

Purchasing Workforce Competency Assessment Report

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Executive summary

Background

In response to tasking from the Director of Human Capital Initiatives (HCI) for the Department of Defense's (DOD) Acquisition, Technology, and Logistics (AT&L), CNA is working with HCI and workforce representatives to develop competency models for each of the major career fields within the AT&L workforce. This report contains CNA's analysis of the Purchasing career field.

Together, HCI, Purchasing leadership, and subject matter experts (SMEs), with guidance from CNA, developed and validated a model of performance (presented in appendix A) consisting of competencies determined to be necessary to meet Purchasing's mission goals. We used the model to create a competency assessment, in which we invited Purchasing personnel to participate. Respondents reported on their proficiency in each competency element. They also indicated how critical each competency element was to their job. Employees indicated how frequently they perform each competency element and responded to 17 demographic and intentions questions.

The analysis presented in this report uses data collected from the competency assessment to address the following three research goals: (1) assess the current capability of the Purchasing workforce, (2) describe how those capabilities are distributed across the career field and certain workforce segments, and (3) develop a profile of the Purchasing workforce.

Approach

Participation rates

The targeted Purchasing population for this assessment consists of close to 1300 employees. 275 employees participated in the competency assessment across all workforce segments (services and 4th Estate agencies), which represents around 20 percent of the Purchasing population.

Competency analysis

We analyzed responses received from respondents and present results across the entire Purchasing workforce, by career level, and by the two largest organizations for Purchasing – Navy and Army. Thus, our importance and proficiency analyses focus on these four groupings.

Findings

Our importance results indicated that

- All competencies were highly important across the entire Purchasing workforce, across the entire Navy and Army segments, and when grouping responses according to career level (Entry, Journey, Senior).

Table 1. Highly important Purchasing competencies

Competencies	Purchasing	
	Determination of How Best to Satisfy Requirements for the Mission Area	Emergency Acquisition
Consider Small Business and Other Socioeconomic Requirements	Interpersonal Skills	
Promote Competition	Oral Communication	
Terms and Conditions	Integrity/Honesty	
Solicitation of Offers	Written Communication	
Contractor Responsibility Determination	Continual Learning	
Price Analysis and Negotiation	Public Service Motivation	
Contract Award	Creativity and Innovation	
Initiation of Work	Strategic Thinking	
Contract Performance Management	Accountability	
Issue Changes and Modifications	Customer Service	
Issue Close Our Contracts/Orders	Problem Solving	
E-Business and Automated Tools	Technical Capability	
Purchase Cards		

Results

Proficiency results indicate that:

- Mean proficiency ratings for the Purchasing workforce competencies identified as highly important are at or above 3.0 and this holds true across career levels.
- Entry-level, Journey-level and Senior-level Purchasing respondents possess *intermediate* to *advanced* proficiency in most of the competencies of high importance, and above *advanced* proficiency in the remaining high importance competencies.
- Professional competencies tended to have higher overall proficiency averages at all career levels

The importance and proficiency findings suggest that Purchasing management should place the development of professional competencies as a high priority.

In presenting our extensive analysis of competency data, we did not explicitly identify proficiency gaps based on a standard because no proficiency standard currently exists. We present and discuss the data in ways intended to help leadership think about the current state of the Purchasing workforce. Given that no proficiency standards exist, we strongly encourage Purchasing leadership to set standards based on this baseline. Once standards have been set, results such as these can be used to determine whether there are existing or potential gaps at appropriate individual and organizational levels.

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Section 1: Background and model overview

Personnel challenges within the Acquisition, Technology, and Logistics (AT&L) community must be addressed in order for the Department of Defense (DOD) to effectively perform its mission. As part of the AT&L workforce, individuals in the Purchasing career field are typically purchasing agents or supervisory purchasing agents.

Purchasing—This function requires the individuals to purchase, rent, or lease supplies, services, and equipment through either simplified acquisition procedures or placement of orders against pre-established contractual instruments. The primary objective of their work is the rapid delivery of goods and services in direct support of operational requirements. It requires knowledge of applicable laws, policies, and regulations and of commercial supply sources and common business practices for roles, prices, discounts, deliveries, stocks, and shipments .

Rapid changes in the acquisition environment, retirement eligibility of baby boomers, and potential talent shortages threaten the strength and stability of AT&L. Acquisition personnel are a key focus of government-wide initiatives to enhance recruiting, training, and retention.²

This report presents the most recent assessment of the competencies of the AT&L Purchasing career field.

The Office of Personnel Management (OPM) describes a competency as “an observable, measurable pattern of skills, knowledge, abilities, behaviors and other characteristics that an individual needs to perform work roles or occupational

¹ <https://dap.dau.mil/career/pur/Pages/Certification.aspx>

² Department of Defense, Acquisition, Technology & Logistics, *AT&L Human Capital Strategic Plan v3.0*, 2007.

functions successfully.” OPM’s definition of a competency is the foundation on which AT&L workforce competency models are built. The Purchasing workforce, competency-based assessment described here aligns with the AT&L Human Capital Strategic Plan and is one element of an approach by the Human Capital Initiatives (HCI) Office to prepare the AT&L workforce for the future.³

The Purchasing workforce assessment is part of a larger competency assessment program addressing various major career fields within the AT&L community.

Research objectives

The research goals for the overall AT&L Competency Program are as follows:⁴

- AT&L Goal-1: Define the competencies required to deliver (needed) capabilities
- AT&L Goal-2: Assess the workforce to identify current and future gaps

The competency model used for this assessment satisfies the first AT&L goal. Discussions in subsequent sections of this report address the second.

Model components

AT&L competency models have both a technical and a professional component. Technical competencies are functional-specific competencies associated with a career field (e.g., Promote Competition). Professional competencies are

³Ken Krieg, Under Secretary of Defense for Acquisition, Technology & Logistics, *AT&L Human Capital Strategic Plan v3.0*, 2007.

⁴Department of Defense, Acquisition, Technology & Logistics, *AT&L Human Capital Strategic Plan v3.0*, 2007.

leadership, relational, cognitive, and management focused and can be applied to all career fields (e.g., Problem Solving). Competency models contain high-level units of competence that house competencies. Competencies are detailed and are comprised of element statements. Element statements are concise descriptions of behaviors with an associated goal. In addition, competencies often include short statements about the knowledge required to perform the behaviors (referred to as knowledge items).

Model development

The Purchasing competency model was developed and validated in four phases. In Phase I, the competency assessment model development phase, leadership in the Purchasing career field served as an expert panel (EP). They identified the behaviors, skills, characteristics, and knowledge required to be a successful Purchasing employee. Through successive discussions between Purchasing leadership and CNA, this information was developed into a competency model framework, which was then used to solicit more detailed competency information from a larger group of subject matter experts (SMEs). Framework development included using the recent competency assessment report developed by CNA for the AT&L Contracting community, the Federal Acquisition Regulations for Simplified Acquisition, Purchasing position descriptions, and interviews with Teresa Brooks and Mary Thomas from AT&L DPAP Policy Office of the Under Secretary of Defense. At the end of Phase I, EP members identified successful Purchasing employees from all representative DOD services and agencies to serve as SMEs and to support development of a model from the framework. Criteria were developed to ensure that the selected SMEs represented the entire Purchasing workforce population and were experienced, superior employees. This ensured that the final competency model would accurately reflect successful performance criteria.

In Phase II, SMEs were asked to provide data about what makes them successful in their jobs. The CNA research team devised a

multifaceted approach to collecting the data. Use of CNA's online data collection tool facilitated collection of demographic information, framework validation, and descriptions of key situations. Purchasing SMEs were first asked to provide demographic information. SMEs were also asked to add or suggest removal of competencies, elements, and knowledge items. Finally, a structured set of questions asked SMEs to compare their job responsibilities with the framework of competencies and provide examples from their own experiences of successful job performance. This process allowed CNA to collect both the qualitative and quantitative data necessary to validate competencies required for superior performance. Feedback was collected from 13 Purchasing SMEs.

In Phase III, CNA worked with Purchasing leadership and workforce experts to decide how to use the information provided by the SMEs in order to refine the Purchasing competency framework developed by the EP. CNA used the resulting competency model to build a web-based assessment tool to capture workforce-wide assessment data.

The Purchasing competency model consists of 37 elements and 27 competencies, organized into five units of competence. Figure 1 shows the final model; the detailed elements are listed in appendix A. In Phase IV, we assessed the Purchasing workforce, using this competency model.

tion workforces. First, a small group of EP members developed a framework for the model. Then, a larger group of SMEs from across the workforce validated the content in the framework to produce the recommended model. Finally, we assessed the workforce population against this model. This final assessment provides further validation of the model, as well as demographic, proficiency, and importance ratings. The assessment survey was approved, prior to the launch of the assessment, by both DMDC and WHS.

Section 2: Rating and analysis methodology

The original intent of this assessment was to conduct as close to a Purchasing workforce census as possible rather than a sampling of employees. We received 275 assessment responses and the response rate did not achieve a census level. This was especially true for supervisors. As a result, we had to change our planned methodology in order to understand the degree to which the participants are reflective of the population. Therefore, our discussion of methodology begins with a discussion of the observed participation rates.

