



Chapter highlights

- **Purpose:** This chapter discusses information technology (IT) procurement planning, which include efforts by all personnel responsible for significant aspects of an IT project to ensure that they are coordinated and integrated in a comprehensive manner.
- **Key points:**
 - As an IT procurement best practice, comprehensive IT procurement planning is proven to provide multiple benefits to public procurement.
 - Market research is central to sound IT procurement planning and market research results should be understood by the entire procurement project team.
 - Strategic procurement planning helps the Commonwealth optimize performance, minimize price, increase achievement of socio-economic acquisition goals, evaluate total life cycle management costs, improve supplier access to business opportunities, and increase the value of each IT dollar.
 - VITA may have an existing mandatory-use or optional-use statewide contract that would serve your IT procurement need. Agencies subject to VITA's IT procurement authority must determine whether one is available as a first step in the procurement planning process.

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11.0 Introduction

Effective information technology (IT) procurement planning produces more efficient and economical acquisitions which result in cost-efficient and timely contracts for IT products or services. Procurement planning is the process by which all personnel responsible for significant aspects of a project have adopted specific roles and responsibilities and are integrated in a comprehensive manner. Procurement planning begins with the recognition of a specific IT business need. Procurement planning includes identification of what is needed, when it is needed, how it will be acquired and by whom. The amount of time necessary for the planning process is dependent upon the dollar value, risk, complexity and criticality of the proposed purchase. Procurement planning must also include budget planning. In general, the more costly and complex the IT procurement is, the more essential the need will be for a rigorous, well-planned, structured and disciplined procurement process.

VITA may have an existing mandatory-use or optional-use statewide contract that would serve your IT procurement need. Agencies subject to VITA's IT procurement authority must determine whether one is available as a first step in the planning process. Using a statewide contract(s) may significantly reduce the time and cost for the IT acquisition, as these contracts are competitively procured as a result of the VPPA-required procurement process and the contracts are VPPA compliant. Current VITA statewide contracts may be found at this link: <https://vita.cobblestonesystems.com/public/>

In addition, the procurement planning process must allow for the time necessary to comply with all Code-required VITA, CIO, Project Management Division (PMD), Enterprise Cloud Oversight Services (ECOS), Security and approvals and governance and oversight requirements for agency IT procurements covered in [§ 2.2-2007](#) through [§ 2.2-2021](#) of the *Code of Virginia*.

11.1 Various IT procurement scenarios

A variety of IT procurement scenarios are possible, some of which are described below:

- **The IT procurement is of low value, easy to define and supported by several supplier alternatives.** In this situation, the procurement approach is similar to buying a commodity and can be fast-tracked using [eVA](#) Quick Quotes or an Invitation for Bid in accordance with VITA's procurement guidelines.
- **The IT procurement is of low value, but is hard to define or seems to have only one supplier.** In this situation, a Request For Information (RFI) may be made of potential suppliers. An RFI is an informal effort to seek ideas, perspectives, costs and information from potential suppliers so that a formal project scope and set of requirements can be developed. An RFI will also enable agencies to determine the number of suppliers in the market available to provide the needed IT solution. Agencies should also conduct a market analysis to determine what suppliers are available and the prices and/or deals those suppliers have offered to other similar customers.
- **The IT procurement is of high value, but is easy to define or is supported by a range of alternatives.** In this situation, a structured procurement approach, usually based on a request for proposal (RFP), is recommended. For more information on RFPs, please refer to [Chapter 24](#) of this manual, Requests for Proposals.

- The IT procurement is of high value, but is hard to define and scope, or the extent of available alternatives is not known. In this situation, it may be advisable to consider an RFI as part of the market research, followed by an RFP.

