importance)	Detailed Evaluation Skills (Importance)
N	114	114	114	114	114	114	114
Mean	1.9737	1.9298	2.0263	2.0877	2.0439	2.6579	3.0088
Std. Deviation	1.4782	1.3935	1.5312	1.5996	1.4353	1.6500	1.8885
Std. Error of Mean	.1384	.1305	.1434	.1498	.1344	.1545	.1769

	Effective Negotiation & Analytical Skills (Importance)	Effective Award Resolution (Importance)	Effective Communication of Contract Requirements (Importance)	Effective Performance Management (Importance)	Effective Financial Management (Importance)	Make Decisions Related to Allowability of Contract Costs (Importance)	Effective Resolution of Contract Termination and/or Closeout (Importance)
N	114	114	114	114	114	114	114
Mean	2.5439	2.0263	3.4474	3.3860	2.5877	2.7719	2.3421
Std. Deviation	1.6571	1.5711	1.7704	1.7423	1.6446	1.7950	1.8038
Std. Error of Mean	.1552	.1471	.1658	.1632	.1540	.1681	.1689

## **Appendix F: Importance Statistics for Facets of Performance**

**For each competency the following information is reported:**

1. Number of critical incidents used in the analysis (N).
2. Mean importance rating: Sum of importance ratings divided by the number of critical incidents.
3. Standard deviation of the importance rating (Std. Deviation): The typical distance of an importance rating from the average importance rating.
4. Standard error of the mean importance rating (Std. Error): A measure of the distance of the sample mean from the population mean which is used to calculate confidence intervals. 95% confidence intervals are computed as follows: Mean  $\pm$  (1.96 \* Standard Error).

## Determination of Need

	Strategic Planning (Importance)	Understanding the Marketplace (Importance)	Understanding Sourcing (Importance)	Defining Government Requirements in Commercial & Noncommercial Terms (Importance)	Defining Business Relationships (Importance)	Effective Communication (Importance)	Detailed Evaluation Skills (Importance)
N	32	32	32	32	32	32	32
Mean	4.2500	4.1875	4.0625	3.5938	2.5000	3.1562	3.6875
Std. Deviation	1.4142	1.5748	1.5850	1.7935	1.7961	1.8335	1.7678
Std. Error of Mean	.2500	.2784	.2802	.3171	.3175	.3241	.3125

	Effective Negotiation & Analytical Skills (Importance)	Effective Award Resolution (Importance)	Effective Communication of Contract Requirements (Importance)	Effective Performance Management (Importance)	Effective Financial Management (Importance)	Make Decisions Related to Allowability of Contract Costs (Importance)	Effective Resolution of Contract Termination and/or Closeout (Importance)
N	32	32	32	32	32	32	32
Mean	2.7187	2.7812	2.7188	2.1875	2.3125	1.9687	1.8125
Std. Deviation	1.8706	1.9631	1.9216	1.7494	1.7494	1.4916	1.4013
Std. Error of Mean	.3307	.3470	.3397	.3093	.3093	.2637	.2477

## Analysis of Requirement

	Strategic Planning (Importance)	Understanding the Marketplace (Importance)	Understanding Sourcing (Importance)	Defining Government Requirements in Commercial & Noncommercial Terms (Importance)	Defining Business Relationships (Importance)	Effective Communication (Importance)	Detailed Evaluation Skills (Importance)
N	42	42	42	42	42	42	42
Mean	4.1429	4.2619	3.6429	3.6905	3.3810	3.7381	4.5714
Std. Deviation	1.3717	1.2699	1.6353	1.6303	1.6072	1.5627	1.0156
Std. Error of Mean	.2117	.1960	.2523	.2516	.2480	.2411	.1567

	Effective Negotiation & Analytical Skills (Importance)	Effective Award Resolution (Importance)	Effective Communication of Contract Requirements (Importance)	Effective Performance Management (Importance)	Effective Financial Management (Importance)	Make Decisions Related to Allowability of Contract Costs (Importance)	Effective Resolution of Contract Termination and/or Closeout (Importance)
N	42	42	42	42	42	42	42
Mean	3.4762	3.2143	3.8095	2.7619	2.4048	2.0238	1.6429
Std. Deviation	1.6115	1.8151	1.7702	1.7917	1.7399	1.4565	1.2459
Std. Error of Mean	.2487	.2801	.2731	.2765	.2685	.2247	.1922