Participation rates

Overall, approximately 21 percent of the Purchasing workforce contributed in some way to the assessment. Across all services and agencies, 275 employees completed self-assessments and supervisors assessed 68 employees, not all of whom participated in the assessment. The Purchasing workforce has employees in all three service departments (Air Force, Army, and Navy), as well as in various 4th Estate agencies. Participation rates for the overall Purchasing workforce and for each of the four segments of the workforce—Air Force, Army, Navy, and 4th Estate—are shown in table 2.

This assessment was designed to target the entire Purchasing workforce; it was not a random sample design. In order to infer to the workforce as a whole, the 21 percent of the workforce that responded needs to be a random sample. Via our analysis of demographic data, we found no major evidence that our sample is not random. However, caution should still be exercised in extrapolating these results to represent the entire workforce. These results do represent the 21 percent that responded to the survey.

Table 2. Participation rates by Purchasing workforce segment

Final assessment status	Purchasing-All		Navy		Army		Air Force		4 th Estate	
	Count	%	Count	%	Count	%	Count	%	Count	%
Number of people invited	1291	100	546	100	364	100	171	100	192	100
Completed or partially completed employee assessments	275	21	128	23	79	22	23	13	43	22
Completed or partially completed supervisory assessments	68	5	30	6	30	8	0	0	8	4
Completed or partially completed employee and supervisory assessments	30	2	15	3	12	3	0	0	3	2

Methodology changes driven by participation rates

Changes in the data used for analysis

We attempted to use a multi-rater approach from a prior DOD Acquisition workforce assessment, by capturing criticality and proficiency ratings for each employee from both the employee and his or her supervisor. The response rate for paired Purchasing employee-supervisor assessments was, however, too low to provide sufficient data for an analysis of this type. Therefore, we modified our methodology to use only employee responses. This approach provides the largest consistent set of responses for our analysis. The number of employee responses is representative of the overall Purchasing workforce population. The results are, however, less verifiable than employee-supervisor paired responses because the employee proficiency and criticality responses have not been validated against supervisor responses. See the section titled *Data used for analysis* for a discussion of this topic.

Changes to how data are aggregated and reported

In this report, we provide results at the overall Purchasing workforce level, for the two biggest segments within Purchasing, and at each career level. This methodology for data aggregation and reporting eliminates most of the problems associated with low response analysis, which requires masking of responses because of privacy and confidentiality issues.⁵

Competency ratings

Employees rated (1) their own proficiency for each element of the competency model, (2) how critical they believe the competency element to be in performing their current job, and (3) how frequently they use each competency element.⁶ Behavioral descriptions for each competency element assisted the participant in selecting the most appropriate rating for each element. Each rating scale contained five usable ratings, enumerated one through five, and one rating of zero, which indicated that the employee or supervisor could not respond to the question on that element or rating category (proficiency, criticality, or frequency). We excluded all zero ratings in calculating average response rates. The rating scales used are below:

⁵Because of the lower-than-anticipated response rates, we were sometimes unable to present data at the career level for some segments with the same level of confidence that we can at the aggregate Purchasing-Overall or organization level. In addition, if we were to show the data at the service or agency level (or below) we would be forced to mask substantial portions of any report that focuses on individual components because of privacy and confidentiality restrictions. The interested reader can find some of these results in Appendix C.

⁶Each employee's supervisor was also asked to rate the proficiency of the employee for each element in the competency model and the criticality of the element to the employee's job, but we did not use these responses due to lack of sufficient sample size.

Proficiency: How proficient are you at the competency element behaviors? (Employee) / How proficient is the employee whom you are rating? (Supervisor)

0. No Exposure to or awareness of this competency
1. Awareness: Applies the competency in the *simplest* situations
2. Basic: Applies the competency in *somewhat complex* situations
3. Intermediate: Applies the competency in *complex* situations
4. Advanced: Applies the competency in *considerably complex* situations
5. Expert: Applies the competency in *exceptionally complex* situations

Criticality: How critical is this activity in your job? (Employee) / How critical is this behavior to the employee whom you are rating? (Supervisor)

0. N/A: Not needed in *my* job (Employee) / N/A: Not needed in *the* job (Supervisor)
1. Not Critical
2. Somewhat Critical
3. Fairly Critical
4. Very Critical
5. Extremely Critical

Frequency: How often do you do this activity in your job? (Employee only)

0. Never: Not needed in my job
1. Almost Never
2. Rarely
3. Occasionally
4. Frequently
5. Very Frequently

Career level

We asked employees to select a career level from the following three options:

Entry: Employees in Entry-level positions generally understand the competency principals and can execute with guidance. Typical Years of Experience: 0-2 years of Purchasing experience.

Journey: Employees in Journey-level positions are able to perform on their own with some/limited guidance. At this level, they are gaining depth and different office/agency/mission perspectives. Typical Years of Experience: 3-5 years of Purchasing experience.

Senior: Employees in Senior-level positions provide expert advice to management, have extensive practical application and experience across different offices/agencies/missions, and/or serve at the management/executive level. May lead teams and organizations composed of entry and journey-level personnel. Typical Years of Experience: 6+ years of Purchasing experience.

Analysis of importance

We asked employees to rate the criticality and frequency of use of each competency element against a standard five-point scale. We computed the mean of both ratings, by competency, for Purchasing's top two largest segments—Navy and Army in order to assign relative importance. These segments represent approximately 71 percent of the Purchasing workforce and 75 percent of Purchasing respondents. We categorized competencies as high, medium, or low based on their mean criticality and frequency values. We also computed mean criticality and frequency ratings by career level and grouped them according to relative importance. Sample sizes can be small when responses are grouped by career level within each segment, and it is unclear how reliable the resulting average is, compared to other results that were averaged across a larger sample size. For this reason, we present the results of responses organized by career level for each organization in Appendix C.

To determine how many competencies lie within each importance category (high, medium, or low) by workforce segment, we compared mean criticality against mean frequency ratings for the two largest segments. Comparing high-importance competencies across the two largest segments allowed us to identify similarities and differences between them. Comparing mean criticality and frequency ratings across career

levels within each workforce segment revealed the relative importance of competencies for each career level.

Prior to analyzing importance data, we eliminated any responses that did not include a value of one through five for criticality or frequency of use, and we calculated the sample sizes for importance of each competency by counting respondents who provided reliable frequency or criticality responses at the competency-element level. Eliminating responses using our validation criteria (outlined separately) changed the sample sizes for each question in the assessment.

Analysis of proficiency

We analyzed proficiency data received from respondents across the entire Purchasing workforce, by career level, and by the two largest segments for Purchasing – Navy and Army.⁷ We compared these values to get a sense of the proficiency status for each group of respondents.

Again, sample sizes can be small when responses are grouped by career level within each segment, and it is unclear how reliable the resulting average is, compared to other results that were averaged across a larger sample size. For this reason, we present those proficiency results in Appendix C.

Data used for analysis

We obtained only 30 sets of paired responses from an employee and his or her supervisor, across the entire 1291 targeted respondents of the Purchasing workforce. If we were to perform our analysis using the multi-rater approach, this low level of response would be insufficient for the level and types of analysis expected by Purchasing workforce management and would force us to mask substantial portions of any report because of privacy and confidentiality restrictions. We collected 275

⁷ We also did this for Air Force and 4th estate, but those responses are presented in Appendix C.

individual employee responses, with representative distribution across the services and agencies. These independent employee responses do lack the multi-view validation for each respondent, but they still appear to be representative of the Purchasing workforce.

To ensure that the dataset contained reliable data for the analysis, we validated it and excluded the following scenarios:

- If the employee selected 0 (“Not needed in my job”) in the frequency or criticality rating for an element.
- If the employee selected 0 (“No Exposure to or awareness of this competency”) in the proficiency rating for an element.
- If the criticality, proficiency, or frequency ratings were blank for an element.
- If the responding employee was identified as a contractor by “.ctr” in his or her email address.
- If a systematic response pattern was identified (i.e., AAA, ABA, ABB, etc).

Section summary

Overall, 21 percent of the Purchasing workforce contributed to the assessment, completing 275 self-assessments. The lower-than-expected response rates, especially from supervisors, dictated two main methodological changes:

- Only employee responses were used in the analysis.
- We reported aggregate data for the overall Purchasing workforce, the two largest segments that comprise the Purchasing workforce, and at each career level.

The methodologies for analysis of importance and proficiency were consistent with the other DOD Acquisition workforces, and the rating scales were identical.

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Section 3: Workforce demographics

Respondents were asked 17 demographic questions. These questions and the selections available to each respondent are shown in appendix B and additional tables are in appendix D. Supervisors were presented the same demographic questions when they responded as an employee, but provided no demographic input in their supervisory responses. Demographic items were voluntary; not all respondents answered all items.

What follows helps create a profile of the Purchasing workforce obtained from demographic responses.

