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Assessment of Navy Contract Management Processes

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- Background
- Theoretical Foundation
- Assessment Model
- Research Findings
- Implications of Research
- Summary



- Contract management is an increasingly important function for the DoD
 - In FY15, DoD obligated \$242 billion in contracts for supplies and services
- GAO has identified DoD contract management as a high risk (since 1992)
 - Contracting techniques and approaches
- DoD IG has identified material weaknesses in contracting internal controls

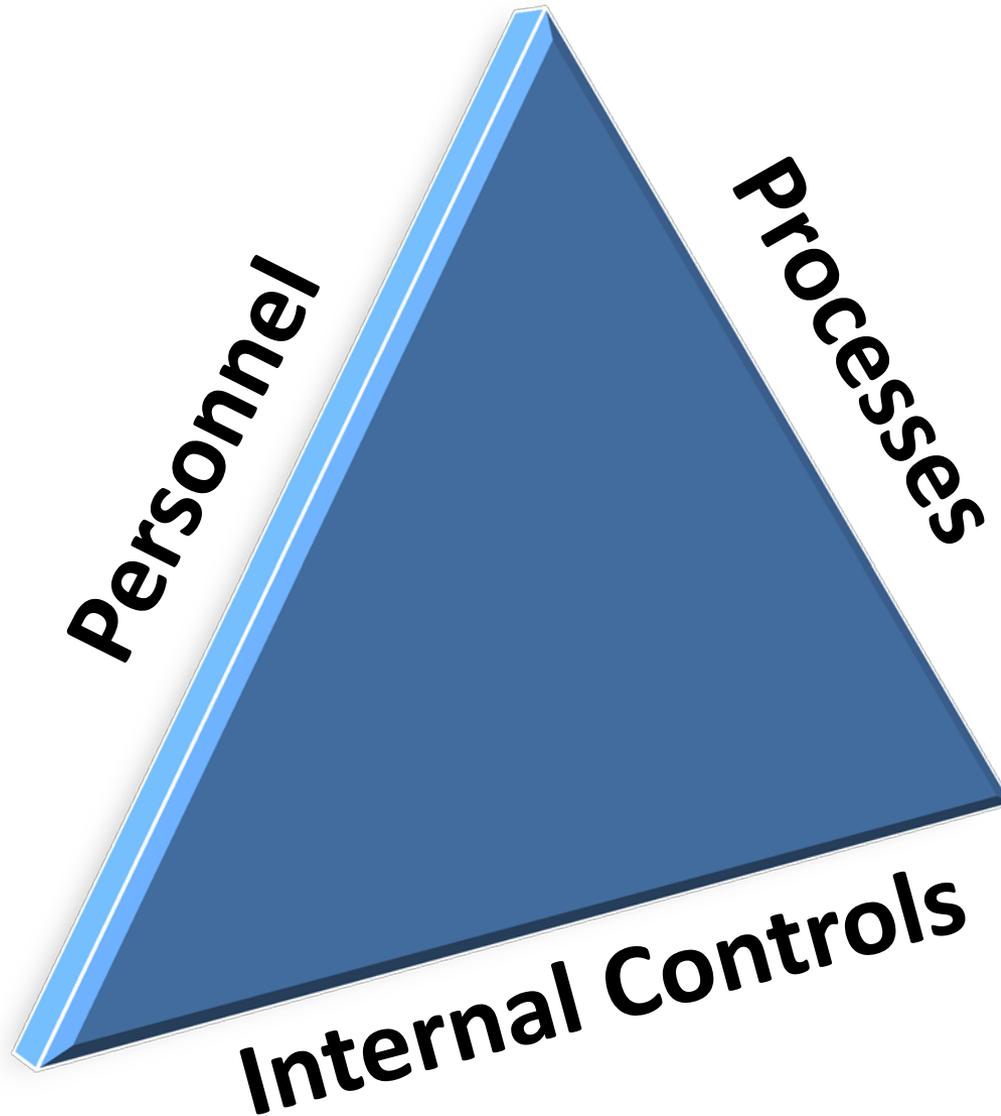


- DoD responds with an increased emphasis on workforce competence:
 - Contract management training
 - Contract management policies
- However, less emphasis is being placed on organizational competence:
 - Contract management process capability
 - Contract management process improvement



- Why emphasize process capability?
 - 85% of quality problems are related to processes, while only 15% of problems are controlled by individual workers (Deming, 1986).
 - Individual competence and organization process capability are both needed to ensure successful project results (Frame, 1999).
 - Capable processes supports auditability in organizations.

Auditability Triangle





- Why emphasize process capability?
 - Benchmarking contract management processes results in a significant positive impact on purchasing performance and a positive effect on business performance (Sanchez-Rodriguez, Martinez-Lorente, & Clavel, 2003).



- Assessing contract management processes
 - Maturity model concept
 - Levels of maturity reflect process capability (ability to produce planned results)
 - As process capability increases, processes become predictable and measurable, organizational competence increases, and organizational processes become more mature (Ahern et al., 2001)



- The Contract Management Maturity Model (CMMM)
 - Key Process Areas
 - Levels of Process Maturity
 - Process Capability Enablers



- Web-based assessment instrument
- Anonymous survey deployed to organization's contracting workforce (1102s and military)
- Survey items based on contract management best practices (emphasis on practice, not policy)
- Likert scale options for survey items



- Procurement Planning
 - Solicitation Planning
 - Solicitation
 - Source Selection
 - Contract Administration
 - Contract Closeout
- Pre-Award**
- Award**
- Post-Award**



Process Maturity Levels

Level 5 – Optimized

Level 4 – Integrated

Level 3 – Structured

Level 2 – Basic

Level 1 – Ad Hoc

Level 1 – Ad Hoc

- There are **no formally established, institutionalized, and mandated CM processes** throughout the organization.
- Some established CM processes and informal documentation exist and are used within the organization, but **applied only on an ad hoc and sporadic basis** to various contracts.
- **Managers and CM personnel are not held accountable for adhering to or complying with any CM processes or standards.**



Level 5 – Optimized

Level 4 – Integrated

Level 3 – Structured

Level 2 – Basic

Level 1 – Ad Hoc

Level 2 – Basic

- Some **CM processes and standards are established**, but are only required on selected complex, critical, or high-visibility contracts.
- **Some formal documentation has been developed** for these established CM processes and standards.
- The CM processes and standards are **not considered established or institutionalized** throughout the organization.
- There is **no organizational policy** requiring the consistent use of these CM processes and standards on other than the required contracts.



Process Maturity Levels

Level 3 – Structured

Level 5 – Optimized

Level 4 – Integrated

Level 3 – Structured

Level 2 – Basic

Level 1 – Ad Hoc

- CM processes are **fully established, institutionalized, and mandated** throughout the organization.
- **Formal documentation** has been developed for these CM processes, and some processes may even be automated.
- **Tailoring of CM processes** and documents is allowed in consideration of the unique aspects of each contract.
- **Senior management is involved** in providing guidance, direction, and even approval of key contracting strategy, decisions, documents, and contract Ts & Cs



Level 5 – Optimized

Level 4 – Integrated

Level 3 – Structured

Level 2 – Basic

Level 1 – Ad Hoc

Level 4 – Integrated

- CM processes **fully integrated** with other organizational core processes such as financial management, program management, and systems engineering.
- In addition to representatives from other organizational functional offices, the contract's end-user customer is also an **integral member of the contracts team.**
- **Periodical use of metrics** to measure various aspects of the CM processes and to make contract-related decisions.