11.2 IT procurement planning principles

Here are several key IT procurement planning principles:

- Sourcing should be consistent with market capabilities and available spend rather than driving solutions toward prescriptive requirements.
- Strive for quick and easy IT solutions.
- IT solutions should be forward facing and positioned for future supportability.
- Procurement planning can prepare agencies for negotiating mutually collaborative agreements with IT suppliers. These agreements should reflect the best agreements in the marketplace.
- Agency stakeholders including the business owner, project manager, information security officer and procurement lead should be in constant collaboration.
- Consider all required processes and approvals (VITA, federal, other) in your procurement timeline for a realistic versus reactive procurement process.

11.3 Benefits of IT procurement planning

As an IT procurement best practice, IT procurement planning has been proven to generate multiple benefits for public procurement. IT procurement planning enables agencies to implement strategic IT sourcing concepts during the procurement process. Planning will also enable agencies to leverage the Commonwealth's purchasing power to obtain lower costs and better value. Developing a thorough IT procurement plan which assigns roles and responsibilities to the procurement project team members and defines the process steps will facilitate a better-value IT procurement. The IT procurement planning process should be a collaborative and synergistic effort between procurement project team members.

Proven benefits of procurement planning include:

- Development of a strong communication framework and structure for cross-functional information sharing.
- Improved schedule success through workload and resource planning and the assignment of roles and responsibilities for each procurement project team member.
- Increased project discipline by demanding systematic documentation of business needs, timelines, and costs while providing sufficient lead time and resources in the selection of appropriate procurement types and development of innovative contracting methods.
- Requiring a baseline commitment from the supplier community to adhere to the response parameters set forth in the solicitation.
- Enhanced structure and control over the amount of time and resources required to accomplish the objectives.
- Speedier negotiations and contract execution because contractual requirements are defined at the beginning of the project.
- Reduced miscommunication and disputes during the evaluation phase.
- Improved savings and cost efficient IT assets for the Commonwealth by utilizing planning to encourage consolidation of requirements to achieve greater IT economies through innovative price reductions and/or quantity discounts.

11.4 IT Procurement planning roles and responsibilities

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The agency's sourcing specialist or assigned procurement lead is responsible for the preparation and delivery of the procurement plan to the procurement project team. As an example, the following responsibilities are delegated to the various roles listed below which ensure that duties are performed by the appropriate subject-matter experts and procurement team members. These roles vary for each project but are considered critical to the success of the procurement plan. For complex major IT procurements, the agency may require VITA PMD and other VITA technical experts be involved. The planning and sourcing process is intended to be collaborative as many steps are shared among team members. For a more in-depth discussion on these roles, go to [Chapter 24](#) of this manual, Requests for Proposals.

Procurement role	Responsibilities
Agency procurement lead/sourcing specialist	<ul style="list-style-type: none"> • Be knowledgeable about the scope of work and the technical and business objectives of the project. • Determine if VITA has a statewide IT contract that satisfies the IT business need, thereby eliminating a new procurement process. • Develop procurement plan methodology and framework. • Define and assign roles and responsibilities for the duration of the procurement process to each team member. • Act as single point of contact (SPOC) for the team; the evaluation team, if different group; steering committee, if applicable; suppliers and procurement process oversight. • Coordinate and participate in assessing all potential project risks and including mitigation methods and RFP/contract language with appropriate stakeholders; i.e., business owner, project manager, information security officer, budget analyst. • Participate with team in establishing well-defined evaluation criteria. • Participate with team to develop a clear, concise scoring plan. • Choose best contract type for project success. • Obtain and maintain all confidentiality/non-disclosure agreements from team members, subject matter experts and evaluation team, if different group. • Prepare RFP/solicitation and evaluation documents. VITA sourcing specialists must use VITA templates. • Preside over the bidder/pre-proposal conference if held. • Post solicitation documents and respond to supplier questions. • Obtain clarification of supplier proposals if necessary. • Along with team, participate in supplier product demonstrations and oral presentations, if held. • Provide and maintain control of the price information from proposers. • Participate in and lead proposal evaluations and contract negotiations. • Serve as chairperson of evaluation team. • Review and approve evaluation recommendation. • Help tailor the contract to the unique needs of the project. • Protect and manage the integrity of the project and the ability to get work done. • Protect and manage the relationship with potential suppliers.