Career Level

Almost half of the Purchasing respondents are Journey-level

Results presented in table 3 are from respondents selecting their career level. They were asked to do this immediately prior to the ratings, but separate from the rest of the demographic items. The career field definitions can be found on pages 14-15.

Forty-six percent of the Purchasing respondents are Journey-level. One-third of the Purchasing respondents self-identified as Senior-level and the remaining respondents chose Entry as their career level (21 percent).

A similar breakdown for the Navy occurred, with 46 percent of the Purchasing respondents within the Navy self-identifying as Journey-level and over a third of Navy respondents classifying themselves as Senior-level. Within the Army, an equal number of respondents classified themselves as Journey-level and Senior-level (38 percent for each).

Table 3. Purchasing career level responses by segment

Years of Experience	Purchasing-All		Navy		Army	
	Participant count	%	Participant count	%	Participant count	%
Entry	56	21	23	18	19	24
Journey	126	46	58	46	30	38
Senior	90	33	45	36	30	38
All respondents	272	100	126	100	79	100

Experience

About half of Purchasing respondents have less than 10 years of Purchasing experience.

Results presented in table 4 are derived from the following demographic question: *How many years of experience do you have in Purchasing?*

About one third (32 percent) of the Purchasing respondents have less than 5 years of Purchasing experience. One-fifth of the Purchasing respondents have 5-10 years of experience, and another fifth has 16-25 years of Purchasing experience. The largest grouping is “less than 5 years of Purchasing experience” within each segment.

Approximately 13 percent of Purchasing respondents have more than 25 years of Purchasing experience. However, the Air Force has the most, with 17 percent of respondents having 25 years or more years of experience. The table with this information can be found in Appendix D.

Table 4. Purchasing experience responses by Purchasing segment

Years of Experience	Purchasing-All		Navy		Army	
	Participant count	%	Participant count	%	Participant count	%
Less than 5	88	32	39	30	21	27
5 to 10	56	20	28	21	17	21
11 to 15	40	15	18	14	12	15
16 to 25	55	20	27	21	16	21
More than 25	35	13	16	15	12	15
All Respondents (who answered)	274	100	128	99*	78	99*

*Rounding accounts for a summation of under 100 percent.

Military versus civilian status

Most Purchasing respondents are civilians.

Results presented in table 5 are derived from the following demographic question: *What is your current status.*

Most of the Purchasing respondents are civilians (99 percent). This holds true even when looking across segments: that the majority are civilians.

Table 5. Military versus civilian responses by Purchasing segment

Military/civilian status	Purchasing-All		Navy		Army	
	Participant count	%	Participant count	%	Participant count	%
Civilian	270	99	126	98	78	100
Military	4	2	2	2	0	0
All respondents	274	101*	128	100	283	100

*Rounding accounts for a summation of over 100 percent.

Most Purchasing respondents that are civilians are paid according to the GS-Level pay scale and reside in the GS-5 to GS-7 grade level range.

Results presented in table 6 are derived from the following demographic question: *Please indicate your civilian grade equivalent.*

Most Purchasing respondents that are civilians are paid according to the GS-Level pay scale (264 respondents, which is 96 percent of the respondents). Within the GS-Level pay scale

system, most respondents fall in the GS-5 to GS-7 range. This also holds true when looking within the Navy and other segments, but not for Army. For Army, more respondents fall in the GS-9 to GS-11 range.

Table 6. Civilian grade level/pay band responses by segment

Grade level/ pay band	Purchasing-All		Navy		Army	
	# Civ	% Civ	# Civ	% Civ	# Civ	% Civ
GS-5 to GS-7	154	56	73	57	27	34
GS-9 to GS-11	75	27	38	30	30	38
GS-12 to GS-13	27	10	9	7	12	15
GS-14 to GS-15	8	3	2	2	6	8
Other Pay Plan	10	4	5	4	4	5
All respondents	274	100	127	100	79	100

Certification level

Over one third of Purchasing respondents are Level 2 certified.

Results presented in table 7 are derived from the following demographic question: *What is your current certification level?*

Sixteen percent of the Purchasing respondents are Level 3 certified. This proportion is larger in the Army (23 percent), but is similar for the Navy (17 percent). Overall, over one-third of Purchasing respondents are Level 2 certified. However, when taking into account segment type, this is not always true. Within the Navy and 4th estate, the largest grouping is Level 2 certified (42 and 38 percent, respectively). The largest grouping within the other two segments is either Level 1 certified (Army, 34 percent) or don't know/certifications do not apply (Air Force, 57 percent).

Table 7. Certification level responses by Purchasing segment

Level	Purchasing-All		Navy		Army	
	Participant count	%	Participant count	%	Participant count	%
Don't know- N/A	59	22	25	20	10	13
One	73	27	27	21	27	34
Two	99	36	54	42	24	30
Three	44	16	22	17	18	23
All respondents	275	101*	128	100	79	100

*Rounding accounts for a summation of over/under 100 percent.

Education

Over one third of Purchasing respondents have at most a high school diploma

Results presented in table 8 are derived from the following demographic questions: *What is your highest level of educational attainment?*

Few Purchasing respondents have a Master's Degree (8 percent) and over one-fifth have at most a Bachelor's Degree. For three of the four segments, the largest grouping of respondents has a High School diploma as the highest level of educational attainment (the exception being 4th estate, with 33 percent, reporting a Bachelor's Degree as their highest level of education).

Table 8. Education levels and focus responses by Purchasing segment

Highest level of educational achievement	Purchasing-All		Navy		Army	
	Participant count	%	Participant count	%	Participant count	%
High School diploma	106	39	51	40	31	39
Associate Degree	56	20	32	25	11	14
Bachelor's Degree	64	23	28	22	18	23
Master's Degree	23	8	7	5	11	14
Other	26	10	10	8	8	10
All respondents	275	100	128	100	79	100

Section summary

The responses to the demographic portion of the competency assessment provide insight into the composition of the Purchasing workforce.

Almost half of the Purchasing respondents are at the Journey-level. Results also indicate that about half of respondents have less than 10 years of Purchasing experience. The respondents primarily consist of federal civilians. Most civilian respondents are within the GS-Level pay scale and reside in the GS-5 to GS-7 grade-level range. Most Purchasing respondents (approximately 36 percent) are Level 2 certified, considering both civilian and military respondents. We found that over one third of respondents in the Purchasing workforce have at most a high school diploma.

Section 4: Relative importance of competencies

Each assessment participant ranked the criticality and frequency of use for each of the 37 competency elements. We computed the mean criticality and the mean frequency of each competency, which we then used to assign relative importance. We categorize competencies in terms of importance as follows:

- Competencies that have both a mean criticality rating AND a mean frequency rating of 3.0 or above have *high importance*.
- Competencies that have either a mean criticality rating OR a mean frequency rating of 3.0 or above have *medium importance*.
- Competencies that have both a mean criticality rating AND a mean frequency rating below 3.0 have *lower importance*.

In this section, we discuss the relative importance of competencies for Purchasing respondents overall, for the two largest segments, and lastly at each career level

Important competencies overall

Overall, the Purchasing respondents considered all of the 27 competencies highly important.

Important competencies by organization

As determined in our workforce demographic analysis, the Navy and Army represent 75 percent of Purchasing respondents. The remaining two workforce segments have relatively small percentages of respondents. Therefore, we focus the remainder

of our analysis on the two largest segments. Additional tables with importance information are in appendix C.

Navy

Our analysis suggests that respondents who described themselves as part of the Navy consider all 27 of the competencies as highly important.

Army

Similarly, Army respondents considered all 27 of the competencies in the competency model to be of high importance.

Relative importance of competencies by career level

In this section, we discuss competency importance within each career level.

All competencies were reported to be highly important by Purchasing respondents across all career levels.