Level 5 – Optimized

Level 4 – Integrated

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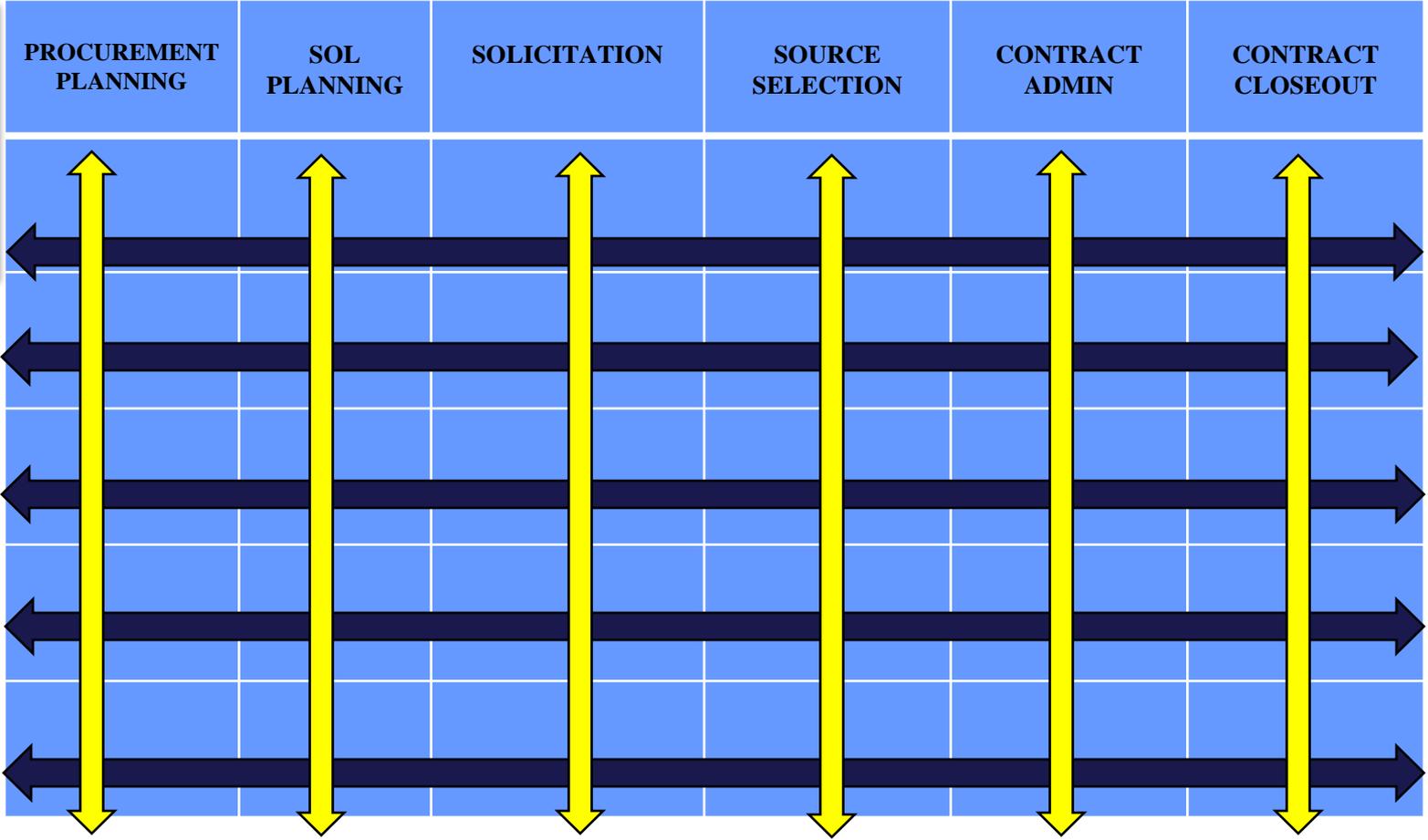
Level 5 – Optimized

- **Systematic use of performance metrics** to measure the quality and evaluate the efficiency and effectiveness of the CM processes.
- **Continuous process improvement** efforts used to improve the CM processes.
- Established **Lessons Learned and Best Practices** programs to improve CM processes and standards.
- CM **process streamlining** initiatives implemented as part of its continuous process improvement program.

Analyzing Contract Management Processes

1st:
Analyze by KPA.
Vertically,
reviewing all
Questions for
that KPA

2nd:
Analyze by
Process
Capability
Enablers.
Horizontally
across KPAs
reviewing only
subset of
questions in
each KPA



CONTRACT MANAGEMENT MATURITY MODEL©

MATURITY LEVEL	PROCUREMENT PLANNING	SOLICITATION PLANNING	SOLICITATION	SOURCE SELECTION	CONTRACT ADMIN	CONTRACT CLOSEOUT
5 OPTIMIZED						
4 INTEGRATED						
3 STRUCTURED						
2 BASIC						
1 AD HOC						



- Web-based assessment instrument deployed to three Navy contracting agencies
- Survey administered to 1102s and military equivalents certified at DAWIA Level 2 or higher
- Total eligible participants: 369
- Total surveys completed: 185
- Response rate: 50%

CONTRACT MANAGEMENT MATURITY MODEL[©]

MATURITY LEVEL	PROCUREMENT PLANNING	SOLICITATION PLANNING	SOLICITATION	SOURCE SELECTION	CONTRACT ADMIN	CONTRACT CLOSEOUT
5 OPTIMIZED						
4 INTEGRATED	A	A		A		
3 STRUCTURED	B	B D	A	B		
2 BASIC	C D	C	C B D	C D	C B A D	
1 AD HOC						C B A D

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Figure 1. U.S. Navy CMMM Maturity Levels

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Figure 2. Procurement Planning Survey Item Mean Scores