Procurement role	Responsibilities
	<ul style="list-style-type: none"> • Ensure the overall integrity of the procurement process through fair and open competition. • Coordinate legal and/or CIO review and approval of procurement documentation required before release/execution. • Award and post contract. • Ensure the procurement file is complete.
Business owner	<ul style="list-style-type: none"> • Define requirements. • Define budget, requested timeline and other possible constraints. • Ensure that the procurement aligns with the agency's and Commonwealth's IT strategic plan(s). • Define conditions of performance satisfaction and final acceptance. • Identify business needs such as: <ul style="list-style-type: none"> ○ demonstrations ○ bonding/acceptance testing ○ service levels ○ milestones/payment terms ○ required supplier technical and professional standards and certifications (agency, VITA, Commonwealth, federal, etc.) • Support negotiations to ensure that final contract supports business needs and agency requirements. • Serve on evaluation team to evaluate the supplier responses. • Coordinate VITA PMD participation and PGR approval process.
Agency Information Security Officer or AITR	<ul style="list-style-type: none"> • Ensure solicitation includes all appropriate agency and VITA security policy requirements, including ECOS, if the procurement is or may be a cloud-based solution. • Collaborate with the SPOC and VITA security and ECOS stakeholders.
Subject matter expert (SME)	<ul style="list-style-type: none"> • Possess expert technical, industry-, commodity- or service-specific competence and/or knowledge for the project. • May be a member of team or a resource to the team.
External consultant	<ul style="list-style-type: none"> • External consultant technical, industry-, commodity- or service-specific competence and/or knowledge not available from an internal resource. • Provide advice or assistance to sourcing team members. • Function as a non-voting resource to the sourcing team. • Prohibited from benefiting from outcome of any award or participating in preparation of solicitation.
Evaluation team members	<ul style="list-style-type: none"> • Individuals designated/responsible to make award recommendation. • The procurement project team/evaluation team would typically include an agency representative (business owner), SMEs and be led by the agency procurement lead/sourcing specialist. • Each member participates to provide business, legal, technical and financial input according to their area of expertise. The members only evaluate their area of expertise as assigned.
Single point of contact (SPOC)	<ul style="list-style-type: none"> • Agency procurement lead/sourcing specialist serves this role. (See role responsibilities above.) • Is the designated resource for communications with suppliers and all others during the solicitation process.

11.5 Market research

Market research is central to sound procurement planning and must be addressed and understood by the entire procurement project team. Market research sources must be substantial, credible, current and supportable and aligned with the project's business and functional objectives.

11.5.1 The purpose of market research

When little or no knowledge exists for the desired IT product, service or solution or available supplier resources, market research helps identify:

- Products, services or solutions available in the marketplace to address the business problem.
- Appropriate requirements based on how others have procured similar solutions.
- Realistic cost estimates and schedules.
- Customary practices such as warranty, financing, discounts for the IT product, service or solution.
- Distribution and support capabilities of potential suppliers including alternative arrangements and cost estimates.
- Availability and status of potential supplier sources.
- Lessons learned and implementation pitfalls and/or resolutions.
- The best deals/prices that have been obtained by other customers when acquiring a similar IT product, service or solution.

11.5.2 Methods of market research

The procurement project team may utilize any of (or a combination of) the following methods to conduct market research:

- Acquire information about products, trends, product availability, business practices, product/service reliability and prices.
- Perform a Porter's Five Forces Industry Analysis and/or a Strengths, Weaknesses, Opportunities and Threats (SWOT) analysis to identify opportunities.
- Contact knowledgeable individuals in government and industry regarding market capabilities to meet requirements.
- Review the results of recent market research undertaken to meet similar or identical requirements.
- Conduct unbiased industry briefings or pre-solicitation discussions with potential suppliers to discuss requirements and obtain recommendations.
- Analyze the purchase history of requirements to determine the level of competition, prices and performance results.
- Research technical analysis publications.
- Publish a formal RFI to survey the market on the complete and final requirements.
- Research the status of applicable technology and the extent and success of its commercial application.