Table 9. Importance ratings for the Purchasing workforce by career level

#	Competency Name	Entry		Journey		Senior	
		Mean Freq	Mean Crit	Mean Freq	Mean Crit	Mean Freq	Mean Crit
1	Determination of How Best to Satisfy Requirements for the Mission Area	3.96	3.55	4.01	3.84	4.09	3.79
2	Consider Small Business and Other Socioeconomic Requirements	3.88	3.61	3.97	3.78	3.88	3.62
3	Promote Competition	3.62	3.53	3.83	3.76	3.71	3.78
4	Terms and Conditions	3.60	3.57	3.56	3.67	3.68	3.73
5	Solicitation of Offers	3.61	3.58	3.94	3.98	3.88	3.92
6	Contractor Responsibility Determination	3.70	3.72	3.93	4.00	3.88	3.83
7	Price Analysis and Negotiation	3.38	3.47	3.79	3.87	3.72	3.85
8	Contract Award	3.87	3.74	4.11	4.10	4.05	4.02
9	Initiation of Work	3.28	3.29	3.42	3.61	3.44	3.58
10	Contract Performance Management	3.60	3.55	3.52	3.75	3.54	3.76
11	Issue Changes and Modifications	3.53	3.56	3.71	3.76	3.76	3.84
12	Issue Close Our Contracts/Orders	3.59	3.56	3.57	3.63	3.39	3.67
13	E-Business and Automated Tools	3.91	3.49	3.89	3.68	3.54	3.31
14	Purchase Cards	3.90	3.72	3.73	3.88	4.20	4.06

#	Competency Name	Entry		Journey		Senior	
		Mean Freq	Mean Crit	Mean Freq	Mean Crit	Mean Freq	Mean Crit
15	Emergency Acquisition	3.93	3.67	3.87	4.14	4.21	4.26
16	Interpersonal Skills	4.63	4.33	4.60	4.42	4.61	4.40
17	Oral Communication	4.06	4.02	3.87	3.99	3.95	4.11
18	Integrity/Honesty	4.76	4.62	4.78	4.73	4.75	4.54
19	Written Communication	4.08	3.98	4.29	4.30	4.16	4.15
20	Continual Learning	3.98	3.83	4.12	4.09	4.20	4.08
21	Public Service Motivation	4.06	3.94	4.32	4.29	4.10	4.03
22	Creativity and Innovation	3.90	3.82	3.90	3.93	3.57	3.59
23	Strategic Thinking	3.50	3.49	3.66	3.79	3.25	3.50
24	Accountability	4.15	4.19	4.25	4.20	4.08	4.08
25	Customer Service	4.32	4.21	4.50	4.33	4.39	4.22
26	Problem Solving	4.02	3.96	4.06	4.13	4.04	4.04
27	Technical Capability	4.15	3.98	4.27	4.31	4.27	4.23

Shading indicates relative importance of each competency according to Purchasing respondents: green = high importance; yellow = medium importance.

Importance ratings are a composite of frequency and criticality ratings; definitions are located on pages 15.

As mentioned in Section 2, due to small sample sizes, we do not report importance by career level for the individual segments⁸ within Purchasing, but this information is reported in Appendix C.

Section summary

We classified competencies by their relative importance for all Purchasing respondents, looking within the two largest segments, and then by career level. Due to small sample sizes, we do not report importance by career level for the individual segments within Purchasing. Through this analysis, we found that on average, all competencies in the Purchasing competency model were denoted to be highly important by respondents.

On average, professional competencies were found to be highly important to all respondents, respondents within the Navy and Army, and respondents across all career levels. Professional competencies generally have the highest mean criticality and

⁸ However, Journey-level and Senior-level respondents within the Navy (where sample sizes were larger) rated all competencies as highly important, similar to the average ratings for importance for the entire group of Purchasing respondents.

frequency ratings of all competencies. This finding could indicate that the entire workforce shares a common regard for professionalism or it could be an acknowledgement by the workforce that Purchasing management places high value on professional competencies.

Section 5: Proficiency ratings

In this section, we present the average proficiency ratings provided by assessment participants for all competencies in the Purchasing competency model. We display our results by workforce career level at the competency level (additional data tables are in appendix C). We finish our discussion by highlighting the proficiency of the highly important competencies.

Proficiency ratings of Purchasing respondents

Mean proficiency ratings for competencies identified as highly important are at or above 3.0 and this holds true across career levels.

We summarize the mean proficiency results of high-importance competencies as rated by Purchasing respondents. Note that all 27 competencies were designated as highly important:

- **Entry**— Mean proficiency ratings are between 3.0 (*intermediate*) and 4.0 (*advanced*) for 25 of 27 high-importance competencies. The remaining 2 competencies are above 4.0 (*advanced*).
- **Journey**—Mean proficiency ratings are between 3.0 (*intermediate*) and 4.0 (*advanced*) for 23 of 27 high-importance competencies. The remaining 4 high-importance competencies are above 4.0 (*advanced*).
- **Senior**—Mean proficiency levels are between 3.0 (*intermediate*) and 4.0 (*advanced*) for 25 of 27 high-importance competencies. For the remaining 2 high-importance competencies, the mean proficiency levels are above 4.0 (*advanced*).

Table 10. Mean proficiency ratings for Purchasing, by competency and career level

#	Competency	Entry	Journey	Senior
1	Determination of How Best to Satisfy Requirements for the Mission Area	3.67	3.58	3.63
2	Consider Small Business and Other Socioeconomic Requirements	3.57	3.56	3.55
3	Promote Competition	3.61	3.57	3.61
4	Terms and Conditions	3.26	3.23	3.36
5	Solicitation of Offers	3.51	3.64	3.62
6	Contractor Responsibility Determination	3.48	3.52	3.51
7	Price Analysis and Negotiation	3.27	3.47	3.48
8	Contract Award	3.49	3.72	3.72
9	Initiation of Work	3.04	3.18	3.18
10	Contract Performance Management	3.13	3.34	3.37
11	Issue Changes and Modifications	3.29	3.42	3.76
12	Issue Close Our Contracts/Orders	3.14	3.35	3.31
13	E-Business and Automated Tools	3.32	3.54	3.18
14	Purchase Cards	3.48	3.60	3.74
15	Emergency Acquisition	3.53	3.77	3.85
16	Interpersonal Skills	4.22	4.32	4.34
17	Oral Communication	3.98	3.81	3.90
18	Integrity/Honesty	4.35	4.55	4.48
19	Written Communication	3.85	4.05	4.00
20	Continual Learning	3.74	3.98	4.00
21	Public Service Motivation	3.76	3.97	3.79
22	Creativity and Innovation	3.57	3.71	3.37
23	Strategic Thinking	3.29	3.51	3.13
24	Accountability	3.87	4.00	3.98
25	Customer Service	3.96	4.14	3.94
26	Problem Solving	3.82	3.86	3.78
27	Technical Capability	3.81	3.89	3.80

Shading indicates relative importance of each competency according to Purchasing respondents: green = high importance; yellow = medium importance; no shading = least important. Proficiency ratings: 1=Awareness; 2=Basic; 3=Intermediate; 4=Advance; 5=Expert. Ratings are defined in full on page 14.

Analysis of proficiency responses by competency suggests that Purchasing respondents at all career levels are, on average, applying all of the highly important competencies in situations that are at least at the *complex* level (scale rating of 3 or higher).

Professional competencies tended to have higher overall proficiency averages at all career levels. Two of the professional competencies (competencies 16 and 18) were consistently reported at all career levels as being applied in *considerably complex* situations.

The results of our proficiency analysis should not be used to judge whether adequate levels of proficiency have been achieved for each group for two main reasons:

- Our proficiency analysis reports the average level of proficiency for Purchasing-wide respondents, not individual levels of proficiency. On average, respondents have at least *intermediate* proficiency (scale rating of 3) in all highly important competencies, but by definition, individual responses will be higher or lower than the average.
- There are no proficiency standards for the Purchasing workforce. Therefore, one grouping of the workforce may have consistently rated itself above *intermediate* proficiency in a given competency, but the proficiency rating might fall well short of what is actually needed to get the job done. Alternatively, it may not be necessary for employees at certain career levels or in certain Purchasing segments to be proficient in some competencies.

Therefore, Purchasing leadership should consider using the proficiency analysis presented in this report as the impetus for developing proficiency standards. Once standards are set, results such as these can be used to determine whether and where deficiencies exist.

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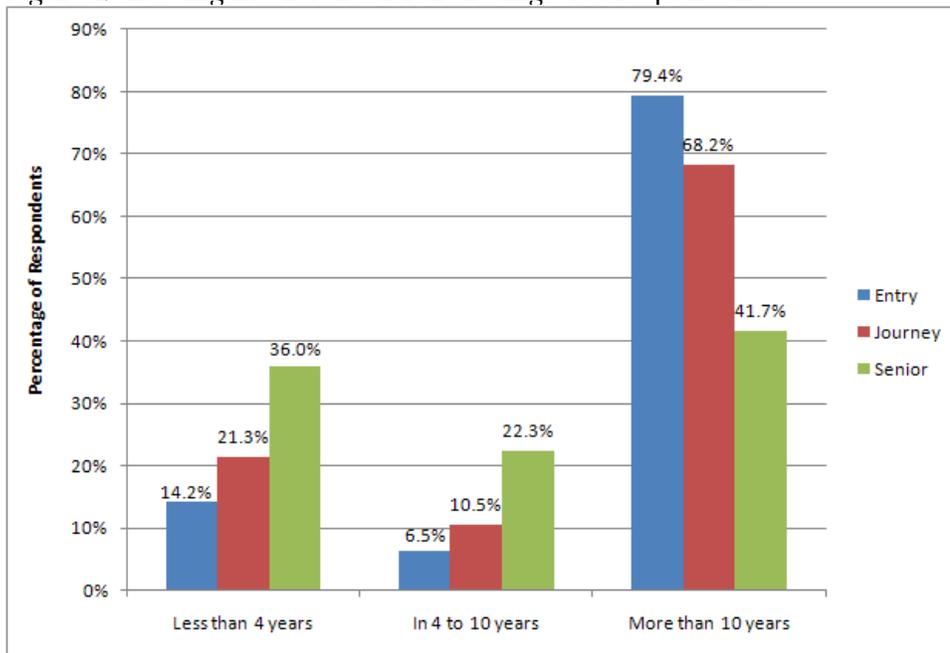
Section 6: Intentions analysis

In this section, we present the results of our analysis of respondent-provided intentions data.