## Extent of Competition

	Strategic Planning (Importance)	Understanding the Marketplace (Importance)	Understanding Sourcing (Importance)	Defining Government Requirements in Commercial & Noncommercial Terms (Importance)	Defining Business Relationships (Importance)	Effective Communication (Importance)	Detailed Evaluation Skills (Importance)
N	34	34	34	34	34	34	34
Mean	4.0000	4.6176	4.8824	3.6176	2.2059	3.0294	3.6471
Std. Deviation	1.4771	.8881	.4093	1.5957	1.6102	1.7835	1.6856
Std. Error of Mean	.2533	.1523	7.020E-02	.2737	.2761	.3059	.2891

	Effective Negotiation & Analytical Skills (Importance)	Effective Award Resolution (Importance)	Effective Communication of Contract Requirements (Importance)	Effective Performance Management (Importance)	Effective Financial Management (Importance)	Make Decisions Related to Allowability of Contract Costs (Importance)	Effective Resolution of Contract Termination and/or Closeout (Importance)
N	34	34	34	34	34	34	34
Mean	2.9706	2.5294	2.8235	1.9118	1.7647	1.3529	1.2059
Std. Deviation	1.8172	1.7449	1.8002	1.4641	1.3939	.9497	.7699
Std. Error of Mean	.3116	.2992	.3087	.2511	.2391	.1629	.1320

## Source Selection Planning

	Strategic Planning (Importance)	Understanding the Marketplace (Importance)	Understanding Sourcing (Importance)	Defining Government Requirements in Commercial & Noncommercial Terms (Importance)	Defining Business Relationships (Importance)	Effective Communication (Importance)	Detailed Evaluation Skills (Importance)
N	13	13	13	13	13	13	13
Mean	4.7692	3.7692	3.8462	4.1538	2.6154	3.4615	4.0000
Std. Deviation	.4385	1.9215	1.8187	1.4632	1.8046	1.5607	1.6330
Std. Error of Mean	.1216	.5329	.5044	.4058	.5005	.4329	.4529

	Effective Negotiation & Analytical Skills (Importance)	Effective Award Resolution (Importance)	Effective Communication of Contract Requirements (Importance)	Effective Performance Management (Importance)	Effective Financial Management (Importance)	Make Decisions Related to Allowability of Contract Costs (Importance)	Effective Resolution of Contract Termination and/or Closeout (Importance)
N	13	13	13	13	13	13	13
Mean	2.5385	2.4615	3.3846	2.6154	2.3077	1.7692	1.7692
Std. Deviation	1.7134	1.8536	1.9807	1.8046	1.7022	1.3634	1.4806
Std. Error of Mean	.4752	.5141	.5493	.5005	.4721	.3782	.4107



## Solicitation Terms and Conditions

	Strategic Planning (Importance)	Understanding the Marketplace (Importance)	Understanding Sourcing (Importance)	Defining Government Requirements in Commercial & Noncommercial Terms (Importance)	Defining Business Relationships (Importance)	Effective Communication (Importance)	Detailed Evaluation Skills (Importance)
N	11	11	11	11	11	11	11
Mean	2.5455	3.6364	3.2727	3.5455	2.9091	2.8182	4.0000
Std. Deviation	1.6949	1.7477	2.0045	1.6949	1.9212	1.8878	1.5492
Std. Error of Mean	.5110	.5270	.6044	.5110	.5793	.5692	.4671

	Effective Negotiation & Analytical Skills (Importance)	Effective Award Resolution (Importance)	Effective Communication of Contract Requirements (Importance)	Effective Performance Management (Importance)	Effective Financial Management (Importance)	Make Decisions Related to Allowability of Contract Costs (Importance)	Effective Resolution of Contract Termination and/or Closeout (Importance)
N	11	11	11	11	11	11	11
Mean	2.0000	2.1818	3.2727	1.4545	1.4545	1.8182	1.0000
Std. Deviation	1.5492	1.8340	2.0045	1.2136	1.2136	1.6011	.0000
Std. Error of Mean	.4671	.5530	.6044	.3659	.3659	.4828	.0000