11.6 Key steps and milestones of IT procurement planning

For a full discussion on the principles and background of complex IT solution procurements, technical and functional requirements definition, evaluation guidelines, etc., refer to [Chapter 24](#) of this manual, Requests for Proposals. For the purpose of this chapter, however, the high-level key steps in developing a thorough IT procurement plan are shown in subsections 11.6.1 through 11.6.4 below.

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11.6.1 Define business objectives

Step	Action
1.	<p>Define scope and conditions of acceptance. The desired outcome of the objective is a clearly defined statement of the business problem(s) and the need(s) being procured, including the current technology and user environments.</p> <p>Considerations in defining the scope and conditions of acceptance include:</p> <ul style="list-style-type: none"> • Requirements for compatibility with existing or future systems, programs, strategic plans or initiatives, • Cost, schedule and capability or performance constraints, or any enhancement phasing, • Stability of the desired technology or requirements, • Delivery and performance-based requirements, and • Potential risks and trade-offs.
2.	Prepare market analysis to gain awareness of products/services/solutions readily available in the marketplace for purchase.
3.	Perform a "make vs. buy" analysis.
4.	<p>Estimate investment costs: set established cost goals for the project and the rationale supporting them; discuss related cost concepts to be employed, including, when appropriate:</p> <ul style="list-style-type: none"> • Life cycle costs including repair parts, upgrades and maintenance. • Fair cost estimate: develop a cost estimate given the requirements and current market trends. This estimate may be used as a benchmark for the evaluation of the reasonableness of the prices proposed.
5.	Create procurement project team.
6.	Define and assign team member roles and responsibilities.
7.	Develop a project plan/schedule.
8.	Discuss technical, cost and schedule risks and describe efforts to reduce risks and consequences of failure to achieve goals.
9.	Discuss any special security, data and/or confidentiality needs (i.e., HIPAA, VITA Security or Enterprise Solutions and Governance, SAS 70 audits, etc.).
10.	Address protections and remedies such as payment holdbacks, performance bonds, warranty provisions, liquidated damages provisions, intellectual property or insurance (i.e., errors and omissions, cyber security) requirements.
11.	Commit to the source-selection objectives for the procurement including the timing for submission and evaluation of proposals and the relationship of evaluation factors to the agency business needs.
12.	Prepare statement of objectives for the business owner/steering committee, if appropriate, and obtain business owner sign-off.

11.6.2 Develop requirements

Step	Action
1.	Develop and agree upon product, service and/or solution requirements.

Step	Action
2.	Utilize approved solicitation documents and templates as discussed in Chapter 24 , RFPs and Competitive Negotiations, and Chapter 25 , IT Contract Formation.
3.	Establish evaluation criteria that provide clear, concise definitions for each criterion.
4.	Develop a detailed scoring plan that explains how proposals will be evaluated and provides the specific meaning of the scoring methodology.
5.	Determine if a pre-bidders/pre-proposal conference is justified.
6.	Identify major project milestones and deliverables and identify the key logistic milestones that may affect competition. Determine if supplier payments should be tied to the major milestones or deliverables and if any holdback is required prior to final acceptance.
7.	Identify if there are other related project interdependencies that may affect the project's schedule.
8.	<p>Discuss which contract type is appropriate or whether a specialized contract is needed and any specific terms and conditions. For cloud/SaaS procurements, see additional information and recommended solicitation language here: https://www.vita.virginia.gov/media/vitavirginiagov/supply-chain/docs/ECOSProcedureChecklistforCloudSolutionSolicitationsandContract_s20180307.docx</p> <p>Regardless of the amount, if the procurement involves an off-premise (cloud hosted) solution, agencies must follow the Enterprise Cloud Oversight Services (ECOS) process and Third Party Policy Workflow. A Security Assessment of the cloud service will need to be completed by the supplier and approved by ECOS, via a work request 1-003, and special Cloud Services Terms & Conditions must be included in the contract prior to award.</p> <p>The VITA Minimum Contractual Requirements for "Major" Technology Projects and Delegated Procurements identifies specific terms and conditions for agency delegated procurements and those requiring CIO approval and can be found on VITA SCM's web site.</p>
9.	Identify or determine what business-based service levels are needed to develop a performance-based contract and apply desired remedies.
10.	Develop a change management plan to manage expectations and communications.
11.	Create Request for Proposal/Invitation for Bid package, including any attached specifications, diagrams, etc.
12.	Obtain any necessary review and/or approvals (i.e., legal, CIO, PMD) prior to solicitation release.