Retirement intentions

Respondents were asked the following question related to their intentions: *When do you plan to retire or resign?* Answers to this question are shown in figure 2 below by career level.

Figure 2. Leaving intentions of Purchasing-wide respondents



Section summary

The question, *When do you plan to retire or resign?*, allows Purchasing senior leadership to observe a subset of their workforce's career intentions. As can be seen in Figure 3, over 40 percent of the Senior-level respondents reported that they plan to retire or resign in less than 4 years as compared to about one fifth of the Journey-level respondents. These percentages may suggest a need to ensure that institutional knowledge and processes are captured from these individuals within the next four years. We caveat that these responses are only from a subset of the Senior-level Purchasing workforce and are not necessarily indicative of the workforce as a whole.

We recommend adding additional retirement questions in future assessments; understanding and accounting for knowledge loss is important to successful workforce effectiveness.

Section 7: Conclusion and next steps

Our analysis of employee-provided responses to the Purchasing competency assessment suggests that the Purchasing competency model captures technical and professional competencies pertinent to the Purchasing workforce as a whole, within the two largest segments—Navy and Army—and within career levels.

On average, purchasing respondents find every competency to be highly important and report having at least *intermediate* to *advanced* proficiency in all these competencies of high importance. Professional competency proficiency averages tended to be higher, with some professional competencies having ratings greater than *advanced*.

Although there were military respondents found in the Purchasing workforce, we found that the majority of the Purchasing workforce respondents are federal civilian.

We recommend Purchasing management consider using our analysis results to develop proficiency standards.

In addition, we recommend that a strong emphasis be placed on the development of professional competencies. Responses to the assessment indicate that professional competencies captured in the Purchasing model are of the most importance to the Purchasing workforce.

Finally, we found that over 40 percent of the Senior-level respondents plan to retire in less than 4 years. This suggests that proficiency resident in the Senior-level workforce could be substantially impacted by the departure of employees over that time period.

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Appendix A: Purchasing workforce competency model

Table 11: Complete and detailed Purchasing competency model

Unit of Competence	Competency	Element
Pre-Award and Award	Determination of How Best to Satisfy Requirements for the Mission Area	Provide proactive business advice on requirements documentation to find the best solution to satisfy mission requirements.
		Ensure appropriate and adequate funding for the contracting action.
		Conduct market research using relevant resources prior to solicitation to understand the industry environment and determine availability of sources of supply and/or services.
		Perform acquisition planning for simplified acquisitions by considering available sources and methods of procurement to satisfy mission.
	Consider Small Business and Other Socioeconomic Requirements	Consider small business and other socioeconomic requirements to provide for maximum practicable contracting and subcontracting opportunities.
	Promote Competition	Promote competition, to the maximum extent practicable.
		Justify the need to negotiate or award the contract without competition or, in a multiple award scenario, without providing for fair opportunity based on business strategies and market research.
	Terms and Conditions	Determine terms and conditions that are appropriate for the acquisition to comply with laws and regulations.
		Consider labor, environmental, and foreign requirements to comply with statutory requirements.
	Solicitation of Offers	Publicize proposed procurements to promote competition.
		Solicit quotes, offers, or proposals in a manner appropriate for the acquisition.
		Respond to pre-award inquiries by taking the appropriate action according to FAR/DFARS (and applicable supplements).
	Contractor Responsibility Determination	Determine contractor responsibility by reviewing pertinent information to ensure the contractor will be able to satisfy government requirements.
	Price Analysis and Negotiation	Perform price analysis to determine a fair and reasonable price to the government.
		Request local technical and pricing support when needed to determine price is fair and reasonable.
		Negotiate terms and conditions, when applicable, and a fair and reasonable price when such a price is not established by competition.
	Contract Award	Select the awardee providing the best offer meeting the Government's requirement.
Award contract/ Issue task or delivery orders after ensuring fund availability and obtaining reviews and approvals.		

Unit of Competence	Competency	Element
Contract Administration	Initiation of Work	Plan for Contract administration to ensure roles and responsibilities for government oversight are clear.
	Contract Performance Management	Administer contract or order to enforce contractor compliance with contract requirements.
	Issue Changes and Modifications	Analyze the need for contract or order modifications and take appropriate action.
	Issue Close Our Contracts/Orders	Assist in close-out of contracts/ orders following proper procedure to ensure property disposition, final payments, and documents/clearances have been received.
E-Business Systems and Tools	E-Business and Automated Tools	Use e-business systems and automated tools to promote standardization, efficiency, and transparency.
	Purchase Cards	Effectively use the government purchase card in accordance with established procedures.
Support Emergency Acquisition	Emergency Acquisition	Effectively use the government purchase card in accordance with established procedures.
Professional	Interpersonal Skills	Treat others with courtesy, sensitivity, and respect. Consider and respond appropriately to the needs and feelings of different situations.
	Oral Communication	Make clear and convincing oral presentations. Listen effectively; clarify information as needed.
	Integrity/Honesty	Behave in an honest, fair, and ethical manner. Show consistency in words and actions. Model high standards of ethics.
	Written Communication	Write in a clear, concise, organized, and convincing manner for the intended audience.
	Continual Learning	Assess and recognize own strengths and weaknesses; pursue self-development.
	Public Service Motivation	Show a commitment to serve the public. Ensure that actions meet public needs; align organizational objectives and practices with public interests.
	Creativity and Innovation	Demonstrate the ability to build support from your workforce and stakeholders to adopt and act on specific ideas.
	Strategic Thinking	Formulate objectives, priorities, and plans consistent with the long-term business and competitive interests of the organization in a global environment. Capitalize on opportunities and manage risks.
	Accountability	Hold self and others accountable for measurable high-quality, timely, and cost-effective results. Determine objectives, set priorities, and delegate work. Accept responsibility for mistakes. Comply with established control systems and rules.
	Customer Service	Anticipate and meet the needs of both internal and external customers. Deliver high-quality products and services; commit to continuous improvement.

	Problem Solving	Identify and analyze problems; weigh relevance and accuracy of information; generate and evaluate alternative solutions; make recommendations.
	Technical Capability	Understand and appropriately apply principles, procedures, requirements, regulations, and policies related to specialized expertise.

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Appendix B: Purchasing demographic and intentions questions

The table below contains the demographic and intentions questions provided to Purchasing assessment participants and the possible response options. The final column ties the demographic and intentions questions to the applicable Purchasing research goals, which are as follows:

- Purchasing Goal-1: Assess the current capability of the Purchasing workforce
- Purchasing Goal-2: Describe how those capabilities are distributed across DOD organizations and programs
- Purchasing Goal-3: Develop a profile of the Purchasing workforce

Table 12. Purchasing demographic and intentions questions, response options, and planned use of responses

Demographic/Intentions Questions	Response Options	Applicable Purchasing Research Goal(s)
1) Please select your Job/Principal title (or closest equivalent) from the list below.	Contract Specialist Contracting Officer General Business Specialist Grant Specialist Purchasing Agent Supervisor Contract Specialist >>Other...Fill In	Goal-3
2) Please indicate your total years of Acquisition Experience (includes experience in a purchasing position, or in any other acquisition position (e.g., Program Management, Contracting, etc.). Your experience can be in government or industry:	Less than 5 5 to 10 11 to 15 16 to 25 More than 25	Goal-2, Goal-3
3) How many years of experience do you have in Purchasing (Purchasing experience is government or industry experience in a purchasing position):	Less than 5 5 to 10 11 to 15 16 to 25 More than 25	Goal-3

Demographic/Intentions Questions	Response Options	Applicable Purchasing Research Goal(s)
4) Please indicate your Warrant Type:	Not Warranted Hold Warrant	Goal-3
5) What is your current status?	Active Duty Military Federal Civilian - Prior Military Service Federal Civilian - No Prior Military Service	Goal 2, Goal-3
6) If you are active-duty military, what is your current rank?	N/A: Not active-duty military E1 to E5 E6 to E9 O1 to O3 O4 or higher	Goal-3
7) If you are currently active-duty military, for how many years on active-duty have you served?	N/A: Not active-duty military Less than 5 years Between 5 to 10 years Between 11 to 15 years Between 16 to 20 years Between 21 to 25 years More than 25 years	Goal-3
8) If you are currently active duty military, do you intend to continue to work as a federal civilian employee after completing military service?	N/A: Not active-duty military Yes No Unsure of Intent	Goal-3
9) If you are currently a federal civilian, how long have you been in the federal civilian workforce?	N/A: Not civil service Less than 5 years Between 5 to 10 years Between 11 to 15 years Between 16 to 20 years Between 21 to 25 years More than 25 years	Goal-3
10) Please indicate your civilian grade equivalent:	GS-5 to GS-7 GS-9 to GS-11 GS-12 to GS-13 GS-14 to GS-15 Above GS-15 Other Pay Plan	Goal-3
11) What retirement program/system are you currently under or eligible for?	CSRS FERS Active Duty Military Currently Retired Military	Goal-3
12) What is your current certification level?	One Two Three Don't Know - N/A	Goal-3
13) What is your highest level of educational attainment?	High school diploma Associate degree Bachelors degree Masters degree Doctoral degree Other	Goal-3
14) When do you plan to retire or resign?	Less than 4 years In 4 to 10 years More than 10 years	Goal-3
15) Which age category do you fall under?	Less than 35 years old 36 to 45 years old 46 to 55 years old over 55 years old	Goal-3