## Solicitation of Offers

	Strategic Planning (Importance)	Understanding the Marketplace (Importance)	Understanding Sourcing (Importance)	Defining Government Requirements in Commercial & Noncommercial Terms (Importance)	Defining Business Relationships (Importance)	Effective Communication (Importance)	Detailed Evaluation Skills (Importance)
N	27	27	27	27	27	27	27
Mean	3.1111	3.5185	3.7407	3.2593	2.1481	3.0000	4.1111
Std. Deviation	1.6251	1.6955	1.6075	1.7887	1.6572	1.8187	1.5771
Std. Error of Mean	.3128	.3263	.3094	.3442	.3189	.3500	.3035

	Effective Negotiation & Analytical Skills (Importance)	Effective Award Resolution (Importance)	Effective Communication of Contract Requirements (Importance)	Effective Performance Management (Importance)	Effective Financial Management (Importance)	Make Decisions Related to Allowability of Contract Costs (Importance)	Effective Resolution of Contract Termination and/or Closeout (Importance)
N	27	27	27	27	27	27	27
Mean	2.1852	2.0000	2.2593	1.5556	1.2593	1.5926	1.3704
Std. Deviation	1.7105	1.6408	1.8312	1.2810	.9443	1.3085	1.1145
Std. Error of Mean	.3292	.3158	.3524	.2465	.1817	.2518	.2145

## Bid Evaluation

	Strategic Planning (Importance)	Understanding the Marketplace (Importance)	Understanding Sourcing (Importance)	Defining Government Requirements in Commercial & Noncommercial Terms (Importance)	Defining Business Relationships (Importance)	Effective Communication (Importance)	Detailed Evaluation Skills (Importance)
N	19	19	19	19	19	19	19
Mean	2.2105	1.8421	2.2105	2.3684	4.2105	1.8947	3.6316
Std. Deviation	1.4749	1.2589	1.6526	1.6059	1.5121	1.5237	1.6059
Std. Error of Mean	.3384	.2888	.3791	.3684	.3469	.3496	.3684

	Effective Negotiation & Analytical Skills (Importance)	Effective Award Resolution (Importance)	Effective Communication of Contract Requirements (Importance)	Effective Performance Management (Importance)	Effective Financial Management (Importance)	Make Decisions Related to Allowability of Contract Costs (Importance)	Effective Resolution of Contract Termination and/or Closeout (Importance)
N	19	19	19	19	19	19	19
Mean	2.5263	2.8947	2.2632	1.5263	1.4737	1.3684	1.5789
Std. Deviation	1.8964	1.8528	1.6945	1.0733	1.0733	1.0116	1.3045
Std. Error of Mean	.4351	.4251	.3887	.2462	.2462	.2321	.2993

## Proposal Evaluation and Negotiation

	Strategic Planning (Importance)	Understanding the Marketplace (Importance)	Understanding Sourcing (Importance)	Defining Government Requirements in Commercial & Noncommercial Terms (Importance)	Defining Business Relationships (Importance)	Effective Communication (Importance)	Detailed Evaluation Skills (Importance)
N	76	76	76	76	76	76	76
Mean	2.8553	3.0395	2.9868	3.0132	4.0526	3.0658	3.8289
Std. Deviation	1.6947	1.7697	1.7243	1.7087	1.4320	1.5861	1.6198
Std. Error of Mean	.1944	.2030	.1978	.1960	.1643	.1819	.1858

	Effective Negotiation & Analytical Skills (Importance)	Effective Award Resolution (Importance)	Effective Communication of Contract Requirements (Importance)	Effective Performance Management (Importance)	Effective Financial Management (Importance)	Make Decisions Related to Allowability of Contract Costs (Importance)	Effective Resolution of Contract Termination and/or Closeout (Importance)
N	76	76	76	76	76	76	76
Mean	4.5789	3.6842	3.2632	2.1447	2.1842	2.1579	1.4868
Std. Deviation	.9559	1.6101	1.6921	1.5808	1.6059	1.6497	1.1372
Std. Error of Mean	.1096	.1847	.1941	.1813	.1842	.1892	.1304