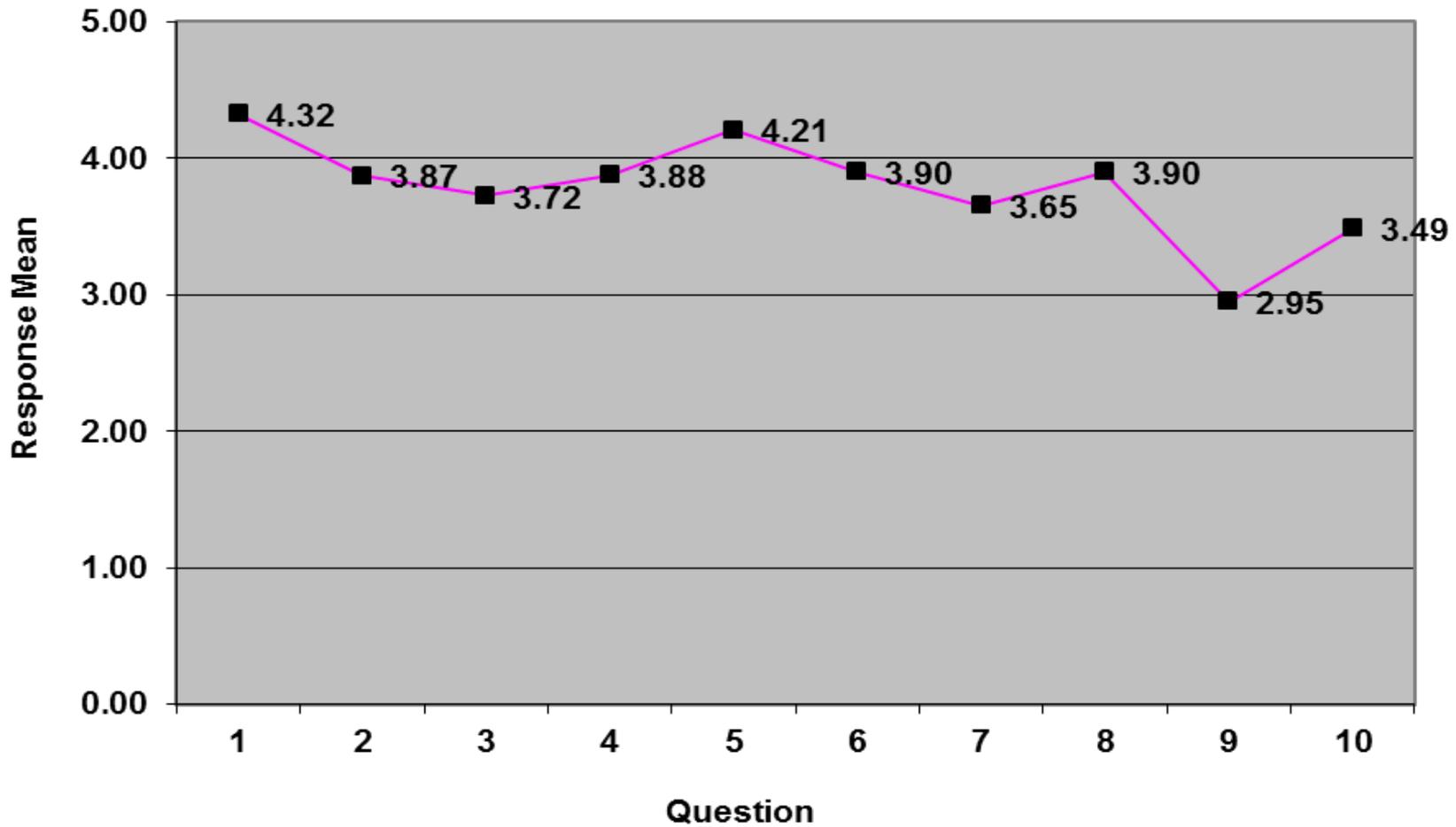


Figure 3. Solicitation Planning Survey Item Mean Scores

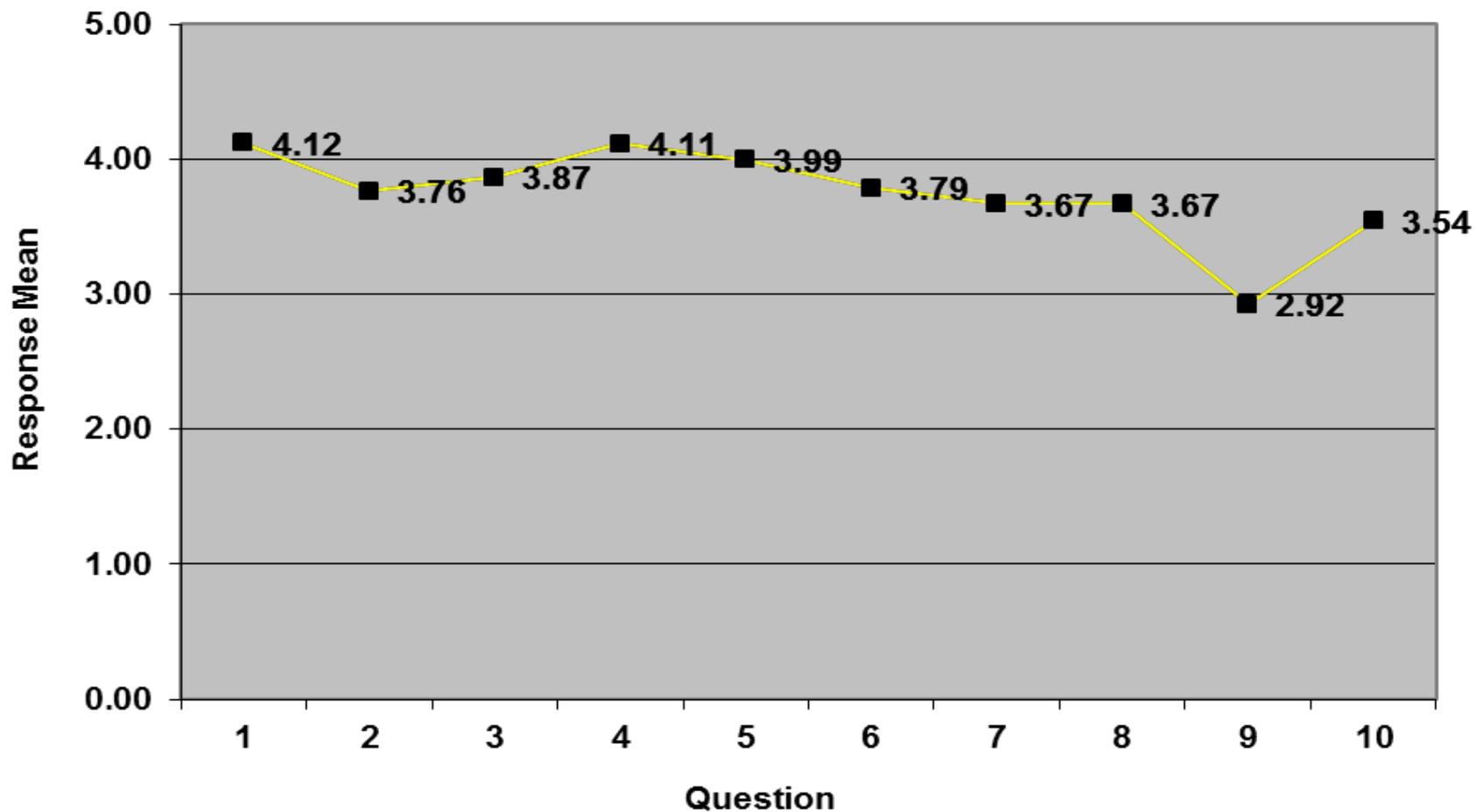


Figure 4. Solicitation Survey Item Mean Scores

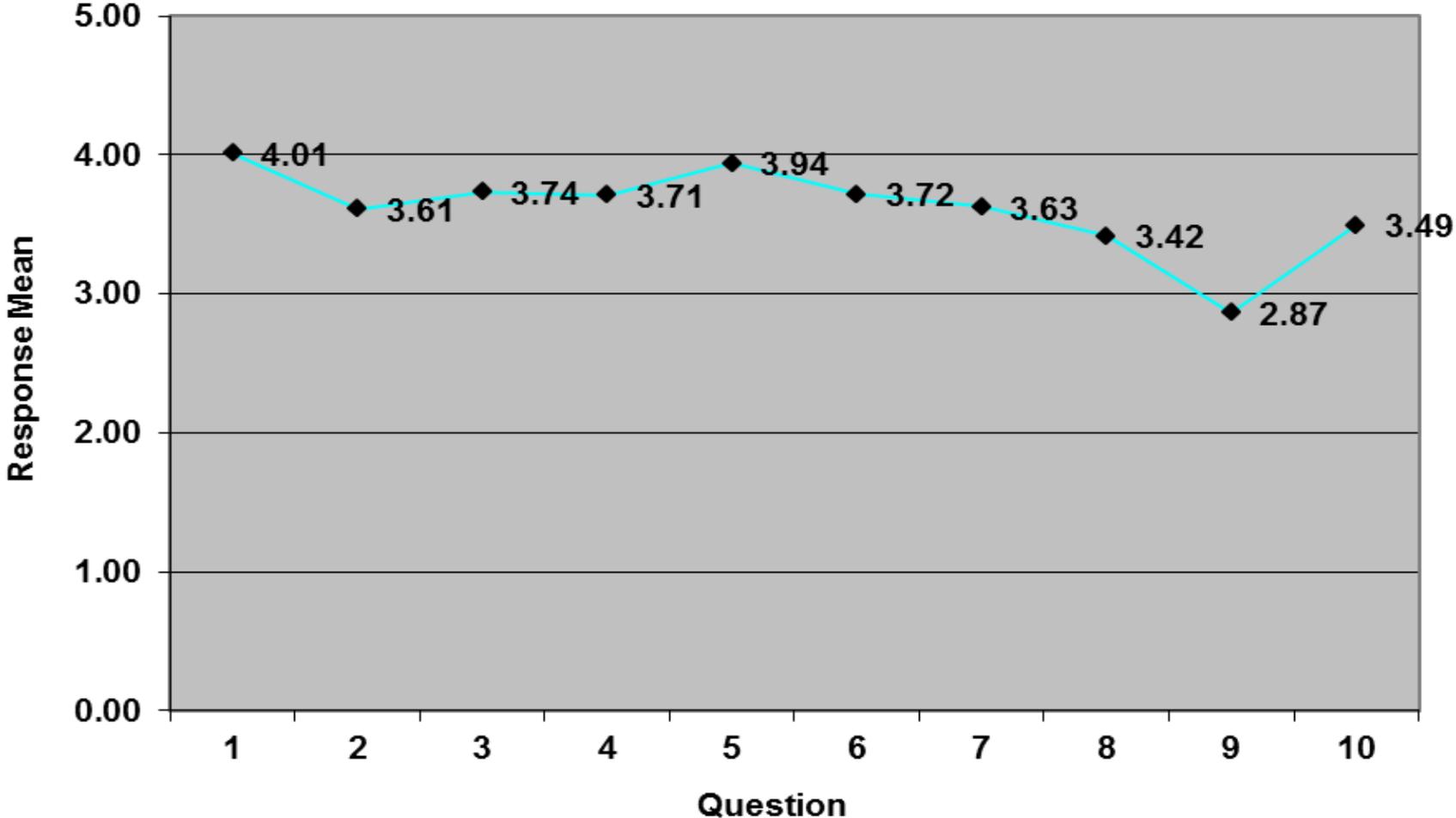


Figure 5. Source Selection Survey Item Mean Scores

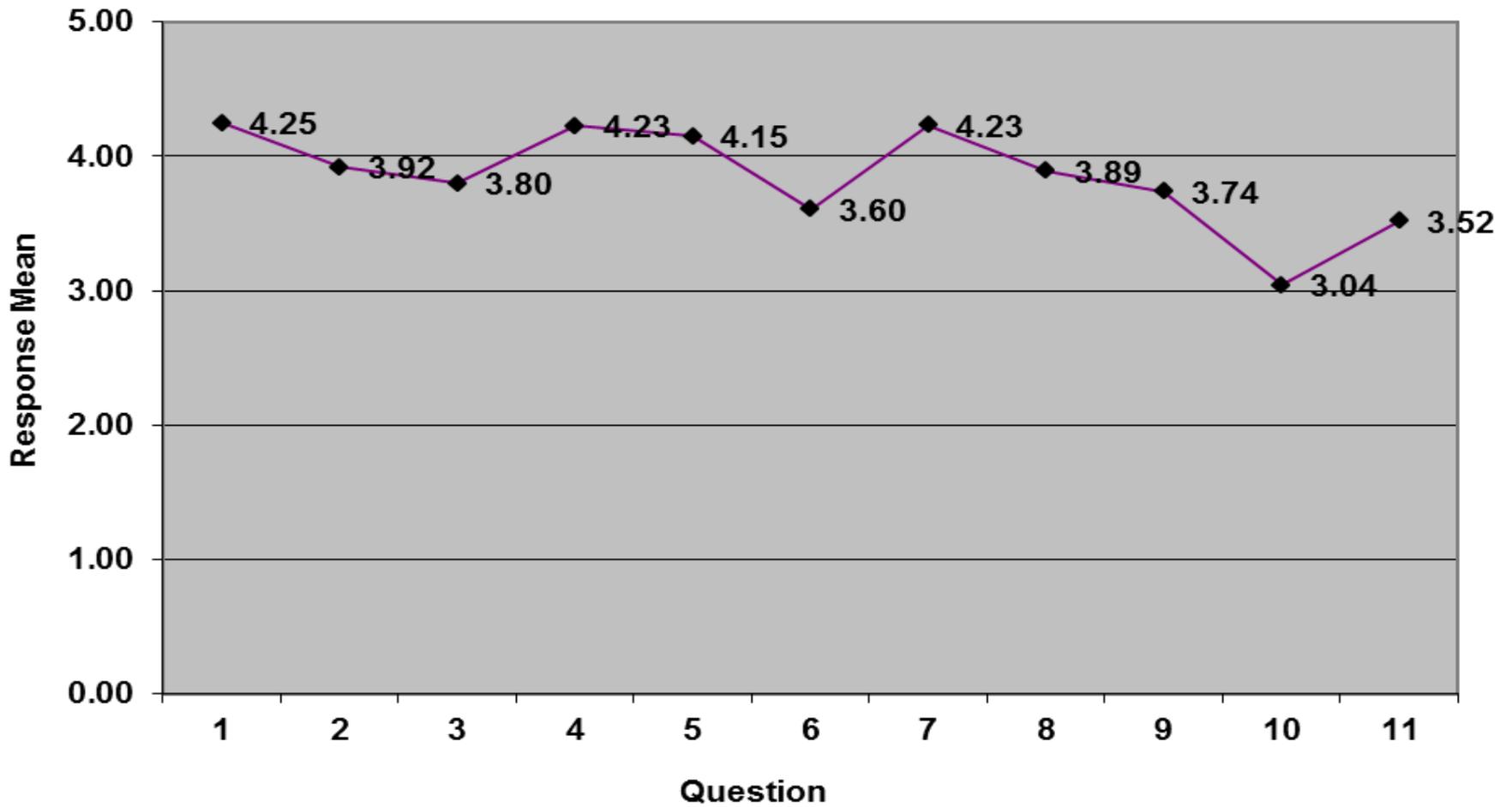


Figure 6. Contract Administration Survey Item Mean Scores