Demographic/Intentions Questions	Response Options	Applicable Purchasing Research Goal(s)
16) Are you interested in participating in professional growth programs such as mentoring or rotational assignments?	Yes No Unsure	Goal-3
17) Would you be willing to serve as a mentor to others?	Yes No Unsure	Goal-3

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Appendix C: Additional Data Tables

Table 13. Comparison of high importance competencies across all 4 segments within Purchasing (Navy, Army, Air Force and 4th Estate)

Unit of Competence	Competency Name	Navy , Army and Air Force ⁹	4th Estate
Pre-Award and Award.	1. Determination of How Best to Satisfy Requirements for the Mission Area	X	
	2. Consider Small Business and Other Socioeconomic Requirements	X	
	3. Promote Competition	X	
	4. Terms and Conditions	X	
	5. Solicitation of Offers	X	X
	6. Contractor Responsibility Determination	X	X
	7. Price Analysis and Negotiation	X	X
	8. Contract Award	X	X
	9. Initiation of Work	X	
	10. Contract Performance Management	X	
Contract Administration	11. Issue Changes and Modifications	X	
	12. Issue Close Our Contracts/Orders	X	X
E-Business Systems and Tools	13. E-Business and Automated Tools	X	
	14. Purchase Cards	X	X
Support Emergency Acquisition	15. Emergency Acquisition	X	X
Professional	16. Interpersonal Skills	X	X
	17. Oral Communication	X	X
	18. Integrity/Honesty	X	X
	19. Written Communication	X	X
	20. Continual Learning	X	X
	21. Public Service Motivation	X	X
	22. Creativity and Innovation	X	X
	23. Strategic Thinking	X	X
	24. Accountability	X	X
	25. Customer Service	X	X
	26. Problem Solving	X	X
	27. Technical Capability	X	X

⁹ Navy, Army and Air Force respondents indicated that all 27 competencies were highly important and therefore these are presented in one column.

Table 14. Mean frequency and criticality ratings for the Navy, by competency and career level

#	Competency Name	Entry		Journey		Senior	
		Mean Freq	Mean Crit	Mean Freq	Mean Crit	Mean Freq	Mean Crit
1	Determination of How Best to Satisfy Requirements for the Mission Area	4.72	4.34	4.60	4.5	4.47	4.11
2	Consider Small Business and Other Socio-economic Requirements	4.35	4.32	4.41	4.40	4.24	3.95
3	Promote Competition	4.23	4.16	4.25	4.28	3.97	4.06
4	Terms and Conditions	4.00	4.17	3.98	4.13	3.93	3.97
5	Solicitation of Offers	4.14	4.35	4.31	4.40	4.11	4.19
6	Contractor Responsibility Determination	4.18	4.33	4.29	4.40	4.03	4.11
7	Price Analysis and Negotiation	3.79	4.06	4.16	4.27	3.91	4.04
8	Contract Award	4.27	4.37	4.51	4.54	4.16	4.22
9	Initiation of Work	3.89	4.11	3.74	4.13	3.55	3.65
10	Contract Performance Management	4.11	4.26	3.86	4.21	3.45	3.74
11	Issue Changes and Modifications	3.90	4.37	4.10	4.36	4.00	4.22
12	Issue Close Our Contracts/Orders	3.90	4.05	3.84	3.98	3.52	3.82
13	E-Business and Automated Tools	4.22	4.00	4.22	4.11	3.89	3.68
14	Purchase Cards	3.88	3.90	3.79	3.95	4.35	4.28
15	Emergency Acquisition	3.81	3.95	3.77	4.15	4.23	4.38
16	Interpersonal Skills	4.78	4.61	4.73	4.61	4.67	4.60
17	Oral Communication	4.52	4.50	4.06	4.15	4.08	4.27
18	Integrity/Honesty	4.91	4.91	4.82	4.82	4.81	4.72
19	Written Communication	4.35	4.41	4.46	4.53	4.36	4.33
20	Continual Learning	4.09	4.09	4.21	4.27	4.23	4.09
21	Public Service Motivation	4.24	4.19	4.59	4.50	4.11	4.11
22	Creativity and Innovation	4.23	4.32	4.17	4.21	3.66	3.68
23	Strategic Thinking	3.95	3.91	3.82	4.10	3.35	3.62
24	Accountability	4.35	4.39	4.38	4.32	4.12	4.19
25	Customer Service	4.57	4.39	4.68	4.5	4.55	4.43
26	Problem Solving	4.43	4.43	4.33	4.51	4.12	4.23
27	Technical Capability	4.52	4.39	4.48	4.55	4.40	4.33

Shading indicates relative importance of each competency for Navy: green = high importance; yellow = medium importance; no shading = least important. Importance ratings are a composite of frequency and criticality ratings; definitions are located on page 14.

**Denotes masking (n<5) to ensure respondent anonymity.

Table 15. Mean frequency and criticality ratings for the Army, by competency and career level

#	Competency Name	Entry		Journey		Senior	
		Mean Freq	Mean Crit	Mean Freq	Mean Crit	Mean Freq	Mean Crit
1	Determination of How Best to Satisfy Requirements for the Mission Area	3.75	3.34	4.08	3.64	4.06	3.75
2	Consider Small Business and Other Socio-economic Requirements	3.47	3.24	4.07	3.62	3.79	3.57
3	Promote Competition	3.41	3.21	3.75	3.57	3.55	3.61
4	Terms and Conditions	3.58	3.27	3.44	3.39	3.65	3.69
5	Solicitation of Offers	3.41	3.14	3.93	3.89	3.75	3.84
6	Contractor Responsibility Determination	3.40	3.27	3.87	3.91	3.78	3.68
7	Price Analysis and Negotiation	3.22	3.06	3.75	3.73	3.66	3.81
8	Contract Award	3.53	3.19	4.29	4.08	4.06	4.02

#	Competency Name	Entry		Journey		Senior	
		Mean Freq	Mean Crit	Mean Freq	Mean Crit	Mean Freq	Mean Crit
9	Initiation of Work	2.69	2.60	3.24	3.20	3.55	3.58
10	Contract Performance Management	3.15	2.80	3.37	3.42	3.75	3.96
11	Issue Changes and Modifications	3.15	2.80	3.29	3.29	3.56	3.71
12	Issue Close Our Contracts/Orders	3.00	2.87	3.50	3.36	3.08	3.67
13	E-Business and Automated Tools	3.71	3.00	3.88	3.58	3.24	3.00
14	Purchase Cards	3.93	3.47	3.76	4.00	4.09	3.96
15	Emergency Acquisition	4.07	3.44	4.27	4.44	4.37	4.24
16	Interpersonal Skills	4.41	3.88	4.56	4.38	4.57	4.21
17	Oral Communication	3.93	3.53	3.75	3.88	3.93	4.04
18	Integrity/Honesty	4.65	4.35	4.80	4.71	4.64	4.43
19	Written Communication	4.13	3.63	4.08	4.17	3.93	4.07
20	Continual Learning	4.19	3.88	4.20	4.08	4.11	4.15
21	Public Service Motivation	4.18	3.71	4.08	4.04	4.13	4.08
22	Creativity and Innovation	3.94	3.56	3.59	3.61	3.40	3.62
23	Strategic Thinking	3.36	3.14	3.45	3.40	3.08	3.46
24	Accountability	4.18	4.25	4.04	4.08	4.11	4.07
25	Customer Service	4.59	4.18	4.32	4.13	4.14	4.04
26	Problem Solving	4.00	3.69	3.68	3.75	4.04	3.96
27	Technical Capability	4.25	3.81	4.08	4.04	4.11	4.21

Shading indicates relative importance of each competency for Army: green = high importance; yellow = medium importance; no shading = least important. Importance ratings are a composite of frequency and criticality ratings; definitions are located on pages 14.