## Contract Award

	Strategic Planning (Importance)	Understanding the Marketplace (Importance)	Understanding Sourcing (Importance)	Defining Government Requirements in Commercial & Noncommercial Terms (Importance)	Defining Business Relationships (Importance)	Effective Communication (Importance)	Detailed Evaluation Skills (Importance)
N	38	38	38	38	38	38	38
Mean	2.9474	2.8421	3.2632	2.9211	3.6316	2.9737	3.5263
Std. Deviation	1.6595	1.7168	1.7035	1.7764	1.6833	1.6683	1.8119
Std. Error of Mean	.2692	.2785	.2763	.2882	.2731	.2706	.2939

	Effective Negotiation & Analytical Skills (Importance)	Effective Award Resolution (Importance)	Effective Communication of Contract Requirements (Importance)	Effective Performance Management (Importance)	Effective Financial Management (Importance)	Make Decisions Related to Allowability of Contract Costs (Importance)	Effective Resolution of Contract Termination and/or Closeout (Importance)
N	38	38	38	38	38	38	38
Mean	3.6842	4.4211	3.6053	2.8947	2.3684	2.4211	1.6579
Std. Deviation	1.7569	1.2440	1.6852	1.8858	1.7151	1.7802	1.2363
Std. Error of Mean	.2850	.2018	.2734	.3059	.2782	.2888	.2006

## Initiation of Work and Modification

	Strategic Planning (Importance)	Understanding the Marketplace (Importance)	Understanding Sourcing (Importance)	Defining Government Requirements in Commercial & Noncommercial Terms (Importance)	Defining Business Relationships (Importance)	Effective Communication (Importance)	Detailed Evaluation Skills (Importance)
N	34	34	34	34	34	34	34
Mean	1.8529	1.7353	1.8529	2.0588	1.9706	2.2941	2.6176
Std. Deviation	1.3955	1.3553	1.4798	1.7046	1.4870	1.6793	1.9697
Std. Error of Mean	.2393	.2324	.2538	.2923	.2550	.2880	.3378

	Effective Negotiation & Analytical Skills (Importance)	Effective Award Resolution (Importance)	Effective Communication of Contract Requirements (Importance)	Effective Performance Management (Importance)	Effective Financial Management (Importance)	Make Decisions Related to Allowability of Contract Costs (Importance)	Effective Resolution of Contract Termination and/or Closeout (Importance)
N	34	34	34	34	34	34	34
Mean	2.4412	1.9706	3.5000	3.0000	1.8824	2.4706	1.8235
Std. Deviation	1.7090	1.5272	1.8299	1.8091	1.3431	1.7274	1.5467
Std. Error of Mean	.2931	.2619	.3138	.3103	.2303	.2962	.2652

## Quality Assurance

	Strategic Planning (Importance)	Understanding the Marketplace (Importance)	Understanding Sourcing (Importance)	Defining Government Requirements in Commercial & Noncommercial Terms (Importance)	Defining Business Relationships (Importance)	Effective Communication (Importance)	Detailed Evaluation Skills (Importance)
N	24	24	24	24	24	24	24
Mean	2.2083	1.7083	2.0833	2.2500	2.0417	2.6250	2.9583
Std. Deviation	1.5598	1.2329	1.5857	1.6219	1.4289	1.7892	1.8992
Std. Error of Mean	.3184	.2517	.3237	.3311	.2917	.3652	.3877

	Effective Negotiation & Analytical Skills (Importance)	Effective Award Resolution (Importance)	Effective Communication of Contract Requirements (Importance)	Effective Performance Management (Importance)	Effective Financial Management (Importance)	Make Decisions Related to Allowability of Contract Costs (Importance)	Effective Resolution of Contract Termination and/or Closeout (Importance)
N	24	24	24	24	24	24	24
Mean	2.5833	1.9167	3.7500	4.3750	2.8333	2.1250	2.2500
Std. Deviation	1.6918	1.6396	1.7004	1.2790	1.6330	1.7020	1.7258
Std. Error of Mean	.3453	.3347	.3471	.2611	.3333	.3474	.3523