11.6.3 Issue and conduct solicitation

Step	Action
1.	Issue an RFP or IFB and fulfill all VPPA posting requirements.
2.	Answer questions received from suppliers in a public forum/posting.
3.	Receive bids/proposals.
4.	Facilitate collaborative team evaluation of bids/proposals.
5.	Evaluate and score each proposal received.

Step	Action
6.	Perform a price or cost analysis.
7.	Recommend top supplier(s).
8.	Negotiate contract(s).
9.	Prepare procurement files and award/post contract.
10.	Brief business owner/steering committee (as applicable), contract manager and de-brief team for solicitation closeout.
11.	Archive solicitation documents and procurement files.
12.	Conduct post-award orientation meeting with supplier and key stakeholders.

11.6.4 Manage and administer contract

Step	Action
1.	Determine the processes by which the contract will be managed and administered including: <ul style="list-style-type: none"> • Contract status reporting requirements. • Preliminary, production and/or cutover technical reviews/testing • Acceptance process and how inspection and acceptance corresponding to the statement of work's performance criteria will be monitored and enforced. • Invoice review process. • Product or service deficiency reporting. • Contract changes and amendments process. • Service level agreements and performance metrics including how such service levels will be monitored, measured, and reported. • VITA governance and oversight compliance
2.	Manage product warranties.
3.	Direct change management: administer changes, budget changes, contract modifications, etc.
4.	Resolve contract disputes.
5.	Create realistic and justifiable remedies for non-performance, non-conformance of deliverables and/or unmet service level commitments. <ul style="list-style-type: none"> • A portion of the work may be accepted or all of the work may be rejected. • Work may be accepted with provisions for corrections in the future. • Ensure that all project requirements are complete.
6.	Terminate/expire contract: <ul style="list-style-type: none"> • Terminate contract for default. Supplier may fail to deliver or fail to make progress. • Terminate contract for convenience.

Make sure that the contract file includes all required backup and supporting data according to your agency's record retention policies and the Virginia Freedom of Information Act's requirements.

11.7 Other considerations affecting the IT procurement planning process

11.7.1 Lease vs. buy analysis

Public bodies may acquire IT equipment by lease or purchase. The decision to lease should be the result of a careful financial analysis of all factors involved, especially the total cost of ownership to the Commonwealth for the expected period of use. Purchase costs are usually lower than lease costs if equipment is used for an appreciable portion of its useful life. One major disadvantage of a purchase is that the public body is "locked into" the acquisition; whereas, leasing provides a measure of flexibility. Lease vs. buy cost analyses are based on the "contract or program life" of the items being purchased. "Contract or program life" is the anticipated life cycle of the requirement for which the equipment is used, less any reasonable estimated length of time when a lower cost substitute capability becomes available. When the analysis indicates leasing is the least costly acquisition method, public bodies may enter into a lease contract. The terms of such contract should be equal to the predicted "contract or program life."