Table 16. Mean frequency and criticality ratings for the Air Force, by competency and career level

#	Competency Name	Entry		Journey		Senior	
		Mean Freq	Mean Crit	Mean Freq	Mean Crit	Mean Freq	Mean Crit
1	Determination of How Best to Satisfy Requirements for the Mission Area	**	**	3.69	3.46	3.26	3.15
2	Consider Small Business and Other Socioeconomic Requirements	**	**	3.75	3.25	3.00	2.50
3	Promote Competition	**	**	3.14	3.23	3.25	3.36
4	Terms and Conditions	**	**	3.14	3.38	2.92	3.42
5	Solicitation of Offers	**	**	3.55	3.62	3.44	3.63
6	Contractor Responsibility Determination	**	**	3.50	3.30	3.80	3.40
7	Price Analysis and Negotiation	**	**	3.38	3.52	3.47	**
8	Contract Award	**	**	3.75	3.7	3.70	3.70
9	Initiation of Work	**	**	3.86	3.86	3.00	**
10	Contract Performance Management	**	**	3.57	4.00	3.80	3.60
11	Issue Changes and Modifications	**	**	4.00	4.14	4.00	3.40
12	Issue Close Our Contracts/Orders	**	**	3.57	4.00	3.83	3.17
13	E-Business and Automated Tools	**	**	3.57	3.86	3.33	3.00
14	Purchase Cards	**	**	3.63	3.63	4.00	3.57
15	Emergency Acquisition	**	**	3.75	3.88	3.71	4.00
16	Interpersonal Skills	**	**	4.33	4.22	4.29	4.00
17	Oral Communication	**	**	3.78	4.00	3.33	3.33
18	Integrity/Honesty	**	**	4.56	4.44	4.71	4.00
19	Written Communication	**	**	4.13	4.25	3.67	3.67
20	Continual Learning	**	**	4.00	3.78	4.29	3.86
21	Public Service Motivation	**	**	4.44	4.33	3.86	3.71

#	Competency Name	Entry		Journey		Senior	
		Mean Freq	Mean Crit	Mean Freq	Mean Crit	Mean Freq	Mean Crit
22	Creativity and Innovation	**	**	3.67	3.67	3.86	3.57
23	Strategic Thinking	**	**	3.78	3.56	3.50	3.50
24	Accountability	**	**	4.11	3.89	3.57	4.00
25	Customer Service	**	**	4.56	4.33	4.14	4.00
26	Problem Solving	**	**	4.44	4.22	3.83	3.57
27	Technical Capability	**	**	4.33	4.33	4.00	4.17

Shading indicates relative importance of each competency for Air Force: green = high importance; yellow = medium importance; no shading = least important. Importance ratings are a composite of frequency and criticality ratings; definitions are located on pages 15.

**Denotes masking (n<5) to ensure respondent anonymity.

Table 17. Mean frequency and criticality ratings for the 4th Estate, by competency and career level

#	Competency Name	Entry		Journey		Senior	
		Mean Freq	Mean Crit	Mean Freq	Mean Crit	Mean Freq	Mean Crit
1	Determination of How Best to Satisfy Requirements for the Mission Area	2.69	2.13	2.89	2.95	3.04	2.74
2	Consider Small Business and Other Socioeconomic Requirements	3.44	2.67	2.86	2.70	3.00	2.83
3	Promote Competition	2.67	2.67	3.24	3.02	3.38	3.33
4	Terms and Conditions	2.94	3.00	2.77	2.97	3.00	2.75
5	Solicitation of Offers	2.70	2.65	3.20	3.21	3.44	2.94
6	Contractor Responsibility Determination	3.38	3.38	3.22	3.39	3.50	3.17
7	Price Analysis and Negotiation	2.95	3.05	2.96	3.08	3.15	3.00
8	Contract Award	3.50	3.33	3.10	3.25	3.60	3.00
9	Initiation of Work	2.67	2.67	2.31	2.36	2.80	2.80
10	Contract Performance Management	2.83	3.00	2.63	2.71	2.80	3.00
11	Issue Changes and Modifications	2.83	2.83	3.06	2.70	3.17	2.67
12	Issue Close Our Contracts/Orders	3.50	3.43	3.00	2.89	3.50	3.33
13	E-Business and Automated Tools	3.38	2.88	3.17	2.68	2.60	2.60
14	Purchase Cards	4.00	3.75	3.59	3.71	4.20	4.00
15	Emergency Acquisition	4.00	3.63	3.80	3.94	4.20	4.00
16	Interpersonal Skills	4.55	4.36	4.43	4.09	4.71	4.29
17	Oral Communication	3.00	3.63	3.57	3.7	3.83	4.17
18	Integrity/Honesty	4.64	4.55	4.74	4.65	4.86	4.43
19	Written Communication	3.44	3.60	4.17	3.91	4.33	3.67
20	Continual Learning	3.36	3.09	3.83	3.78	4.29	4.00
21	Public Service Motivation	3.56	3.78	3.90	4.05	4.25	3.50
22	Creativity and Innovation	3.00	3.00	3.67	3.72	3.40	2.80
23	Strategic Thinking	2.67	3.00	3.29	3.43	3.00	2.75
24	Accountability	3.60	3.70	4.24	4.14	4.33	3.50
25	Customer Service	3.30	3.89	4.20	4.10	4.67	3.83
26	Problem Solving	3.11	3.38	3.68	3.55	3.67	3.50
27	Technical Capability	3.10	3.30	3.96	4.00	4.33	3.67

Shading indicates relative importance of each competency for the 4th Estate: green = high importance; yellow = medium importance; no shading = least important. Proficiency ratings: 1=Awareness; 2=Basic; 3=Intermediate; 4=Advance; 5=Expert. Ratings are defined in full on page 14.

Table 18. Mean proficiency ratings for the Navy, by competency and career level

#	Competency	Entry	Journey	Senior
1	Determination of How Best to Satisfy Requirements for the Mission Area	4.51	4.15	4.07
2	Consider Small Business and Other Socioeconomic Requirements	4.35	4.13	3.89
3	Promote Competition	4.43	4.11	3.91
4	Terms and Conditions	4.00	3.67	3.54
5	Solicitation of Offers	4.21	4.19	4.01
6	Contractor Responsibility Determination	4.23	3.98	3.79
7	Price Analysis and Negotiation	3.94	3.92	3.85
8	Contract Award	4.29	4.20	4.07
9	Initiation of Work	3.62	3.66	3.33
10	Contract Performance Management	3.81	3.84	3.62
11	Issue Changes and Modifications	3.95	3.86	4.09
12	Issue Close Our Contracts/Orders	3.70	3.73	3.49
13	E-Business and Automated Tools	3.83	3.90	3.67
14	Purchase Cards	3.77	3.78	4.03
15	Emergency Acquisition	3.64	3.78	4.16
16	Interpersonal Skills	4.57	4.50	4.47
17	Oral Communication	4.39	4.08	3.95
18	Integrity/Honesty	4.65	4.70	4.63
19	Written Communication	4.22	4.30	4.05
20	Continual Learning	4.00	4.25	4.12
21	Public Service Motivation	4.14	4.25	3.92
22	Creativity and Innovation	4.05	4.08	3.43
23	Strategic Thinking	3.77	3.84	3.20
24	Accountability	4.22	4.29	4.05
25	Customer Service	4.30	4.34	4.12
26	Problem Solving	4.22	4.29	4.00
27	Technical Capability	4.35	4.18	4.00

Shading indicates relative importance of each competency for the Navy: green = high importance; yellow = medium importance; no shading = least important. Proficiency ratings: 1=Awareness; 2=Basic; 3=Intermediate; 4=Advance; 5=Expert. Ratings are defined in full on page 14.

Table 19. Mean proficiency ratings for the Army, by competency and career level

#	Competency	Entry	Journey	Senior
1	Determination of How Best to Satisfy Requirements for the Mission Area	3.26	3.43	3.61
2	Consider Small Business and Other Socioeconomic Requirements	3.11	3.41	3.52
3	Promote Competition	3.12	3.27	3.45
4	Terms and Conditions	2.89	3.00	3.31
5	Solicitation of Offers	2.96	3.36	3.28
6	Contractor Responsibility Determination	2.82	3.21	3.32
7	Price Analysis and Negotiation	2.83	3.27	3.17
8	Contract Award	2.85	3.63	3.43
9	Initiation of Work	2.50	2.62	3.08
10	Contract Performance Management	2.63	2.80	3.19
11	Issue Changes and Modifications	3.00	3.05	3.46
12	Issue Close Our Contracts/Orders	2.60	2.86	3.08
13	E-Business and Automated Tools	2.88	3.28	2.75
14	Purchase Cards	3.29	3.47	3.76
15	Emergency Acquisition	3.63	3.82	3.75
16	Interpersonal Skills	3.88	3.96	4.32

#	Competency	Entry	Journey	Senior
17	Oral Communication	3.56	3.56	3.93
18	Integrity/Honesty	4.12	4.28	4.39
19	Written Communication	3.63	3.72	3.96
20	Continual Learning	3.63	3.68	3.96
21	Public Service Motivation	3.65	3.63	3.79
22	Creativity and Innovation	3.50	3.22	3.42
23	Strategic Thinking	3.13	3.05	3.15
24	Accountability	3.76	3.64	4.04
25	Customer Service	3.94	3.84	3.89
26	Problem Solving	3.63	3.28	3.71
27	Technical Capability	3.56	3.64	3.71

Shading indicates relative importance of each competency according for the Army: green = high importance; yellow = medium importance; no shading = least important. Proficiency ratings: 1=Awareness; 2=Basic; 3=Intermediate; 4=Advance; 5=Expert. Ratings are defined in full on page 14.