## Payment and Accounting

	Strategic Planning (Importance)	Understanding the Marketplace (Importance)	Understanding Sourcing (Importance)	Defining Government Requirements in Commercial & Noncommercial Terms (Importance)	Defining Business Relationships (Importance)	Effective Communication (Importance)	Detailed Evaluation Skills (Importance)
N	28	28	28	28	28	28	28
Mean	1.9643	1.7857	2.1429	1.9286	1.8214	2.4286	2.6786
Std. Deviation	1.5026	1.2869	1.6265	1.4639	1.4156	1.5013	1.8064
Std. Error of Mean	.2840	.2432	.3074	.2766	.2675	.2837	.3414

	Effective Negotiation & Analytical Skills (Importance)	Effective Award Resolution (Importance)	Effective Communication of Contract Requirements (Importance)	Effective Performance Management (Importance)	Effective Financial Management (Importance)	Make Decisions Related to Allowability of Contract Costs (Importance)	Effective Resolution of Contract Termination and/or Closeout (Importance)
N	28	28	28	28	28	28	28
Mean	2.3571	2.0357	3.0000	2.8571	3.5000	3.7143	1.6071
Std. Deviation	1.6151	1.4778	1.7638	1.6934	1.7533	1.6069	1.3427
Std. Error of Mean	.3052	.2793	.3333	.3200	.3313	.3037	.2538



## Special Terms

	Strategic Planning (Importance)	Understanding the Marketplace (Importance)	Understanding Sourcing (Importance)	Defining Government Requirements in Commercial & Noncommercial Terms (Importance)	Defining Business Relationships (Importance)	Effective Communication (Importance)	Detailed Evaluation Skills (Importance)
N	11	11	11	11	11	11	11
Mean	1.8182	2.5455	2.4545	2.2727	2.6364	4.3636	4.5455
Std. Deviation	1.6011	1.6949	2.0181	1.8488	1.5667	.9244	1.2136
Std. Error of Mean	.4828	.5110	.6085	.5574	.4724	.2787	.3659

	Effective Negotiation & Analytical Skills (Importance)	Effective Award Resolution (Importance)	Effective Communication of Contract Requirements (Importance)	Effective Performance Management (Importance)	Effective Financial Management (Importance)	Make Decisions Related to Allowability of Contract Costs (Importance)	Effective Resolution of Contract Termination and/or Closeout (Importance)
N	11	11	11	11	11	11	11
Mean	2.9091	2.2727	3.3636	3.8182	2.5455	2.6364	2.0000
Std. Deviation	1.7581	1.8488	1.9633	1.6624	1.6348	1.9117	1.7321
Std. Error of Mean	.5301	.5574	.5920	.5012	.4929	.5764	.5222

## Contract Closeout or Termination

	Strategic Planning (Importance)	Understanding the Marketplace (Importance)	Understanding Sourcing (Importance)	Defining Government Requirements in Commercial & Noncommercial Terms (Importance)	Defining Business Relationships (Importance)	Effective Communication (Importance)	Detailed Evaluation Skills (Importance)
N	17	17	17	17	17	17	17
Mean	2.0000	2.4706	1.8235	2.0588	2.1765	2.7059	3.4118
Std. Deviation	1.5411	1.5459	1.0744	1.5601	1.3339	1.4476	1.8048
Std. Error of Mean	.3738	.3749	.2606	.3784	.3235	.3511	.4377

	Effective Negotiation & Analytical Skills (Importance)	Effective Award Resolution (Importance)	Effective Communication of Contract Requirements (Importance)	Effective Performance Management (Importance)	Effective Financial Management (Importance)	Make Decisions Related to Allowability of Contract Costs (Importance)	Effective Resolution of Contract Termination and/or Closeout (Importance)
N	17	17	17	17	17	17	17
Mean	2.7647	2.1176	3.7059	3.3529	2.1765	2.8235	4.9412
Std. Deviation	1.6405	1.6912	1.6869	1.8351	1.3800	1.8451	.2425
Std. Error of Mean	.3979	.4102	.4091	.4451	.3347	.4475	5.882E-02