11.7.2 Build vs. buy analysis

Computer systems and software seem to go out of date as soon as they hit the market. This presents agencies with the dilemma of whether it makes more sense to build a custom system or buy a packaged solution. When building or buying a new IT system, there are a number of things to consider. For a custom system design, an agency will have to deal with hard costs such as development, testing and implementation. For off-the-shelf packages, there is initial package cost, ongoing license fees, and possibly costs to customize, configure, modify, test and maintain. For application service provider, software-as-a-service or other cloud-based solutions, consider the security and data privacy requirements to determine if hosting should really be provided by the agency or VITA, or if a private cloud is required vs. a public one, and consider all associated costs for the different data hosting and data storage environments. Build vs. buy decision points are the same regardless of the procurement:

- Cost
- Time to market
- Market conditions
- Architecture
- Support costs
- Availability of skilled resources
- Strategic value

Additionally, major IT supplier consolidation has led to new pricing models and bundling options that give business owners much greater leverage. Open source software may deliver the best of both worlds, with hybrid approaches that combine purchased and custom-built components. When evaluating whether to build or buy, an agency must understand the total costs during the software life cycle, which are typically seven or eight years. Research studies show that 70% of software costs occur after implementation. A rigorous lifecycle analysis that realistically estimates ongoing maintenance by in-house developers often shows that it is cheaper to buy than create a solution. In addition, as more cost-effective, attractive market solutions become available, it may be more favorable to replace aging proprietary applications with proven commercial solutions. When conducting a build vs. buy analysis, there are some decision points which can help with the analysis:

- Decide what the system requirements will be, based on the system's ultimate use. These requirements will dictate the points to consider during the build vs. buy analysis.

- Research the types of available market products available to meet the requirements. Analyze these products' strengths and weaknesses versus the requirements and how they compare to the design and implementation of a custom-built system.
- Develop a decision analysis spreadsheet for each product rated on cost, customization, schedule, supplier support, etc.
- Evaluate intangible factors that are hard to quantify. If the system needs repair or modification, it may be easier to find developers to support generic languages such as MS Visual Basic or Oracle than specialty programming languages. It is beneficial to own the source code so developers can work on the system. With a custom system, an agency can own the code if the contract is written correctly. With a packaged system, an agency will have to pay licensing fees and may not be able to obtain access rights to key parts of the code.
- Avoid purchasing more capability than is needed. Many packaged software systems have more features than an agency may need.

11.8 IT spend management

Strategic sourcing begins with a spend analysis and identification of commodities. Spend analysis is the structured process of critically analyzing a public body's IT spend and then using this information to make business decisions about to acquire needed commodities and services effectively and efficiently. This process helps optimize performance, minimize price, evaluate total life cycle management costs, and increase the value of each IT dollar spent. Spend management in conjunction with procurement planning may be used to achieve the following procurement objectives:

- Understanding the potential for savings with a higher degree of certainty.
- Revising sourcing approaches to generate savings.
- Improving procurement processes and practices.

A broad overview of the spend management assessment process includes these steps:

- Examine and collect data and establish baselines on what is being bought in current spending. (What is being bought where and for how much?)
- Assess the supply market. (Who offers what?)
- Identify leverage opportunities by evaluating top spending areas.
- Identify savings opportunities and demand management opportunities.

11.9 Outcomes of IT procurement planning

IT procurement planning may drive different expected results such as:

- Reduction in the number of overall contract awards
- Understanding and managing total cost of ownership
- More purchasing options—lease vs. buy
- Data-driven decision making
- Improved risk mitigation prior to award
- More identification of opportunities where suppliers can add value
- Increased understanding of the IT industry—procurement staff become more knowledgeable about supply chains and costs.
- Performance driven contracts—data driven supplier performance (i.e., automated and electronic tracking systems).

- Improved relationships with suppliers—more communication, face-to-face meetings (quarterly review sessions).