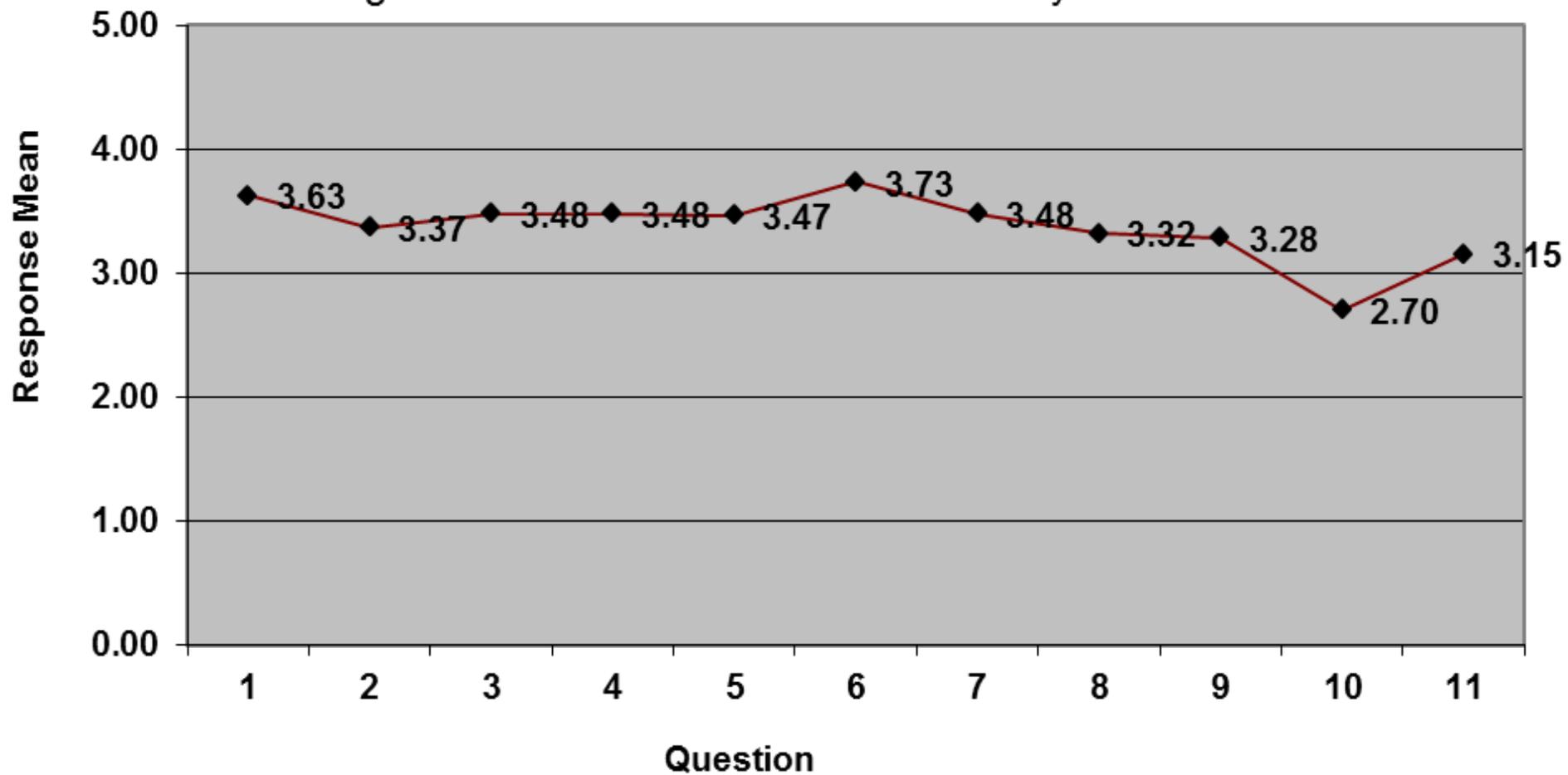


Figure 7. Contract Closeout Survey Item Mean Scores

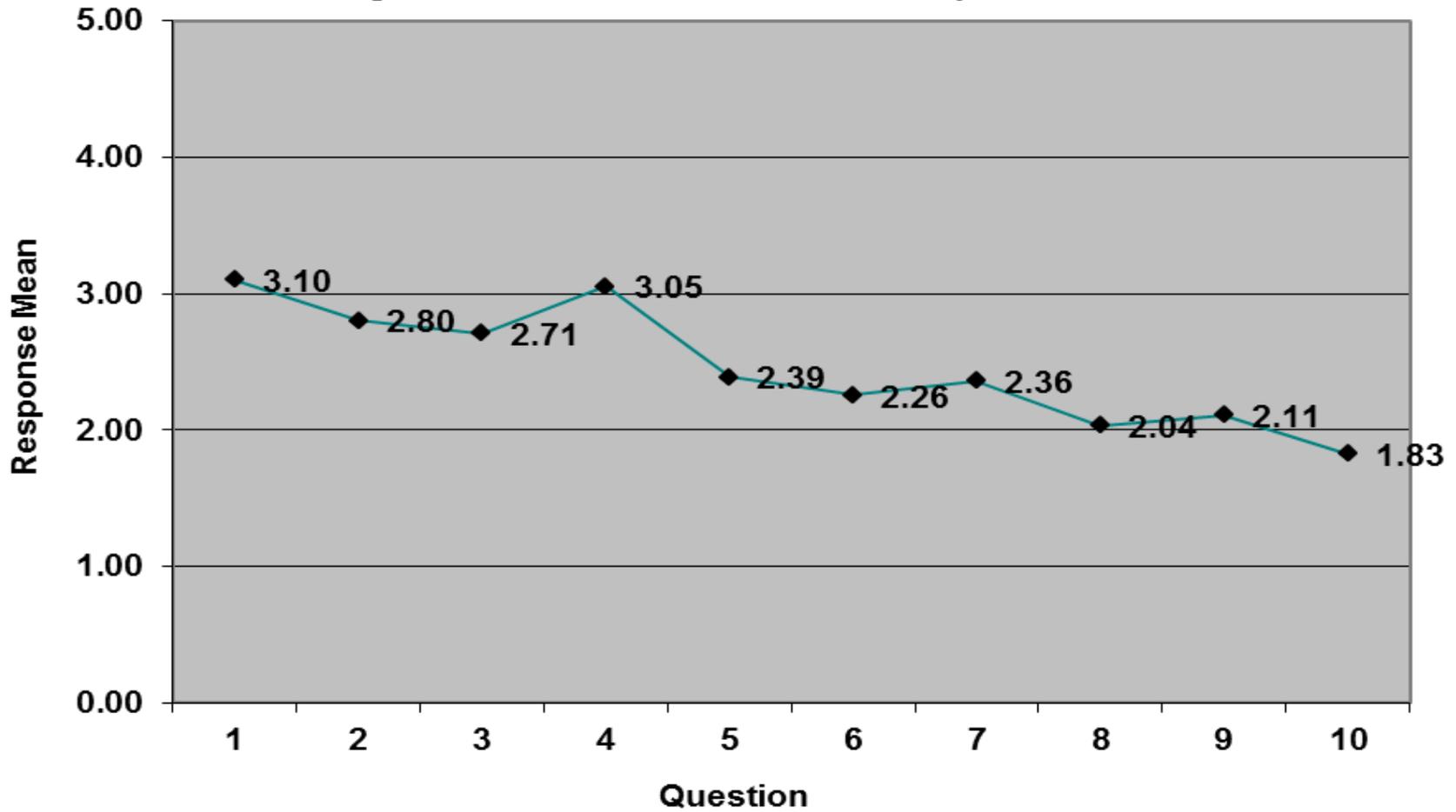
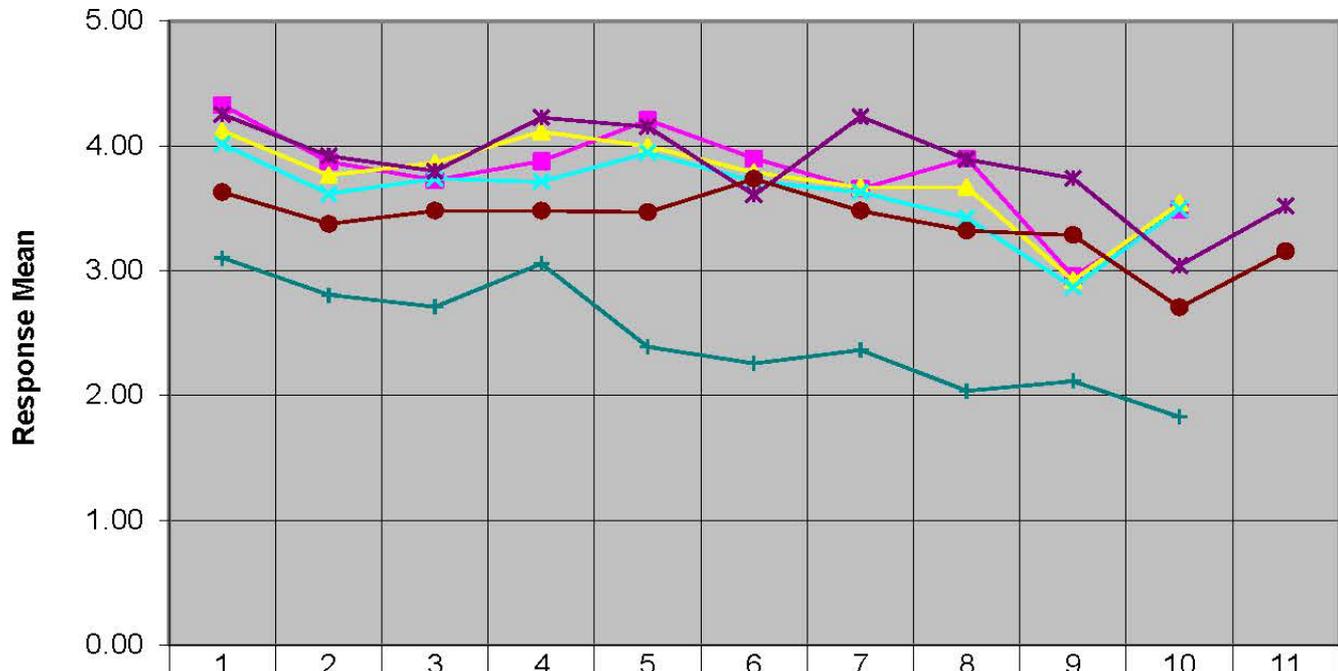


Figure 8. Comparison of Contract Management Process Survey Item Mean Scores



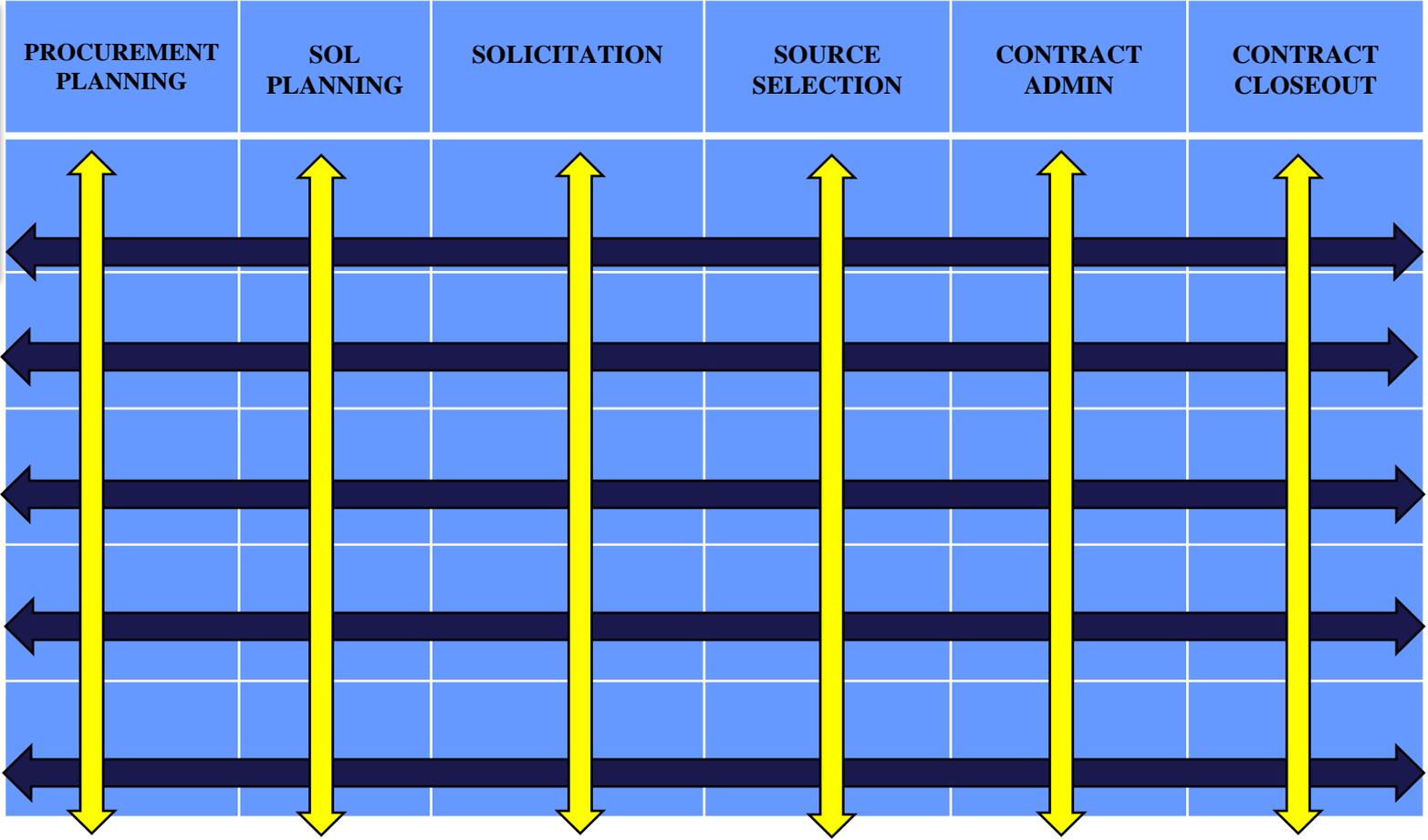
—■— Procurement Planning	4.32	3.87	3.72	3.88	4.21	3.90	3.65	3.90	2.95	3.49	
—▲— Solicitation Planning	4.12	3.76	3.87	4.11	3.99	3.79	3.67	3.67	2.92	3.54	
—×— Solicitation	4.01	3.61	3.74	3.71	3.94	3.72	3.63	3.42	2.87	3.49	
—*— Source Selection	4.25	3.92	3.80	4.23	4.15	3.60	4.23	3.89	3.74	3.04	3.52
—●— Contract Administration	3.63	3.37	3.48	3.48	3.47	3.73	3.48	3.32	3.28	2.70	3.15
—+— Contract Closeout	3.10	2.80	2.71	3.05	2.39	2.26	2.36	2.04	2.11	1.83	