Table 20. Mean proficiency ratings for the Air Force, by competency and career level

#	Competency	Entry	Journey	Senior
1	Determination of How Best to Satisfy Requirements for the Mission Area	**	3.34	2.56
2	Consider Small Business and Other Socioeconomic Requirements	**	3.58	2.50
3	Promote Competition	**	2.91	2.91
4	Terms and Conditions	**	2.81	3.08
5	Solicitation of Offers	**	3.41	3.19
6	Contractor Responsibility Determination	**	3.20	3.40
7	Price Analysis and Negotiation	**	3.11	3.47
8	Contract Award	**	3.40	3.50
9	Initiation of Work	**	3.86	3.40
10	Contract Performance Management	**	3.71	3.60
11	Issue Changes and Modifications	**	4.00	4.00
12	Issue Close Our Contracts/Orders	**	3.57	3.17
13	E-Business and Automated Tools	**	3.50	2.83
14	Purchase Cards	**	3.50	3.00
15	Emergency Acquisition	**	3.75	3.29
16	Interpersonal Skills	**	4.22	3.71
17	Oral Communication	**	3.44	3.33
18	Integrity/Honesty	**	4.44	4.00
19	Written Communication	**	3.75	3.50
20	Continual Learning	**	4.00	3.57
21	Public Service Motivation	**	4.00	3.43
22	Creativity and Innovation	**	3.67	3.43
23	Strategic Thinking	**	3.67	3.00
24	Accountability	**	3.89	3.86
25	Customer Service	**	3.89	3.57
26	Problem Solving	**	4.00	3.71
27	Technical Capability	**	3.78	3.57

Shading indicates relative importance of each competency according to the Air Force: green = high importance; yellow = medium importance; no shading = least important. Proficiency ratings: 1=Awareness; 2=Basic; 3=Intermediate; 4=Advance; 5=Expert. Ratings are defined in full on page 14.

**Denotes masking (n<5) to ensure respondent anonymity.

Table 21. Mean proficiency ratings for the 4th estate by career level

#	Competency	Entry	Journey	Senior
1	Determination of How Best to Satisfy Requirements for the Mission Area	2.42	2.76	2.45
2	Consider Small Business and Other Socioeconomic Requirements	2.50	2.57	2.71
3	Promote Competition	2.33	2.98	3.15
4	Terms and Conditions	2.26	2.55	2.67
5	Solicitation of Offers	2.52	2.72	3.06
6	Contractor Responsibility Determination	2.71	2.79	2.67
7	Price Analysis and Negotiation	2.32	2.68	2.75
8	Contract Award	2.33	2.84	3.00
9	Initiation of Work	2.14	2.13	2.40
10	Contract Performance Management	2.00	2.39	2.40
11	Issue Changes and Modifications	1.88	2.5	3.00
12	Issue Close Our Contracts/Orders	2.29	2.81	3.33
13	E-Business and Automated Tools	2.56	3.00	2.20
14	Purchase Cards	2.90	3.35	2.83
15	Emergency Acquisition	2.9	3.71	3.33
16	Interpersonal Skills	3.91	4.30	4.29
17	Oral Communication	3.60	3.62	4.00
18	Integrity/Honesty	4.00	4.52	4.43
19	Written Communication	3.20	3.96	4.33
20	Continual Learning	3.27	3.65	3.86
21	Public Service Motivation	3.11	3.65	3.2
22	Creativity and Innovation	2.44	3.35	2.6
23	Strategic Thinking	2.22	3.00	2.5
24	Accountability	3.10	3.71	3.33
25	Customer Service	3.10	4.05	3.33
26	Problem Solving	3.11	3.36	2.71
27	Technical Capability	2.80	3.52	3.14

Shading indicates relative importance of each competency according to the 4th estate: green = high importance; yellow = medium importance; no shading = least important. Proficiency ratings: 1=Awareness; 2=Basic; 3=Intermediate; 4=Advance; 5=Expert. Ratings are defined in full on page 14.

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Appendix D: Additional Demographic Tables

Table 22. Purchasing career level responses by segment

Years of Experience	Air Force		4 th Estate	
	Participant count	%	Participant count	%
Entry	3	14	11	24
Journey	12	55	26	58
Senior	7	32	8	18
All respondents	22	101*	45	100

*Rounding accounts for a summation of under/over 100 percent.

Table 23. Purchasing experience responses by segment

Years of Experience	Air Force		4 th Estate	
	Participant count	%	Participant count	%
Less than 5	11	48	17	38
5 to 10	3	13	8	18
11 to 15	2	9	8	18
16 to 25	3	13	9	20
More than 25	4	17	3	7
All Respondents	23	100	45	101*

*Rounding accounts for a summation of under/over 100 percent.

Table 24. Military versus civilian responses by Purchasing segment

Military/civilian status	Air Force		4 th Estate	
	Participant count	%	Participant count	%
Civilian	21	91	45	100
Military	2	9	0	0
All respondents	23	100	45	100

Table 25. Civilian grade level/pay band responses by Purchasing segment

Grade level/ pay band	Air Force		4 th Estate	
	# Civ	% Civ	# Civ	% Civ
GS-5 to GS-7	18	78	36	80
GS-9 to GS-11	1	4	6	13
GS-12 to GS-13	3	13	3	7
Other Pay Plan	1	4	0	0
All respondents	23	99*	45	100

*Rounding accounts for a summation of under/over 100 percent.

Table 26. Certification level responses by Purchasing segment

Level	Air Force		4 th Estate	
	Participant count	%	Participant count	%
Don't know- N/A	13	57	11	24
One	4	17	15	33
Two	4	17	17	38
Three	2	9	2	4
All respondents	23	99*	45	99

*Rounding accounts for a summation of under/over 100 percent.

Table 27. Education levels by Purchasing segment

Highest level of educational achievement	Air Force		4 th Estate	
	Participant count	%	Participant count	%
High School diploma	10	43	14	31
Associate Degree	4	17	9	20
Bachelor's Degree	3	13	15	33
Master's Degree	3	13	2	4
Other	3	13	5	11
All respondents	23	99*	45	99*

*Rounding accounts for a summation of under/over 100 percent.

Table 28. Job title, by Purchasing segment

	Navy	Army	Air Force	4th estate
Job title	Count of participants	Count of participants	Count of participants	Count of participants
Contract Specialist	3	1	1	5
Contracting Officer	10	6		
Purchasing Agent	99	52	18	36
Supervisor Contract Specialist	2	9		1
Other	13	11	4	3

Table 29. Acquisition experience responses, by Purchasing segment

	Navy	Army	Air Force	4th Estate
Years of experience	Participant count	Participant count	Participant count	Participant count
Less than 5	35	13	11	12
5 to 10	30	26	3	12
11 to 15	15	14	2	7
16 to 25	30	12	2	9
More than 25	18	14	5	5

Table 30. Count of those interested in participating in professional growth programs, by Purchasing segment

	Navy	Army	Air Force	4th Estate
Years of experience	Participant count	Participant count	Participant count	Participant count
Yes	68	35	6	32
No	36	27	10	9
Unsure	24	17	7	4

Table 31. Count of those interested in serving as a mentor, by Purchasing segment

	Navy	Army	Air Force	4th Estate
Years of experience	Participant count	Participant count	Participant count	Participant count
Yes	68	41	11	27
No	30	16	7	9
Unsure	30	22	5	9

Table 32. Retirement program/system, by Purchasing segment

	Navy	Army	Air Force	4th Estate
Program/system	Participant count	Participant count	Participant count	Participant count
Active Duty Military	3		2	
CSRS	22	16	2	10
Currently Retired Military	8	3	1	1
FERS	94	78	17	34

Table 33. Warrant Type

Warrant Type	Participant count
Hold Warrant	107
Not Warranted	168

Table 34. Count of responses to Warrant Type amount if Warrant Type was “Hold Warrant”

Responses to Warrant Type amount	Participant count
3000	11
10000	1
20000	1
25000	19
50000	1
80000	1
100000	25
150000	20
250000	2
1000000	1
5000000	1
10000000	2
200000000	1
SAT	1
\$150KOM & \$500K dely orders	1
\$2M	1
\$40 Million	1
\$6.5 mil	1
100K	1
5.5m	1
6.5M	1
unlimited	10

Glossary

AT&L	Acquisition, Technology, and Logistics
CSRS	Civil Service Retirement System
DAES	Defense Acquisition Executive Summary
DAWIA	Defense Acquisition Workforce Improvement Act
DMDC	Defense Manpower Data Center
DOD	Department of Defense
DOD IG	Department of Defense Inspector General
DoDEA	Department of Defense Education Activity
EP	Expert panel
FERS	Federal Employees Retirement System
HCI	Human Capital Initiatives
JCS	Joint Chiefs of Staff
OPM	Office of Personnel Management
OUSD (AT&L)	Office of the Under Secretary of Defense, Acquisition Technology & Logistics
pBIB	partially balanced incomplete block
RFP	Requests for Proposal
SMEs	Subject matter expert(s)
SOWs	Statement of work(s)
WHS	Washington Headquarters Services

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