Question

Analyzing Contract Management Processes

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Horizontally
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reviewing only
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Process Capability Enablers

- Process Strength
- Successful Results
- Management Support
- Process Integration
- Process Measurement

Figure 9. Process Strength Survey Item Mean Scores

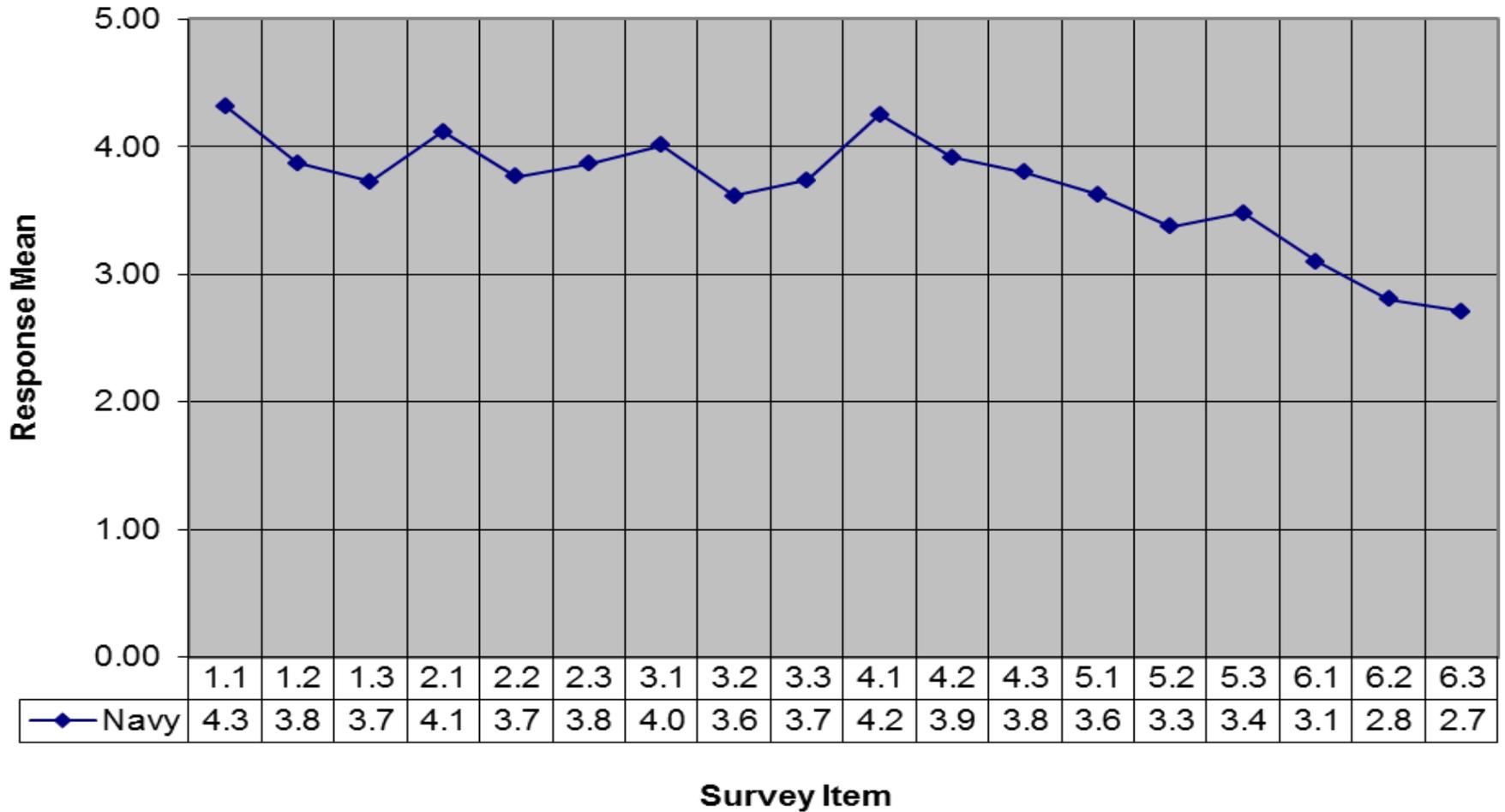


Figure 10. Process Results Survey Item Mean Scores

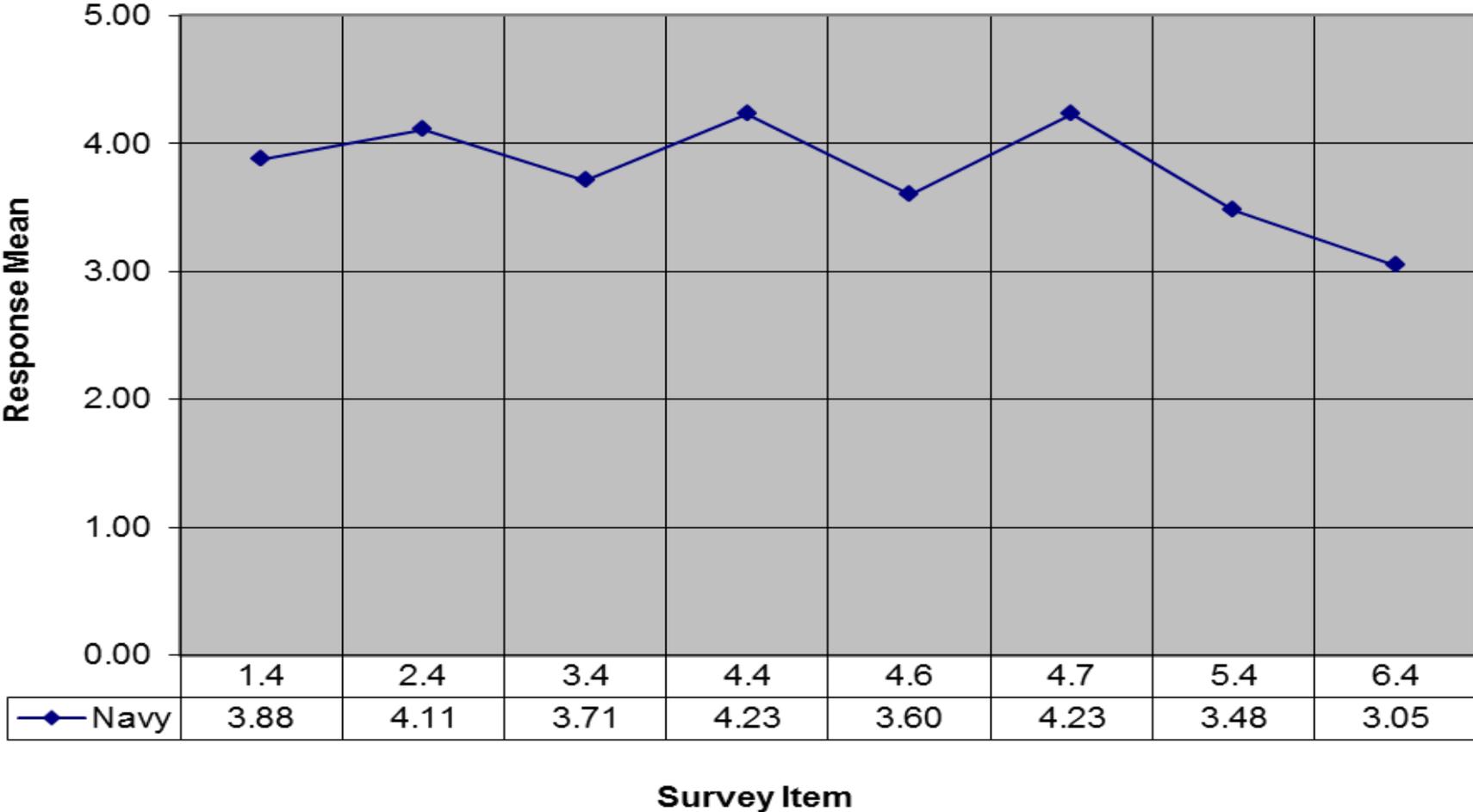


Figure 11. Management Support Survey Item Mean Scores

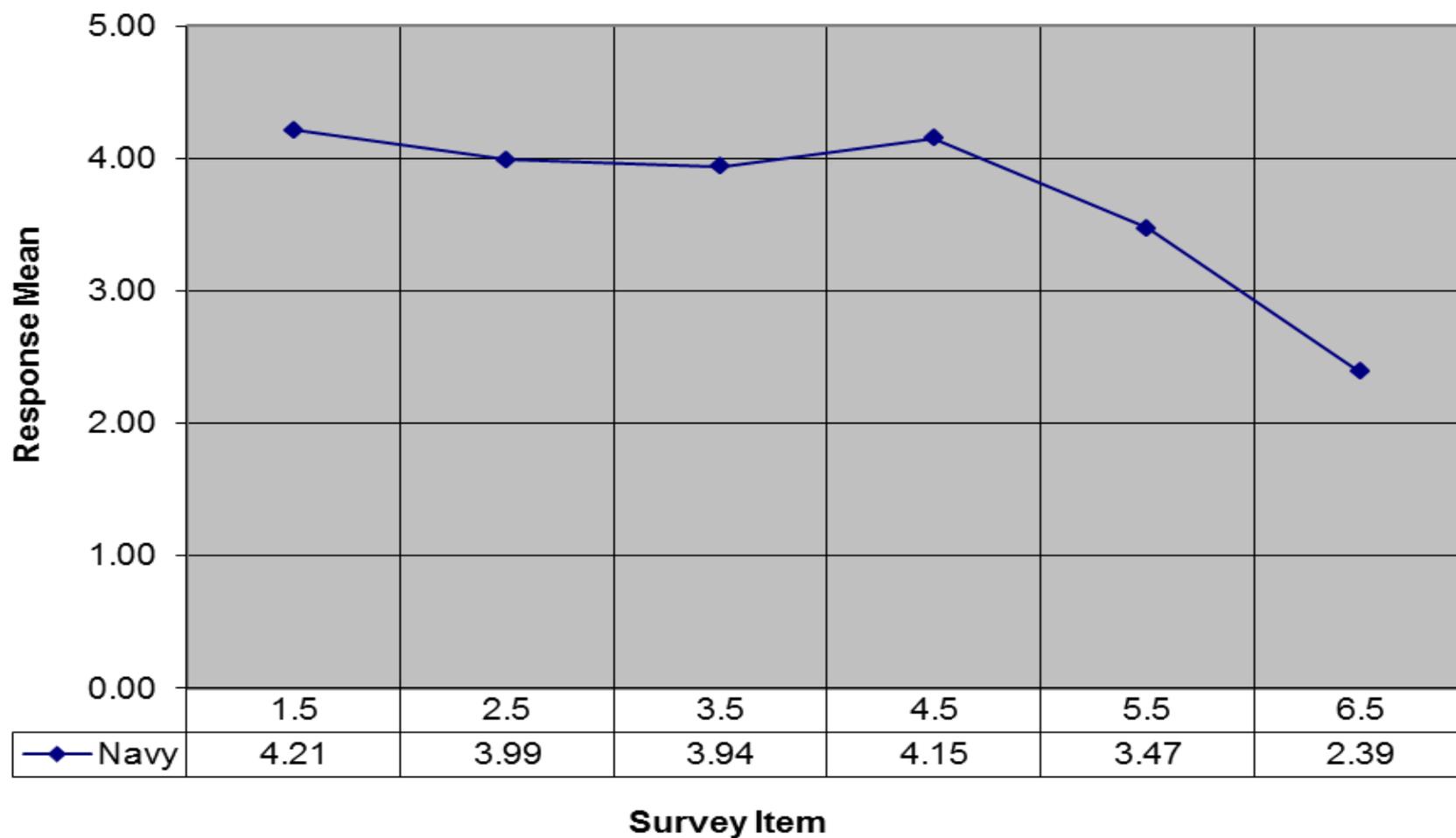


Figure 12. Process Integration Survey Item Mean Scores

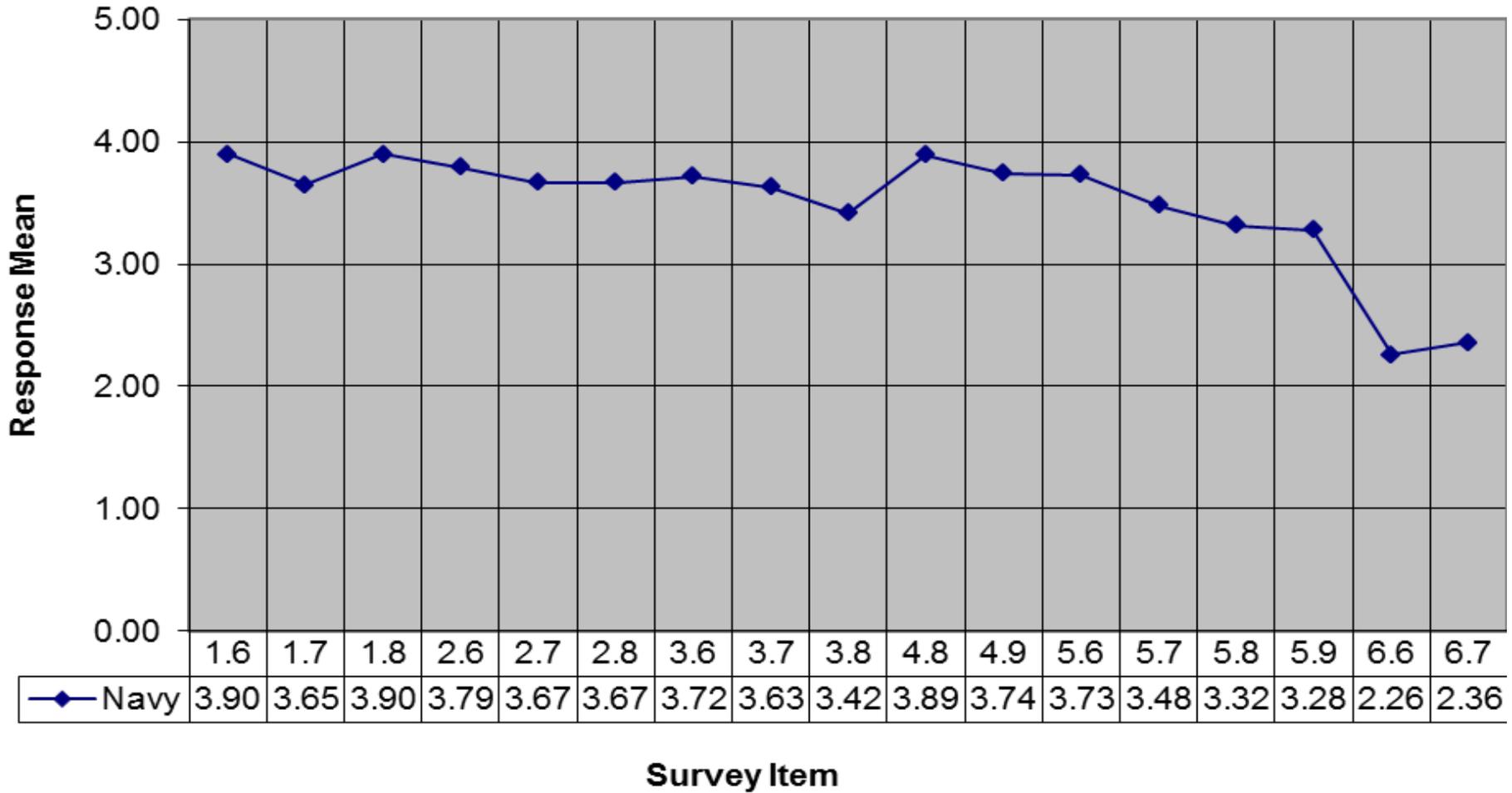
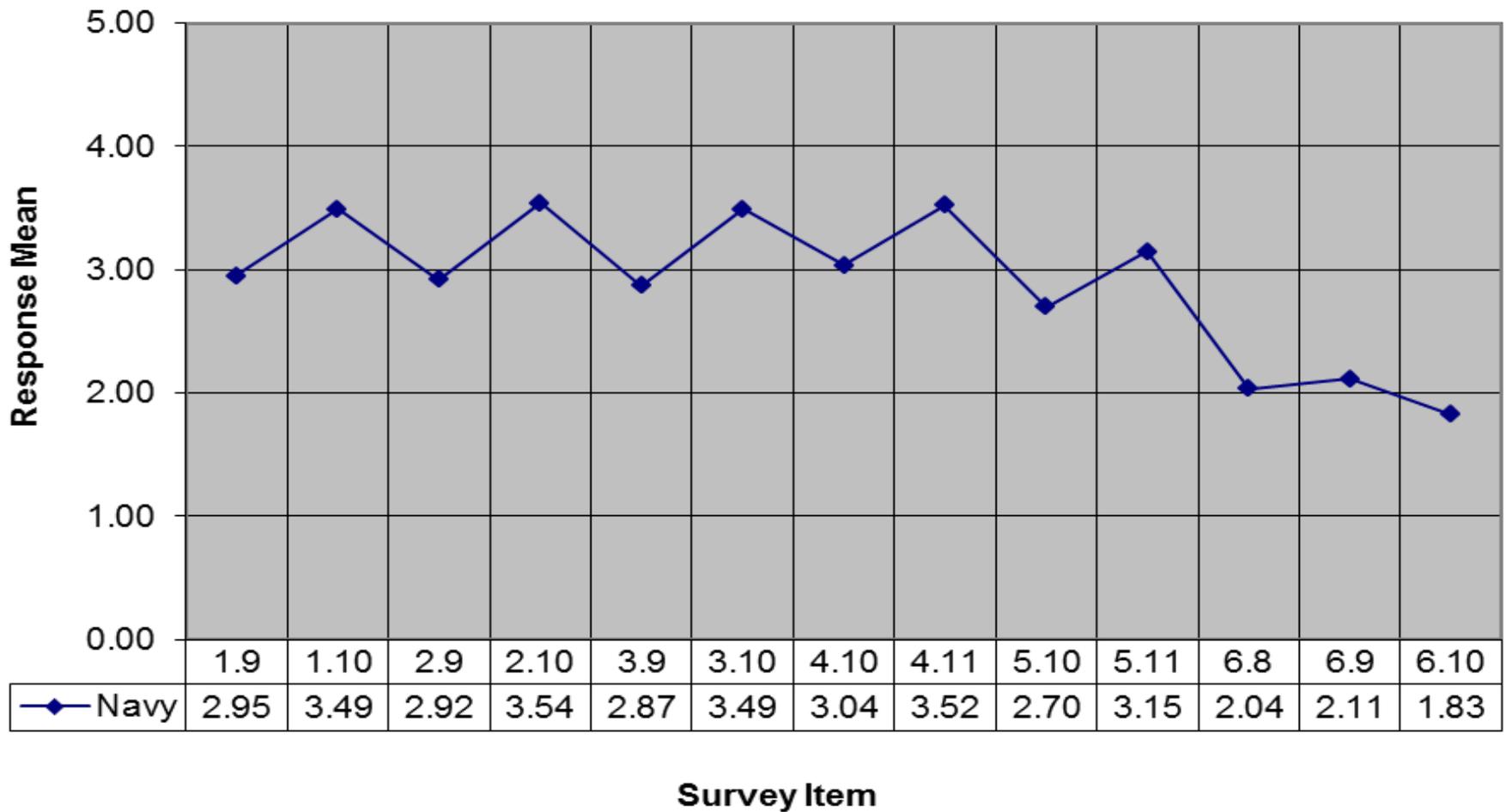


Figure 13. Process Measurement Survey Item Mean Scores





- Process capability is a critical component of auditability.
- The maturity model concept can be applied to assess contract management process capability.
- Assessment results can be used for identifying process deficiencies and process improvement and knowledge sharing opportunities.
- Bottom Line: Contracts are the products of the processes that were used to create them and will only be as successful as the processes used to manage them.



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Questions/Comments

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Back Up Slides

Table 1. Descriptive Statistics for the Contracting Process Area Scale Factors

Contracting process area scale factor	No. of items	<i>M</i> (<i>SD</i>)	Valid <i>N</i>	Cronbach's α
Procurement Planning	10	3.79 (.88)	185	.91
Solicitation Planning	10	3.74 (.87)	178	.92
Solicitation	10	3.61 (.93)	174	.92
Source Selection	11	3.85 (.90)	172	.93
Contract Administration	11	3.37 (1.03)	169	.94
Contract Closeout	10	2.46 (1.59)	168	.94



- Procurement Planning
 - Activities:
 - Conduct requirements analysis
 - Conduct market research
 - Develop preliminary budget and schedule
 - Develop preliminary work statement (SOW,...)
 - Determine procurement method, award strategy, and contract type



- Solicitation Planning
 - Activities
 - Prepare solicitation document (IFB, RFP)
 - Document program requirement
 - Identify potential sources
 - Determine contract type, procurement method, evaluation criteria, contract award strategy
 - Structure contract terms and conditions
 - Finalize work statement (SOW, SOO, PWS)



- Solicitation
 - Activities
 - Conduct solicitation conferences
 - Conduct site visits
 - Advertise procurement opportunity
 - Maintain qualified offeror's list



- Source Selection
 - Activities
 - Receive proposals
 - Evaluate proposals
 - Conduct negotiations
 - Award contract
 - Document contract agreement



- Contract Administration
 - Activities
 - Conduct pre-performance conference
 - Perform contractor surveillance
 - Monitor and measure contractor's performance
 - Process contractor payments
 - Manage changes to the contract



- Contract Closeout
 - Activities
 - Conduct final acceptance of supplies or services
 - Process final contractor payment
 - Conduct property dispositions
 - Document contractor's performance
 - Document lessons learned and best practices



- Process Strength
 - Established, documented, institutionalized, and mandated throughout the organization
 - Personnel held accountable for following established processes
 - Allowance for tailoring processes in consideration of unique aspects of project



- Successful Results
 - Contract management processes are focused on specific successful outcomes
 - Well-defined and validated requirement
 - Accurate and complete solicitation
 - Fair and ethical selection of contractor
 - Sufficient monitoring of contractor performance
 - Responsive processing of contractor payments and timely closeout of completed contracts



- Management Support
 - Senior organizational management involvement in contract management processes
 - Senior management provides guidance, direction, and approval, if required, of contract management strategy, decisions, and documents



- Process Integration
 - Contract management processes are integrated with other organizational core processes
 - Process integration includes use of cross-functional teams
 - The end-user customer is also involved in the procurement and is a member of the procurement project team



- Process Measurement
 - Organizations systematically use performance metrics to measure the quality and evaluate the effectiveness of the contract management processes
 - Lessons learned and best practices are used to identify continuous process improvement initiatives